ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 98

[EPA–HQ–OAR–2010–0929; FRL–9916–76–OAR]

RIN 2060–AQ81

Revisions to Reporting and Recordkeeping Requirements, and Confidentiality Determinations Under the Greenhouse Gas Reporting Program; Final Rule

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is amending the reporting and recordkeeping requirements of the Greenhouse Gas Reporting Program. These amendments include an alternative verification approach in lieu of collecting certain data elements for which the EPA has identified disclosure concerns and for which the reporting deadline was deferred until March 31, 2015. The alternative verification approach includes the addition of new verification, recordkeeping, and reporting requirements while maintaining the EPA's ability to verify emissions and ensure compliance with the Greenhouse Gas Reporting Program. In conjunction with the amendments, the EPA is establishing final confidentiality determinations for the new data elements added in this action.

DATES: This final rule is effective on November 24, 2014.

ADDRESSES: All documents in the docket are listed in the *http://www.regulations.gov* index. Although listed in the index, some information is not publicly available, e.g., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in *http://www.regulations.gov* or in hard copy at the Air Docket, EPA/DC, William Jefferson Clinton Building West, Room B102, 1301 Constitution Ave. NW., Washington, DC. This Docket Facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742.

FOR FURTHER GENERAL INFORMATION CONTACT: Carole Cook, Climate Change Division, Office of Atmospheric Programs (MC–6207J), Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460; telephone number: (202) 343–9263; fax number: (202) 343–2342; email address: *GHGreporting@epa.gov*. For technical information, contact the Greenhouse Gas Reporting Rule Helpline at: *http://www.epa.gov/climatechange/emissions/ghgrule_contactus.htm.* Alternatively, contact Carole Cook at 202–343–9263.

Worldwide Web (WWW). In addition to being available in the docket, an electronic copy of this final rule, memoranda to the docket, and all other related information will also be available through the WWW on the EPA's greenhouse gas reporting rule Web site at *http://www.epa.gov/climatechange/emissions/ghgrulemaking.html.*

SUPPLEMENTARY INFORMATION:

Regulated Entities. This final rule revision on reporting and recordkeeping requirements and verification procedures affects entities that must submit annual greenhouse gas (GHG) reports under the Greenhouse Gas Reporting Program (GHGRP) (40 CFR part 98). The Administrator has determined that 40 CFR part 98 is subject to the provisions of Clean Air Act (CAA) section 307(d). See CAA section 307(d)(1)(V) (the provisions of CAA section 307(d) apply to ''such other actions as the Administrator may determine''). Entities affected by this final rule are owners and operators of facilities that are direct emitters of GHGs, which include those listed in Table 1 of this preamble:

TABLE 1—EXAMPLES OF AFFECTED ENTITIES BY CATEGORY

Category	NAICS	Examples of affected facilities
General Stationary Fuel Combustion Sources.	.....	Facilities operating boilers, process heaters, incinerators, turbines, and internal combustion engines.
	321	Manufacturers of lumber and wood products.
	322	Pulp and paper mills.
	325	Chemical manufacturers.
	324	Petroleum refineries and manufacturers of coal products.
	316, 326, 339 ...	Manufacturers of rubber and miscellaneous plastic products.
	331	Steel works, blast furnaces.
	332	Electroplating, plating, polishing, anodizing, and coloring.
	336	Manufacturers of motor vehicle parts and accessories.
	221	Electric, gas, and sanitary services.
	622	Health services.
	611	Educational services.
	325193	Ethyl alcohol manufacturing facilities.
	311611	Meat processing facilities.
	311411	Frozen fruit, juice, and vegetable manufacturing facilities.
	311421	Fruit and vegetable canning facilities.
Adipic Acid Production	325199	Adipic acid manufacturing facilities.
Aluminum Production	331312	Primary aluminum production facilities.
Ammonia Manufacturing	325311	Anhydrous and aqueous ammonia production facilities.
Cement Production	327310	Portland cement manufacturing plants.
Ferroalloy Production	331112	Ferroalloys manufacturing facilities.
Glass Production	327211	Flat glass manufacturing facilities.
	327213	Glass container manufacturing facilities.
	327212	Other pressed and blown glass and glassware manufacturing facilities.
HCFC–22 Production and HFC–23 Destruction.	325120	Chlorodifluoromethane manufacturing facilities.
Hydrogen Production	325120	Hydrogen production facilities.
Iron and Steel Production	331111	Integrated iron and steel mills, steel companies, sinter plants, blast furnaces, basic oxygen process furnace shops.

TABLE 1—EXAMPLES OF AFFECTED ENTITIES BY CATEGORY—Continued

Category	NAICS	Examples of affected facilities
Lead Production	331419	Primary lead smelting and refining facilities.
	331492	Secondary lead smelting and refining facilities.
Lime Production	327410	Calcium oxide, calcium hydroxide, dolomitic hydrates manufacturing facilities.
Nitric Acid Production	325311	Nitric acid production facilities.
Petrochemical Production	32511	Ethylene dichloride production facilities.
	325199	Acrylonitrile, ethylene oxide, methanol production facilities.
	325110	Ethylene production facilities.
	325182	Carbon black production facilities.
Petroleum and Natural Gas Systems	486210	Pipeline transportation of natural gas.
	221210	Natural gas distribution facilities.
	211	Extractors of crude petroleum and natural gas.
	211112	Natural gas liquid extraction facilities.
Petroleum Refineries	324110	Petroleum refineries.
Phosphoric Acid Production	325312	Phosphoric acid manufacturing facilities.
Pulp and Paper Manufacturing	322110	Pulp mills.
	322121	Paper mills.
	322130	Paperboard mills.
Silicon Carbide Production	327910	Silicon carbide abrasives manufacturing facilities.
Soda Ash Manufacturing	325181	Alkalies and chlorine manufacturing facilities.
	212391	Soda ash, natural, mining and/or beneficiation.
Titanium Dioxide Production	325188	Titanium dioxide manufacturing facilities.
Zinc Production	331419	Primary zinc refining facilities.
	331492	Zinc dust reclaiming facilities, recovering from scrap and/or alloying purchased metals.
	311411	Frozen fruit, juice and vegetable manufacturing facilities.
	311421	Fruit and vegetable canning facilities.
Wastewater Treatment [a]	322110	Pulp mills.
	322121	Paper mills.
	322122	Newsprint mills.
	322130	Paperboard mills.
	311611	Meat processing facilities.
	311411	Frozen fruit, juice and vegetable manufacturing facilities.
	311421	Fruit and vegetable canning facilities.
	325193	Ethanol manufacturing facilities.

[a] The inputs to emission equations (for which reporting was deferred to 2015) in these categories were evaluated following the four-step process set forth in the memorandum entitled ''Process for Evaluating and Potentially Amending Part 98 Inputs to Emission Equations'' (Docket ID No. EPA–HQ–OAR–2010–0929). Refer to Section 1.B of the proposal preamble (78 FR 55994, September 11, 2013) for further information regarding this evaluation. No amendment to the subpart affecting this industry category was proposed as a result of the evaluation. Accordingly, this final action does not include any amendment to this subpart. Refer to Section II.B of this preamble for further discussion of the EPA's decision.

Table 1 of this preamble is not intended to be exhaustive, but rather provides a guide for readers regarding facilities and suppliers likely to be affected by this action. Types of facilities other than those listed in this table might also be affected by this action. To determine whether you are affected by this action, you should carefully examine the applicability criteria found in 40 CFR part 98, subpart A or the relevant criteria in the subparts. If you have questions regarding the applicability of this action to a particular facility or supplier, consult the person listed in the preceding **FOR FURTHER GENERAL INFORMATION CONTACT** section.

Many facilities that are affected by 40 CFR part 98 have GHG emissions from multiple source categories listed in Table 1 of this preamble.

Judicial Review. Under CAA section 307(b)(1), judicial review of this final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit (the Court) by December 23, 2014. Under CAA section 307(d)(7)(B), only an objection to this final rule that was raised with reasonable specificity during the period for public comment can be raised during judicial review. Section 307(d)(7)(B) of the CAA also provides a mechanism for the EPA to convene a proceeding for reconsideration, ''[i]f the person raising an objection can demonstrate to EPA that it was impracticable to raise such objection within [the period for public comment] or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule.'' Any person seeking to make such a demonstration to us should submit a Petition for Reconsideration to the Office of the Administrator, Environmental Protection Agency, Room 3000, William Jefferson Clinton Building, 1200 Pennsylvania Ave. NW., Washington, DC 20460, with a copy to the person listed in the preceding **FOR FURTHER GENERAL INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20004. Note that under CAA section 307(b)(2), the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by the EPA to enforce these requirements.

Acronyms and Abbreviations. The following acronyms and abbreviations are used in this document.

CAA Clean Air Act
CaO Calcium oxide
CAR Climate Action Reserve
CBI Confidential business information
CEMS continuous emissions monitoring system
CFR Code of Federal Regulations
CKD Cement kiln dust
CO_2 Carbon dioxide

e-GGRT Electronic Greenhouse Gas Reporting Tool
EPA U.S. Environmental Protection Agency
FISMA Federal Information Security Management Act of 2002
FR Federal Register
FTC Federal Trade Commission
GHG Greenhouse gas
GHGRP Greenhouse Gas Reporting Program
HCFC–22 Chlorodifluoromethane
HFC Hydrofluorocarbons
HTML Hypertext markup language
ICR Information Collection Request
IVT Inputs Verification Tool
KA Ketone-alcohol oil (or cyclohexanol)
lb Pound
MMBtu Million British thermal units
N_2O Nitrous oxide
NAICS North American Industry Classification System
NIST National Institute of Standards and Technology
NTTAA National Technology Transfer and Advancement Act
OMB Office of Management & Budget
PUC Public utility commission
RFA Regulatory Flexibility Act
SSM Startup, shutdown, and malfunction
TLS Transport Layer Security
TRI Toxics Release Inventory
UMRA Unfunded Mandates Reform Act
U.S. United States
WWW Worldwide Web
XML Extensible markup language

Organization of This Document. The following outline is provided to aid in locating information in this preamble.

I. Executive Summary, Background, and Overview

A. How is this preamble organized?

Section I of this preamble provides background information regarding the origin of the final amendments. Section I also discusses the EPA's legal authority under the CAA to promulgate and amend the Greenhouse Gas Reporting Rule (40 CFR part 98, hereinafter referred to as ''Part 98'') and the EPA's legal authority to make confidentiality determinations for new data elements required by this amendment. Section II of this preamble describes the final amendments to Part 98, which includes the EPA's proposed alternative verification approach. Section II of this preamble also describes the major changes made since proposal to the alternative verification approach and provides brief summaries of significant public comments and the EPA's responses thereto. Section III of this preamble finalizes the confidentiality determinations for the new data reporting elements being added to Part 98 in this action. Section IV of this preamble discusses the impacts of the final amendments. Section V of this preamble describes the statutory and executive order requirements applicable to this action.

B. Executive Summary

The EPA is finalizing the proposed alternative verification approach for the GHGRP, with some changes made in response to public comments. The alternative verification approach includes amendments to reporting and recordkeeping requirements of Part 98, as follows:

- Adding a requirement for certain reporters under 23 subparts to use an EPA-provided inputs verification tool (IVT). For these subparts, 324 inputs to emission equations for which reporting was deferred to 2015 and for which disclosure concerns have been identified must be entered into IVT.[1] IVT will perform electronic verification on the entered inputs to emission equations and use the entered inputs to calculate the emission equation results. IVT will not retain the entered inputs (i.e., the inputs are not reporting requirements under Part 98); instead, IVT will conduct certain checks (e.g., accuracy of the inputs and the calculated emissions values) at the time of data entry and generate a verification summary. The EPA will not have access to the entered inputs either during the time of entry or any time thereafter. However, the verification summary, which will be accessible to the EPA once the reporter has completed using IVT and the annual report is submitted, will provide the EPA with information to conduct further verification if necessary.
- For 23 subparts, removing the requirement to report 378 inputs to emission equations for which reporting was deferred to 2015 and for which disclosure concerns have been identified.[2]
- For reporters required to use IVT, specifying the format for maintaining records of data entered into IVT so that all such records are maintained in a consistent format; and for each facility subject to the IVT requirement, lengthening the record retention period from 3 to 5 years for all data entered into IVT and for other records maintained by the reporting facility under Part 98 (including subparts not required to use IVT).
- For certain reporters required to use IVT, adding new data elements to be reported.

The EPA is not amending the reporting requirements for 151 inputs to emission equations for which reporting was deferred, but for which disclosure concerns were not identified and the data remain useful. For these inputs to emission equations, the deferral will

[1] Under this final action, IVT would not be required to be used by reporters for any reported GHG for which the reporter uses a continuous emissions monitoring system (CEMS) or an EPA-approved alternative method—as allowed under 40 CFR 98.33(a)(5), 98.53(a)(2), and 98.223(a)(2) to calculate the reported GHG value, rather than using inputs to emission equations (for which reporting was deferred to 2015) and the associated EPA-provided calculation methodologies to calculate the reported GHG value.

[2] As mentioned above, there are 378 equation inputs for which reporting was deferred to 2015 and for which the EPA determined there are disclosure concerns, and 324 of these equation inputs must be entered into IVT. Fifty-four of the 378 equation inputs do not need to be entered into IVT because these equation inputs are redundant to other equations inputs being entered into IVT or are otherwise not needed for verification.

expire on March 31, 2015, by which date these inputs must be reported.[3]

This alternative verification approach builds on the EPA's experience and success with electronic reporting and verification during the first 4 years of the GHGRP. This alternative verification approach, which includes additional verification checks that IVT will conduct on data entered into IVT (during the data entry process), provides the EPA with information necessary to identify facilities with potential reporting errors and conduct further verification following the submission of annual reports. This alternative verification approach, including its associated revisions to recordkeeping and reporting requirements, provides an alternative to collecting certain data elements for which disclosure concerns have been identified, while maintaining the EPA's ability to verify data and ensure compliance with the GHGRP.

Also, in conjunction with the amendments, the EPA is establishing confidentiality determinations for the new data elements finalized in this action.

C. Background on the Action

On October 30, 2009, the EPA published the Greenhouse Gas Reporting Rule, 40 CFR part 98, requiring annual reporting of GHG data from a broad range of industry sectors (74 FR 56260). Under Part 98, the EPA requires annual reporting of data from certain facilities and suppliers above specified emission or quantity-supplied thresholds. On July 7, 2010 (75 FR 39094) and subsequent proposals (77 FR 1434, January 10, 2012; 77 FR 10434, February 22, 2012), we proposed confidentiality determinations for the data elements required to be reported. The confidentiality of each reported data element was determined using a two-step approach: (1) Grouping data elements into 22 data categories (e.g., inputs to emission equations, emissions, and unit/process operating characteristics that are not inputs to emission equations for direct emitter source categories) and (2) making confidentiality determinations either categorically or on the basis of individual data elements. Refer to both the July 7, 2010 proposal (75 FR 39097) and the May 26, 2011 final rule (76 FR 30785–30786) for more detailed descriptions of this process. Refer to the May 26, 2011 final rule also for a discussion of individual data element confidentiality determinations. The EPA has established final confidentiality determinations for part 98 data elements except those in the ''inputs to emission equations'' category (May 26, 2011, 76 FR 30782; August 13, 2012, 77 FR 48072; and August 24, 2012, 77 FR 51477).[4] We proposed that ''inputs to emission equations'' meet the definition of ''emission data'' under 40 CFR 2.301(a)(2)(i). Because, under section 114(c) of the CAA, emission data are not entitled to confidential treatment, we did not evaluate whether such data elements would qualify as CBI, including whether disclosure would likely cause substantial competitive harm to the reporting facilities (75 FR 39105 and 39108, July 7, 2010).

Following our proposal, we received numerous industry comments expressing concerns regarding potential disclosure of many of these data elements. In light of the comments, the EPA expressed that ''these concerns warranted an in-depth evaluation of the potential impact from the release of inputs to emission equations'' and that the EPA would ''complete this evaluation and take appropriate final actions regarding inputs to equations before these data elements are reported to EPA and potentially be subject to release.'' (76 FR 53060, August 25, 2011). In a document published on December 27, 2010, we issued a call for information (75 FR 81366) requesting additional information to assist us in conducting our evaluation. To allow sufficient time to complete this evaluation through notice and comment, we deferred the reporting deadline for data elements assigned to the ''inputs to emission equation'' category. Reporting of certain of these data elements was deferred to March 31, 2013, as specified in Table A–6 to subpart A; and reporting of the remainder of these data elements was deferred to March 31, 2015, as specified in Table A–7 to subpart A (see the August 25, 2011 final rule, 76 FR 53057).

Our process for the abovementioned evaluation was documented in the final deferral document (76 FR 53057, August 25, 2011) and the accompanying memorandum entitled ''Process for Evaluating and Potentially Amending Part 98 Inputs to Emission Equations'' (Docket ID No. EPA–HQ–OAR–2010–0929). As discussed in the final deferral document and memorandum, our evaluation involved a four-step process, as follows:

- Step 1: Determine whether each data element assigned to the ''inputs to emission equations'' category is already publicly available.
- Step 2: For data elements assigned to the ''inputs to emission equations'' category that are not publicly available, evaluate whether disclosure of the information is likely to result in substantial competitive harm.
- Step 3: For data elements assigned to the ''inputs to emission equations'' category that are likely to cause substantial competitive harm if disclosed, evaluate potential alternative calculation methods.
- Step 4: For data elements assigned to the ''inputs to emission equations'' category that are likely to cause substantial competitive harm if disclosed, evaluate potential alternative verification methods.

Using each step of the four-step evaluation process, the EPA evaluated data elements for which reporting was deferred to March 31, 2015.[5] The results of the evaluation were documented in the four following memoranda available in the EPA's Docket ID No. EPA–HQ–OAR–2010–0929:

- ''Evaluation of Public Availability of Inputs to Emission Equations for which Reporting was Deferred to March 31, 2015,'' August 2013.
- ''Evaluation of Competitive Harm from Disclosure of 'Inputs to Equations' Data Elements Deferred to March 31, 2015,'' August 2013.
- ''Evaluation of Alternative Calculation Methods,'' August 2013.
- ''Evaluation of Alternative Verification Approaches For Greenhouse Gas Reporting Rule Subparts for which Reporting of Inputs to Emission Equations was Deferred to March 31, 2015,'' August 2013.

Based on the results of this evaluation, the EPA proposed on September 11, 2013 (78 FR 55994) amendments to the recordkeeping and reporting provisions for 24 subparts of Part 98, including an alternative

[3] In this action, the EPA is providing an option for Subpart W reporters to delay reporting of six inputs to emission equations for two reporting years in specific situations. Refer to section III.A.3 of this preamble for further discussion on this topic.

[4] There are a small number of data elements (besides data elements categorized as ''inputs to emission equations'') for which we have not made final confidentiality determinations because we concluded that a determination of confidentiality for the data element should be made on a case-by-case facility basis. For example, annual ferroalloy product production capacity in subpart K (ferroalloy production), was not assigned a confidentiality determination; see 76 FR 30782, May 26, 2011.

[5] Based on the same four-step process, we also evaluated all data elements for which reporting was deferred to March 31, 2013 (Table A–6 to Part 98), which did not result in amendments to Part 98. Accordingly, affected facilities were required to report by April 1, 2013 these data elements for reporting years 2010 through 2012 and must include them in annual reports for subsequent reporting years, as required by Part 98. For a discussion of this evaluation, refer to the EPA's memorandum ''Summary of Evaluation of Greenhouse Gas Reporting Program (GHGRP) Part 98 ''Inputs to Emission Equations'' Data Elements Deferred Until 2013'' (December 17, 2012), available at *http://www.epa.gov/ghgreporting/documents/pdf/2012/documents/2013-inputs-memo.pdf.* In addition, the reporting of the inputs to emission equations in subpart I was addressed by amendments published on November 13, 2013 (77 FR 68162).

verification approach, to address the inputs to emission equations for which disclosure concerns were identified in these subparts. The public comment period for the proposed rule amendments was initially scheduled to end on November 12, 2013. The EPA received requests to extend the public comment period, and the EPA published a document in the **Federal Register** on November 6, 2013 (78 FR 66674) extending the public comment period to November 26, 2013.

In this action, the EPA is finalizing the proposed alternative verification approach for 23 subparts of the GHGRP with some changes from the proposed rule. The EPA had proposed amendments but is not taking final action on subpart L inputs to emission equations. Final action on subpart L inputs to emission equations will be addressed in a separate rulemaking.[6] Responses to comments submitted on the proposed amendments can be found in both Section II of this preamble and the document ''Greenhouse Gas Reporting Rule—Revisions to Reporting and Recordkeeping Requirements, and Proposed Confidentiality Determinations Under the Greenhouse Gas Reporting Program: EPA's Responses to Public Comments'' (see Docket ID No. EPA–HQ–OAR–2010–0929).

D. Subparts Covered in the Final Rule

The final amendments remove certain reporting requirements and add certain verification requirements for all subparts listed in Table 2 of this preamble. Table 2 of this preamble includes most of the subparts of Part 98 with inputs to emission equations for which the reporting deadline was deferred until 2015. Subpart I is not included in Table 2 of this preamble because reporting of the inputs to emission equations for subpart I was addressed by amendments published on November 13, 2013 (77 FR 68162). As mentioned above, subpart L is not included in Table 2 of this preamble because the EPA's final decision on reporting of the inputs to emission equations for subpart L will be addressed in a separate rulemaking. Subpart II is not listed in Table 2 of this preamble because no subpart II inputs to emission equations were determined to have disclosure concerns, so no subpart II inputs are removed from reporting under this amendment. Subpart W is excluded from Table 2 of this preamble as well, because no inputs to emission equations in subpart W are being removed from reporting. Refer to the memorandum ''Final Evaluation of Competitive Harm from Disclosure of 'Inputs to Equations' Data Elements Deferred to March 31, 2015,'' September 2014 (refer to Docket ID No. EPA–HQ–OAR–2010–0929) for discussions about the EPA's harm analysis results for subparts W and II. Refer to Section II.B of this preamble for a discussion of amendments to subpart W. Additionally, parts of these final rule amendments affect subparts not listed in Table 2 of this preamble. Specifically, for owners or operators of facilities subject to both a subpart listed in Table 2 of this preamble and a subpart of Part 98 not listed in Table 2 of this preamble, the amended recordkeeping duration applies to the facility's records required for all Part 98 subparts (to which the reporter is subject). Refer to Sections II.C and III.B of the proposal preamble for further discussion of this recordkeeping amendment (78 FR 55994, September 11, 2013). Additionally, owners or operators of facilities reporting under subparts E, H, O, Q, W, Y, AA, CC, and II, as well as certain owners and operators reporting under subpart C, must report inputs to emission equations for which reporting was deferred to 2015 and disclosure concerns were not identified for reporting years 2010 through 2013 in the reporting year 2014 annual report.[7] Refer to Section III.A.3 of the proposal preamble for further discussion of this reporting amendment (78 FR 55994, September 11, 2013).

TABLE 2—SUBPARTS AFFECTED BY THE FINAL AMENDMENTS REMOVING CERTAIN REPORTING AND ADDING CERTAIN VERIFICATION REQUIREMENTS [a]

Subpart
C—General Stationary Fuel Combustion—Stationary fuel combustion sources (e.g., individual units, aggregations of units, common pipes, or common stacks) excluding those that contain at least one combustion unit connected to a fuel-fired electric generator owned or operated by an entity that is subject to regulation of customer billing rates by the public utility commission (PUC) (excluding generators connected to combustion units subject to 40 CFR part 98, subpart D) and that are located at a facility for which the sum of the nameplate capacities for all such electric generators is greater than or equal to 1 megawatt electric output.[b c]
E—Adipic Acid Production.
F—Aluminum Production.
G—Ammonia Manufacturing.
H—Cement Production.
K—Ferroalloy Production.
N—Glass Production.
O—HCFC–22 Production and HFC–23 Destruction.
P—Hydrogen Production.
Q—Iron and Steel Production.
R—Lead Production.
S—Lime Manufacturing.
U—Miscellaneous Uses of Carbonate.
V—Nitric Acid Production.
X—Petrochemical Production.
Y—Petroleum Refineries.
Z—Phosphoric Acid Production.
AA—Pulp and Paper Manufacturing.
BB—Silicon Carbide Production.
CC—Soda Ash Manufacturing.
EE—Titanium Dioxide Production.

[6] Accordingly, comments received covering solely topics related to subpart L will be addressed in a separate rulemaking.

[7] For six data elements in subpart W, reporting of the data for reporting year 2013 may be delayed until reporting year 2015 in specific cases. Refer to section II.B.2 of this preamble for further discussion of this optional reporting delay. Further, final action on the inputs to emission equations whose reporting deadline was deferred until 2015 in Subpart L will be addressed in a separate rulemaking.

TABLE 2—SUBPARTS AFFECTED BY THE FINAL AMENDMENTS REMOVING CERTAIN REPORTING AND ADDING CERTAIN VERIFICATION REQUIREMENTS [a]—Continued

Subpart
GG—Zinc Production.
TT—Industrial Waste Landfills.

[a] This final action does not remove reporting requirements or require use of IVT for any reported GHG value for which the reporter uses a continuous emissions monitoring system (CEMS) or an EPA-approved alternative method—as allowed under 40 CFR 98.33(a)(5), 98.53(a)(2), and 98.223(a)(2)—to calculate the reported GHG value, rather than using inputs to emission equations for which reporting was deferred to March 31, 2015, and the associated EPA-provided calculation methodologies to calculate the reported GHG value.

[b] Includes one deferred input to an emission equations, 40 CFR 98.3(d)(3)(v), which is specified in subpart A of Part 98 and applies to only certain reporters under subpart C.

[c] These subpart C sources may elect to report inputs to emission equations rather than use IVT.

E. Legal Authority

The EPA is amending Part 98 under its existing CAA authority provided in CAA section 114. As stated in the preamble to the 2009 final GHG reporting rule (74 FR 56260, October 30, 2009), CAA section 114(a)(1) provides the EPA broad authority to require the information to be reported by this rule because such data would inform and are relevant to the EPA's carrying out a wide variety of CAA provisions. See the preambles to the proposed (74 FR 16448, April 10, 2009) and final Part 98 (74 FR 56260, October 30, 2009) for further information.

In addition, pursuant to sections 114, 301, and 307 of the CAA, the EPA has established final confidentiality determinations for the new data elements required by this amendment. Section 114(c) of the CAA requires that the EPA make publicly available information obtained under CAA section 114, except for information (excluding emission data) that qualifies for confidential treatment. The Administrator has determined that this action (Part 98 amendment and confidentiality determinations) is subject to the provisions of CAA section 307(d).

II. Summary of Final Amendments to Part 98

The EPA is finalizing the proposed alternative verification approach for the GHGRP, with some changes made in response to public comments. A detailed description of the alternative verification approach is available in the preamble to the proposed rule (78 FR 55994, September 11, 2013). Additionally, the EPA is finalizing its CBI determinations for the new reporting elements added to Part 98 in this action, with changes made in response to public comments.

This section of the preamble describes the final amendments to Part 98, organized according to the following four general areas:

- Addition of a requirement for facilities subject to the subparts listed in Table 2 of this preamble to use IVT to enter 324 inputs to emission equations into IVT for which reporting was deferred to 2015 and for which disclosure concerns were identified.
- Removal of the requirement to report 378 inputs to emission equations for which reporting was deferred to 2015 and for which disclosure concerns were identified.[8]
- Revision of recordkeeping requirements for facilities required to use IVT.
- Addition of new reporting elements for certain facilities required to use IVT.

These four areas of final amendments are described in more detail in Sections II.A through II.D of this preamble. Specifically, each of these sections includes a summary of final amendments, a summary of major changes since proposal, and a summary of the major comments and the EPA's responses thereto. The comment response document (Docket ID. No. EPA–HQ–OAR–2010–0929) includes a complete listing of all comments received on the proposed rule (78 FR 55994, September 11, 2013) and the EPA's responses.

Additional rationale for these amendments is available in the preamble to the proposed rule (78 FR 55994, September 11, 2013).

The final amendments also include minor changes from the proposed rule that harmonize regulatory text to be consistent with other provisions in 40 CFR part 98, clarify regulatory text, and correct minor errors in the proposal. These changes are described in the memorandum ''Summary and Explanation of Minor Changes Since the Proposed Rule'' (Docket ID No. EPA–HQ–OAR–2010–0929).

[8] As mentioned above, there are 378 equation inputs for which reporting was deferred to 2015 and for which the EPA determined there are disclosure concerns, and 324 of these equation inputs must be entered into IVT. Fifty-four of the 378 equation inputs do not need to be entered into IVT because these equation inputs are redundant to other equations inputs being entered into IVT or are otherwise not needed for verification.

A. Addition of a Requirement for Certain Reporters To Use an Inputs Verification Tool (IVT) To Enter Certain Data Elements

1. Summary of Final Amendments to Part 98

The EPA is finalizing the proposed requirement that IVT be used by facilities subject to the subparts listed in Table 2 of this preamble, with some exceptions for certain subpart C sources, as further discussed in Section II.A.2 of this preamble. Most commenters generally supported use of IVT as an effective method for verifying emissions. Using entered inputs to emission equations, IVT calculates the equation results, conducts electronic verification checks on the inputs, and generates a verification summary, as follows. IVT will be deployed within the Electronic Greenhouse Gas Reporting Tool (e-GGRT) and will be integrated without interrupting the current electronic reporting process. Reporters will enter data into e-GGRT that are required to be reported in the annual report, and will also enter into e-GGRT (via IVT) the inputs to emission equations for which reporting is no longer required under the amendments. IVT will use these entered data to calculate the equation results, conduct electronic verification checks on the entered inputs to emission equations, and generate a verification summary that informs the EPA about the verification results without specifying the entered inputs to emission equations. IVT will not retain the entered inputs to emission equations, which will not be electronically accessible to the EPA during their entry or anytime thereafter. Instead, the EPA will rely on the verification summary, which will become accessible to the EPA after annual report submittal, and other follow-up verification procedures described in the proposed rule for conducting verification. Sources subject to multiple subparts under Part 98 are required to use IVT for only those subparts listed in Table 2 of this

preamble. Reporters must use IVT starting with reporting year 2014. A detailed description of IVT and these requirements is provided in the proposal preamble (78 FR 55994, September 11, 2013), the memorandum ''Technical Approach and Design for Inputs Verification Tool,'' August 2013 (refer to Docket ID No. EPA–HQ–OAR–2010–0929), and Section II.A.3 of this preamble.

The inputs to emission equations required to be entered into IVT are specified in the ''verification software records'' provisions in the recordkeeping section of each subpart specified in Table 2 of this preamble.

Subpart C sources (e.g., individual units, aggregations of units, common pipes, or common stacks) that do not meet the following criteria have the option to use IVT or to report these deferred inputs to emission equations for which reporting was deferred to 2015: Contain at least one combustion unit connected to a fuel-fired electric generator owned or operated by an entity that is subject to regulation of customer billing rates by the public utility commission (PUC) (excluding generators connected to combustion units subject to 40 CFR part 98, subpart D) and are located at a facility for which the sum of the nameplate capacities for all such electric generators is greater than or equal to 1 megawatt electric output. For those sources who choose to report their inputs to emission equations, e-GGRT will require the reporters to waive the right to make confidentiality claims before they can be reported via e-GGRT.

2. Summary of Changes Since Proposal

This section provides a brief summary of changes to the requirement to use IVT since proposal. The EPA's rationale for these changes is provided in Section II.A.3 of this preamble as part of the EPA's response to the related comment(s).

The changes to the proposed requirement to use IVT are as follows:

- The EPA has revised one of the criteria in 40 CFR 98.36(f) that specifies which stationary fuel combustion sources (e.g., individual units, aggregations of units, common pipes, or common stacks) subject to subpart C of part 98 are required to report inputs to emission equations for which reporting was deferred to 2015. At proposal, 40 CFR 98.36(f)(1) stated that the stationary combustion source contains at least one combustion unit connected to a fuel-fired electric generator granted access by the Public Utilities Commission to deliver power to the local or regional power grid (excluding generators that are connected to combustion units that are subject to subpart D of the part). In the final rule, this criterion is revised to state that the stationary fuel combustion source contains at least one combustion unit connected to a fuel-fired electric generator that is owned or operated by an entity that is subject to regulation of customer billing rates by the public utility commission (excluding generators that are connected to combustion units that are subject to subpart D of the part).
- For sources that do not meet the criteria specified in 40 CFR 98.36(f), the EPA has added an option in 40 CFR 98.3(d)(3)(v) and 40 CFR 98.36(a) to either elect to use IVT or, if potential disclosure is not a concern to the reporters, to report these inputs to emission equations. For reporting year 2014, if a subpart C source elects not to use IVT, the source is required to report their subpart C inputs to emission equations for which reporting was deferred to 2015 for reporting years 2010 through 2014 in the reporting year 2014 annual report. If this source is not required to use IVT for other subparts listed in Table 2 of this preamble, the source would not be subject to the extended recordkeeping requirements of 5 years.[9]
- The EPA has revised the proposed amendments to 40 CFR 98.5(b) to add an option for reporters subject to using IVT to enter an explanation into IVT in cases where IVT has produced a warning message for an entered data value (e.g., the value is outside the EPA's expected range), but the reporter believes that the data value is accurate as entered.
- The EPA has revised its method for specifying which inputs to emission equations must be entered into IVT. At proposal, 40 CFR 98.5(b) indicated which inputs to emission equations must be entered into IVT by referring to equations specified in proposed Table A–8 of Part 98. In the final rule, the EPA identifies the inputs to emission equations that must be entered into IVT in a ''verification software records'' provision in the recordkeeping section of each affected subpart. Therefore, proposed Table A–8 is not included in the final rule. Refer to Section II.C of this preamble for further discussion of these ''verification software records'' provisions.

Additionally, in response to public comments, the EPA is making changes related to implementation of the alternative verification approach. These changes do not involve regulatory amendments to Part 98, but do improve the design and use of the IVT and address questions and concerns raised by commenters. A summary of these changes follows.

IVT Testing. The EPA will provide an opportunity well in advance of the March 2015 reporting deadline for stakeholders to test and provide feedback to the EPA on IVT for the 23 subparts addressed in this final action via a compliance assistance open testing period, or ''sandbox.'' Refer to Section II.A.3 of this preamble for a description of ''sandbox'' testing and further discussion of this opportunity. The EPA encourages all stakeholders to participate in the sandbox testing because this testing will provide a valuable opportunity for reporters to preview and familiarize themselves with the new application for all applicable subparts before the open reporting period begins, typically in mid-February. The EPA intends to offer sandbox testing from October through December 2014, providing testing by subpart on a rolling basis. Participants who identify an error in IVT will have the opportunity to provide feedback to the EPA regarding their IVT testing experience. Such feedback will ensure a higher quality IVT for reporting in early 2015 and subsequent years. For details on the sandbox testing, including a schedule of when testing will occur for each of the 23 subparts, please see *http://www.epa.gov/ghgreporting/reporters/training/inputs-verifier.html.*

IVT Design. In response to commenter input, the EPA has revised the IVT design to improve the ease of use and the efficiency of the data entry process, instructions, help screens, warnings, and error messages. Refer to Section II.A.3 of this preamble for further discussion of these revisions. See the EPA's comment response document in Docket ID No. EPA–HQ–OAR–2010–0929 for a list of all public comments regarding additional improvements to IVT and the EPA's responses, including revisions to address errors identified by commenters.

3. Summary of Comments and Responses

This section provides a brief summary of the significant comments received in response to the proposed requirement to use IVT, and the EPA's responses. The EPA's comment response document in Docket ID No. EPA–HQ–OAR–2010–0929 provides a complete listing of all related comments and the EPA's responses.

Comment: One commenter asserted that the verification approach that the EPA has used during the deferral period has been successful, is efficient, and should be adopted as EPA's permanent approach for verification, rather than requiring facilities to use IVT. The commenter asserted that, during this deferral period, verification checks have been conducted through e-GGRT on data that have been reported to the EPA. The commenter believes that while the EPA has identified reporting errors during these years, such concerns will become increasingly rare as reporters become more familiar with and are able

[9] If the source is required to use IVT for other subparts, the source must retain records for all subparts (including subpart C) for a period of 5 years.

to streamline the reporting process. The commenter asserted that in situations where the EPA is not able to verify the data, the EPA can continue to follow-up with facilities. The commenter also asserted that the interim verification approach used by the EPA has strong parallels to other ''certification'' requirements that the EPA has long deemed sufficient to ensure compliance in similar circumstances. Finally, the commenter asserted that because the interim verification approach has been successful, the risk of entering CBI into an unproven system that has the potential to be insecure is not justified.

Response: As the commenter notes, the EPA has been conducting verification checks using data other than inputs to emission equations. Although the checks to date gave us some confidence in the submitted data, the verification approach being finalized in this action allows for more precise checks to be conducted and therefore a more robust verification approach. Specifically, requiring that the inputs to emission equations (for which disclosure concerns were identified) be entered into IVT allows the tool to verify reported emissions by calculating the emission equation results as well as conducting verification checks on the entered inputs to emission equations. These checks are designed to ensure that calculations are performed correctly by the reporter and that appropriate data were used to calculate emissions. While the EPA agrees that over time, commenters will become more familiar with e-GGRT and IVT and the increased familiarity may help to reduce reporting errors, it is important that the Agency's verification process is as robust as it can be to ensure the accuracy of the submitted data. The verification approach finalized in this action will accomplish that goal while at the same time addressing the concerns regarding potential disclosure of sensitive information.

Regarding the comment that the verification approach used during the deferral period is similar to ''other certification requirements that the EPA has long deemed sufficient to ensure compliance in similar circumstances,'' it is not clear which programs to which the commenter is referring. As the EPA stated in the memorandum ''Evaluation of Alternative Verification Approaches For Greenhouse Gas Reporting Rule Subparts for which Reporting of Inputs to Emission Equations was Deferred to March 31, 2015'' (EPA–HQ–OAR–2010–0929–0048), the EPA considered the verification approach used by the EPA's Toxics Release Inventory (TRI) program, which requires self-certification that the information reported is accurate, and includes electronic data checks and follow-up conducted by the EPA. However, the TRI is a different type of program than the GHGRP in that it does not require specific monitoring and calculation approaches, but rather requires that estimates be based on the best available information. In contrast, the GHGRP prescribes a set of specific calculation methods, or equations, for individual source categories, processes, and emission units, so that data collected from multiple facilities are consistent and comparable. Given the additional specification required by the GHGRP, the EPA concluded that the more precise checks that will be conducted by IVT are warranted.

The EPA addresses the comment about IVT's security and the assertion that the system is unproven later in this section of the preamble.

Comment: One commenter expressed concern regarding the language used in 40 CFR 98.36(f)(1), indicating that the language is vague and confusing. The commenter stated that the phrase ''granted access by the Public Utilities Commission (PUC) to deliver power to the local or regional electric power grid'' could result in confusion or overly-broad reporting of CBI. The commenter explained that some jurisdictions impose only registration and other ministerial requirements on units granted access; whereas some jurisdictions ''engage in direct price and other regulation of vertically integrated and other utility operations that grant or restrict franchise rights.'' The commenter cautioned that it is not clear what level of regulation constitutes a ''grant of access'' under the rule, explaining that all units, regardless of type or regulatory regime, require ''access'' to a local or regional grid in some form to make off-site sales of power.

The commenter recommended that the EPA avoid misinterpretation of 40 CFR 98.36(f) by clarifying in the final rule that only units subject to regulation as ''public utilities under the laws and regulations of a given state'' (as opposed to those under other Federal regulations or not otherwise subject to State utility commission oversight of operations and rates as ''public utilities'') should be considered as having been ''granted access by the Public Utilities Commission to deliver power to the local or regional electric power grid.'' The commenter also stated that it is incorrect to assume that information provided to PUCs or similar institutions is also disclosed publicly, and that the EPA should clarify how it will address such information if the PUC treats that information as CBI or it is otherwise not available to the public.

Response: For the reasons stated below, the EPA agrees that the proposed 40 CFR 98.36(f)(1) does not clearly define the combustion units that must report subpart C inputs to emission equations for which reporting was deferred to 2015. Proposed 40 CFR 98.36(f) specified that: (1) The stationary combustion source contains at least one combustion unit connected to a fuel-fired electric generator that has been granted access by the Public Utilities Commission to deliver power to the local or regional electric power grid (excluding generators that are connected to combustion units that are subject to subpart D of the part); and (2) The stationary fuel combustion source is located at a facility for which the sum of the nameplate capacities for all electric generators specified in paragraph (f)(1) of the section is greater than or equal to 1 megawatt electric output.[10] As indicated in the memorandum, ''Evaluation of Competitive Harm from Disclosure of 'Inputs to Equations' Data Elements Deferred to March 31, 2015,'' August 2013 (refer to Docket ID No. EPA–HQ–OAR–2010–0929), the EPA had found no disclosure concerns for any combustion source meeting the proposed criteria in 40 CFR 98.36(f)(1), including combustion sources owned or operated both by power producers whose primary purpose is selling electricity and by power producers whose primary purpose is not selling electricity. It was the EPA's understanding at the time that both types of power producers are granted access to the grid by the PUC, that such grant requires that the associated consumer billing rates be regulated by PUCs and that, therefore, the power producers experience a high level of transparency due to the practice of the owner or operator disclosing fuel costs to the PUC through ratemaking procedures. Based on the above understanding, the EPA had concluded that releasing these data would not reveal any proprietary information about facility or process performance, design, and operation; cost to do business; raw material usage; or production.

In light of the comment above, the EPA further investigated the reporting obligations of the owner or operators of power producers to PUCs. Based on these investigations, the EPA established that the PUC does not

[10] We received no comment on the proposed criterion (2), and we are therefore finalizing that criterion as proposed.

typically grant access to the grid, but sometimes requires utilities to grant other power producers access to the grid. The EPA recognized that not all power producers that are granted access to the grid are subject to regulation of rates by PUCs, and therefore some of these power producers do not experience the high level of transparency that would be associated with the disclosure of fuel costs to the PUC through ratemaking procedures. As a result, the EPA cannot conclude that there would be no disclosure concerns associated with the release of these data for power producers based on their connectivity to the grid, given that some power producers connected to the grid are not subject to regulation of rates by the PUC. The new understanding and resulting harm analysis described above are also reflected in the memorandum ''Final Evaluation of Competitive Harm from Disclosure of 'Inputs to Equations' Data Elements Deferred to March 31, 2015,'' September 2014 (refer to Docket ID No. EPA–HQ–OAR–2010–0929). Given that the EPA found no disclosure concerns with respect to those power producers subject to regulatory oversight of consumer billing rates by a PUC, the EPA has changed proposed 40 CFR 98.36(f)(1) in the final rule to more clearly and accurately describe the combustion units that must report as those units owned or operated by an entity that is subject to regulation of customer billing rates by the public utility commission. Power producers subject to regulatory oversight of consumer billing rates by a PUC include investor-owned utilities (IOUs) (i.e., the most common type of utility regulated by PUCs), non-utility generators, and consumer-owned utilities (COUs) that are subject to regulation of customer billing rates by a PUC. Because industrial plants that generate electricity are not subject to regulation of customer billing rates by a PUC, power producers owned or operated by industrial plants would not meet this revised reporting criterion in 40 CFR 98.36(f)(1).

The commenter recommended replacing the proposed language ''granted access by the PUC to deliver power to the grid'' with ''subject to regulation as a public utility under the laws and regulations of a given state.'' The terminology ''public utility'' could be interpreted to refer only to COUs, which are sometimes called ''public power,'' but excluding IOUs, which would not be appropriate because IOUs are subject to regulatory oversight of consumer billing rates by a PUC and therefore experience a high level of transparency. Also, the commenter's suggested phrase ''under the laws and regulations of a given state'' could be interpreted as meaning any state law or regulation, regardless of whether they are associated with PUCs. Given that virtually all facilities generating electricity are governed to some degree by other state laws and regulations, and those regulated by the PUC might not be regulated for ratemaking purposes, this suggested text would expand the reporting requirement beyond those facilities subject to regulation of rates by the PUC, which is the basis for our finding of transparency. Accordingly, the EPA has determined that the rule text suggested by the commenter was overly broad. The EPA has determined that the text ''owned by an entity subject to regulation of customer billing rates by a public utility commission'' more accurately describes the power producers for which we found no disclosure concerns and therefore must report the subpart C inputs to emission equations for which reporting was deferred until 2015.

The EPA agrees with the comment that not all information that is provided to PUCs may necessarily be made available to the public; however, the EPA believes that power producers subject to regulation of rates by PUCs generally experience a high level of transparency. The EPA has received no comment refuting the high level of transparency or stating that there are disclosure concerns associated with these subpart C inputs to emission equations. The final criterion (''subject to regulation of customer billing rates by PUCs'') was formulated to capture power producers that are utilities in states with so-called ''regulated'' electricity markets. In these states, power producers are generally owned by vertically integrated utilities, which operate as monopolies and sell power to customers at rates that are established through PUC proceedings. Given this monopolistic market for power producers subject to regulation of rates by PUCs, the EPA does not identify any disclosure concerns with reporting the inputs to emission equations in subpart C for reporters that meet the final criterion. In contrast, in ''deregulated'' or ''restructured'' states that have unbundled generation and delivery, independent power producers may compete to sell electricity, which is then delivered through a regulated distribution utility. These independent producers are not subject to PUC ratemaking procedures, and they will therefore not be required to report subpart C inputs to emission equation data for their combustion units. For the reasons stated above, the EPA concludes that clarifying the scope of the criteria to be those power producers that are subject to regulation of customer billing rates by PUCs accurately specifies facilities identified as having no disclosure concerns with the release of these data.

Specifically, the final 40 CFR 98.36(f) provides the following criteria to indicate which stationary fuel combustion sources (e.g., individual unit, aggregation of units, common pipe, or common stack) must report their inputs to emission equations for which reporting was deferred to 2015: (1) The stationary fuel combustion source contains at least one combustion unit connected to a fuel-fired electric generator owned or operated by an entity that is subject to regulation of customer billing rates by the public utility commission (excluding generators that are connected to combustion units that are subject to subpart D of the part); and (2) The stationary fuel combustion source is located at a facility for which the sum of the nameplate capacities for all electric generators specified in paragraph (f)(1) of the section is greater than or equal to 1 megawatt electric output. For any stationary fuel combustion source subject to subpart C that does not meet these criteria, the final rule provides an option for the source either to use IVT starting in reporting year 2014 or to report these data to the EPA, including reporting the data specified in revised Table A–7 for reporting years 2010 through 2013.[11] Refer to the comment summary and the EPA's response immediately following this response for further discussion about this new option.

Comment: Three commenters asserted that the EPA not require them to use IVT. They asserted that reporters under subpart HH (municipal solid waste landfills) have not expressed disclosure concerns regarding inputs to equations during comment periods for previous rulemakings, and that the proposal did not take this into consideration as it did not include an option to allow reporters to submit data to the EPA rather than use IVT. They further asserted that under the proposal, they would be required to use IVT for only a single equation input (quantity of fuel combusted under subpart C, Tier 1), and that the burden to their industry associated with use of IVT is not warranted, given that the single

[11] As discussed above, the e-GGRT will require that such reporter waive any confidentiality claim for its facility's inputs to emission equations before such data can be entered into e-GGRT.

equation input is associated with less than 1 percent of reported GHG emissions from the industry. The commenters expressed concern that imposing the proposed requirements associated with IVT on landfills would be burdensome, and indicated that they would be willing to report the single data element to the EPA. They recommended that the EPA exclude Tier 1 reporters from being required to use IVT.

Response: The IVT requirements in the final amendments for subpart C, which covers a wide range of industries, address disclosure concerns identified for certain ''inputs to emission equations'' data elements. However, these commenters expressed that they do not have disclosure concerns with their fuel use data, the single input required for Tier 1 reporting under subpart C. For these commenters who are not concerned with reporting their fuel use quantity under subpart C, the EPA sees no reason to insist that they use IVT instead of reporting such data. In addition, the fact that these commenters have not identified disclosure concerns with any inputs to equations suggests that it is likely that landfills using other subpart C calculation methods besides Tier 1 may similarly prefer to report inputs to emission equations data elements under subpart C instead of using the IVT. Further, given the wide range of industries reporting under subpart C, it is possible that there are other industries that do not have disclosure concerns with fuel quantity and other equation inputs for subpart C calculation methods. For any such subpart C reporter, the EPA similarly sees no reason to insist that it use IVT instead of reporting such data. Accordingly, the EPA is revising 40 CFR 98.36 to make it optional for subpart C sources that do not meet the criteria for electric generators in 40 CFR 98.36(f) [12] to use IVT. As such, under the final rule, a subpart C reporter, except for those meeting the criteria of 40 CFR 98.36(f), who does not have disclosure concerns for the subpart C inputs to emission equation data elements may waive confidentiality claims and report such data instead of using IVT. Before e-GGRT will accept entry of these inputs to emission equations data, it will require that the reporter waive confidentiality claims of such data.

If a subpart C source elects to report these data for reporting year 2014, the source is required to report these data for reporting years 2010 through 2013 as part of the reporting year 2014 annual report. If a source elects to use IVT in reporting year 2014, and then the source elects in a future year to report these data, the reporter will not be obligated to report these data for any prior year.

Comment: Six commenters recommended that the EPA allow reporters time to test IVT prior to the start of reporting for reporting year 2014, using a fully functional ''sandbox'' testing environment similar to that used previously for e-GGRT testing. These commenters urged the EPA to allow sandbox testing for each affected subpart, arguing that the subpart X prototype developed for commenter review at proposal allowed them to review only the design and functionality of the prototype for subpart X. They stressed that additional testing is necessary to ensure IVT works for all affected subparts. Two commenters noted that sandbox testing would allow errors in the software to be found and corrected prior to implementation. Commenters also noted that sandbox testing of each subpart would enable them to determine whether IVT calculates emission equation results correctly and stated that sandbox testing would provide an opportunity for reporters to compare results of the calculations in IVT against the values calculated using the optional calculation spreadsheets. Other commenters requested sandbox testing because it would allow them to review and comment on the verification ranges incorporated in IVT. One commenter stated that testing could provide important information that may result in improvements to IVT that obviate the need for reporters to over-ride error messages. Other commenters expressed concern about protection of CBI and concluded that rigorous testing of each affected subpart is critical to ensuring confidential data are protected.

Four commenters recommended that the EPA allow sandbox testing of the XML version of IVT. These commenters noted that the pilot IVT provided very limited testing for reporters using the XML option. They noted that the testing was limited to only one subpart, that only one sample XML file was provided for testing, and that the EPA did not provide the XML schema. Two commenters requested that the EPA provide additional time for reporters to review and test the XML IVT for each subpart. The complexity of the XML option, they argue, makes thorough testing of any XML schema essential.

Eight commenters asserted that the pilot tool available during the comment period for the subpart X mass balance methodology was too limited, and as a result provided limited value in assessing the burden of the tool for the other methodologies and subparts that would be required to use the tool. Two of these commenters noted that because subpart X has different inputs to equation data elements and equations than other subparts, they were unable to provide adequate feedback on the tool during the comment period. Two of these commenters suggested that the EPA develop a pilot reporting tool for their subpart of interest, and re-propose the verification tool for that subpart to provide ample opportunity to provide public comment on the burden associated with the use of the tool. Three of these commenters asserted that because the pilot testing for subpart X was limited to the mass balance methodology, it provided limited value to assess the ease of use and burden of the tool for the other methodologies within subpart X.

Two commenters indicated that reporters need more time in 2015 to complete their annual reports than in previous years. One commenter stated that in the past, the EPA has provided industry just a handful of weeks before the reporting deadline to update all of its data systems, input all of its data into e-GGRT, correct any errors, complete internal reviews of the reports, and to submit the reports. The commenter noted that the short timeframe was extremely challenging in past years. Both commenters indicated that it would be unacceptable for the EPA to provide another short timeframe in 2015, considering the new requirements to back-report 2010 through 2013 data and use the new IVT. One commenter requested that the inputs verification tool be fully functional by January 1, 2015 to allow reporters to undergo the required software development so that their systems accurately ''sync'' with the new version of e-GGRT. The commenter suggested that the EPA include language in Subpart A to indicate that for each day past January 1, 2015 that the upgraded e-GGRT is not available, the reporting deadline will be extended by one day.

Response: During the public comment period, the EPA provided a subpart X prototype for testing and comment. This prototype allowed reporters to review the overall design, structure, and functionality of IVT, which applies to all subparts that are to use the tool. It was not necessary to have a prototype for every subpart during the open comment period because the overall design of IVT is the same irrespective of the specific methodologies, or

[12] Sources meeting the criteria in 40 CFR 98.36(f) must report their subpart C inputs to emission equations that were deferred from reporting until 2015.

equations, in each subpart. Specifically, the tool demonstrated the following functions that apply to all subparts that are to use the tool: How IVT functions within e-GGRT, how to navigate from e-GGRT to IVT and vice versa, how inputs are entered into IVT, how IVT calculates equation results based on the inputs to emission equations entered, how an emission equation result calculated in IVT is transferred to the annual reporting form in e-GGRT, how the reporter may override an emission value calculated by IVT, how the results of the verification checks conducted in IVT appear in the verification summary, how a reporter may enter inputs to emission equations into IVT over multiple e-GGRT sessions without having to start over each time the reporter logs out of e-GGRT (by saving them on their local computer), and how to use the XML bulk upload feature rather than using webforms. Reporters were also able to generate the list of inputs entered into IVT that must be kept as a record, view the format of the records file created, and test the downloading of the records file for recordkeeping purposes. These features that were available for testing represent all of the key functions of IVT. Comments on any of the above features received during the public comment period would apply to all subparts that are required to use IVT and not just the subpart X prototype. The feedback assisted the EPA in determining improvements to the design and functionality of IVT for all subparts with the IVT requirement.

Although providing IVT for all subparts during the comment period was not necessary, the EPA agrees with the commenters that both the EPA and reporters would benefit from the opportunity to test IVT for all applicable subparts prior to the beginning of reporting for reporting year 2014. Accordingly, the EPA will offer reporters an opportunity prior to the beginning of the reporting year 2014 open reporting period (which is typically in mid-February) to view and provide feedback on the IVT modules for all 23 subparts listed in Table 2 of this preamble. The EPA will use a sandbox testing environment similar to that used previously for e-GGRT testing. The EPA intends to offer sandbox testing from October through December 2014, providing testing by subpart on a rolling basis. For details on the sandbox testing, including a schedule of when testing will occur for each of the 23 subparts, please see *http://www.epa.gov/ghgreporting/reporters/training/inputs-verifier.html.* We are confident that this sandbox testing period will provide reporters the time needed to sync their systems with IVT prior to the open reporting period for reporting year 2014, and submit their reports by March 31, 2015.

As previously provided for in the 2010 sandbox for testing of e-GGRT, the sandbox environment for IVT will provide participants an opportunity to try IVT functions for all 23 subparts, including navigating between IVT screens, entering data, testing the XML uploading option (saving XML files to local drives, and uploading XML files to IVT), checking the built-in calculation algorithms, and accessing Help content. Participants will be assigned a test facility for which they will be able to enter mock data for any IVT subpart module they wish to test.

Sandbox participants may notify the EPA should they identify an error, bug, or technical glitch in IVT. The EPA plans to conduct extensive testing to ensure that IVT calculates the emissions correctly for all subparts; however, should any calculation or other subpart-specific errors remain, these can be detected during the sandbox period and addressed prior to the open reporting period. Because extensive internal testing will have been conducted prior to the compliance assistance ''sandbox'' being made available, the EPA does not anticipate major issues during the sandbox period that cannot be addressed prior to the open reporting period.

Regarding the comment that additional time is needed due to the back-reporting of a significant amount of information, the EPA notes that, with the exception of subpart W, only a handful of inputs to equations in each subpart must be back-reported for years 2010 through 2013 (i.e., reporters typically will have no more than 10 inputs to equations in each of these subparts to report for these years.) Further, as discussed above, because the system will have gone through extensive testing followed by an IVT sandbox period for reporters to sync their systems with IVT before it is opened for reporting, we are confident that the reporters will have sufficient time to submit their reports, including back reporting a small number of inputs for reporting years 2010 through 2013. For subpart W, which has a substantial number of inputs to be back-reported to the EPA for these years, the EPA plans to use a spreadsheet to collect this data, and anticipates publishing the spreadsheet in October 2014. This will allow facilities to begin data entry into the spreadsheet prior to the open reporting period. The spreadsheet can then be uploaded to e-GGRT during the open reporting season. Refer to Section II.B.1 of this preamble for a discussion of the timing of entering inputs to emission equations for reporting years 2011 through 2013 for subpart W. In light of the extensive testing and the sandbox period, which will allow reporters to sync their systems with IVT prior to the open reporting period, and the EPA's plans to make the subpart W spreadsheet for 2010 through 2013 available in October, we have determined that the typical reporting period of approximately six weeks is sufficient.

As requested by commenters, sandbox participants may provide input on the ranges that the EPA has identified for the reasonable range verification checks on the inputs entered into IVT. As is the case for all expected range checks used as part of the electronic verification process, the EPA will set initial ranges and will continually refine ranges as additional information is obtained. Should the EPA receive feedback on expected range checks during the sandbox period, the EPA will review the feedback and adjust the ranges prior to the open reporting period as appropriate. Also, as is the case for all expected range checks conducted in e-GGRT, the reporter may enter any value into IVT regardless of the reasonable range. The expected ranges are not used by the EPA as a final determination regarding data quality or compliance; rather, they are used as a first step of the verification process and are further investigated. Finally, as is discussed in more detail later in this section of this preamble, during the reporting process, the reporter will have the opportunity to add a comment to the EPA associated with individual verification warnings in IVT. As a result, if reporters feel that an explanation is needed as to why a particular range was exceeded or that the range within IVT needs to be adjusted, they may do so as part of the annual reporting process.

Regarding the comments on the XML upload reporting option, the EPA notes that during the public comment period, we published an XML schema for the IVT prototype, as well as two sample files to be used with the prototype, an XML Inputs Verifier file and an XML Annual Report File. The sandbox that will be available for IVT will also include this XML upload reporting option. For subparts with XML reporters, the EPA will provide the XML schema for the inputs to equations data entered into IVT and example XML files to use for testing the XML upload approach. The EPA agrees that changes to the XML schema need to be

thoroughly tested, and the EPA plans to do so prior to releasing the XML schema for e-GGRT and IVT.

The EPA disagrees with the comments that the pilot verification tool provided at proposal for the mass balance methodology in subpart X was of limited value for assessing the burden of use for other methodologies and subparts required to use IVT. As discussed in detail above, the overall design of the IVT is the same irrespective of the differences in methodologies and subparts. Accordingly, the subpart X prototype allowed reporters to review the overall design, structure, and functionality of IVT for all subparts that are to use the tool. Based on their experience with the subpart X prototype, reporters may assess the burden associated with other subparts by comparing the number and complexity of equations in other subparts to the equations in subpart X. Further, in the proposed Impacts Analysis, ''Assessment of Cost Impacts of 2015 Inputs Proposal—Revisions to Reporting, Recordkeeping, and Verification Requirements Under the Greenhouse Gas Reporting Program,'' August 2013 (available in the EPA's Docket ID No. EPA–HQ–OAR–2010–0929), the EPA stated that the burden for entering inputs to equations into IVT is no different than it would be to enter them into e-GGRT for reporting to the EPA. The EPA did not receive comments on the proposed Impacts analysis. For the reasons stated above, we do not believe that it is necessary to re-propose the tool with all subparts to provide an opportunity to comment on the burden of using the tool for all subparts, as suggested by several commenters. Refer to the next comment and response for additional detail on the specific comments provided to the EPA on IVT design and functionality and how the EPA is addressing those comments.

Regarding the comment that rigorous testing of each affected subpart is critical to ensuring that data are adequately protected, refer to comments and responses later in this section on how the EPA is ensuring that inputs entered into IVT are not retained by the EPA.

Comment: Many commenters provided useful suggestions for improvements to IVT. For example, some commenters recommended IVT include functions that allow reporters to automatically populate web form fields in situations where the data are reported on a recurring basis (e.g., weekly, monthly, etc.) and are likely to remain constant over time. Other commenters recommended IVT allow data to be copied from external spreadsheets or other data files instead of being entered individually into IVT. These commenters noted that this approach would save time and avoid unnecessary transcription errors. Three commenters recommended that IVT flag any data entry errors related to the data being outside an acceptable range directly following data entry, rather than on a separate screen. One of these commenters requested that IVT should provide more information regarding the error triggered (e.g., whether the entered data are above or below the expected range). These commenters stressed that alerting reporters to errors at the moment of data entry would help reporters identify errors more quickly. Three commenters recommended an additional comment field be added to IVT that allows reporters to respond to IVT error messages. They maintained that this approach would streamline the verification process and save time for both the EPA and reporters by potentially avoiding follow-up after the report has been submitted to the EPA.

Response: The EPA has reviewed the commenters' suggested improvements to IVT and, with the exception of one suggestion described below, has incorporated these improvements in IVT. The EPA agrees with the suggestion that reporters should have the ability to automatically populate web form fields in situations where the data required to be entered were collected on a recurring basis (e.g., weekly, monthly, etc.). For example, in subpart X, for the gas stream entry fields, reporters will be able to automatically populate the monthly carbon content and molecular weight of the feedstock with the first month's values since those values may remain constant in many cases. The EPA anticipates that this change in IVT will improve the efficiency of the data entry process and reduce chances for errors associated with manual entry. Regarding the recommendation to allow data to be copied from external spreadsheets or other data files instead of being entered individually into IVT, the EPA agrees with commenters that this capability would reduce burden and errors associated with manual data entry. For each data element for which the reporter is required to enter values collected at a frequency greater than monthly, the EPA is providing an off-line tool to convert spreadsheets to the XML input format, for use with IVT.

The EPA has evaluated commenters' concerns regarding the flagging of data errors when they are entered into IVT. As discussed in the proposed rule, IVT provides ''real-time'' checks as data are entered into IVT, similar to checks in e-GGRT. The results of these checks, called validation messages in IVT, will be easily accessible within e-GGRT at the time of entry. Although such warnings will be on a separate screen, there are direct links to such screens to ensure that it is easy to navigate to IVT to revise data as needed. This is the same for all validation checks that are currently conducted and displayed within e-GGRT for all reporters. Although we recognize the potential usefulness of this suggestion, this type of design change would require a significant amount of resources, and cannot be done prior to the reporting period for reporting year 2014. The EPA is always open to making changes to e-GGRT and IVT over time, and may consider whether it is feasible to show validation messages on the same screen on which the data are being entered and, if so, whether to make such adjustment in IVT.

The EPA agrees with commenters that IVT should provide more information regarding the error triggered (e.g., whether entered data are above or below the expected range). Accordingly, in response to these comments, IVT will include an ''out of range'' message in the verification summary that indicates the range being used for each data element entered as well as whether the value entered was above or below the range. We anticipate that this additional information will make the verification process more efficient by reducing the amount of follow-up required for verification.

Finally, the EPA has considered commenter recommendations for addition of a comment field allowing reporters to respond to IVT error messages, explaining why a potential error may not be an error, such as when an entered equation input is found to be out of range or has otherwise triggered a message on the verification summary. The EPA recognizes that, in some cases, reporters may have inputs to emission equations that are legitimately outside of identified ranges due to unique circumstances. In cases such as these, we agree with commenters that this option will reduce the amount of follow-up required of the EPA and reporters. As such, we have implemented this change in IVT.

Comment: Eight commenters raised security concerns regarding data entered into IVT. These commenters wanted additional information on how IVT would protect sensitive data and assurances that the data would not be inadvertently disclosed. One commenter stated that the security of IVT was particularly important to facilities that are required to comply with certain U.S.

export control requirements. Four commenters were concerned about security during the period of transient storage while the user is logged into IVT of data. Some commenters asked for clarification on where the data will reside during this period, while other commenters wanted the EPA to demonstrate that data would only be stored temporarily and that no data would be retained during a system crash. Some commenters wanted additional information about who would have access to the data during this transient storage of the data. One commenter wanted the EPA to confirm that data with disclosure concerns entered into IVT would not be accessible to EPA personnel. Two commenters were concerned that outside vendors would have access to data in the transient storage area. Three commenters were concerned about the security of data transmitted over the Internet. Two commenters were concerned that data could be intercepted during transmission by proxy servers and that data may still be stored in these proxy servers after the session ends. One commenter expressed concern that use of XML files to input data into IVT raises security concerns because the format is easily readable, containing the definitions needed to decipher the data values. This commenter was also concerned that malicious or inadvertent HTML codes can be inserted into XML files thereby causing other security vulnerabilities. Other commenters wanted the EPA to confirm that IVT will not submit confidential information over the Internet.

Response: IVT is designed to operate securely within e-GGRT, as a transient process, such that data entered into IVT would be temporarily housed in the IVT system while the reporter is actively using IVT. The IVT system is designed so that entered inputs data are placed only in session (server memory). The entered inputs will not be saved to the underlying EPA database, nor will they be saved to the server's file system. The EPA has taken the following steps to ensure that inputs data are not mistakenly appended to data that are saved (e.g., when saving validation and verification summary records to the database) and to ensure that information saved to the server logs does not contain user-entered inputs data. IVT has not been configured to use the server's file system to temporarily save files. Instead, IVT is configured only to use memory for transient housing of inputs data while the reporter is actively using IVT. This configuration applies to inputs data entered into IVT webforms or data uploaded from a local 'inputs' file through the IVT webforms, as well as inputs data uploaded through the XML upload process. As with data entered through the webform, IVT will not save uploaded XML files to the underlying EPA database or to the server's file system, but will only retain the data in server memory for the duration of the session. Uploaded XML files will be validated against a published schema definition (i.e., published document prescribing the required format of the file), so in many cases XML files containing ''malicious or inadvertent HTML codes'' would be rejected by the system as not being well-formed. If ''malicious or inadvertent HTML codes'' were inserted into an XML in a manner that did not render it invalid, the file would be rejected by a process that inspects uploaded files for script tags. Therefore, the system is not vulnerable to any potential HTML code appended to these files. The entered inputs to emission equations are then erased when the user's session with e-GGRT ends.

Regarding the comments that unauthorized persons may be able to access data that are temporarily in session while the reporter is actively using IVT and the concerns with transmission of data over the Internet and potential data interception, the EPA complies with the strict security procedures and guidance governing access to federal data servers established by the National Institutes of Standards and Technology (NIST) and in accordance with the Federal Information Security Management Act of 2002 (FISMA). All EPA information systems must meet the security requirements defined in the NIST Special Publication 800–53.[13] Adherence to the NIST Federal Information Systems requirements are intended to protect EPA information systems, including e-GGRT, from a diverse set of threats including hostile cyber-attacks, natural disasters, structural failures, and human errors. As such, the program keeps a security plan up to date and conducts annual reviews of the security controls. Furthermore, in order to address the security concerns noted by the commenter regarding unauthorized access to data while it is in session on the server, the EPA has identified an additional security layer beyond the NIST requirements to encrypt the transient session data used by the server while the reporter is actively using IVT. The session data will be encrypted with a key unique to that user's session. As a result, the EPA has concluded that this suite of protections is sufficient to address concerns raised regarding the possibility of unauthorized persons accessing data in the transient housing area while the reporter is actively using IVT.

Regarding the comments expressing concern over transmission of data over the Internet and potential data interception, the inputs data entered by a reporter in the web form are encrypted via Transport Layer Security (TLS) security protocol. TLS is a standard security protocol providing an encrypted link between the client (the user's browser) and the EPA's servers. TLS encryption ensures that entered data are secure from the browser to the EPA server. Normal Internet HTTP communication sends data between the client and the server in plain text. Application of the TLS protocol to HTTP communication (HTTPS) will ensure that the inputs data are encrypted rather than in plain text while in transit. TLS encryption ensures that data are completely secure from the user's browser to the e-GGRT servers. Although data are transferred over the Internet through proxy servers, due to TLS encryption, the inputs data would never be in plain text and could not be deciphered by intermediate or proxy servers. TLS is the standard security protocol used to protect the transfer of many types of sensitive data, including credit card numbers, banking data, and similar information requiring maximum protection. The EPA does not use proxy servers for its e-GGRT database, but relies completely on dedicated server space at the National Computer Center. Therefore, TLS termination takes place only on secured e-GGRT servers. The EPA will always use these secure servers (identified with the ''https'' prefix), which identify that the TLS security protocol is applied, and IVT will not incorporate inputs to emission equations data into URLs. This also applies to data transferred through XML upload. XML data uploaded by a user will also be encrypted via TLS security protocol and will not be in plain text while in transit. If intercepted while in transit, the XML data would be encrypted and therefore indecipherable. These encrytion procedures will protect data as they are transferred between the client's browser and the EPA's servers.

IVT is also designed to protect data in the instance of a system malfunction. In the event of a system crash, all session data are lost, including the session key that would be capable of decrypting that data. There are no processes in place to save any information during a system crash. Therefore, if a reporter enters data

[13] *http://csrc.nist.gov/publications/PubsSPs.html.*

into IVT and the IVT system malfunctions, the reporter's data are not stored in any way and cannot be recovered.

Regarding an earlier comment that IVT is an unproven system, the EPA disagrees with this comment. The EPA designed a prototype to demonstrate the functionality of the tool. As stated earlier in this preamble, this prototype allowed reporters to review the overall design, structure, and functionality of IVT, which applies to all subparts required to use the tool. For additional information on this topic, please see the discussion earlier in this preamble on the prototype and ''sandbox'' testing.

In summary, the EPA has taken several steps to add safeguards and to build multiple security ''layers'' into the system to prevent release of the data as they are transmitted to the EPA's servers and temporarily housed while the user is actively using IVT, but are not retained in the server memory after the user's e-GGRT session ends. The EPA is confident that the described security procedures will adequately protect the data entered into IVT.

Comment: Six commenters stated that they consider equation input data required to be entered into IVT to be CBI and expressed concern that the EPA has not gone far enough to legally protect these data from public disclosure. Four commenters described how these data meet the five-part criteria specified in 40 CFR 2.208 for confidential treatment. The commenters asserted that the EPA recognized in its proposed rule that these data are entitled to protection from public disclosure. The commenters questioned why, given this recognition, the EPA has not afforded these data CBI protection under the CAA. Two commenters questioned why the EPA was silent in its proposal as to whether these data are to be afforded CBI protection, instead focusing on revising reporting and recordkeeping requirements for these data.

Five of the commenters referred to a continued risk associated with the proposed verification approach that equation inputs entered into IVT will be available to the public or subject to disclosure under the CAA. Four commenters noted that section 114(c) requires that the EPA must provide ''emission data'' to the public, if requested. One of these commenters described the continued risk as related to the EPA's inspection of facility records, indicating that the EPA did not include provisions in the proposal explaining whether or how records of equation input data entered into IVT are to be afforded CBI protection or otherwise protected from public disclosure as a result of Agency review of records. The commenter further stated that the proposed rule does not set forth a requirement that the EPA can access these data only through an official enforcement-related action that might afford the information privileged status and provide some security from public release, nor, according to the commenter, are there provisions to ensure that non-enforcement staff or EPA contractors cannot access the data and inadvertently release these data or otherwise render the information unprotected.

Three commenters further expressed concern that by retaining any residual risk of disclosure of equation input data entered into IVT, 40 CFR part 98 could potentially subject reporters to antitrust liability. The commenters explained that equation input data required to be entered into IVT include cost- and output-related information that is a significant determinant of prices, including information regarding fuel production and distribution, which provides details about plant operations and inputs, nature, and location of sources.

The six commenters contended that the EPA must take further steps to address the remaining ''residual risk'' of disclosure under the CAA of equation input data required to be entered into IVT. Five of the commenters urged the EPA to provide CBI protection to equation inputs entered into IVT. Four of the commenters urged the EPA to address their concerns about disclosure by explicitly stating in the final rule that data entered into IVT qualify for confidential treatment under the EPA's regulations and should not be deemed ''emission data.'' One commenter requested that the EPA address their concerns about disclosure by including in the final rule language expressly recognizing the CBI status of these data. One commenter urged the EPA to further address concerns about the residual risk of disclosure by clarifying, in the preamble to the final rule, that equation input data entered into IVT remain at all times in the possession of the company entering the data and thus are not subject to disclosure under any other Federal law as a result of entry into IVT.

Response: As explained below, the EPA has not determined either in this rulemaking or any other final action that the equation input data entered into IVT are entitled to CBI protection. The EPA previously amended Part 98 to defer the reporting of inputs to emission equations data elements to allow the Agency time to evaluate concerns raised by some reporters regarding potential public disclosure of some of these data elements and to take appropriate action (76 FR 53057, August 25, 2011). The four-step evaluation, which was designed to inform the Agency whether and what further action may be appropriate, includes discussions of potential disclosure scenarios as well as consideration of alternative emission calculation and verification methods.[14] The evaluation does not include establishing confidentiality status for any data that the EPA assigns to the inputs to emission equations category. Any such determination must be made in accordance with the CAA and the EPA's implementing regulations under 40 CFR part 2, subpart B. Based on the evaluation,[15] we had proposed, and are now taking final action, to replace the requirement to report certain inputs to emission equations by 2015 with a requirement to enter these data into IVT. Although the final rule addresses potential disclosure concerns with respect to certain inputs by providing an alternative verification tool (i.e., IVT) instead of requiring reporting of these inputs, it does not include final confidentiality determinations for any equation input data required to be entered into IVT, nor has the EPA stated anywhere in the rulemaking record that such data are entitled to CBI protection. The EPA therefore has not concluded that any such data (inputs to emission equations) are entitled to CBI protection.

Regarding the comments that expressed concern about the EPA's ability to protect equation input data entered into IVT, the concern may have stemmed from a mistaken belief that the EPA will have possession of such data. That is not the case as explained in detail here, as well as in the response to comment immediately above, Section II.A of the preamble to the proposed rule (78 FR 55994, September 11, 2013), and the memorandum ''Technical Approach and Design for Inputs Verification Tool,'' August 2013 (refer to Docket ID No. EPA–HQ–OAR–2010–

[14] For a description of the evaluation process, please see the memorandum titled ''Process for Evaluating and Potentially Amending Part 98 Inputs to Emission Equations'' (Docket ID No. EPA–HQ–OAR–2010–0929).

[15] The results of the evaluation were documented in the four following memoranda available in the EPA's Docket ID No. EPA–HQ–OAR–2010–0929: ''Evaluation of Public Availability of Inputs to Emission Equations for which Reporting was Deferred to March 31, 2015,'' August 2013; ''Evaluation of Competitive Harm from Disclosure of 'Inputs to Equations' Data Elements Deferred to March 31, 2015,'' August 2013; ''Evaluation of Alternative Calculation Methods,'' August 2013; ''Evaluation of Alternative Verification Approaches For Greenhouse Gas Reporting Rule Subparts for which Reporting of Inputs to Emission Equations was Deferred to March 31, 2015,'' August 2013.

0929). During the time period that a reporter is entering data (i.e., inputs to emissions equations) into IVT, the EPA will have no access to the data being entered. Further, when a reporter logs out of IVT, none of the data entered into IVT are retained in the EPA's electronic systems. To address concerns about potential release of these data via the Internet, the EPA provides further clarifications regarding the security of IVT elsewhere in this section of the preamble. Given that the EPA will have no access to, nor possession of, data entered into IVT, such data will not be considered to be agency records as defined by the Freedom of Information Act or the Federal Records Act, and the EPA cannot conceive, and the commenters did not explain, which federal law would require the EPA to release information that it does not have. For the same reason, the EPA also rejects any suggestion that the Agency is legally required to protect or make confidentiality determinations for equation input data entered into IVT. The commenters have not identified any law or regulation that requires the EPA to protect data not in the EPA's possession, nor do we believe that any such duty exists. For the reasons stated above, we disagree with the comments that the EPA must provide CBI protection to equation input data entered into IVT.

With respect to the commenter's inquiry on how records of equation input data entered into IVT, which are required to be kept on-site, are protected from public disclosure as a result of Agency review of records, we describe below the verification process, including follow-up on-site visits. As described below, we do not envision that an onsite review of records for purposes of verifying emissions reported using inputs that are entered into IVT would necessitate or typically involve collection of those records. Rather, visual inspections would likely suffice to determine whether or not a facility is in compliance.

As described below, the EPA has developed a robust electronic verification and communication system in order to ensure high quality data are reported under the GHGRP, and the verification summaries from IVT will be integrated into that process. This electronic verification approach helps to minimize the need for on-site review which helps to reduce the burden and costs to the EPA and reporters. Likely scenarios under which a GHGRP inspection could occur due to information received from the IVT verification summaries are described below. As described below, none of these activities typically involve the EPA's collection of the inputs entered into the IVT.

As explained in the proposed rule, the first step of the verification process will include review of the verification summary generated by the IVT in conjunction with the results of the verification checks that are currently used on the annual report data. In the event that the EPA's review results in remaining questions regarding data quality, the EPA plans to follow-up with the facility initially via email or phone to determine whether a reporting error has occurred. For example, if the EPA learns from the facility that the facility's production doubled in a given year due to unusually high demand, the EPA may then understand the increase in emissions, certain out of range warnings, and determine that there is not a data quality issue. If the EPA is unable to resolve the issue via phone and email, an on-site visit may be needed. The EPA anticipates that these visits would likely include a review of the records required to be kept which, as mentioned above, include the record of the inputs to emission equations that were entered into IVT as well as an examination of the monitoring equipment. Depending on the results of the verification summary for a particular facility, the EPA envisions two general scenarios for these on-site visits. One scenario would be that the verification summary produced by IVT for a particular facility indicates that the reported emissions values matched the values calculated by IVT but other verification checks show that certain inputs are outside the EPA's expected range(s). In that scenario, the EPA anticipates that if a site visit is needed, the site visit would focus on the accuracy of the inputs entered into IVT. To verify the accuracy of the inputs entered into IVT, the EPA would likely check whether data entered into IVT are consistent with other records required to be kept by the facility. For example, if an input to an equation is a monthly average of a value that is measured daily by a particular on-site monitor and the daily measured values are also required records, the EPA may confirm that the input entered into IVT is in fact the average of the daily values. In addition, the EPA may confirm that the on-site monitor meets the specifications prescribed in Part 98, such as calibration and accuracy specifications. If calibration and accuracy specifications do not comply with Part 98 requirements, then a substantive error [16] would likely be identified, and the facility would need to resubmit their report. If the inputs at issue comport with the on-site records, then there would be no further action necessary by either the EPA or the reporter. As described above, because we envision that verification would be completed while on-site, we do not expect that there would be a need to collect inputs records.

In the second scenario, an on-site visit that is conducted in a situation when the verification summary produced by IVT indicates a discrepancy between the reported emissions and the emission equation results calculated by IVT, the EPA anticipates that the visit would focus on determining the root cause of the discrepancy. The EPA would ask the facility to demonstrate how their emissions calculations yielded a result different from the one calculated through the use of IVT. The EPA expects that such discrepancy is likely a result of mathematical error(s), which would likely constitute a substantive error, and the facility would need to resubmit their report.

In both of these scenarios, the EPA envisions that the discrepancies would be resolved on-site and that collecting the on-site records of inputs would not be necessary. Despite the above, we do not rule out the possibility that collection of certain records could be necessary under unique circumstances not contemplated above. However, the EPA does not know at this point what records would be removed, the specific circumstances under which they would be collected and the reasons for such collection, and therefore we cannot address at this time how such records would be treated. Should that occur, the EPA will treat the collected information according to applicable laws and regulations.

Regarding the comments asserting that 40 CFR part 98 could potentially subject reporters to antitrust liability, the EPA reiterates that information entered into IVT is not reported to or collected by the EPA. As a result, it does not become an agency record and, therefore, it is not subject to Freedom of

[16] 40 CFR 98.3(h)(3) defines substantive error as an error that impacts the quantity of GHG emissions reported or otherwise prevents the reported data from being validated or verified. 40 CFR 98.3(h) states that once a substantive error is identified, an owner or operator shall, within 45 days of receipt of the notification, either resubmit the report that, for each identified substantive error, corrects the identified substantive error (in accordance with the applicable requirements of this part) or provide information demonstrating that the previously submitted report does not contain the identified substantive error or that the identified error is not a substantive error.

Information Act or other required disclosures related to agency records.

B. Removal of the Requirement To Report Certain Data Elements

1. Summary of Final Amendments to Part 98

The EPA is removing the requirement to report 396 data elements in the 23 subparts listed in Table 2 of this preamble. Of these 396 data elements removed from reporting, 378 data elements are removed due to disclosure concerns and 18 data elements are removed because these data elements are redundant to other inputs being reported or are no longer useful to be reported to the EPA in the absence of other inputs to emission equations that will no longer be reported (refer to the discussion below for further explanation). Of the 378 data elements removed from reporting due to disclosure concerns, 324 data elements will be entered into IVT.[17] We are finalizing the proposed amendments to remove reporting requirements and require entry of these data elements into IVT, with changes specified in Section II.B.2 of this preamble.

Table 3 of this preamble provides a summary of the number of data elements removed from reporting for each subpart. Refer to Table 1 in the memorandum ''Data Elements Deferred to March 31, 2015: Final List of 'Inputs to Equations' Data Elements Not To Be Reported,'' September 2014, (refer to Docket ID No. EPA–HQ–OAR–2010–0929) for a list of these 396 data elements removed from reporting.

TABLE 3—SUBPARTS FOR WHICH REPORTING REQUIREMENTS ARE REMOVED

Subpart	Number of inputs to emission equations for which reporting was deferred to 2015 (''deferred inputs'')	Number of deferred inputs for which reporting is removed
C—General Stationary Fuel Combustion—Stationary fuel combustion sources excluding sources that contain at least one combustion unit connected to a fuel-fired electric generator owned or operated by an entity that is subject to regulation of customer billing rates by the public utility commission (excluding generators connected to combustion units subject to 40 CFR part 98, subpart D) and that are located at a facility for which the sum of the nameplate capacities for all such electric generators is greater than or equal to 1 megawatt electric output[a]	[b]26	[b]26
E—Adipic Acid Production	21	11
F—Aluminum Production	29	29
G—Ammonia Manufacturing	8	8
H—Cement Production	16	14
K—Ferroalloy Production	13	13
N—Glass Production	3	3
O—HCFC–22 Production and HFC–23 Destruction	15	12
P—Hydrogen Production	7	7
Q—Iron and Steel Production	86	85
R—Lead Production	10	10
S—Lime Manufacturing	9	9
U—Miscellaneous Uses of Carbonate	6	6
V—Nitric Acid Production	21	21
X—Petrochemical Production	[c]19	[c]19
Y—Petroleum Refineries	75	70
Z—Phosphoric Acid Production	4	4
AA—Pulp and Paper Manufacturing	31	28
BB—Silicon Carbide Production	3	3
CC—Soda Ash Manufacturing	10	4
EE—Titanium Dioxide Production	2	2
GG—Zinc Production	8	8
TT—Industrial Waste Landfills	4	4

[a] These subpart C sources may elect to report inputs to emission equations rather than use IVT. Additionally, the reporting requirements are not amended for stationary fuel combustion sources that contain at least one combustion unit connected to a fuel-fired electric generator owned or operated by an entity that is subject to regulation of customer billing rates by the PUC (excluding generators connected to combustion units subject to 40 CFR part 98, subpart D) and that are located at a facility for which the sum of the nameplate capacities for all such electric generators is greater than or equal to 1 megawatt electric output.

[b] Includes one deferred input to an emission equations, 40 CFR 98.3(d)(3)(v), which is specified in subpart A of part 98 and applies to only certain reporters under 40 CFR part 98, subpart C.

[c] There were 2 additional inputs to emission equations for which reporting was deferred to 2015; however, these two inputs are not reflected in this table because the inputs were removed from Part 98 by a previous rulemaking (78 FR 71904, November 29, 2013).

The EPA is finalizing the proposed amendments to exclude from reporting 18 deferred inputs to emission equations for which no disclosure concerns have been identified. As explained in the preamble to the proposed rule (78 FR 56005, September 11, 2013), while posing no disclosure concerns, these data elements are redundant to other inputs being reported or are no longer useful to be reported in the absence of other inputs to emission equations that will no longer be reported; they are not needed to be reported to the EPA for data verification and they are also not helpful in informing future GHG policy development. For further information

[17] As mentioned above, there are 378 equation inputs for which reporting was deferred to 2015 and for which the EPA determined there are disclosure concerns, and 324 of these equation inputs must be entered into IVT. Fifty-four of the 378 equation inputs do not need to be entered into IVT because these equation inputs are redundant to other equations inputs being entered into IVT or are otherwise not needed for verification.

on these 18 data elements, please see the memorandum ''Data Elements Deferred to March 31, 2015: Final List of Data Elements Not To Be Reported,'' September 2014 (refer to Docket ID No. EPA–HQ–OAR–2010–0929).

For the remaining inputs to emission equations for which reporting was deferred to 2015 for the 23 subparts listed in Table 2 of this preamble, the EPA is not amending the reporting requirements because the EPA has not identified disclosure concerns associated with their public release, and reporting of these data elements remains useful to the EPA for data verification as well as for informing future GHG policy development. Deferral of reporting of these inputs to emission equations expires on March 31, 2015. As a result, by March 31, 2015, 151 inputs to emission equations must be reported for reporting year 2014 and all prior reporting years, except as described below for six inputs to emission equations in subpart W of part 98. These 151 data inputs must also be reported in the annual report for all future reporting years, except as specified below for the six inputs to emission equations in subpart W. Refer to Section III.A.3 of the preamble to the proposed rule (78 FR 56005, September 11, 2013) for further discussion about how 2010 through 2014 data will be included in the 2014 annual report. For a list of these 151 deferred inputs to emission equations that will be reported, refer to Table 2 of the memorandum cited above. Additionally, to clarify which data elements must be reported for previous reporting years 2010 through 2013, the EPA is finalizing its proposed revision of Table A–7 of Part 98, ''Data Elements That Are Inputs To Emission Equations And For Which The Reporting Deadline Is March 31, 2015'', which includes these 151 inputs to emission equations that must be reported.

For the purposes of reporting the subpart W inputs for reporting years 2011 through 2014, the EPA plans to use a spreadsheet format that will be uploaded to e-GGRT. Recognizing the substantial amount of information that facilities will be entering into the spreadsheet, the EPA anticipates publishing the spreadsheet in October 2014. This will allow facilities to begin data entry into the spreadsheet prior to the open reporting period. The spreadsheet can then be uploaded to e-GGRT during the open reporting season.

For subpart W, the EPA is finalizing the proposed decision to require subpart W facilities to report all inputs to emission equations for which reporting was deferred to 2015; however, in the final rule, in response to comment, the EPA is providing an option for reporters to delay reporting of six of these inputs to emission equations for two reporting years for specific situations related to two types of exploratory wells, delineation and wildcat wells (as defined in this final rule in 40 CFR 98.238), starting with reporting year 2013.

2. Summary of Changes Since Proposal

This section provides a brief summary of changes since proposal to the proposed requirement to use IVT. The EPA's rationale for these changes is provided in Section II.A.3 as part of the EPA's response to the related comment(s).

The changes to the list of data elements removed from reporting and required to be entered into IVT are as follows:

- The proposed amendments, specifically at 40 CFR 98.5(b), required that the inputs to emission equations for the calculation methods listed in the proposed Table A–8, ''Calculation Methods For Which Inputs To the Calculation Methods Must be Entered Into Verification Software Specified By the Administrator,'' be entered into IVT. In the final rule, the EPA removed the proposed Table A–8 of part 98, replacing it with a new ''verification software records'' provision in the recordkeeping section of each affected subpart, which lists for each subpart each equation input that must be entered into IVT.
- The proposed amendments required that the data element in 40 CFR 98.196(b)(8) be entered into IVT. After proposal, we discovered that this data element is not an input to an emission equation. Further, it is no longer needed for verification because the proposed new data element (40 CFR 98.196(b)(18)), which is being finalized in this action, will be sufficient for verification purposes. Therefore, in the final rule, we are removing the reporting requirement for this data element.
- The proposed amendments did not require that the input to Equation F–4 be entered into IVT, because this input is not required to be reported under Part 98. Based on a suggestion from a commenter, in the final rule we are requiring that the input to Equation F–4 be entered into IVT. Although part 98 does not require reporting of this input, the commenter stated that this input should be entered into IVT, and we agree that it is needed for calculating and verifying emissions in subpart F.
- The EPA is replacing eight reporting elements, which were incorrectly identified in the final deferral rulemaking (76 FR 53057, August 25, 2011) as inputs to Equations F–2 and F–3 and were, therefore, incorrectly proposed (78 FR 55994, September 11, 2013) to be entered into IVT (instead of the correct inputs to Equations F–2 and F–3). As a result of a comment received, the EPA discovered that it had previously misidentified eight data elements as inputs to Equations F–2 and F–3, mistakenly required and then deferred their reporting under part 98, and recently mistakenly proposed their entry into IVT. These misidentified data elements are annual values; whereas the inputs to these two equations are monthly values, which are not required to be reported under Part 98. In light of the error, the EPA is requiring in this final rule that the correct inputs (monthly values) for Equations F–2 and F–3 be entered into IVT. Further, given that the EPA had previously incorrectly required the reporting of these eight annual values as inputs to Equations F–2 and F–3, and given that the actual inputs (i.e., the monthly values) for Equations F–2 and F–3 will be entered into IVT, the EPA does not need these eight annual values for verification. The EPA is therefore finalizing the removal of reporting of these eight annual values for Equations F–2 and F–3. Refer to the EPA's comment response document in Docket ID No. EPA–HQ–OAR–2010–0929 for further discussion of this comment supporting entry into IVT of monthly input data for Equations F–2 through F–4 and the EPA's response.
- For a given sub-basin, in the following situations, the EPA is providing the option to delay for two reporting years the reporting of six data elements associated with delineation or wildcat wells starting in reporting year 2013:

—For gas well completions or workovers with hydraulic fracturing, where wildcat wells and/or delineation wells are the only wells in a sub-basin that can be used for the measurement; and

—for onshore production storage tanks, where wildcat wells and/or delineation wells are the only wells in a sub-basin.

These six data elements are: (1) Measured flow rate of backflow during well completion (40 CFR 98.236(c)(6)(i)(B)); (2) measured flow rate of backflow during well workover (40 CFR 98.236 (c)(6)(i)(D)); (3) total number of days of backflow from all wells during completions (40 CFR 98.236 (c)(6)(i)(E)); (4) total number of days of backflow from all wells during workovers (40 CFR 98.236 (c)(6)(i)(F)); (5) total volume of oil from all wellhead separators sent to tank(s) in barrels per year (40 CFR 98.236(c)(8)(i)(F)); and (6) total volume of sales oil from all wells in barrels per year (40 CFR 98.236(c)(8)(ii)(A)). For reporting years 2011 and 2012, the two year delay would still require reporting by March 31, 2015. As a result, there is no need to delay reporting for these two reporting years. Refer to Section II.B.3 of this preamble for the EPA's rationale for this decision. If the 2-year delay in reporting is used, the reporter must report the following information in the current reporting year: indicate for each delayed reporting element that one of the two situations listed above is true (e.g., for gas well completions or workovers with hydraulic fracturing, wildcat wells and/or delineation wells are the only wells in a sub-basin that can be used for the measurement). In addition, when reporters report the delayed inputs to emission equations after the 2 year delay, they must also report the API well ID numbers for the applicable wildcat and/or delineation wells in the sub-basin for which the reporting element was delayed.

- For purposes of part 98, the EPA has added to 40 CFR 90.238 definitions of

''delineation well'' and ''wildcat well.'' ''Delineation well'' is defined as a well drilled in order to determine the boundary of a field or producing reservoir. ''Wildcat well'' is defined as a well outside known fields or the first well drilled in an oil or gas field where no other oil and gas production exists. These definitions are consistent with the definitions of ''delineation well'' and ''wildcat well'' in 40 CFR part 60, subpart OOOO. Refer to Section II.B.2 of this preamble for the EPA's rationale for this decision.

- The EPA has removed from reporting the inputs to emission equations in 40 CFR 98.226(i), (j), (m)(4), (m)(5), and (p). These data must be entered into IVT, except for 40 CFR 98.226(j). Refer to Section II.B.3 of this preamble for the EPA's rationale for this decision.

3. Summary of Comments and Responses

This section summarizes the significant comments and responses related to the proposed amendments to remove reporting requirements and require entry of data into IVT. The EPA's comment response document in Docket ID No. EPA–HQ–OAR–2010–0929 provides a complete listing of all comments related to this topic and the EPA's responses.

Comment: One commenter asserted that all 9 inputs to emission equations reported under 40 CFR 98.226(i), (j), (m)(4) and (5), and (p) would reveal process design, process performance, and operational efficiencies data regarding a nitric acid train. The commenter further noted that the EPA indicated in section 2.2 of its memorandum, ''Evaluation of Competitive Harm from Disclosure of 'Inputs to Equations' Data Elements Deferred to March 31, 2015,'' August 2013 (refer to Docket ID No. EPA–HQ–OAR–2010–0929), that these types of data could be used to determine facility operational conditions and would, therefore, have disclosure concerns.

Response: In the EPA's proposed harm analysis cited above in the comment summary, the EPA stated that the 9 inputs to emission equations reported under 40 CFR 98.226(i), (j), (m)(4) and (5), and (p) would not reveal any proprietary information about cost to do business, raw material usage, production, or facility or process performance, design, and operation, as long as the emission factors required to be reported in 40 CFR 98.226(m)(1) are not reported. As a result of this comment, the EPA further investigated the operational conditions at current nitric acid facilities, and considered the specific case when there are nitric acid facilities that have non-operational nitric acid trains and others that are in the process of installing or upgrading NO_X control devices, some of which can also serve as N_2O abatement (i.e., non-selective catalytic reduction). In light of this, the data reported under 40 CFR 98.226(i), (j), (m)(4), (m)(5), and (p), if reported over a multiple-year period where facilities are making changes to the operational status of their trains and/or abatement systems, could be used to determine train-specific conditions at the facility, such as efficiency losses, equipment degradation, changes in nitric acid demand, and/or the installation of N_2O abatement technology. As a result, the EPA agrees with the commenter that the deferred inputs to emission equations reported under 40 CFR 98.226(i), (j), (m)(4), (m)(5), and (p) (destruction efficiency and fraction control factor of the abatement technology, abatement utilization factor, and nitrous oxide (N_2O) concentration and volumetric flow rate per test run during performance test of each train) would reveal information about process design, process performance, and operational efficiencies of a nitric acid train, regardless of whether the emission factors required to be reported in 40 CFR 98.226(m)(1) are not reported. Therefore, the EPA has concluded that these data have disclosure concerns, and the EPA is removing these data from the reporting requirements in the final rule. Reporters will be required to enter these data into IVT, except 40 CFR 98.226(j), which is not needed to be entered into IVT for verification purposes because IVT generates this value using the inputs entered into Equation V–2 and Equation V–2.

Comment: One commenter expressed concern about reporting information on exploratory wells in Subpart W, especially when the wells are located in step-out areas where no prior reporting exists for a given sub-basin (including vertical or horizontal wells). The commenter explained that the problem occurs when an exploratory well is the sole well in a sub-basin (including vertical or horizontal wells) and is not reported in combination with other wells, thereby shielding any individual well's contribution. The commenter noted that its concerns are related to the timing of releasing the information to the public, as the commenter stated that the information is most sensitive if it is made available too early during the exploration or initial development stages. The commenter stated that the success of a well in exploratory areas could be inferred if detailed data are provided to the public too soon during the exploration and assessment period. The commenter provided an example of such an occurrence: An exploratory well completed in December of the reporting year, data reported to the EPA by end of March of the following year and then released by the EPA to the public within a few months during the same year. The commenter stated that early release of data regarding operating characteristics of such wells, including postflowback flaring/venting volumes, could cause competitive harm if made publicly available too early.

The commenter noted that Federal law and State codes allow companies to designate as confidential the data obtained from exploratory wells, especially in new discovery areas or areas that are being explored for development. The commenter further noted that the original intent of State oil and gas commissions to allow withholding of select drilling and production information from early release to the public was to allow competitive exploration by searching for new pockets of oil or gas and experimenting with new tools and techniques. The commenter stated that releasing data on such wells through the GHGRP—despite the fact that they are held confidential by other regulatory bodies—could cause substantial competitive harm and lead to a loss of investment value. The commenter explained that competitive harm could occur if the public could obtain detailed high-resolution operational information on a well-by-well basis and on a daily or weekly basis.

The commenter requested that the EPA categorically determine that all information associated with exploratory wells, with the exception of well ID and location, be classified as CBI for a period of at least 24 months from the start of exploration. The commenter recommended either of two suggested approaches under the GHGRP: (1) Companies would report all data to the EPA as mandated by subpart W, but the EPA would hold the reported data as CBI and not include it in its public data release for at least 24 months (this could be accomplished by a flagging system (or a ''radio button'') in e-GGRT that could also allow for a short informative text on why that particular well information is to be maintained confidential); or (2) the EPA could set up a deferral system where initial data on exploratory wells will be well ID and location information and the remaining data would be backfilled by companies after a period of 24 months. The commenter added that neither option would require case-by-case review of companies' information, and both are consistent with the approach taken by state oil and gas commissions and are

protective of companies' commercial investment interests.

Response: The EPA reviewed the types of data identified by the commenter as having disclosure concerns for exploratory wells: ''data regarding operating characteristics . . . including post-flowback flaring/venting volumes.'' In our proposed memorandum ''Evaluation of Competitive Harm from Disclosure of 'Inputs to Equations' Data Elements Deferred to March 31, 2015,'' August 2013 (refer to Docket ID No. EPA–HQ–OAR–2010–0929), the EPA stated regarding exploratory wells, that because onshore production data are reported under the GHGRP at a sub-basin level, as defined by county boundaries, the data are aggregated to a large enough scale that disclosure of the data collected under subpart W would not reveal any proprietary information about the facility or cost to do business. After further investigation in response to the comment received, and review of the state laws protecting these types of data, the EPA has determined that, in the following situations which were not specifically considered in the proposed rule, early public disclosure of certain deferred inputs to emission equations associated with wildcat wells and/or delineation wells could reveal the well productivity, thereby resulting in the loss of investment value:

- For gas well completions or workovers with hydraulic fracturing, where wildcat wells and/or delineation wells are the only wells in a sub-basin that can be used for the measurement; and
- For onshore production storage tanks, where wildcat wells and/or delineation wells are the only wells in a sub-basin.

The inputs to emission equations (for which reporting was deferred to 2015) that could reveal well productivity for wildcat and/or delineation wells in the applicable situations listed above are as follows:

- For gas well completions or workovers with hydraulic fracturing, the measured flow rate of backflow during well completion (40 CFR 98.236(c)(6)(i)(B));
- For gas well completions or workovers with hydraulic fracturing, the measured flow rate of backflow during well workover (40 CFR 98.236(c)(6)(i)(D));
- For gas well completions or workovers with hydraulic fracturing, the total number of days of backflow from all wells during completions (40 CFR 98.236(c)(6)(i)(E));
- For gas well completions or workovers with hydraulic fracturing, the total number of days of backflow from all wells during workovers (40 CFR 98.236(c)(6)(i)(F));
- For onshore production storage tanks, the total volume of oil from all wellhead separators with wellhead gas-liquid separator oil throughput greater than or equal to 10 barrels per day sent to tank(s) in barrels per year (40 CFR 98.236(c)(8)(i)(F)); and
- For onshore production storage tanks, the total volume of sales oil from all wells with oil production greater than or equal to 10 barrels/day in barrels per year (40 CFR 98.236(c)(8)(ii)(A)).

These six inputs to emission equations data elements are themselves a small subset of the inputs to emission equations data elements (for which reporting was deferred to 2015) collected in subpart W, as there are 90 such inputs to emission equations in subpart W. Further, wildcat and delineation wells represent a relatively small percentage of the wells being reported under the GHGRP for these data elements. As such, in the interim period before these data are reported to the EPA, the EPA will be able to verify the majority of the emissions using the inputs to equations that will be reported to the EPA. For the six inputs to emission equations that may be delayed for 2 years, the EPA will verify emissions using other data reported to the EPA, and will conclude verification upon receipt of the data. The EPA agrees with the commenter that a 2-year delay of reporting is sufficient to prevent early public disclosure of these data and will provide sufficient time for the reporter to thoroughly conduct an assessment of the well. Given the results of this evaluation, the EPA determined that, for these six inputs to emission equations, in those cases where a reporter has wildcat wells or delineation wells in a sub-basin and these wells meet one of the two situations described above, reporters should be provided an option to delay reporting of the given input for two reporting years starting in reporting year 2013. There is no early public disclosure concern for these inputs for reporting years 2011 and 2012 because 2 years would already have passed before they are to be reported in March 31, 2015. As a result, there is no need to delay reporting for these two reporting years. For reporting years 2013 and thereafter, this delay will prevent early public disclosure of information regarding well productivity. In such cases, if the 2-year delay in reporting is used, the reporter must report the following information in the current reporting year: indicate for each delayed reporting element that one of the two situations listed above is true (e.g., for gas well completions or workovers with hydraulic fracturing, wildcat wells and/or delineation wells are the only wells in a sub-basin that can be used for the measurement). In addition, when reporters report the delayed inputs to emission equations after the 2 year delay, they must also report the API well ID numbers for the applicable wildcat and/or delineation wells in the sub-basin for which the reporting element was delayed.

The EPA also determined that additional definitions are necessary in order to clarify and specify the types of exploratory wells (delineation and wildcat wells) covered by the 2-year delay of reporting option. The EPA is adopting the terms and definitions used to describe delineation wells and wildcat wells in the new source performance standards for the oil and gas sector under 40 CFR part 60, subpart OOOO, as reporters under 40 CFR part 98, subpart W are also complying with 40 CFR part 60, subpart OOOO requirements. To minimize confusion for reporters and be consistent with 40 CFR part 60, subpart OOOO, the final rule includes the terms and definitions of a ''delineation well'' and ''wildcat well,'' as used in 40 CFR part 60, subpart OOOO. ''Delineation well'' is defined as a well drilled in order to determine the boundary of a field or producing reservoir. ''Wildcat well'' is defined as a well outside known fields or the first well drilled in an oil or gas field where no other oil and gas production exists.

C. Revision of Recordkeeping Requirements for Facilities Required To Use IVT

1. Summary of Final Amendments to Part 98

The EPA is finalizing the proposed revisions to recordkeeping requirements for facilities required to use IVT. For each facility required to use IVT, the facility is required to retain all records starting with records for reporting year 2010, including records for subparts not subject to using IVT, for 5 years, rather than the 3-year record retention period required for non-IVT users. In other words, if any facility subject to using IVT is also subject to a subpart of Part 98 not listed in Table 2 of this preamble, the facility is required to maintain the records required for those other subparts for 5 years. Facilities subject to IVT are also required to maintain a record of all inputs to emission equations entered into IVT, in the format provided by IVT. At the time the reporter completes entry of data into IVT, the facility is required to download from IVT a file that lists the entered data and maintain a copy of the file as a record of the entered inputs. As specified in 40 CFR 98.3(g), subpart A, this file may be maintained in electronic or hard copy format. Refer to Sections II.C and III.B of the proposal preamble (78 FR 55994, September 11, 2013) for further discussion of these

amendments to the Part 98 recordkeeping requirements being finalized in this action.

The EPA has added a new ''verification software records'' provision to the recordkeeping section of each subpart listed in Table 2 of this preamble to list all inputs to emission equations required to be entered into IVT. As mentioned above, a list of the entered inputs must be downloaded from IVT and maintained as records.

We are also revising an error in 40 CFR 98.3(g), as proposed. As discussed in Section III.B of the proposal preamble (78 FR 55994, September 11, 2013), in a previous action amending this paragraph (76 FR 73866, November 29, 2011), our intention was to amend the second sentence of the paragraph regarding record retention duration; however, the third sentence regarding record format was inadvertently amended. As a result, as proposed, we are removing the second sentence of 40 CFR 98.3(g) and reinstating the previous third sentence of 40 CFR 98.3(g) (regarding format of records). Refer to Section II.B of this preamble for further discussion of this new provision.

2. Summary of Changes Since Proposal

The EPA is making no changes to the proposed revisions to recordkeeping requirements for IVT users. To clarify which data are entered into IVT and must be kept as records (i.e., the data included in the file generated by IVT to be maintained as a record), the EPA is adding a ''verification software records'' provision to the recordkeeping section of each subpart specified in Table 2 of this preamble. Each ''verification software records'' provision lists the inputs to equations required to be entered into IVT and required to be maintained as a record.

3. Summary of Comments and Responses

This section summarizes the significant comments and responses related to the proposed amendments to the recordkeeping requirements for IVT users. The EPA's comment response document in Docket ID No. EPA–HQ–OAR–2010–0929 provides a complete listing of all comments and responses related to this topic.

Comment: Three commenters supported the EPA's extension of the records retention period. Eight commenters opposed the EPA's proposal to extend the record retention time from 3 to 5 years. Five of the eight commenters indicated that this proposed requirement would add significantly more burden to owners with multiple reporting facilities, where some facilities would be subject to a 3-year record retention schedule and some of which would be subject to a 5-year record retention period. Three of these commenters presented this argument in the context of landfills, where one owner would have multiple landfills, and only certain of the landfills would be subject to using IVT due to being subject to subpart C. One of the five commenters explained that owners of multiple facilities in remote locations (e.g., offshore production platforms, compressor stations, fuel supply terminals) rely on data centers and centralized archiving procedures to maintain accurate records and back-up documentation for demonstrating compliance for some records. The commenter provided one example of a scenario where an owner of multiple facilities subject to subparts C, W, and NN would be subject to use of IVT due to subpart C. The commenter indicated that this requirement would create confusion by requiring that data maintained in the central data centers be organized according to two different record retention periods. Additionally, the commenter asserted, for a given reporter (e.g., gas processing plant subject to subparts C and W), some records are maintained on site and other are maintained in a central data exchange. The commenter added that the requirement to keep records according to two different retention periods would substantially increase the volume of records required. Another commenter also pointed out the increased confusion associated with maintaining records for multiple record duration periods.

Two commenters contended that this revision conflicts with the justification the EPA previously made for requiring 3 years in the 2009 promulgated GHGRP rule, citing that the EPA determined it was sufficient time to audit and review, reduces recordkeeping burden, and is consistent with recordkeeping requirements in other Federal programs. Two of the commenters stated that the EPA did not provide sufficient justification for extending the record retention time. Two of the commenters disagreed with the EPA's rationale that the extra time is needed for follow-up with reporters because IVT would generate an immediate flag on a real-time basis of any input errors and follow-up could be immediate. One of these commenters further disagreed with the EPA's rationale that the extra time would allow the EPA inspectors time for appropriate assessment of compliance, because the EPA could accomplish this with timely inspections that do not need the extra time.

One commenter expressed concern that the proposed extra retention time would be an unfair burden because it only applies to those sources using IVT and not all sources. The commenter added that sources using IVT would be unfairly subjected to potential additional fines and penalties for noncompliance for an extra 2 years, while other sources would not be subject to this noncompliance issue. The commenter concluded that requiring the verification IVT users to retain information longer would lead to unjustified prejudices against these source categories.

Six of the eight commenters that opposed the EPA's proposal to extend the record retention time from 3 to 5 years also opposed the EPA's proposal that this 5-year record retention requirement for IVT users be extended to all subparts applicable to a reporter. The six commenters opposed this additional requirement for the same reasons they opposed the 5-year retention period.

Response: The EPA is finalizing in this action this proposed amendment to recordkeeping requirements for IVT users as part of the alternative verification approach included in these amendments. As previously stated in the proposal preamble (September 11, 2013, 78 FR 55994), the EPA considered whether the current record retention period and record format requirements would be sufficient to allow the EPA to perform data verification under this alternative verification approach. We considered:

- The time we would need to follow up with reporters to further verify reported GHG emissions.
- The desirability of retaining multiple years of data records to allow for appropriate assessment of compliance and for analyses of trends for policy analysis purposes.
- The format of records, and whether the current format would be adequate for our verification process. For example, we considered whether records of inputs to emission equations (for which reporting was deferred to 2015) contained in multiple separate documents (as currently allowed under Part 98) would allow an EPA inspector to efficiently analyze the consistency of the data elements and use the data elements to perform calculations to confirm reported GHG emissions.

This revision to the recordkeeping timeframe is part of the new verification approach using IVT that is being finalized today. Given the large number of reporters under the subparts identified in Table 2 of this preamble (over 2,000 facilities) and the likely increase in follow-up activities under

the new approach, it is important that relevant records are available to the EPA for follow-up activities with facilities, including on-site audits if necessary, regarding potential errors, discrepancies, or questions. When an EPA employee visits a facility, it is important that the employee be able to examine not only the current year's records but those from previous years as well, because previous years' data will provide year-to-year comparisons, which are useful for verifying the current year's data. A 5-year record retention period ensures the availability of relevant records for the follow-up activities described above.

Regarding the general comment that this proposed 5-year record retention requirement would add significantly more burden to owners with multiple reporting facilities, the EPA disagrees with this assertion. Given that reporters are already required to maintain records for 3 years, the reporter is not required to do anything more than keep the records for an additional 2 years. Only one commenter provided a description of the additional burden for these types of owners. The commenter referred to a scenario where one parent company has multiple facilities subject to different combinations of subparts NN, C, and W (where some facilities are in remote locations, such as offshore production platforms, compressor stations, and fuel supply terminals). As such, the parent company is subject to both a 3-year record duration for some facilities and a 5-year record duration for other facilities. The commenter described the burden as being associated with the need for their records that are maintained in their central data centers to be organized according to two different record retention periods. However, the commenter did not provide any additional information or data to support their claim that the increased burden associated with this scenario would be significant, and the EPA does not understand how saving data electronically for an additional 2 years would require significant additional burden. The EPA received no comments on its proposed impacts analysis, which concluded that there is no additional burden imposed on keeping records for 2 additional years (refer to Section V of the proposal preamble, September 11, 2013, 78 FR 55994). Lastly, if a parent company does not want to maintain some facilities' records for 3 years and others for 5 years, there is nothing in this rulemaking that prevents owners from maintaining all records for a period of 5 years.

Regarding the comment that this 5-year record duration requirement conflicts with the EPA's justification in the 2009 promulgated GHGRP rule that the 3-year duration is adequate, the EPA's rationales for extending the recordkeeping period under the new verification approach using IVT do not conflict with the previous justification for the 3-year recordkeeping requirement in the 2009 rulemaking because the 2009 GHGRP rule (74 FR 56260) did not include the alternative verification approach being finalized today. Since the IVT approach was not part of the 2009 rulemaking, the previous consideration did not take into account this new approach that is being finalized today. Further, at the time the previous justification was made, not only was there no IVT approach, the inputs to equations, which were necessary for verifying emissions under the 2009 rule, were required to be reported timely with the annual reports. In light of the subsequent changes to the verification approach and input reporting, it is unreasonable to suggest that the previous justification for a 3-year recordkeeping period still applies. The commenter did not identify or explain any deficiency in the EPA's rationales for extending the record keeping period to accommodate the IVT approach.

Regarding the comment that this 5-year record duration requirement is inconsistent with recordkeeping requirements in other Federal programs, the other Federal programs referred to by the commenter (i.e., Department of Energy (DOE) and Acid Rain Program (ARP)) are not using the alternative verification approach associated with this action. As such, comparison to DOE or ARP reporting programs is not appropriate. The EPA also notes that the EPA's National Emission Standards for Hazardous Air Pollutants require 5-year record retention (see 40 CFR 63.10(b)).

Regarding the comment that the EPA does not need extra time to allow for follow-up with reporters because IVT would generate an immediate flag on a real-time basis of any input errors and follow-up could be immediate, based on its experience with data verification for reporting years 2010 through 2012, the EPA anticipates situations where the verification summary will indicate discrepancies between reported GHG emissions and the GHG emission equation results calculated by IVT as well as other verification results that will require further attention. In certain situations, the EPA will need additional time to follow up with these reporters to resolve discrepancies, as further described above.

Regarding the comment that the EPA does not need extra time because the EPA could accomplish this alternative verification approach with ''timely inspections,'' as further described above, the EPA anticipates more direct follow-up activities under the alternative verification approach associated with this action. Given the large number of sources reporting to the GHGRP and limited resources, any direct follow-up with facilities would be more effective with the ability to access 5 years of data.

In response to the comment that the proposed extra retention time would be an unfair burden because certain sources would be unfairly subjected to potential additional fines and penalties for noncompliance for an extra 2 years, it is important to note that different facilities within the Greenhouse Gas Reporting Program are subject to different verifications approaches (reporting inputs to emissions equations versus using IVT). Different verification approaches necessitate different reporting and record keeping requirements to ensure the success of the individual verification approach. Further, we do not believe that the 5-year record retention period is complex or otherwise difficult or burdensome to implement; if a facility uses IVT, it must keep all of its record for 5 years. Given that a reporter is already required to maintain records for 3 years, this 5-year recordkeeping requirement does not require any action beyond keeping these records for an additional 2 years. In any event, the commenters did not provide any information to support the claim that 2 additional years of record maintenance would somehow trigger additional fines and penalties. Further, the commenter provided no comment on the EPA's proposed impacts analysis, which concluded that there is no additional burden imposed on keeping records for 2 additional years (refer to Section V of the proposal preamble, September 11, 2013, 78 FR 55994).

Regarding the comments opposing extending the 5-year record retention requirement to all subparts for IVT users, the EPA proposed this provision because during a site visit, if questions arise regarding the accuracy of equation inputs entered into IVT, it may be necessary to examine other recordkeeping information not entered into IVT, such as a monitoring plan or recordkeeping information in a different subpart, in order to fully investigate the accuracy of the data at issue. For example, a lime production facility with natural gas-fired kilns may report combustion emissions under subpart C, CO_2 process emissions from lime kilns

under subpart S, and CO_2 supply under subpart PP. As part of the site visit, the EPA may check for inconsistencies in the quantities of CO_2 collected and transferred off site (reported under subpart PP) compared with the CO_2 process emissions reported under subpart S. Specifically, if a facility reported collecting 32,000 metric tons under subpart PP but reported generating only 30,000 metric tons of CO_2 in their lime kilns, then the EPA may need to check the records and review the monitoring plan for both subpart S and PP to determine why this inconsistency occurred. If this facility also elected to report the natural gas combusted (i.e., the facility elects not to use IVT for subpart C), then the EPA would also use the fuel quantity data to check for unexpected inconsistencies in the subpart S data using parameters such as the ratio of CO_2 emissions to fuel consumption and looking for significant changes in such parameters when compared to data from previous years. As part of this process, the EPA may examine the monitoring plan associated with all of the subparts reported by this facility to ensure that the correct monitoring was conducted by the facility. In this example, if facilities were allowed to retain records for only 3 years for subparts for which IVT was not used, the EPA's verification and compliance activities would be impacted by incomplete records for subparts C and PP when compared with subpart S. As the above example illustrates, records necessary to verify data submitted by a facility using IVT may include that facility's data from subparts not subject to IVT. It is therefore necessary to ensure that all data necessary for verification are available, and this 5-year record retention period requirement will provide assurance of on-site data availability. The EPA received no additional rationale opposing this provision beyond the rationales presented against the 5-year record duration requirement. The EPA received no details to contradict the EPA's proposed impacts analysis, which concluded that this proposed requirement would impose no additional burden (refer to Section V of the proposal preamble, September 11, 2013, 78 FR 55994). As such, the EPA is finalizing the proposed requirement for IVT users to maintain records for all subparts for a period of 5 years.

Comment: One commenter suggested that the recordkeeping section of each subpart be modified to clearly specify which records related to IVT must be maintained. The commenter argued that e-GGRT is a reporting tool, but not a regulation, such that it would not be appropriate for IVT to dictate which records must be maintained.

Response: The EPA had requested comment on whether additional specificity within the recordkeeping requirements of each subpart would improve the clarity of the specific records that are required to be retained. After considering the commenter's request, the EPA agrees with the recommendation to specify each record that reporters must maintain. In the final rule, each subpart listed in Table 2 of this preamble includes, in the recordkeeping section, a new ''verification software records'' provision that specifies each data element in that subpart that must be entered into IVT and maintained as a record.

D. Addition of Reporting Requirements for Certain Facilities Required To Use IVT

1. Summary of Final Amendments to Part 98

The EPA is finalizing the proposed addition of new reporting requirements for facilities required to use IVT for subparts E, G, H, P, Q, S, V, X, and AA of part 98, with changes to the proposed amendments for subparts E, V, Y, and AA, as discussed in Section II.D.2 of this preamble. The final list of new data elements being added in this action is in Table 4 of this preamble.

TABLE 4—NEW DATA ELEMENTS BEING FINALIZED IN TODAY'S ACTION FOR SUBPARTS E, G, H, P, Q, S, V, X, AND AA OF PART 98

Subpart	Subpart name	New data element description
E	Adipic Acid Production	If only cyclohexane is oxidized to produce adipic acid: the annual quantity of cyclohexane (tons) used to produce adipic acid. If materials other than cyclohexane are oxidized to produce adipic acid: the annual quantity of cyclohexanone and cyclohexanol mixture (metric tons) used to produce adipic acid.
		Annual percent nitrous oxide (N_2O) emission reduction for all production units combined.
G	Ammonia Production	Annual ammonia production (metric tons, sum of all process units reported within subpart G).
		Annual methanol production (metric tons) for each process unit.
H	Cement Production	Annual clinker production (metric tons).
		Annual average clinker carbon dioxide (CO_2) emission factor for the facility, averaged across all kilns (metric tons CO_2/metric ton clinker produced).
		Annual average cement kiln dust (CKD) CO_2 emission factor for the facility, averaged across all kilns (metric tons CO_2/metric ton CKD produced).
P	Hydrogen Production	Name and annual quantity (metric tons) of each carbon-containing fuel and feedstock.
		Annual methanol production (metric tons) for each process unit.

TABLE 4—NEW DATA ELEMENTS BEING FINALIZED IN TODAY'S ACTION FOR SUBPARTS E, G, H, P, Q, S, V, X, AND AA OF PART 98—Continued

Subpart	Subpart name	New data element description
Q	Iron and Steel Production	If you use the carbon mass balance method in 40 CFR 98.173(b)(1) to determine CO_2 emissions: The annual mass (metric tons) of all gaseous, liquid, and solid fuels (combined) used in process units specified in Equations Q–1 through Q–7 of subpart Q, calculated as specified in Equation Q–9 of subpart Q being finalized in this action. Do not include fuel used in a stationary combustion unit where emissions are reported under subpart C.
		If you use the carbon mass balance method in 40 CFR 98.173(b)(1) to determine CO_2 emissions: The annual mass (metric tons) of all non-fuel material inputs (combined) specified in Equations Q–1 through Q–7 of subpart Q, calculated as specified in Equation Q–10 of subpart Q being finalized in this action.
		If you use the carbon mass balance method in 40 CFR 98.173(b)(1) to determine CO_2 emissions: The annual mass (metric tons) of all solid and liquid products and byproducts (combined) specified in Equations Q–1 through Q–7 of subpart Q, calculated as specified in Equation Q–11 of subpart Q being finalized in this action.
		If you use the carbon mass balance method in 40 CFR 98.173(b)(1) to determine CO_2 emissions: The weighted average carbon content of all gaseous, liquid, and solid fuels (combined) included in Equation Q–9 of subpart Q being finalized in this action, calculated as specified in Equation Q–12 of subpart Q being finalized in this action.
		If you use the carbon mass balance method in 40 CFR 98.173(b)(1) to determine CO_2 emissions: The weighted average carbon content of all non-fuel inputs to all furnaces (combined) included in Equation Q–10 of subpart Q being finalized in this action, calculated as specified in Equation Q–13 of subpart Q being finalized in this action.
		If you use the carbon mass balance method in 40 CFR 98.173(b)(1) to determine CO_2 emissions: The weighted average carbon content of all solid and liquid products and byproducts from all furnaces (combined) included in Equation Q–11 of subpart Q being finalized in this action, calculated as specified in Equation Q–14 of subpart Q being finalized in this action.
S	Lime Manufacturing	Annual quantity (tons) of lime product sold, by type.
V	Nitric Acid Production	Annual percent N_2O emission reduction for all nitric acid trains combined.
X	Petrochemical Production	If using the CEMS method to calculate GHG emissions: Name and annual quantity (in metric tons) of each product. If using the mass balance method to calculate GHG emissions: Name and annual quantity (in metric tons) of each product used in Equations X–1, X–2, and X–3 of subpart X.
		If using the CEMS method to calculate GHG emissions: Name and annual quantity (in metric tons) of each carbon-containing feedstock. If using the mass balance method to calculate GHG emissions: Name and annual quantity (in metric tons) of each carbon-containing feedstock used in Equations X–1, X–2, and X–3 of subpart X.
AA	Pulp and Paper Manufacturing	For each pulp mill lime kiln: Quantity of calcium oxide (CaO) produced (metric tons).
		For each pulp mill lime kiln: Percentage of annual heat input, individually for each fossil fuel type.

The EPA is also adding six new equations (Equations Q–9 through Q–14 of part 98) to subpart Q, as proposed, to specify how to calculate and report each of the six new data elements added to subpart Q in this action. Final confidentiality determinations for the data elements specified in Table 4 are presented in Section III of this preamble.

2. Summary of Changes Since Proposal

This section provides a brief summary of changes since proposal. The EPA's rationale for these changes is provided in Section II.D.3 of this preamble as part of the EPA's response to the related comment(s). In cases where the EPA is making a change that was not related to a public comment, a summary of the rationale is included in this section.

The changes to the proposed addition of new reporting requirements for facilities required to use IVT are as follows:

• In the final rule, the new data element for subpart E, 40 CFR 98.56(m), specifies that if only cyclohexane is oxidized to produce adipic acid, the reporter must report the annual quantity of cyclohexane used to produce adipic acid; otherwise, if materials other than cyclohexane are oxidized to produce adipic acid, the reporter must report the annual quantity of cyclohexanone and cyclohexanol mixture used to produce adipic acid. Refer to Section II.D.3 of this preamble for the rationale for this revision.

• The EPA is not finalizing the proposed addition of two new data elements to subpart AA: The annual mass of steam generated (proposed as 40 CFR 98.276(m)(1)) and the ratio of the unit's maximum rated heat input capacity to its design rated steam output capacity (proposed as 40 CFR 98.276(m)(2)). Refer to Section II.D.3 of this preamble for the rationale for this revision.

• The EPA is revising the new data element added to subpart V (40 CFR 98.226(q)) to read ''annual percent N_2O emission reduction for all nitric acid trains combined.'' The text ''nitric acid trains'' replaces proposed text ''production units'' to be consistent with the terminology used elsewhere in subpart V. This rationale is documented in ''Summary and Explanation of Minor Changes Since the Proposed Rule'' (Docket ID No. EPA–HQ–OAR–2010–0929).

• The EPA is not finalizing the proposed addition of the following three new data elements to subpart Y, which were proposed to be required to be reported when Equation Y–3 is used to calculate flare CO_2 emissions: Annual quantity of flare gas combusted, annual average molecular weight of flare gas combusted, and annual average carbon content of flare gas combusted, all for normal operations and startup, shutdown, and malfunction (SSM) events combined. The EPA included these new elements in the proposal to supplement the IVT verification approach by minimizing the need for potential follow-up activities (e.g., phone calls, emails, site visits, etc.) to verify reported GHG emissions from flares using Equation Y–3 to calculate emissions. Specifically, such information would allow the EPA to verify and reconcile potential differences between reported emissions and emissions equation results calculated by IVT, and therefore minimize the need for follow-up via phone, email or site visits. At the time of proposal, the EPA did not consider the proposed new reporting elements in conjunction with the monitoring requirements associated with Equation Y–1a and Y–1b. In the process of finalizing this rulemaking, the EPA realized that, under the current rule, if the flare gas composition (which determines molecular weight and carbon content) is measured weekly or more frequently, reporters are required to use either Equation Y–1a or Y–1b to calculate flare CO_2 emissions. Reporters that either do not measure the composition of flare gas or conduct such measurements but less frequently than weekly may use Equation Y–3, which does not require such values to calculate routine flare gas emissions. As a result, requiring reporters to report annual averages of molecular weight and carbon content when using Equation Y–3 would undermine the purpose of Equation Y–3 by requiring facilities that do not currently measure these values to now have to determine and report these values. These facilities would now have to conduct such measurements or provide the values through other means. In the case where reporters do not measure these values, they would likely report the values determined for the subset of flare emissions related to SSM events, which would not be representative of the annual average, and therefore would not be useful for verification. As a result, the EPA is not finalizing the proposed reporting of the annual average molecular weight of flare gas combusted and annual average carbon content of flare gas combusted, both for normal operations and SSM events combined. Further, given that the three proposed data elements were to be used together to provide an alternative method of estimating emissions, requiring reporting of the annual quantity of flare gas combusted would not be useful in the absence of the other two data elements. The EPA is therefore not requiring the reporting of these three data elements in the final rule and will continue to rely on the general IVT verification approach for verifying flare CO_2 emissions using Equation Y–3.

3. Summary of Comments and Responses

This section summarizes the significant comments and responses related to the proposed addition of new reporting requirements for facilities required to use IVT. See the EPA's comment response document in Docket ID No. EPA–HQ–OAR–2010–0929 for a complete listing of all comments and responses related to this topic.

Comment: One commenter suggested that the amount of cyclohexanone and cyclohexanol combined (also called ketone-alcohol oil or (KA) used to manufacture adipic acid should be substituted for cyclohexane for the verification of N_2O emissions from adipic acid manufacturing. The commenter indicated that they use an EPA-approved alternate method, as allowed under 40 CFR 98.53(a)(2) to report N_2O emissions, and the proposed new data element would not fairly represent emissions from their manufacturing facility. The commenter explained that the EPA is assuming that adipic acid is manufactured wholly via the oxidation of cyclohexane to KA, which is then further oxidized with nitric acid to adipic acid. The commenter stated that this assumes that all the KA used in the nitric acid oxidation comes from cyclohexane oxidation and all the KA produced is used to produce adipic acid. However, the commenter stated that, in reality, KA can be purchased or sold commercially as well as produced using materials other than cyclohexane. The commenter noted that they operate an alternate process to produce KA in addition to the cyclohexane-based KA production.

Response: The EPA agrees with the commenter that the proposed new data element for subpart E (i.e., 40 CFR 98.56(m), the annual quantity of cyclohexane fed to all production lines, combined) will be useful to the EPA for verification purposes for only those reporters that are producing all adipic acid from cyclohexane. At proposal, the EPA had assumed that all KA used to produce adipic acid was produced by the reporting facility using cyclohexane. Based on this commenter input and further consideration, the EPA has determined that there are cases where either the KA used by the reporting facility to create adipic acid is purchased from another KA producer or the reporting facility uses materials other than cyclohexane to produce KA (such as the facility represented by the commenter). In a case where the KA used by the reporting facility to create adipic acid is purchased from another KA producer, the reporting facility may not know whether and how much cyclohexane was used to produce the KA. Likewise, in cases where the reporting facility uses materials other than cyclohexane to produce KA (which may then be used to produce adipic acid), the reported annual quantity of cyclohexane used to produce adipic acid would not be applicable and, therefore, not useful to EPA for verification of reported GHG emissions (representing all adipic acid produced) because this quantity of cyclohexane would represent only part (or none, if no cyclohexane is used) of the KA used to produce adipic acid. In cases where a reporter is producing KA using materials other than cyclohexane, or where a reporter is purchasing KA, the EPA has changed the new data element to be the quantity of KA fed to adipic acid production lines. In the final rule, the EPA has revised the new data element to specify that if only cyclohexane is oxidized to produce adipic acid, the reporter must report the annual quantity of cyclohexane used to produce adipic acid; otherwise, the reporter must report the annual quantity of KA used to produce adipic acid. Regarding the comment that some adipic acid producers are selling some of the KA produced, these adipic acid producers will be required to report a corrected quantity of cyclohexane or KA, as applicable, used to produce adipic acid to account for any KA sold. Regarding the comment that some adipic acid producers purchase KA to produce adipic acid, these reporters will be required to report the annual quantity of KA used to produce adipic acid under 40 CFR 98.56(m)(2).

Comment: One commenter supported the reporting for two new data elements proposed to be reported for subpart AA: (1) Quantity of calcium oxide (CaO) produced (metric tons), and (2) percent of annual heat input, individually for each fossil fuel type. The commenter opposed the reporting of two other data

elements proposed to be reported for subpart AA for each chemical recovery furnace and chemical recovery combustion unit for which Equation C–2c of subpart C is not used to calculate CO_2 emissions: (1) Annual mass of steam generated (pound (lb) steam), individually for each fossil fuel type and for spent liquor solids, and (2) Ratio of the unit's maximum rated heat input capacity to its design rated steam output capacity (MMBtu/lb steam), individually for each fossil fuel type and for spent liquor solids. The commenter contended that these requirements are unclear and unnecessary and should be removed from the final rule. The commenter asserted that these proposed reporting requirements for pulp mills directly contradict the requirement in 40 CFR 98.36(e)(2)(ii)(D) that requires stationary fuel combustion units to report the steam and heat/steam ratio only if Equation C–2c is used. Regarding recovery units not using Equation C–2c, the commenter indicated that determining these two data elements would be overly burdensome because determining steam generation by fuel type would be very difficult. The commenter explained that most recovery furnaces only use spent pulping liquor as their fuel and some may use other fuels for either start-up or for flame stabilization, but, generally, the fuels are liquid; and, other than using a percent of fuel to estimate the amount of steam generation per fuel type, the commenter did not know of any other method to determine the amount of steam generation per fuel type. As such, the commenter requested that these two proposed new data elements (annual mass of steam generated and ratio of the unit's maximum rated heat input capacity to its design rated steam output capacity) be eliminated in the final rule.

Response: The EPA thanks the commenter for their support for reporting the quantity of CaO produced, and percent of annual heat input, individually for each fossil fuel type. These two data elements are added as proposed. Regarding the other two data elements (annual mass of steam generated (lb steam), individually for each fossil fuel type and for spent liquor solids, and ratio of the unit's maximum rated heat input capacity to its design rated steam output capacity (MMBtu/lb steam), individually for each fossil fuel type and for spent liquor solids), the EPA included these new elements in the proposal to supplement the IVT verification approach because having such information would allow the EPA to verify and reconcile potential differences between reported emissions and emissions equation results calculated by IVT and therefore minimize the need for follow-up via phone, email or on-site visit. However, as the EPA stated in the proposal preamble (September 11, 2013), the proposal to collect these two data elements was also based in part on the EPA's incorrect assumption that the proposed new reporting elements would be readily available for affected facilities, or easily calculated using data already required to be collected. In light of the comment, and after further investigation of the method available to reporters to calculate steam generated by fuel type, the EPA has learned that generating these two new data reporting elements would require a significant investment in time. Upon further consideration, the EPA concludes that any potential time saved from the reduced follow-up activities due to collection of these two data elements is outweighed by the significant resources and time required for the facilities to generate these data. The EPA is therefore not requiring the reporting of these two data elements in the final rule and will continue to rely on the general IVT verification approach for verifying chemical recovery furnace and chemical recovery combustion unit emissions. For the reasons stated above, the EPA is not finalizing these two new data elements in this final action.

III. Summary of Final Confidentiality Determinations for New Data Elements

A. Summary of Final CBI Determinations

The EPA is finalizing the proposed data category assignment and confidentiality determination for each new data element added in this final rule[18] except 40 CFR 98.226(q). For 40 CFR 98.226(q), the EPA is finalizing the proposed data category assignment, but is not making any final confidentiality determination. The EPA's rationale for this change is provided in Section III.B of this preamble.

For the 16 new data elements listed in Table 5 of this preamble, the EPA has determined that they are entitled to confidential treatment, as proposed. Specifically, the EPA is finalizing the proposed category assignments of these data elements to the ''Production/Throughput Data that are Not Inputs to Emission Equations'' and ''Raw Materials Consumed that are Not Inputs to Emission Equations'' data categories and the application of the categorical confidentiality determinations made for these categories in the 2011 final CBI rule (76 FR 30782, May 26, 2011) to these data elements.

TABLE 5—DATA ELEMENTS ASSIGNED TO THE ''PRODUCTION/THROUGHPUT DATA THAT ARE NOT INPUTS TO EMISSION EQUATIONS'' AND ''RAW MATERIALS CONSUMED THAT ARE NOT INPUTS TO EMISSION EQUATIONS'' DATA CATEGORIES

Subpart	Final citation	Data element
''Production/Throughput Data That Are Not Inputs to Emission Equations'' Data Category		
G—Ammonia Production	40 CFR 98.76(b)(14)	Annual ammonia production (metric tons, sum of all process lines reported within subpart G).
	40 CFR 98.76(b)(15)	Annual methanol production (metric tons) for each process unit.
H—Cement Kilns	40 CFR 98.86(b)(16)	Annual clinker production (metric tons).
P—Hydrogen Production	40 CFR 98.166(e)	Annual methanol production (metric tons) for each process unit.
S—Lime Manufacturing	40 CFR 98.196(b)(18)	Annual quantity (tons) of lime product sold, by type.
X—Petrochemical	40 CFR 98.246(a)(13) and (b)(10)	If using the CEMS method to calculate GHG emissions: Name and annual quantity (in metric tons) of each product. If using the mass balance method to calculate GHG emissions: Name and annual quantity (in metric tons) of each product used in Equations X–1, X–2, and X–3 of subpart X.

[18] EPA is not finalizing the addition of all the data elements proposed to be added to the rule. Five data elements are not being added to the rule. The EPA's rationale for this change is provided in Section III.B of this preamble.

TABLE 5—DATA ELEMENTS ASSIGNED TO THE ''PRODUCTION/THROUGHPUT DATA THAT ARE NOT INPUTS TO EMISSION EQUATIONS'' AND ''RAW MATERIALS CONSUMED THAT ARE NOT INPUTS TO EMISSION EQUATIONS'' DATA CATEGORIES—Continued

Subpart	Final citation	Data element
AA—Pulp and Paper	40 CFR 98.276(l)(1)	For each pulp mill lime kiln: Quantity of calcium oxide (CaO) produced (metric tons).
''Raw Materials Consumed That Are Not Inputs to Emission Equations'' Data Category		
E—Adipic Acid Production	40 CFR 98.56(m)	If only cyclohexane is oxidized to produce adipic acid, report the annual quantity of cyclohexane (tons) used to produce adipic acid. If materials other than cyclohexane are oxidized to produce adipic acid, report the annual quantity of cyclohexanone and cyclohexanol mixture (tons) used to produce adipic acid.
P—Hydrogen Production	40 CFR 98.166(b)(7)	Name and annual quantity (metric tons) of each carbon-containing fuel and feedstock.
Q—Iron and Steel	40 CFR 98.176(e)(6)(i)	If you use the carbon mass balance method in 40 CFR 98.173(b)(1) to determine CO_2 emissions: The annual mass (metric tons) of all gaseous, liquid, and solid fuels (combined) used in process units specified in Equations Q–1 through Q–7, calculated as specified in a new Equation Q–9 of subpart Q in the final rule amendments. Does not include fuel used in a stationary combustion unit where emissions are reported under subpart C.
	40 CFR 98.176(e)(6)(ii)	If you use the carbon mass balance method in 40 CFR 98.173(b)(1) to determine CO_2 emissions: The annual mass (metric tons) of all non-fuel material inputs (combined) specified in Equations Q–1 through Q–7 of subpart Q, calculated as specified in a new Equation Q–10 of subpart Q in the final rule amendments.
	40 CFR 98.176(e)(6)(iii)	If you use the carbon mass balance method in 40 CFR 98.173(b)(1) to determine CO_2 emissions: The annual mass (metric tons) of all solid and liquid products and byproducts (combined) specified in Equations Q–1 through Q–7, calculated as specified in a new Equation Q–11 of subpart Q in the final rule amendments.
	40 CFR 98.176(e)(6)(iv)	If you use the carbon mass balance method in 40 CFR 98.173(b)(1) to determine CO_2 emissions: The weighted average carbon content of all gaseous, liquid, and solid fuels (combined) included in Equation Q–9 of subpart Q, calculated as specified in a new Equation Q–12 of subpart Q in the final rule amendments.
	40 CFR 98.176(e)(6)(v)	If you use the carbon mass balance method in 40 CFR 98.173(b)(1) to determine CO_2 emissions: The weighted average carbon content of all non-fuel inputs to all furnaces (combined) included in Equation Q–10 of subpart Q, calculated as specified in a new Equation Q–13 of subpart Q in the final rule amendments.
	40 CFR 98.176(e)(6)(vi)	If you use the carbon mass balance method in 40 CFR 98.173(b)(1) to determine CO_2 emissions: The weighted average carbon content of all solid and liquid products and byproducts from all furnaces (combined) included in a new Equation Q–11 of subpart Q in the final rule amendments, calculated as specified in new Equation Q–14 of subpart Q in the final rule amendments.
X—Petrochemical	40 CFR 98.246(a)(12) and (b)(9)	If using the CEMS method to calculate GHG emissions: Name and annual quantity (in metric tons) of each carbon-containing feedstock. If using the mass balance method to calculate GHG emissions: Name and annual quantity (in metric tons) of each carbon-containing feedstock used in Equations X–1, X–2, and X–3 of subpart X.

The five new data elements listed below in Table 6 of this preamble were proposed to be assigned to the ''Unit Process Operating Characteristics that are Not Inputs to Emission Equations'' category, for which EPA has not established a categorical confidentiality determination. Individual confidentiality determinations were proposed for these data elements, which are shown in Table 6 below. In this action, the EPA is finalizing the categorical assignments and confidentiality determinations for four of the five new data elements listed in Table 6, as proposed. The EPA revised the confidentiality determination for the new data element in subpart V, as shown in Table 6.

TABLE 6—FINAL CONFIDENTIALITY DETERMINATIONS FOR NEW DATA ELEMENTS ASSIGNED TO THE ''UNIT/PROCESS OPERATING CHARACTERISTICS THAT ARE NOT INPUTS TO EMISSION EQUATIONS''

Subpart	Citation	Data element	Confidentiality determination	Final rationale for confidentiality determination
E—Adipic Acid Production.	40 CFR 98.56(n) ..	Annual percent N_2O emission reduction for all production units combined.	Not CBI	The annual facility percent N_2O reduction could not be used to calculate adipic acid production. The level of N_2O reductions varies by the type of abatement technology, the environment in which the abatement technology is operating, the age of the abatement technology, the age of the catalyst used, and the maintenance level of the abatement technology.
H—Cement Kilns ...	40 CFR 98.86(b)(17).	Annual average clinker CO_2 emission factor for the facility, averaged across all kilns (metric tons CO_2/metric ton clinker produced).	CBI	This data element could be used to back calculate a facility's clinker production data, which would result in competitive disadvantage.
	40 CFR 98.86(b)(18).	Annual average cement kiln dust (CKD) CO_2 emission factor for the facility, averaged across all kilns (metric tons CO_2/metric ton CKD produced).	CBI	This data element could provide information about the efficiency of the operation, which would result in competitive disadvantage.
V—Nitric Acid Production.	40 CFR 98.226(q)	Annual percent N_2O emission reduction for all nitric acid trains combined.	ND [a]	Refer to Section III.B of this preamble for the rationale for this determination.
AA—Pulp and Paper.	40 CFR 98.276(l)(2).	For each pulp mill lime kiln: Percent of annual heat input, individually for each fossil fuel type.	Non-CBI	Release of this data would not result in competitive harm because lime kiln fossil fuel use as a fraction of design heat input was reported to the EPA as part of a 2011 ICR survey, and facilities reporting via the survey made no CBI claims regarding fuel type and percent of design heat input.

[a] ND = No determination is being finalized.

B. Response to Public Comments

The EPA received several comments related to the proposed confidentiality determinations for new data elements. Several commenters provided support for the EPA's proposed confidentiality determinations for new data elements proposed to be reported in subparts G, H, S, P, Y, and AA. These comments may be found in the EPA's comment response document in Docket ID No. EPA–HQ–OAR–2010–0929. We received several comments questioning the proposed confidentiality determination of several new data elements, including requests that the data elements be treated as confidential, or that the confidentiality be determined on a case-by-case basis, and summaries of these comments and EPA's responses thereto are provided below. Additional comments and the EPA's responses may be found in the comment response document noted above.

Comment: One commenter provided comments on confidentiality determinations for new data elements proposed for subpart V (Nitric Acid Production). The commenter expressed support for the inclusion of the data element ''annual percent nitrous oxide emissions reduction for all production units combined'' (40 CFR 98.226(q)) in the ''Unit/Process 'Operating' Characteristics That Are Not Inputs to Emission Equations'' data category. However, the commenter disagreed with the EPA's proposed determination that the data element is considered not confidential. The commenter disagreed with the EPA's assertion that the data could not be used to calculate nitric acid production for an individual train because it is an aggregate number, stating that for facility with only a single nitric acid train with N_2O abatement, this would not hold true. The commenter further asserted that the EPA was incorrect to assume that the data are publicly available through the voluntary Climate Action Reserve (CAR). The commenter stated that although some industry members participate in the CAR and release the information, several do not. The commenter contested that it is inappropriate for the EPA to base part of its decision on the voluntary reporting of some facilities. As an alternative, the commenter requested that the EPA not make a confidentiality determination for this data element as it has done for other data elements and, instead, allow individual reporters to assert CBI claims for the data element.

Response: The EPA agrees with the commenter that the annual percent nitrous oxide emissions reduction for all production units combined is not publicly available on an annual basis through the CAR for all facilities reporting under this subpart, and notes that the EPA did not indicate such was the case in the proposed rule. At proposal, the EPA did not specifically consider the situation where a facility has only one nitric acid train. After further investigation in response to the comment received, the EPA agrees that, in cases where a facility has only one nitric acid train with N_2O, the data element ''annual percent nitrous oxide emissions reduction for all production units combined'' (40 CFR 98.226(q)) could be used to calculate nitric acid production. For facilities with only one nitric acid train with N_2O abatement, the reporting of annual percent N_2O emissions reductions, together with annual N_2O emissions from nitric acid

production (as required to be reported in 40 CFR 98.3(c)(4)), the destruction efficiency (as required to be reported in 40 CFR 98.226(i)), and the abatement utilization factor (as required to be reported in 40 CFR 98.226(j)), could be used to back-calculate the mass of nitric acid produced. Further, the EPA cannot conclude that in specific situations, if a facility adds a nitric acid train from one year to the next, and the EPA publishes this data for the year that the facility has two nitric acid trains, that data revealing the annual percent nitrous oxide emissions reductions for all production units combined could not be back-calculated or estimated for the previous year (when the facility had one nitric acid train.)

However, if a facility reports this information to the CAR and it is publicly available, the EPA sees no reason why the same data could not be published through the Greenhouse Gas Reporting Program, regardless of the number of nitric acid trains at the facility. In light of the above, the EPA cannot make a confidentiality determination that applies to all facilities required to report this data element. Therefore, the EPA is not finalizing a confidentiality determination for this data element. In Table 6 of this preamble, the determination for this data element is designated as ''ND,'' which means that no determination has been made. The EPA will make a confidentiality determination for this data element on a case by case basis.

Comment: One commenter provided support for the confidentiality determinations for three new data elements proposed in subpart Y: Annual quantity of flare gas combusted (40 CFR 98.256(e)(11)(i)); annual average molecular weight of flare gas combusted (40 CFR 98.256(e)(11)(ii)); and annual average carbon content of flare gas combusted (40 CFR 98.256(e)(11)(iii)). The three data elements, which are only required when using Equation Y–3 of subpart Y, were assigned to the ''Unit/Process 'Operating' Characteristics that Are Not Inputs to Emission Equations'' Data Category'' and were not classified as CBI in the proposal. Another commenter disagreed with the EPA's determination that these data are not confidential. The commenter explained that the flared gases are process gases, and would reveal characteristics of iron and steel processes. The commenter stated that the data elements may reveal operating efficiency, provide information that would allow competitors to infer production costs and process characteristics, and enable them to gain a competitive advantage. The commenter asserted that the data elements are CBI and must be considered CBI in the final rule.

Response: The EPA proposed to collect these three data elements to assist the EPA in verifying reported GHG emissions associated with flaring gas when Equation Y–3 is used. The EPA is not finalizing the reporting of these data elements. Refer to Section II.D.2 of this preamble for further discussion of the EPA's rationale for this decision.

IV. Impacts of the Final Rule

The EPA has determined that the cost associated with this final action will be $438,000 in the first year of implementation and $55,000 in each subsequent year, as further summarized below. A full discussion of the impacts may be found in the memorandum, ''Assessment of Cost Impacts of 2015 Inputs Proposal—Revisions to Reporting, Recordkeeping, and Verification Requirements Under the Greenhouse Gas Reporting Program,'' August 2013, available in the EPA's Docket ID No. EPA–HQ–OAR–2010–0929.

A. How were the costs of this final rule estimated?

1. Inputs Verification Tool

The data elements required to be used for calculating the annual GHG emissions values, and the cost associated with collecting these data elements, have not changed from the estimate made during the original rulemaking process. The time associated with entry of these inputs to emission equations into e-GGRT (including into the new IVT) is expected to be equivalent to the time originally anticipated for data entry. Prior to using IVT, as currently required, reporters must use their own calculation tool (e.g., calculator, calculation software) to calculate the annual GHG emissions values, using the same sets of equations and entering the same data elements that they would enter into the tool.

The EPA does recognize however that there may be some time associated with learning the new procedures for IVT and we have estimated a cost of approximately $67 per facility, or $383,000 for the first year for all affected facilities. During their first session using IVT, reporters would need to spend approximately one hour to become familiar with how the tool operates within e-GGRT. The requirement to use IVT would not result in any change in the respondent activity of entering these data into e-GGRT. Once the reporter has become familiar with the tool, the EPA does not anticipate any additional burden. The cost includes technical, clerical, and managerial labor hours. For further information about this cost estimate, refer to the memorandum ''Assessment of Cost Impacts of 2015 Inputs Final Rule—Revisions to Reporting, Recordkeeping, and Verification Requirements Under the Greenhouse Gas Reporting Program'' September 2014 and the supporting statement for the information collection request, ''Supporting Statement, Environmental Protection Agency: Revisions to Reporting and Recordkeeping Requirements, and Final Confidentiality Determinations Under the Greenhouse Gas Reporting Program, Office of Management and Budget (OMB) Control Number 2060–0629, ICR Number 2300.12,'' both available in Docket ID No. EPA–HQ–OAR–2010–0929.

2. New Data Elements

We are adding 21 new data elements that were not previously required to be reported under Part 98 (see Section II.D of this preamble for further discussion). These data elements must be reported by facilities in certain subparts that are required to use IVT. Of these 21 data elements, seven data elements are related to annual production or raw material usage, which are collected by a facility as a routine part of conducting business. For these data elements, we are not requiring that reporters comply with specific data collection or monitoring requirements beyond the methods commonly used for accounting purposes. The other 14 data elements to be reported are calculated values using data currently required to be collected to perform emissions calculations. For all of these additional data elements, the EPA has estimated a nominal additional cost to report the data element and fulfill the recordkeeping requirements. The total costs associated with reporting and recordkeeping for the 21 data elements in 9 subparts is $55,000. These costs represent the cost for all affected facilities in the first year.

B. Do the final confidentiality determinations change the impacts of the final amendments?

The final confidentiality determinations for the new data elements would not affect whether and how data are reported and, therefore, would not impose any additional burden on sources. Whether a data reporting element is determined to be CBI, not CBI, or emission data, the reporting element is reported to the EPA through e-GGRT in the same manner.

V. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a ''significant regulatory action'' under the terms of Executive Order 12866 (58 FR 51735, October 4, 1993) and is therefore not subject to review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011).

B. Paperwork Reduction Act

The information collection requirements in this final rule have been submitted for approval to the OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document prepared by the EPA has been assigned EPA ICR number 2300.12. The information collection requirements are not enforceable until OMB approves them.

This action finalizes amendments to reporting and recordkeeping requirements and verification procedures for the GHGRP. In addition, the EPA is publishing confidentiality determinations for the new data elements added in this action. The amendments to the reporting requirements in the source category-specific subparts are not anticipated to result in significant burden for reporters. The data elements required to be reported are expected to be readily available for affected facilities, or easily calculated using data already required to be collected (e.g., a monthly value was previously reported and an annual value is to be reported).

Impacts associated with the changes to the reporting requirements in each subpart are detailed in the memorandum ''Assessment of Cost Impacts of 2015 Inputs Final Rule—Revisions to Reporting, Recordkeeping, and Verification Requirements under the Greenhouse Gas Reporting Program,'' September 2014, (see Docket ID No. EPA–HQ–OAR–2010–0929). Burden is defined at 5 CFR 1320.3(b).

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When this ICR is approved by OMB, the Agency will publish a technical amendment to 40 CFR part 9 in the **Federal Register** to display the OMB control number for the approved information collection requirements contained in this final rule.

C. Regulatory Flexibility Act (RFA)

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of these final rule amendments and confidentiality determinations on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; or (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field. After considering the economic impacts of these final amendments on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. The small entities directly regulated by these final rule amendments include small businesses across all sectors of the economy encompassed by Part 98, small governmental jurisdictions, and small non-profits. We have determined that these facilities will experience impacts of roughly a first-year cost of $67 per facility for learning new procedures for the verification tool and an annual cost of $93 per facility for the recordkeeping and reporting of 21 new data elements.

Although these final rule amendments will not have a significant economic impact on a substantial number of small entities, the EPA nonetheless has tried to reduce the impact of this rule on small entities. The EPA supports a ''help desk'' for the GHGRP, which will be available to answer questions on the provisions in this final rulemaking.

D. Unfunded Mandates Reform Act (UMRA)

The final amendments and confidentiality determinations do not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. This action finalizes the following requirements: (1) Requirements for certain reporters under 23 subparts to use an EPA-provided IVT instead of reporting certain data elements for which disclosure concerns have been identified, (2) lengthening the record retention time for reporters required to use IVT, and (3) new data elements to be reported for certain reporters using IVT and confidentiality determinations for these new data element. As discussed in Section IV of this preamble, for the first year, the total collective impact on regulated entities is (1) $383,000, or $67 per entity, for using IVT; and (2) $55,000, or $93 per entity, for the final new data elements to be reported. Thus, the final amendments and confidentiality determinations are not subject to the requirements of sections 202 or 205 of UMRA.

This final rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. This action amends reporting and recordkeeping requirements and verification procedures for certain reporters in the GHGRP. In addition, the EPA is finalizing confidentiality determinations for the new data elements added in this action. As discussed in Section IV of this preamble, the total collective impact on regulated entities is $438,000 in the first year, and $55,000 annually thereafter. Because this impact on each individual facility is estimated to be approximately $67–$160 in the first year and $93 annually thereafter, the EPA has determined that the provisions in this action will not significantly impact small governments. In addition, because none of the provisions apply specifically to small governments, the EPA has determined that the provisions in this action will not uniquely impact small governments. Therefore, this action is not subject to the requirements of section 203 of the UMRA.

E. Executive Order 13132: Federalism

The final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The final amendments and confidentiality determinations apply to facilities that directly emit greenhouses gases and fuel and chemicals suppliers. These changes do not apply to governmental entities unless the government entity owns a facility that directly emits GHGs above threshold levels (such as a large

stationary combustion device), so relatively few government facilities will be affected. Moreover, for government facilities that are subject to the rule, the final revisions will not have a significant cost impact. This final rule also does not limit the power of States or localities to collect GHG data and/or regulate GHG emissions. Thus, Executive Order 13132 does not apply to this rule.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This final rule does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). The final amendments and confidentiality determinations apply directly to facilities that directly emit GHGs or that are suppliers of GHGs. They will not have tribal implications unless the tribal entity owns a facility that directly emits GHGs above threshold levels (such as a landfill or large combustion device). Relatively few tribal facilities would be affected. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. This final rule is not subject to Executive Order 13045 because it does not establish an environmental standard intended to mitigate health or safety risks.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This final rule is not a ''significant energy action'' as defined in Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Part 98 relates to monitoring, reporting, and recordkeeping and does not impact energy supply, distribution, or use. This final rule amends reporting and recordkeeping requirements and verification procedures for the GHGRP. In addition, the EPA is finalizing confidentiality determinations for the new data elements added in this rulemaking. These final amendments and confidentiality determinations do not make any changes to the existing monitoring, recordkeeping, or reporting requirements under Part 98 that affect the supply, distribution, or use of energy.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law No. 104–113, 12(d) (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs the EPA to provide Congress, through the OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This final rulemaking does not involve any new technical standards. Therefore, the EPA is not considering the use of any voluntary consensus standards.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes Federal executive policy on environmental justice. Its main provision directs Federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

The EPA has determined that these final rule amendments and confidentiality determinations will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because the amendments do not affect the level of protection provided to human health or the environment. This is because the final amendments address information collection and reporting and verification procedures.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2). This rule will be effective on November 24, 2014.

List of Subjects 40 CFR Part 98

Environmental protection, Administrative practice and procedure, Greenhouse gases, Reporting and recordkeeping requirements.

Dated: September 26, 2014.

Gina McCarthy,

Administrator.

For the reasons stated in the preamble, the Environmental Protection Agency amends title 40, chapter I, of the Code of Federal Regulations as follows:

PART 98—MANDATORY GREENHOUSE GAS REPORTING

■ 1. The authority citation for part 98 continues to read as follows:

Authority: 42 U.S.C. 7401, *et seq.*

Subpart A—General Provision

■ 2. Section 98.3 is amended by revising paragraphs (c)(4)(vii), (d)(3)(v), (g) introductory text, and (g)(2)(i) to read as follows:

§ 98.3 What are the general monitoring, reporting, recordkeeping and verification requirements of this part?

* * * * *

(c) * * *

(4) * * *

(vii) The owner or operator of a facility is not required to report the data elements specified in Table A–6 of this subpart for calendar years 2010 through 2011 until March 31, 2013. The owner or operator of a facility is not required to report the data elements specified in Table A–7 of this subpart for calendar years 2010 through 2013 until March 31, 2015 (as part of the annual report for reporting year 2014), except as otherwise specified in Table A–7 of this subpart.

* * * * *

(d) * * *

(3) * * *

(v) For each stationary fuel combustion source that meets the criteria specified in § 98.36(f), report any facility operating data or process information used for the GHG emission calculations. A stationary fuel combustion source that does not meet the criteria specified in § 98.36(f) must either report the data specified in this paragraph (d)(3)(v) in the annual report or use verification software according to § 98.5(b) in lieu of reporting the data specified in this paragraph.

* * * * *

(g) *Recordkeeping.* An owner or operator that is required to report GHGs under this part must keep records as specified in this paragraph (g). Except as otherwise provided in this paragraph, retain all required records for at least 3 years from the date of submission of the annual GHG report for the reporting year in which the record was generated. The records shall be kept in an electronic or hard-copy format (as appropriate) and recorded in a form that is suitable for expeditious inspection and review. If the owner or operator of a facility is required under § 98.5(b) to use verification software specified by the Administrator, then all records required for the facility under this part must be retained for at least 5 years from the date of submission of the annual GHG report for the reporting year in which the record was generated, starting with records for reporting year 2010. Upon request by the Administrator, the records required under this section must be made available to EPA. Records may be retained off site if the records are readily available for expeditious inspection and review. For records that are electronically generated or maintained, the equipment or software necessary to read the records shall be made available, or, if requested by EPA, electronic records shall be converted to paper documents. You must retain the following records, in addition to those records prescribed in each applicable subpart of this part:

* * * * *

(2) * * *

(i) The GHG emissions calculations and methods used. For data required by § 98.5(b) to be entered into verification software specified in § 98.5(b), maintain the entered data in the format generated by the verification software according to § 98.5(b).

* * * * *

■ 3. Section 98.5 is revised to read as follows:

§ 98.5 How is the report submitted?

(a) Each GHG report and certificate of representation for a facility or supplier must be submitted electronically in accordance with the requirements of § 98.4 and in a format specified by the Administrator.

(b) For reporting year 2014 and thereafter, you must enter into verification software specified by the Administrator the data specified in the verification software records provision in each applicable recordkeeping section. For each data element entered into the verification software, if the software produces a warning message for the data value and you elect not to revise the data value, you may provide an explanation in the verification software of why the data value is not being revised.

■ 4. Table A–7 to Subpart A of Part 98 is revised to read as follows:

TABLE A–7 TO SUBPART A OF PART 98—DATA ELEMENTS THAT ARE INPUTS TO EMISSION EQUATIONS AND FOR WHICH THE REPORTING DEADLINE IS MARCH 31, 2015

Subpart	Rule citation (40 CFR part 98)	Specific data elements for which reporting date is March 31, 2015 ("All" means all data elements in the cited paragraph are not required to be reported until March 31, 2015)
A	98.3(d)(3)(v)	All.[a]
C	98.36(b)(9)(iii)	Only estimate of the heat input.[a]
C	98.36(c)(2)(ix)	Only estimate of the heat input from each type of fuel listed in Table C–2 of subpart C of this part.[a]
C	98.36(e)(2)(i)	All.[a]
C	98.36(e)(2)(ii)(A)	All.[a]
C	98.36(e)(2)(ii)(C)	Only HHV value for each calendar month in which HHV determination is required.[a]
C	98.36(e)(2)(ii)(D)	All.[a]
C	98.36(e)(2)(iv)(A)	All.[a]
C	98.36(e)(2)(iv)(C)	All.[a]
C	98.36(e)(2)(iv)(F)	All.[a]
C	98.36(e)(2)(ix)(D)	All.[a]
C	98.36(e)(2)(ix)(E)	All.[a]
C	98.36(e)(2)(ix)(F)	All.[a]
E	98.56(g)	All.
E	98.56(h)	All.
E	98.56(j)(4)	All.
E	98.56(j)(5)	All.
E	98.56(j)(6)	All.
E	98.56(l)	All.
H	98.86(b)(11)	All.
H	98.86(b)(13)	Name of raw kiln feed or raw material.
L	98.126(b)(1)	Only data used in calculating the absolute errors and data used in calculating the relative errors.
L	98.126(b)(2)	All.
L	98.126(b)(6)	Only mass of each fluorine-containing reactant fed into the process.
L	98.126(b)(7)	Only mass of each fluorine-containing product produced by the process.
L	98.126(b)(8)(i)	Only mass of each fluorine-containing product that is removed from the process and fed into the destruction device.

TABLE A–7 TO SUBPART A OF PART 98—DATA ELEMENTS THAT ARE INPUTS TO EMISSION EQUATIONS AND FOR WHICH THE REPORTING DEADLINE IS MARCH 31, 2015—Continued

Subpart	Rule citation (40 CFR part 98)	Specific data elements for which reporting date is March 31, 2015 ("All" means all data elements in the cited paragraph are not required to be reported until March 31, 2015)
L	98.126(b)(8)(ii)	Only mass of each fluorine-containing by-product that is removed from the process and fed into the destruction device.
L	98.126(b)(8)(iii)	Only mass of each fluorine-containing reactant that is removed from the process and fed into the destruction device.
L	98.126(b)(8)(iv)	Only mass of each fluorine-containing by-product that is removed from the process and recaptured.
L	98.126(b)(8)(v)	All.
L	98.126(b)(9)(i)	All.
L	98.126(b)(9)(ii)	All.
L	98.126(b)(9)(iii)	All.
L	98.126(b)(10)	All.
L	98.126(b)(11)	All.
L	98.126(b)(12)	All.
L	98.126(c)(1)	Only quantity of the process activity used to estimate emissions.
L	98.126(c)(2)	All.
L	98.126(d)	Only estimate of missing data.
L	98.126(f)(1)	All.
L	98.126(g)(1)	All.
L	98.126(h)(2)	All.
O	98.156(d)(2)	All.
O	98.156(d)(3)	All.
O	98.156(d)(4)	All.
Q	98.176(f)(1)	All.
W	98.236(c)(1)(i)	All.
W	98.236(c)(1)(ii)	All.
W	98.236(c)(1)(iii)	All.
W	98.236(c)(2)(i)	All.
W	98.236(c)(3)(i)	All.
W	98.236(c)(3)(ii)	Only Calculation Methodology 2 of § 98.233(d).
W	98.236(c)(3)(iii)	All.
W	98.236(c)(3)(iv)	All.
W	98.236(c)(4)(i)(A)	All.
W	98.236(c)(4)(i)(B)	All.
W	98.236(c)(4)(i)(C)	All.
W	98.236(c)(4)(i)(D)	All.
W	98.236(c)(4)(i)(E)	All.
W	98.236(c)(4)(i)(F)	All.
W	98.236(c)(4)(i)(G)	All.
W	98.236(c)(4)(i)(H)	All.
W	98.236(c)(4)(ii)(A)	All.
W	98.236(c)(5)(i)(D)	All.
W	98.236(c)(5)(ii)(C)	All.
W	98.236(c)(6)(i)(B)	All.[b]
W	98.236(c)(6)(i)(D)	All.[b]
W	98.236(c)(6)(i)(E)	All.[b]
W	98.236(c)(6)(i)(F)	All.[b]
W	98.236(c)(6)(i)(G)	Only the amount of natural gas required.
W	98.236(c)(6)(i)(H)	Only the amount of natural gas required.
W	98.236(c)(6)(ii)(A)	All.
W	98.236(c)(6)(ii)(B)	All.
W	98.236(c)(7)(i)(A)	Only for Equation W–14A of § 98.233.
W	98.236(c)(8)(i)(F)	All.[b]
W	98.236(c)(8)(i)(K)	All.
W	98.236(c)(8)(ii)(A)	All.[b]
W	98.236(c)(8)(ii)(H)	All.
W	98.236(c)(8)(iii)(A)	All.
W	98.236(c)(8)(iii)(B)	All.
W	98.236(c)(8)(iii)(G)	All.
W	98.236(c)(12)(ii)	All.
W	98.236(c)(12)(v)	All.
W	98.236(c)(13)(i)(E)	All.
W	98.236(c)(13)(i)(F)	All.
W	98.236(c)(13)(ii)(A)	All.
W	98.236(c)(13)(ii)(B)	All.
W	98.236(c)(13)(iii)(A)	All.
W	98.236(c)(13)(iii)(B)	All.

TABLE A–7 TO SUBPART A OF PART 98—DATA ELEMENTS THAT ARE INPUTS TO EMISSION EQUATIONS AND FOR WHICH THE REPORTING DEADLINE IS MARCH 31, 2015—Continued

Subpart	Rule citation (40 CFR part 98)	Specific data elements for which reporting date is March 31, 2015 ("All" means all data elements in the cited paragraph are not required to be reported until March 31, 2015)
W	98.236(c)(13)(v)(A)	All.
W	98.236(c)(14)(i)(B)	All.
W	98.236(c)(14)(ii)(A)	All.
W	98.236(c)(14)(ii)(B)	All.
W	98.236(c)(14)(iii)(A)	All.
W	98.236(c)(14)(iii)(B)	All.
W	98.236(c)(14)(v)(A)	All.
W	98.236(c)(15)(ii)(A)	All.
W	98.236(c)(15)(ii)(B)	All.
W	98.236(c)(16)(viii)	All.
W	98.236(c)(16)(ix)	All.
W	98.236(c)(16)(x)	All.
W	98.236(c)(16)(xi)	All.
W	98.236(c)(16)(xii)	All.
W	98.236(c)(16)(xiii)	All.
W	98.236(c)(16)(xiv)	All.
W	98.236(c)(16)(xv)	All.
W	98.236(c)(16)(xvi)	All.
W	98.236(c)(17)(ii)	All.
W	98.236(c)(17)(iii)	All.
W	98.236(c)(17)(iv)	All.
W	98.236(c)(18)(i)	All.
W	98.236(c)(18)(ii)	All.
W	98.236(c)(19)(iv)	All.
W	98.236(c)(19)(vii)	All.
Y	98.256(h)(5)(i)	Only value of the correction.
Y	98.256(k)(4)	Only mole fraction of methane in coking gas.
Y	98.256(n)(3)	All (if used in Equation Y–21 of § 98.253 to calculate emissions from equipment leaks).
Y	98.256(o)(4)(vi)	Only tank-specific methane composition data and gas generation rate data.
AA	98.276(e)	All.
CC	98.296(b)(10)(i)	All.
CC	98.296(b)(10)(ii)	All.
CC	98.296(b)(10)(iii)	All.
CC	98.296(b)(10)(iv)	All.
CC	98.296(b)(10)(v)	All.
CC	98.296(b)(10)(vi)	All.
II	98.356(d)(2)	All (if conducting weekly sampling).
II	98.356(d)(3)	All (if conducting weekly sampling).
II	98.356(d)(4)	Only weekly average temperature (if conducting weekly sampling).
II	98.356(d)(5)	Only weekly average moisture content (if conducting weekly sampling).
II	98.356(d)(6)	Only weekly average pressure (if conducting weekly sampling).

[a] Required to be reported only by: (1) Stationary fuel combustion sources (e.g., individual units, aggregations of units, common pipes, or common stacks) subject to subpart C of this part that contain at least one combustion unit connected to a fuel-fired electric generator owned or operated by an entity that is subject to regulation of customer billing rates by the PUC (excluding generators connected to combustion units subject to 40 CFR part 98, subpart D) and that are located at a facility for which the sum of the nameplate capacities for all such electric generators is greater than or equal to 1 megawatt electric output; and (2) stationary fuel combustion sources (e.g., individual units, aggregations of units, common pipes, or common stacks) subject to subpart C of this part that do not meet the criteria in (1) of this footnote that elect to report these data elements, as provided in § 98.36(a), for reporting year 2014.

[b] This rule citation provides an option to delay reporting of this data element for certain wildcat wells and/or delineation wells.

Subpart C—General Stationary Fuel Combustion Sources

■ 5. Section 98.36 is amended by:
■ a. Revising paragraph (a);
■ b. Revising paragraph (b)(9)(iii) and adding paragraph (b)(9)(iv);
■ c. Revising paragraphs (c)(2)(ix) and (x);
■ d. Revising paragraph (e)(2)(ii)(C) and adding paragraph (e)(2)(ii)(E); and
■ e. Adding paragraph (f).

The revisions and additions read as follows:

§ 98.36 Data reporting requirements.

(a) In addition to the facility-level information required under § 98.3, the annual GHG emissions report shall contain the unit-level or process-level data specified in paragraphs (b) through (f) of this section, as applicable, for each stationary fuel combustion source (e.g., individual unit, aggregation of units, common pipe, or common stack) except as otherwise provided in this paragraph (a). For the data specified in paragraphs (b)(9)(iii), (c)(2)(ix), (e)(2)(i), (e)(2)(ii)(A), (e)(2)(ii)(C), (e)(2)(ii)(D), (e)(2)(iv)(A), (e)(2)(iv)(C), (e)(2)(iv)(F), and (e)(2)(ix)(D) through (F) of this section, the owner or operator of a stationary fuel combustion source that does not meet the criteria specified in paragraph

(f) of this section may elect either to report the data specified in this sentence in the annual report or to use verification software according to § 98.5(b) in lieu of reporting these data. If you elect to use this verification software, you must use the verification software according to § 98.5(b) for all of these data that apply to the stationary fuel combustion source.

(b) * * *

(9) * * *

(iii) An estimate of the heat input from each type of fuel listed in Table C–2 of this subpart that was combusted in the unit during the report year.

(iv) The annual CH_4 and N_2O emissions for each type of fuel listed in Table C–2 of this subpart that was combusted in the unit during the report year, expressed in metric tons of each gas and in metric tons of CO_2e.

* * * * *

(c) * * *

(2) * * *

(ix) An estimate of the heat input from each type of fuel listed in Table C–2 of this subpart that was combusted in the units sharing the common stack or duct during the report year.

(x) For each type of fuel listed in Table C–2 of this subpart that was combusted during the report year in the units sharing the common stack or duct during the report year, the annual CH_4 and N_2O mass emissions from the units sharing the common stack or duct, expressed in metric tons of each gas and in metric tons of CO_2e.

* * * * *

(e) * * *

(2) * * *

(ii) * * *

(C) The high heat values used in the CO_2 emissions calculations for each type of fuel combusted during the reporting year, in mmBtu per short ton for solid fuels, mmBtu per gallon for liquid fuels, and mmBtu per scf for gaseous fuels. Report a HHV value for each calendar month in which HHV determination is required. If multiple values are obtained in a given month, report the arithmetic average value for the month.

* * * * *

(E) For each HHV used in the CO_2 emissions calculations for each type of fuel combusted during the reporting year, indicate whether the HHV is a measured value or a substitute data value.

* * * * *

(f) Each stationary fuel combustion source (e.g., individual unit, aggregation of units, common pipe, or common stack) subject to reporting under paragraph (b) or (c) of this section must indicate if both of the following two conditions are met:

(1) The stationary fuel combustion source contains at least one combustion unit connected to a fuel-fired electric generator owned or operated by an entity that is subject to regulation of customer billing rates by the public utility commission (excluding generators that are connected to combustion units that are subject to subpart D of this part).

(2) The stationary fuel combustion source is located at a facility for which the sum of the nameplate capacities for all electric generators specified in paragraph (f)(1) of this section is greater than or equal to 1 megawatt electric output.

■ 6. Section 98.37 is revised to read as follows:

§ 98.37 Records that must be retained.

In addition to the requirements of § 98.3(g), you must retain:

(a) The applicable records specified in §§ 98.34(f) and (g), 98.35(b), and 98.36(e).

(b) *Verification software records.* For each stationary fuel combustion source that elects to use the verification software specified in § 98.5(b) rather than report data specified in paragraphs (b)(9)(iii), (c)(2)(ix), (e)(2)(i), (e)(2)(ii)(A), (e)(2)(ii)(C), (e)(2)(ii)(D), (e)(2)(iv)(A), (e)(2)(iv)(C), (e)(2)(iv)(F), and (e)(2)(ix)(D) through (F) of this section, you must keep a record of the file generated by the verification software for the applicable data specified in paragraphs (b)(1) through (36) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (b)(1) through (36) of this section.

(1) Mass of each solid fuel combusted (tons/year) (Equation C–1 of § 98.33).

(2) Volume of each liquid fuel combusted (gallons/year) (Equation C–1).

(3) Volume of each gaseous fuel combusted (scf/year) (Equation C–1).

(4) Annual natural gas usage (therms/year) (Equation C–1a of § 98.33).

(5) Annual natural gas usage (mmBtu/year) (Equation C–1b of § 98.33).

(6) Mass of each solid fuel combusted (tons/year) (Equation C–2a of § 98.33).

(7) Volume of each liquid fuel combusted (gallons/year) (Equation C–2a).

(8) Volume of each gaseous fuel combusted (scf/year) (Equation C–2a).

(9) Measured high heat value of each solid fuel, for month (which may be the arithmetic average of multiple determinations), or, if applicable, an appropriate substitute data value (mmBtu per ton) (Equation C–2b of § 98.33).

(10) Measured high heat value of each liquid fuel, for month (which may be the arithmetic average of multiple determinations), or, if applicable, an appropriate substitute data value (mmBtu per gallons) (Equation C–2b).

(11) Measured high heat value of each gaseous fuel, for month (which may be the arithmetic average of multiple determinations), or, if applicable, an appropriate substitute data value (mmBtu per scf) (Equation C–2b).

(12) Mass of each solid fuel combusted during month (tons) (Equation C–2b).

(13) Volume of each liquid fuel combusted during month (gallons) (Equation C–2b).

(14) Volume of each gaseous fuel combusted during month (scf) (Equation C–2b).

(15) Total mass of steam generated by municipal solid waste or each solid fuel combustion during the reporting year (pounds steam) (Equation C–2c of § 98.33).

(16) Ratio of the boiler's maximum rated heat input capacity to its design rated steam output capacity (MMBtu/pounds steam) (Equation C–2c).

(17) Annual mass of each solid fuel combusted (short tons/year) (Equation C–3 of § 98.33).

(18) Annual average carbon content of each solid fuel (percent by weight, expressed as a decimal fraction) (Equation C–3).

(19) Annual volume of each liquid fuel combusted (gallons/year) (Equation C–4 of § 98.33).

(20) Annual average carbon content of each liquid fuel (kg C per gallon of fuel) (Equation C–4).

(21) Annual volume of each gaseous fuel combusted (scf/year) (Equation C–5 of § 98.33).

(22) Annual average carbon content of each gaseous fuel (kg C per kg of fuel) (Equation C–5).

(23) Annual average molecular weight of each gaseous fuel (kg/kg-mole) (Equation C–5).

(24) Molar volume conversion factor at standard conditions, as defined in § 98.6 (scf per kg-mole) (Equation C–5).

(25) Identify for each fuel if you will use the default high heat value from Table C–1 of this subpart, or actual high heat value data (Equation C–8 of § 98.33).

(26) High heat value of each solid fuel (mmBtu/tons) (Equation C–8).

(27) High heat value of each liquid fuel (mmBtu/gallon) (Equation C–8).

(28) High heat value of each gaseous fuel (mmBtu/scf) (Equation C–8).

(29) Cumulative annual heat input from combustion of each fuel (mmBtu) (Equation C–10 of § 98.33).

(30) Total quantity of each solid fossil fuel combusted in the reporting year, as defined in § 98.6 (pounds) (Equation C–13 of § 98.33).

(31) Total quantity of each liquid fossil fuel combusted in the reporting year, as defined in § 98.6 (gallons) (Equation C–13).

(32) Total quantity of each gaseous fossil fuel combusted in the reporting year, as defined in § 98.6 (scf) (Equation C–13).

(33) High heat value of the each solid fossil fuel (Btu/lb) (Equation C–13).

(34) High heat value of the each liquid fossil fuel (Btu/gallons) (Equation C–13).

(35) High heat value of the each gaseous fossil fuel (Btu/scf) (Equation C–13).

(36) Fuel-specific carbon based F-factor per fuel (scf CO_2/mmBtu) (Equation C–13).

Subpart E—Adipic Acid Production

■ 7. Section 98.56 is amended by:
■ a. Revising the introductory text;
■ b. Removing and reserving paragraphs (b), (c), and (j)(1) and (3); and
■ c. Adding paragraphs (m) and (n).

The revisions and additions read as follows:

§ 98.56 Data reporting requirements.

In addition to the information required by § 98.3(c), each annual report must contain the information specified in paragraphs (a) through (n) of this section at the facility level.

* * * * *

(m) If only cyclohexane is oxidized to produce adipic acid and the quantity is known, report the information specified in paragraph (m)(1) of this section. If materials other than cyclohexane are oxidized to produce adipic acid, report the information specified in paragraph (m)(2) of this section.

(1) Annual quantity of cyclohexane (tons) used to produce adipic acid.

(2) Annual quantity of cyclohexanone and cyclohexanol mixture (tons) used to produce adipic acid.

(n) Annual percent N_2O emission reduction for all production units combined.

■ 8. Section 98.57 is amended by revising the introductory text and adding paragraph (i) to read as follows:

§ 98.57 Records that must be retained.

In addition to the information required by § 98.3(g), you must retain the records specified in paragraphs (a) through (i) of this section at the facility level:

* * * * *

(i) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (i)(1) through (3) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (i)(1) through (3) of this section.

(1) Annual adipic acid production from each adipic acid production unit (tons) (Equations E–2, E–3a, E–3b, E–3c, and E–3d of § 98.53).

(2) Production rate per test run during the performance test for each production unit test run (tons adipic acid produced/hr) (Equation E–1 of § 98.53).

(3) Annual adipic acid production per N_2O abatement technology during which N_2O abatement technology was used (tons adipic acid produced) (Equation E–2).

Subpart F—Aluminum Production

■ 9. Section 98.66 is amended by:
■ a. Removing and reserving paragraphs (a) and (c)(2);
■ b. Revising paragraphs (c)(3), (e)(1), and (f)(1); and
■ c. Removing and reserving paragraph (g).

The revisions read as follows:

§ 98.66 Data reporting requirements.

* * * * *

(c) * * *

(3) The last date when the smelter-specific-slope coefficients (or overvoltage emission factors) were measured.

* * * * *

(e) * * *

(1) Annual anode consumption if using the method in § 98.63(g).

* * * * *

(f) * * *

(1) Annual paste consumption if using the method in § 98.63(g).

* * * * *

■ 10. Section 98.67 is amended by adding paragraph (i) to read as follows:

§ 98.67 Records that must be retained.

* * * * *

(i) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (i)(1) through (30) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (i)(1) through (30) of this section.

(1) Slope coefficient per potline per month (kg CF_4/metric ton Al)/(AE-Mins/cell-day)) (Equation F–2 of § 98.63).

(2) Anode effect minutes per cell-day per potline per month (AE-Mins/cell-day) (Equation F–2).

(3) Anode effect frequency per potline per month (AE/cell-day) (Equation F–2).

(4) Anode effect duration per potline per month (minutes) (Equation F–2).

(5) Metal production of aluminum per potline per month (metric tons) (Equation F–2).

(6) Overvoltage emission factor per potline per month (kg CF4/metric ton Al) (Equation F–3 of § 98.63).

(7) Metal production of aluminum per potline per month (metric tons) (Equation F–3).

(8) Weight fraction of C_2F6/CF_4 per potline per month (kg C_2F_6/kg CF_4) (Equation F–4 of § 98.63).

(9) Net annual prebaked anode consumption (metric tons C/metric tons Al) (Equation F–5 of § 98.63).

(10) Annual metal production of aluminum (metric tons) (Equation F–5).

(11) Sulfur content in baked anode (weight percent) (Equation F–5).

(12) Ash content in baked anode (weight percent) (Equation F–5).

(13) Annual paste consumption (metric ton/metric ton Al) (Equation F–6 of § 98.63).

(14) Annual metal production of aluminum (metric tons) (Equation F–6).

(15) Annual emissions of cyclohexane soluble matter (kg/metric ton Al) (Equation F–6).

(16) Binder content of paste (weight percent) (Equation F–6).

(17) Sulfur content of pitch (weight percent) (Equation F–6).

(18) Ash content of pitch (weight percent) (Equation F–6).

(19) Hydrogen content of pitch (weight percent) (Equation F–6).

(20) Sulfur content in calcined coke (weight percent) (Equation F–6).

(21) Ash content in calcined coke (weight percent) (Equation F–6).

(22) Carbon in skimmed dust from Søderberg cells (metric ton C/metric ton Al) (Equation F–6).

(23) Initial weight of green anodes (metric tons) (Equation F–7 of § 98.63).

(24) Annual hydrogen content in green anodes (metric tons) (Equation F–7).

(25) Annual baked anode production (metric tons) (Equation F–7).

(26) Annual waste tar collected (metric tons) (Equation F–7).

(27) Annual packing coke consumption (metric tons/metric ton baked anode) (Equation F–8 of § 98.63).

(28) Annual baked anode production (metric tons) (Equation F–8).

(29) Sulfur content in packing coke (weight percent) (Equation F–8).

(30) Ash content in packing coke (weight percent) (Equation F–8).

Subpart G—Ammonia Manufacturing

■ 11. Section 98.76 is amended by removing and reserving paragraphs (b)(2) and (b)(7) through (11) and adding paragraphs (b)(14) and (15) to read as follows:

§ 98.76 Data reporting requirements.

* * * * *

(b) * * *

(14) Annual ammonia production (metric tons, sum of all process units reported within subpart G).

(15) Annual methanol production for each process unit (metric tons).

■ 12. Section 98.77 is amended by revising the introductory text and adding paragraph (c) to read as follows:

§ 98.77 Records that must be retained.

In addition to the records required by § 98.3(g), you must retain the following records specified in paragraphs (a) through (c) of this section for each ammonia manufacturing unit.

* * * * *

(c) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (c)(1) through (7) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (c)(1) through (7) of this section.

(1) Volume of each gaseous feedstock used in month (scf of feedstock) (in Equation G–1 of § 98.73).

(2) Carbon content of each gaseous feedstock, for month (kg C per kg of feedstock) (in Equation G–1).

(3) Molecular weight of each gaseous feedstock per ammonia manufacturing unit with gaseous feedstock (kg/kg-mole) (Equation G–1).

(4) Volume of each liquid feedstock used in month (gallons of feedstock) (Equation G–2 of § 98.73).

(5) Carbon content of each liquid feedstock, for month (kg C per gallon of feedstock) (Equation G–2).

(6) Mass of each solid feedstock used in month (kg of feedstock) (Equation G–3 of § 98.73).

(7) Carbon content of each solid feedstock, for month (kg C per kg of feedstock) (Equation G–3).

Subpart H—Cement Production

■ 13. Section 98.86 is amended by:

■ a. Removing and reserving paragraphs (b)(2), (5), (6), (8), (10), and (12);

■ b. Revising paragraphs (b)(13) and (15); and

■ c. Adding paragraphs (b)(16) through (18).

The revisions and additions read as follows:

§ 98.86 Data reporting requirements.

* * * * *

(b) * * *

(13) Name of raw kiln feed or raw material.

* * * * *

(15) Method used to determine the monthly clinker production from each kiln.

(16) Annual clinker production (metric tons).

(17) Annual average clinker CO_2 emission factor for the facility, averaged across all kilns (metric tons CO_2/metric ton clinker produced).

(18) Annual average CKD CO_2 emission factor for the facility, averaged across all kilns (metric tons CO_2/metric ton CKD produced).

■ 14. Section 98.87 is amended by adding paragraph (c) to read as follows:

§ 98.87 Records that must be retained.

* * * * *

(c) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (c)(1) through (17) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (c)(1) through (17) of this section.

(1) Identify per kiln per month if clinker is measured directly, or is calculated from raw feed (Equation H–2 of § 98.83 and the method in § 98.84(d)).

(2) Quantity of raw kiln feed in month from kiln (tons) (Equation H–2 and the method in § 98.84(d)).

(3) Kiln-specific factor per kiln per month (ton clinker per ton raw feed) (Equation H–2 and the method in § 98.84(d)).

(4) Quantity of clinker produced in month from kiln (tons) (Equation H–2 and the method in § 98.84(d)).

(5) Cement kiln dust (CKD) not recycled to the kiln in quarter from kiln (tons) (Equation H–2 and the method in § 98.84(d)).

(6) Monthly total CaO content of clinker per kiln (weight fraction) (Equation H–3 of § 98.83).

(7) Monthly non-calcined CaO content of clinker per kiln (weight fraction) (Equation H–3).

(8) Monthly total MgO content of clinker per kiln (weight fraction) (Equation H–3).

(9) Monthly non-calcined MgO content of clinker per kiln (weight fraction) (Equation H–3).

(10) Quarterly total CaO content of cement kiln dust not recycled to each kiln (weight fraction) (Equation H–4 of § 98.83).

(11) Quarterly non-calcined CaO content of cement kiln dust not recycled to each kiln (weight fraction) (Equation H–4).

(12) Quarterly total MgO content of cement kiln dust not recycled to each kiln (weight fraction) (Equation H–4).

(13) Quarterly non-calcined MgO content of cement kiln dust not recycled to each kiln (weight fraction) (Equation H–4).

(14) The amount of each raw material consumed annually per kiln (tons/yr (dry basis)) (Equation H–5 of § 98.83).

(15) The amount of each raw kiln feed consumed annually per kiln (tons/yr (dry basis)) (Equation H–5).

(16) Organic carbon content of each raw material per kiln, as determined in § 98.84(c). Default value is 0.002 weight fraction (Equation H–5).

(17) Organic carbon content of combined raw kiln feed per kiln, as determined in § 98.84(c). Default value is 0.002 weight fraction (Equation H–5).

Subpart K—Ferroalloy Production

■ 15. Section 98.116 is amended by:

■ a. Revising paragraph (b).

■ b. Removing and reserving paragraphs (e)(4) and (5); and

■ c. Revising paragraph (e)(6).

The revisions read as follows:

§ 98.116 Data reporting requirements.

* * * * *

(b) If a CEMS is used to measure CO_2 emissions, report the annual production for each ferroalloy product identified in § 98.110, from each EAF (tons).

* * * * *

(e) * * *

(6) List the method used for the determination of carbon content for each material included for the calculation of annual process CO_2 emissions for each EAF (*e.g.,* supplier provided information, analyses of representative samples you collected).

* * * * *

■ 16. Section 98.117 is amended by revising the introductory text and adding paragraph (e) to read as follows:

§ 98.117 Records that must be retained.

In addition to the records required by § 98.3(g), you must retain the records specified in paragraphs (a) through (e) of this section for each EAF, as applicable.

* * * * *

(e) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (e)(1) through (13) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (e)(1) through (13) of this section.

(1) Carbon content in reducing agent (percent by weight, expressed as a decimal fraction) (Equation K–1 of § 98.113).

(2) Annual mass of reducing agent fed, charged, or otherwise introduced into the EAF (tons) (Equation K–1).

(3) Carbon content of carbon electrode (percent by weight, expressed as a decimal fraction) (Equation K–1).

(4) Annual mass of carbon electrode consumed in the EAF (tons) (Equation K–1).

(5) Carbon content in ore (percent by weight, expressed as a decimal fraction) (Equation K–1).

(6) Annual mass of ore charged to the EAF (tons) (Equation K–1).

(7) Carbon content in flux material (percent by weight, expressed as a decimal fraction) (Equation K–1).

(8) Annual mass of flux material fed, charged, or otherwise introduced into the EAF to facilitate slag formation (tons) (Equation K–1).

(9) Carbon content in alloy product (percent by weight, expressed as a decimal fraction) (Equation K–1).

(10) Annual mass of alloy product produced/tapped in the EAF (tons) (Equation K–1).

(11) Carbon content in non-product outgoing material (percent by weight, expressed as a decimal fraction) (Equation K–1).

(12) Annual mass of non-product outgoing material removed from EAF (tons) (Equation K–1).

(13) CH_4 emission factor selected from Table K–1 of this subpart for each product (kg of CH_4 emissions/metric ton of alloy product) (Equation K–3 of § 98.113).

Subpart N—Glass Production

■ 17. Section 98.146 is amended by revising paragraph (b)(2) and removing and reserving paragraphs (b)(4) and (6) to read as follows:

§ 98.146 Data reporting requirements.

* * * * *

(b) * * *

(2) Annual quantity of each carbonate-based raw material charged (tons) to all furnaces combined.

* * * * *

■ 18. Section 98.147 is amended by revising the introductory text and adding paragraph (d) to read as follows:

§ 98.147 Records that must be retained.

In addition to the information required by § 98.3(g), you must retain the records listed in paragraphs (a) through (d) of this section.

* * * * *

(d) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (d)(1) through (3) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (d)(1) through (3) of this section.

(1) Annual average decimal mass fraction of carbonate-based mineral in each carbonate-based raw material for each continuous glass melting furnace (specify the default value, if used, or the value determined according to § 98.144) (percentage, expressed as a decimal) (Equation N–1 of § 98.143).

(2) Annual amount of each carbonate-based raw material charged to each continuous glass melting furnace (tons) (Equation N–1).

(3) Decimal fraction of each calcination achieved for carbonate-based raw material for each continuous glass melting furnace (specify the default value, if used, or the value determined according to § 98.144) (percentage, expressed as a decimal) (Equation N–1).

Subpart O—HCFC–22 Production and HFC–23 Destruction

■ 19. Section 98.156 is amended by:

■ a. Removing and reserving paragraphs (a)(2), (a)(7) through (10), and (b)(1) and (2);

■ b. Revising paragraph (d) introductory text; and

■ c. Removing and reserving paragraphs (d)(1) and (5) and (e)(1).

The revisions read as follows:

§ 98.156 Data reporting requirements.

* * * * *

(d) If the HFC–23 concentration measured pursuant to § 98.154(l) is greater than that measured during the performance test that is the basis for the destruction efficiency (DE), the facility shall report the following:

* * * * *

■ 20. Section 98.157 is amended by adding paragraph (c) to read as follows:

§ 98.157 Records that must be retained.

* * * * *

(c) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (c)(1) through (16) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (c)(1) through (16) of this section.

(1) Factor to account for the loss of HCFC–22 upstream of the measurement over the period, determined pursuant to § 98.154(e) (Equation O–3 of § 98.153).

(2) Mass of HCFC–22 that is measured coming out of the production process over the period. A period can be one year (kg) (Equation O–3).

(3) Mass of used HCFC–22 that is added to the production process upstream of the output measurement over the period. A period can be one year (kg) (Equation O–3).

(4) Mass of HFC–23 generated annually per HCFC–22 production process (metric tons) (Equation O–4 of § 98.153).

(5) Mass of HFC–23 sent off site for sale annually per HCFC–22 production process (metric tons) (Equation O–4).

(6) Mass of HFC–23 sent off site for destruction annually per HCFC–22 production process (metric tons) (Equation O–4).

(7) Mass of HFC–23 destroyed on site per HCFC–22 production process (metric tons) (Equation O–4).

(8) HFC–23 in storage at end of year per HCFC–22 production process (metric tons) (Equation O–4).

(9) HFC–23 in storage at beginning of year per HCFC–22 production process (metric tons) (Equation O–4).

(10) Mass of HFC–23 fed into each destruction device annually per HCFC–22 production process (metric tons) (Equation O–9 of § 98.153 and the calculation method in either § 98.154(l)(1) or (2)).

(11) Identify if each destruction efficiency for each HCFC-22 production process is entered directly, or is calculated using § 98.154(l)(1), or is calculated using § 98.154(l)(2) (Equation O–9 and the calculation method in either § 98.154(l)(1) or (2)).

(12) Destruction efficiency of each destruction device for each HCFC-22 production process (decimal fraction) (Equation O–9 and the calculation method in either § 98.154(l)(1) or (2)).

(13) Volumetric flow rate at the inlet of each destruction device for each HCFC-22 production process from previous test (kg/hr) (Equation O–9 and the calculation method in either § 98.154(l)(1) or (2)).

(14) Volumetric flow rate at the inlet of destruction device during test for each HCFC-22 production process (kg/hr) (Equation O–9 and the calculation method in either § 98.154(l)(1) or (2)).

(15) Concentration of HFC-23 at the inlet of destruction device for each HCFC-22 production process from previous test (weight fraction) (Equation O–9 and the calculation method in either § 98.154(l)(1) or (2)).

(16) Concentration of HFC-23 at the inlet of destruction device for each HCFC-22 production process during test (weight fraction) (Equation O–9 and the calculation method in either § 98.154(l)(1) or (2)).

Subpart P—Hydrogen Production

■ 21. Section 98.166 is amended by:
■ a. Revising the introductory text;
■ b. Removing and reserving paragraphs (b)(2), (5), and (6); and
■ c. Adding paragraphs (b)(7) and (e).

The revisions and additions read as follows:

§ 98.166 Data reporting requirements.

In addition to the information required by § 98.3(c), each annual report must contain the information specified in paragraphs (a) or (b) of this section, as appropriate, and paragraphs (c) through (e) of this section:

* * * * *

(b) * * *

(7) Name and annual quantity (metric tons) of each carbon-containing fuel and feedstock.

* * * * *

(e) Annual methanol production (metric tons) for each process unit.

■ 22. Section 98.167 is amended by revising the introductory text and adding paragraph (e) to read as follows:

§ 98.167 Records that must be retained.

In addition to the information required by § 98.3(g), you must retain the records specified in paragraphs (a) through (e) of this section for each hydrogen production facility.

* * * * *

(e) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (e)(1) through (12) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (e)(1) through (12) of this section.

(1) Indicate whether the monthly consumption of each gaseous fuel or feedstock is measured as mass or volume (Equation P–1 of § 98.163).

(2) Monthly volume of the gaseous fuel or feedstock (scf at standard conditions of 68 °F and atmospheric pressure) (Equation P–1).

(3) Monthly mass of the gaseous fuel or feedstock (kg of fuel or feedstock) (Equation P–1).

(4) Average monthly carbon content of the gaseous fuel or feedstock (kg C per kg of fuel or feedstock) (Equation P–1).

(5) Average monthly molecular weight of the gaseous fuel or feedstock (kg/kg-mole) (Equation P–1).

(6) Indicate whether the monthly consumption of each liquid fuel or feedstock is measured as mass or volume (Equation P–2 of § 98.163).

(7) Monthly volume of the liquid fuel or feedstock (gallons of fuel or feedstock) (Equation P–2).

(8) Monthly mass of the liquid fuel or feedstock (kg of fuel or feedstock) (Equation P–2).

(9) Average monthly carbon content of the liquid fuel or feedstock (kg C per gallon of fuel or feedstock) (Equation P–2).

(10) Average monthly carbon content of the liquid fuel or feedstock (kg C per kg of fuel or feedstock) (Equation P–2).

(11) Monthly mass of solid fuel or feedstock (kg of fuel and feedstock) (Equation P–3 of § 98.163).

(12) Average monthly carbon content of the solid fuel or feedstock (kg C per kg of fuel and feedstock) (Equation P–3).

Subpart Q—Iron and Steel Production

■ 23. Section 98.176 is amended by:
■ a. Revising paragraph (b);
■ b. Removing and reserving paragraphs (e)(1), (3), and (4);
■ c. Adding paragraph (e)(6); and
■ c. Removing and reserving paragraphs (f)(2) through (4) and (g).

The revisions and additions read as follows:

§ 98.176 Data reporting requirements.

* * * * *

(b) If a CEMS is used to measure CO_2 emissions, then you must report the annual production quantity for the production unit (in metric tons) for taconite pellets, coke, sinter, iron, and raw steel.

* * * * *

(e) * * *

(6) The information specified in paragraphs (e)(6)(i) through (vi) of this section aggregated for all process units for which CO_2 emissions were determined using the mass balance method in § 98.173(b)(1), except as provided in § 98.174(b)(4).

(i) The annual mass (metric tons) of all gaseous, liquid, and solid fuels (combined) used in process units for which CO_2 emissions were determined using Equations Q–1 through Q–7 of § 98.173, calculated as specified in Equation Q–9 of this section.

$$Fuel = \sum_{i=1}^{n} \left(F_{g,i} * \frac{MW_i}{MVC} * 0.001 + F_{l,i} * \rho_{l,i} * 0.001 + F_{s,i} \right) \quad \text{(Eq. Q-9)}$$

Where:

Fuel = Annual mass of all gaseous, liquid, and solid fuels used in process units (metric tons).

n = Number of process units where fuel is used.

$F_{g,i}$ = Annual volume of gaseous fuel combusted (''(F_g)'' in Equations Q–1, Q–4 and Q–7 of § 98.173) for each process (scf).

MW_i = Molecular weight of gaseous fuel used in each process (kg/kg-mole).

MVC = Molar volume conversion factor at standard conditions, as defined in § 98.6. Use 849.5 scf per kg mole if you select 68°F as standard temperature and 836.6 scf per kg mole if you select 60°F as standard temperature.

$F_{l,i}$ = Annual volume of the liquid fuel combusted (''(F_l)'' included in Equation Q–1) for each process unit (gallons).

$F_{s,i}$ = Annual mass of the solid fuel combusted (''(F_s)'' in Equation Q–1) for each process unit (metric tons).

$\rho_{l,i}$ = Density of the liquid fuel (kg/gallon).

0.001 = Conversion factor from kg to metric tons.

(ii) The annual mass (metric tons) of all non-fuel material inputs (combined) specified in Equations Q–1 through Q–7 of § 98.173, calculated as specified in Equation Q–10 of this section.

$$NFI = \sum_{i=1}^{n} \left(\begin{matrix} O + Iron + Scrap + lux + Carbon + Coal + Feed \\ + Electrode + Steel_{in} + Ore + Other \end{matrix} \right) \quad \text{(Eq. Q-10)}$$

Where:

NFI = Annual mass of all non-fuel inputs (to all process unit types) specified in Equations Q–1 through Q–7 of § 98.173 (metric tons).

n = Number of process units, all process types.

O = Annual mass of greenball (taconite) pellets fed to the taconite furnace(s) (metric tons).

Iron = Annual mass of molten iron charged to the basic oxygen furnace(s) plus annual mass of direct reduced iron charged to the EAF(s) (metric tons).

Scrap = Annual mass of ferrous scrap charged to the basic oxygen furnace(s) and EAF(s) (metric tons).
Flux = Annual mass of flux materials charged to the basic oxygen furnace(s) and EAF(s) (metric tons).
Carbon = Annual mass of carbonaceous materials (e.g., coal, coke) charged to the basic oxygen furnace(s), EAF(s), and direct reduction furnace(s) (metric tons).
Coal = Annual mass of coal charged to the coke oven battery(s) (metric tons).
Feed = Annual mass of sinter feed material charged to the sinter process(es) (metric tons).
Electrode = Annual mass of carbon electrode consumed in the EAF(s) (metric tons).
$Steel_{in}$ = Annual mass of molten steel charged to the decarburization vessels (metric tons).
Ore = Annual mass of iron ore or iron ore pellets fed to the direct reduction furnace(s) (metric tons).
Other = Annual mass of other materials charged to the direction reduction furnace(s) (metric tons).

(iii) The annual mass (metric tons) of all solid and liquid products and byproducts (combined) specified in Equations Q–1 through Q–7 of § 98.173, calculated as specified in Equation Q–11 of this section.

$$Products = \sum_{i=1}^{n} (P + R + I + Steel_{out} + Slag + Coke + Sinter + Iron + NM) \quad \text{(Eq. Q-11)}$$

Where:
Products = Annual mass of all solid and liquid products and by-products (from all process units) specified in Equations Q–1 through Q–7 of § 98.173 (metric tons).
n = Number of process units, all types.
P = Annual mass of fired pellets produced by the taconite furnace (metric tons).
R = Annual mass of air pollution control residue from all process units (metric tons).
$Steel_{out}$ = Annual mass of steel produced by the basic oxygen furnace(s), EAF(s) and decarburization vessel(s) (metric tons).
Slag = Annual mass of slag produced by the basic oxygen furnace(s) and EAF(s) (metric tons).
Coke = Annual mass of coke produced by the non-recovery coke batteries (metric tons).
Sinter = Annual mass of sinter produced from the sinter process(es) (metric tons).
Iron = Annual mass of iron produced from the direct reduction furnace (metric tons).
NM = Annual mass of non-metallic materials produced by the direct reduction furnace (metric tons).

(iv) The weighted average carbon content of all gaseous, liquid, and solid fuels (combined) included in Equation Q–9 of this section, calculated as specified in Equation Q–12 of this section.

$$CF_{avg} = \frac{\sum_{i=1}^{n} (F_{g,i} * \frac{MW_i}{MVC} * C_{g,f,i} * 0.001 + F_{l,i} * C_{lf,i} * 0.001 + F_{s,i} * C_{sf})}{Fuel} \quad \text{(Eq. Q-12)}$$

Where:
CF_{avg} = Weighted average carbon content of all gaseous, liquid, and solid fuels included in Equation Q–9 of this section (weight fraction).
n = Number of gaseous, liquid, and solid fuel input to each process unit as used in Equation Q–9.
$C_{gf,i}$ = Average carbon content of the gaseous fuel used in each process, from the fuel analysis results (kg C per kg of fuel).
$C_{lf,i}$ = Carbon content of the liquid fuel used in each process, from the fuel analysis results (kg C per gallon of fuel.
C_{sf} = Carbon content of the solid fuel used in each process, from the fuel analysis (expressed as a decimal fraction, e.g., 95% = 0.95).
Fuel = Annual mass of all gaseous, liquid, and solid fuels used in process units (metric tons), as calculated in Equation Q–9.

(v) The weighted average carbon content of all non-fuel inputs to all process units (combined) included in Equation Q–10 of this section, calculated as specified in Equation Q–13 of this section.

$$CI_{avg} = \frac{(\sum_{i=1}^{n} NFI_i * C_{NFIi})}{NFI} \quad \text{(Eq. Q-13)}$$

Where:
CI_{avg} = Weighted average carbon content of all non-fuel inputs to all process units included in Equation Q–10 of this section (weight fraction).
n = Number of non-fuel inputs to all process units as used in Equation Q–10.
NFI_i = Annual mass of each non-fuel input used in Equation Q–10 (metric tons).
C_{NFIi} = Average carbon content of each non-fuel input used in Equation Q–10 (expressed as a decimal fraction).
NFI = Total of all non-fuel inputs to all process units (metric tons).

(vi) The weighted average carbon content of all solid and liquid products and byproducts from all process units (combined) included in Equation Q–11 of this section, calculated as specified in Equation Q–14 of this section.

$$CP_{avg} = \frac{(\sum_{i=1}^{n} Product_i * C_{Pi})}{Products} \quad \text{(Eq. Q-14)}$$

Where:
CP_{avg} = Weighted average carbon content of all solid and liquid products and byproducts from all process units (weight fraction).
n = Number of products and byproducts from each process unit as used in Equation Q–11 of this section.
$Product_i$ = Annual mass of each product or byproduct used in Equation Q–11 (metric tons).
$C_{p,i}$ = Average carbon content of each product or byproduct used in Equation Q–11 (expressed as a decimal fraction).
Products = Mass of all products and byproducts from all process units, calculated in Equation Q–11 (metric tons).

* * * * *

■ 24. Section 98.177 is amended by revising the introductory text and adding paragraph (f) to read as follows:

§ 98.177 Records that must be retained.

In addition to the records required by § 98.3(g), you must retain the records specified in paragraphs (a) through (f) of this section, as applicable. Facilities that use CEMS to measure emissions must also retain records of the verification data required for the Tier 4 Calculating Methodology in § 98.36(e).

* * * * *

(f) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (f)(1) through (9) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (f)(1) through (9) of this section.

(1) The data in paragraphs (f)(1)(i) through (xxv) of this section for each applicable taconite indurating furnace for which the carbon mass balance method of reporting is used.

(i) Annual mass of each solid fuel (metric tons) (Equation Q–1 of § 98.173).

(ii) Carbon content of each solid fuel, from the fuel analysis (expressed as a decimal fraction) (Equation Q–1).

(iii) Annual volume of each gaseous fuel (scf) (Equation Q–1).

(iv) Average carbon content of each gaseous fuel, from the fuel analysis results (kg C per kg of fuel) (Equation Q–1).

(v) Molecular weight of each gaseous fuel (kg/kg-mole) (Equation Q–1).

(vi) Annual volume of each liquid fuel (gallons) (Equation Q–1).

(vii) Carbon content of each liquid fuel, from the fuel analysis results (kg C per gallon of fuel) (Equation Q–1).

(viii) Annual mass of the greenball (taconite) pellets fed to the furnace (metric tons) (Equation Q–1).

(ix) Carbon content of the greenball (taconite) pellets, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–1).

(x) Annual mass of fired pellets produced by the furnace (metric tons) (Equation Q–1).

(xi) Carbon content of the fired pellets, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–1).

(xii) Annual mass of air pollution control residue collected (metric tons) (Equation Q–1).

(xiii) Carbon content of the air pollution control residue, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–1).

(xiv) Annual mass of each other solid input containing carbon fed to each furnace (metric tons) (Equation Q–1).

(xv) Carbon content of each other solid input containing carbon fed to each furnace (expressed as a decimal fraction) (Equation Q–1).

(xvi) Annual mass of each other solid output containing carbon produced by each furnace (metric tons) (Equation Q–1).

(xvii) Carbon content of each other solid output containing carbon (expressed as a decimal fraction) (Equation Q–1).

(xviii) Annual mass of each other gaseous input containing carbon fed to each furnace (metric tons) (Equation Q–1).

(xix) Carbon content of each other gaseous input containing carbon fed to each furnace (expressed as a decimal fraction) (Equation Q–1).

(xx) Annual mass of each other gaseous output containing carbon produced by each furnace (metric tons) (Equation Q–1).

(xxi) Carbon content of each other gaseous output containing carbon produced by each furnace (expressed as a decimal fraction) (Equation Q–1).

(xxii) Annual mass of each other liquid input containing carbon fed to each furnace (metric tons) (Equation Q–1).

(xxiii) Carbon content of each other liquid input containing carbon fed to each furnace (expressed as a decimal fraction) (Equation Q–1).

(xxiv) Annual mass of each other liquid output containing carbon produced by each furnace (metric tons) (Equation Q–1).

(xxv) Carbon content of each other liquid output containing carbon produced by each furnace (expressed as a decimal fraction) (Equation Q–1).

(2) The data in paragraphs (f)(2)(i) through (xxvi) of this section for each applicable basic oxygen process furnace for which the carbon mass balance method of reporting is used.

(i) Annual mass of molten iron charged to the furnace (metric tons) (Equation Q–2 of § 98.173).

(ii) Carbon content of the molten iron charged to the furnace, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–2).

(iii) Annual mass of ferrous scrap charged to the furnace (metric tons) (Equation Q–2).

(iv) Carbon content of the ferrous scrap charged to the furnace, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–2).

(v) Annual mass of the flux materials (e.g., limestone, dolomite) charged to the furnace (metric tons) (Equation Q–2).

(vi) Carbon content of the flux materials charged to the furnace, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–2).

(vii) Annual mass of the carbonaceous materials (e.g., coal, coke) charged to the furnace (metric tons) (Equation Q–2).

(viii) Carbon content of the carbonaceous materials charged to the furnace, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–2).

(ix) Annual mass of molten raw steel produced by the furnace (metric tons) (Equation Q–2).

(x) Carbon content of the steel produced by the furnace, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–2).

(xi) Annual mass of slag produced by the furnace (metric tons) (Equation Q–2).

(xii) Carbon content of the slag produced by the furnace, from the carbon analysis (expressed as a decimal fraction) (Equation Q–2).

(xiii) Annual mass of air pollution control residue collected for the furnace (metric tons) (Equation Q–2).

(xiv) Carbon content of the air pollution control residue collected for the furnace, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–2).

(xv) Annual mass of each other solid input containing carbon fed to each furnace (metric tons) (Equation Q–2).

(xvi) Carbon content of each other solid input containing carbon fed to each furnace (expressed as a decimal fraction) (Equation Q–2).

(xvii) Annual mass of each other solid output containing carbon produced by each furnace (metric tons) (Equation Q–2).

(xviii) Carbon content of each other solid output containing carbon (expressed as a decimal fraction) (Equation Q–2).

(xix) Annual mass of each other gaseous input containing carbon fed to each furnace (metric tons) (Equation Q–2).

(xx) Carbon content of each other gaseous input containing carbon fed to each furnace (expressed as a decimal fraction) (Equation Q–2).

(xxi) Annual mass of each other gaseous output containing carbon produced by each furnace (metric tons) (Equation Q–2).

(xxii) Carbon content of each other gaseous output containing carbon produced by each furnace (expressed as a decimal fraction) (Equation Q–2).

(xxiii) Annual mass of each other liquid input containing carbon fed to each furnace (metric tons) (Equation Q–2).

(xxiv) Carbon content of each other liquid input containing carbon fed to each furnace (expressed as a decimal fraction) (Equation Q–2).

(xxv) Annual mass of each other liquid output containing carbon produced by each furnace (metric tons) (Equation Q–2).

(xxvi) Carbon content of each other liquid output containing carbon produced by each furnace (expressed as a decimal fraction) (Equation Q–2).

(3) The data in paragraphs (f)(3)(i) through (xviii) of this section for each applicable non-recovery coke oven battery for which the carbon mass balance method of reporting is used.

(i) Annual mass of coal charged to the battery (metric tons) (Equation Q–3 of § 98.173).

(ii) Carbon content of the coal, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–3).

(iii) Annual mass of coke produced by the battery (metric tons) (Equation Q–3).

(iv) Carbon content of the coke, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–3).

(v) Annual mass of air pollution control residue collected (metric tons) (Equation Q–3).

(vi) Carbon content of the air pollution control residue, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–3).

(vii) Annual mass of each other solid input containing carbon fed to each battery (metric tons) (Equation Q–3).

(viii) Carbon content of each other solid input containing carbon fed to each battery (expressed as a decimal fraction) (Equation Q–3).

(ix) Annual mass of each other solid output containing carbon produced by each battery (metric tons) (Equation Q–3).

(x) Carbon content of each other solid output containing carbon (expressed as a decimal fraction) (Equation Q–3).

(xi) Annual mass of each other gaseous input containing carbon fed to each battery (metric tons) (Equation Q–3).

(xii) Carbon content of each other gaseous input containing carbon fed to each battery (expressed as a decimal fraction) (Equation Q–3).

(xiii) Annual mass of each other gaseous output containing carbon produced by each battery (metric tons) (Equation Q–3).

(xiv) Carbon content of each other gaseous output containing carbon produced by each battery (expressed as a decimal fraction) (Equation Q–3).

(xv) Annual mass of each other liquid input containing carbon fed to each battery (metric tons) (Equation Q–3).

(xvi) Carbon content of each other liquid input containing carbon fed to each battery (expressed as a decimal fraction) (Equation Q–3).

(xvii) Annual mass of each other liquid output containing carbon produced by each battery (metric tons) (Equation Q–3).

(xviii) Carbon content of each other liquid output containing carbon produced by each battery (expressed as a decimal fraction) (Equation Q–3).

(4) The data in paragraphs (f)(4)(i) through (xxi) of this section for each applicable sinter process for which the carbon mass balance method of reporting is used.

(i) Annual volume of the gaseous fuel (scf) (Equation Q–4 of § 98.173).

(ii) Carbon content of the gaseous fuel, from the fuel analysis results (kg C per kg of fuel) (Equation Q–4).

(iii) Molecular weight of the gaseous fuel (kg/kg-mole) (Equation Q–4).

(iv) Annual mass of sinter feed material (metric tons) (Equation Q–4).

(v) Carbon content of the mixed sinter feed materials that form the bed entering the sintering machine, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–4).

(vi) Annual mass of sinter produced (metric tons) (Equation Q–4).

(vii) Carbon content of the sinter pellets, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–4).

(viii) Annual mass of air pollution control residue collected (metric tons) (Equation Q–4).

(ix) Carbon content of the air pollution control residue, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–4).

(x) Annual mass of each other solid input containing carbon fed to each sinter process (metric tons) (Equation Q–4).

(xi) Carbon content of each other solid input containing carbon fed to each sinter process (expressed as a decimal fraction) (Equation Q–4).

(xii) Annual mass of each other solid output containing carbon produced by each sinter process (metric tons) (Equation Q–4).

(xiii) Carbon content of each other solid output containing carbon (expressed as a decimal fraction) (Equation Q–4).

(xiv) Annual mass of each other gaseous input containing carbon fed to each sinter process (metric tons) (Equation Q–4).

(xv) Carbon content of each other gaseous input containing carbon fed to each sinter process (expressed as a decimal fraction) (Equation Q–4).

(xvi) Annual mass of each other gaseous output containing carbon produced by each sinter process (metric tons) (Equation Q–4).

(xvii) Carbon content of each other gaseous output containing carbon produced by each sinter process (expressed as a decimal fraction) (Equation Q–4).

(xviii) Annual mass of each other liquid input containing carbon fed to each sinter process (metric tons) (Equation Q–4).

(xix) Carbon content of each other liquid input containing carbon fed to each sinter process (expressed as a decimal fraction) (Equation Q–4).

(xx) Annual mass of each other liquid output containing carbon produced by each sinter process (metric tons) (Equation Q–4).

(xxi) Carbon content of each other liquid output containing carbon produced by each sinter process (expressed as a decimal fraction) (Equation Q–4).

(5) The data in paragraphs (f)(5)(i) through (xxxi) of this section for each applicable electric arc furnace for which the carbon mass balance method of reporting is used.

(i) Annual mass of direct reduced iron (if any) charged to the furnace (metric tons) (Equation Q–5 of § 98.173).

(ii) Carbon content of the direct reduced iron, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–5)

(iii) Annual mass of ferrous scrap charged to the furnace (metric tons) (Equation Q–5).

(iv) Carbon content of the ferrous scrap, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–5).

(v) Annual mass of flux materials (e.g., limestone, dolomite) charged to the furnace (metric tons) (Equation Q–5).

(vi) Carbon content of the flux materials, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–5).

(vii) Annual mass of carbon electrode consumed (metric tons) (Equation Q–5).

(viii) Carbon content of the carbon electrode, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–5).

(ix) Annual mass of carbonaceous materials (e.g., coal, coke) charged to the furnace (metric tons) (Equation Q–5).

(x) Carbon content of the carbonaceous materials, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–5).

(xi) Annual mass of molten raw steel produced by the furnace (metric tons) (Equation Q–5).

(xii) Carbon content of the steel, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–5).

(xiii) Annual volume of the gaseous fuel (scf at 60F and 1 atm) (Equation Q–5).

(xiv) Average carbon content of the gaseous fuel, from the fuel analysis

results (kg C per kg of fuel) (Equation Q–5).

(xv) Molecular weight of the gaseous fuel (kg/kg-mole) (Equation Q–5).

(xvi) Annual mass of slag produced by the furnace (metric tons) (Equation Q–5).

(xvii) Carbon content of the slag, from the carbon analysis (expressed as a decimal fraction) (Equation Q–5).

(xviii) Annual mass of air pollution control residue collected (metric tons) (Equation Q–5).

(xix) Carbon content of the air pollution control residue, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–5).

(xx) Annual mass of each other solid input containing carbon fed to each furnace (metric tons) (Equation Q–5).

(xxi) Carbon content of each other solid input containing carbon fed to each furnace (expressed as a decimal fraction) (Equation Q–5).

(xxii) Annual mass of each other solid output containing carbon produced by each furnace (metric tons) (Equation Q–5).

(xxiii) Carbon content of each other solid output containing carbon (expressed as a decimal fraction) (Equation Q–5).

(xxiv) Annual mass of each other gaseous input containing carbon fed to each furnace (metric tons) (Equation Q–5).

(xxv) Carbon content of each other gaseous input containing carbon fed to each furnace (expressed as a decimal fraction) (Equation Q–5).

(xxvi) Annual mass of each other gaseous output containing carbon produced by each furnace (metric tons) (Equation Q–5).

(xxvii) Carbon content of each other gaseous output containing carbon produced by each furnace (expressed as a decimal fraction) (Equation Q–5).

(xxviii) Annual mass of each other liquid input containing carbon fed to each furnace (metric tons) (Equation Q–5).

(xxix) Carbon content of each other liquid input containing carbon fed to each furnace (expressed as a decimal fraction) (Equation Q–5).

(xxx) Annual mass of each other liquid output containing carbon produced by each furnace (metric tons) (Equation Q–5).

(xxxi) Carbon content of each other liquid output containing carbon produced by each furnace (expressed as a decimal fraction) (Equation Q–5).

(6) The data in paragraphs (f)(6)(i) through (xvii) of this section for each applicable decarburization vessel for which the carbon mass balance method of reporting is used.

(i) Annual mass of molten steel charged to the vessel (metric tons) (Equation Q–6 of § 98.173).

(ii) Carbon content of the molten steel before decarburization, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–6).

(iii) Carbon content of the molten steel after decarburization, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–6).

(iv) Annual mass of air pollution control residue collected (metric tons) (Equation Q–6).

(v) Carbon content of the air pollution control residue, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–6).

(vi) Annual mass of each other solid input containing carbon fed to each decarburization vessel (metric tons) (Equation Q–6).

(vii) Carbon content of each other solid input containing carbon fed to each decarburization vessel (expressed as a decimal fraction) (Equation Q–6).

(viii) Annual mass of each other solid output containing carbon produced by each decarburization vessel (metric tons) (Equation Q–6).

(ix) Carbon content of each other solid output containing carbon (expressed as a decimal fraction) (Equation Q–6).

(x) Annual mass of each other gaseous input containing carbon fed to each decarburization vessel (metric tons) (Equation Q–6).

(xi) Carbon content of each other gaseous input containing carbon fed to each decarburization vessel (expressed as a decimal fraction) (Equation Q–6).

(xii) Annual mass of each other gaseous output containing carbon produced by each decarburization vessel (metric tons) (Equation Q–6).

(xiii) Carbon content of each other gaseous output containing carbon produced by each decarburization vessel (expressed as a decimal fraction) (Equation Q–6).

(xiv) Annual mass of each other liquid input containing carbon fed to each decarburization vessel (metric tons) (Equation Q–6).

(xv) Carbon content of each other liquid input containing carbon fed to each decarburization vessel (expressed as a decimal fraction) (Equation Q–6).

(xvi) Annual mass of each other liquid output containing carbon produced by each decarburization vessel (metric tons) (Equation Q–6).

(xvii) Carbon content of each other liquid output containing carbon produced by each decarburization vessel (expressed as a decimal fraction) (Equation Q–6).

(7) The data in paragraphs (f)(7)(i) through (xxvii) of this section for each applicable direct reduction furnace for which the carbon mass balance method of reporting is used.

(i) Annual volume of the gaseous fuel (scf at 68F and 1 atm) (Equation Q–7 of § 98.173).

(ii) Average carbon content of the gaseous fuel, from the fuel analysis results (kg C per kg of fuel) (Equation Q–7).

(iii) Molecular weight of the gaseous fuel (kg/kg-mole) (Equation Q–7).

(iv) Annual mass of iron ore or iron pellets fed to the furnace (metric tons) (Equation Q–7).

(v) Carbon content of the iron ore or iron pellets, from the carbon analysis (expressed as a decimal fraction) (Equation Q–7).

(vi) Annual mass of carbonaceous materials (e.g., coal, coke) charged to the furnace (metric tons) (Equation Q–7).

(vii) Carbon content of the carbonaceous materials, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–7).

(viii) Annual mass of each other material charged to the furnace (metric tons) (Equation Q–7).

(ix) Average carbon content of each other material charged to the furnace, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–7).

(x) Annual mass of iron produced (metric tons) (Equation Q–7).

(xi) Carbon content of the iron produced, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–7).

(xii) Annual mass of non-metallic materials produced by the furnace (metric tons) (Equation Q–7).

(xiii) Carbon content of the non-metallic materials produced, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–7).

(xiv) Annual mass of air pollution control residue collected (metric tons) (Equation Q–7).

(xv) Carbon content of the air pollution control residue collected, from the carbon analysis results (expressed as a decimal fraction) (Equation Q–7).

(xvi) Annual mass of each other solid input containing carbon fed to each furnace (metric tons) (Equation Q–7).

(xvii) Carbon content of each other solid input containing carbon fed to each furnace (expressed as a decimal fraction) (Equation Q–7).

(xviii) Annual mass of each other solid output containing carbon produced by each furnace (metric tons) (Equation Q–7).

(xix) Carbon content of each other solid output containing carbon (expressed as a decimal fraction) (Equation Q–7).

(xx) Annual mass of each other gaseous input containing carbon fed to each furnace (metric tons) (Equation Q–7).

(xxi) Carbon content of each other gaseous input containing carbon fed to each furnace (expressed as a decimal fraction) (Equation Q–7).

(xxii) Annual mass of each other gaseous output containing carbon produced by each furnace (metric tons) (Equation Q–7).

(xxiii) Carbon content of each other gaseous output containing carbon produced by each furnace (expressed as a decimal fraction) (Equation Q–7).

(xxiv) Annual mass of each other liquid input containing carbon fed to each furnace (metric tons) (Equation Q–7).

(xxv) Carbon content of each other liquid input containing carbon fed to each furnace (expressed as a decimal fraction) (Equation Q–7).

(xxvi) Annual mass of each other liquid output containing carbon produced by each furnace (metric tons) (Equation Q–7).

(xxvii) Carbon content of each other liquid output containing carbon produced by each furnace (expressed as a decimal fraction) (Equation Q–7).

(8) The data in paragraphs (f)(8)(i) and (ii) of this section for each process unit for which the site-specific emission factor method was used.

(i) Average hourly feed or production rate, as applicable, during the test (metric tons/hour) (as used in § 98.173(b)(2)(iii)).

(ii) Annual total feed or production, as applicable (metric tons) (as used in § 98.173(b)(2)(iv)).

(9) Total coal charged to the coke ovens for each process (metric tons/year)(as used in § 98.173(c)).

Subpart R—Lead Production

■ 25. Section 98.186 is amended by removing and reserving paragraphs (b)(6) and (7) and revising paragraph (b)(8) to read as follows:

§ 98.186 Data reporting procedures.

* * * * *

(b) * * *

(8) List the method used for the determination of carbon content for each material used for the calculation of annual process CO_2 emissions using Equation R–1 of § 98.183 for each smelting furnace (e.g., supplier provided information, analyses of representative samples you collected).

* * * * *

■ 26. Section 98.187 is amended by revising the introductory text and adding paragraph (d) to read as follows:

§ 98.187 Records that must be retained.

In addition to the records required by § 98.3(g), you must retain the records of the information specified in paragraphs (a) through (d) of this section, as applicable to the smelting furnaces at your facility.

* * * * *

(d) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (d)(1) through (10) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (d)(1) through (10) of this section.

(1) Annual mass of lead ore charged to each smelting furnace (tons) (Equation R–1 of § 98.183).

(2) Carbon content of the lead ore per furnace, from the carbon analysis results (percent by weight, expressed as a decimal fraction) (Equation R–1).

(3) Annual mass of lead scrap charged to each smelting furnace (tons) (Equation R–1).

(4) Carbon content of the lead scrap per furnace, from the carbon analysis (percent by weight, expressed as a decimal fraction) (Equation R–1).

(5) Annual mass of flux materials (e.g., limestone, dolomite) charged to each smelting furnace (tons) (Equation R–1).

(6) Carbon content of the flux materials per furnace, from the carbon analysis (percent by weight, expressed as a decimal fraction) (Equation R–1).

(7) Annual mass of carbonaceous materials (e.g., coal, coke) charged to each smelting furnace (tons) (Equation R–1).

(8) Carbon content of the carbonaceous materials per furnace, from the carbon analysis (percent by weight, expressed as a decimal fraction) (Equation R–1).

(9) Annual mass of each other material containing carbon, other than fuel, fed, charged, or otherwise introduced into the smelting furnace (tons) (Equation R–1).

(10) Carbon content of each other material, from the carbon analysis results per furnace (percent by weight, expressed as a decimal fraction) (Equation R–1).

Subpart S—Lime Manufacturing

■ 27. Section 98.196 is amended by:

■ a. Revising paragraph (b) introductory text;

■ b. Removing and reserving paragraphs (b)(2), (3), (5), (6), (8), (10), (11), and (12); and

■ c. Adding paragraph (b)(18).

The revisions and addition read as follows:

§ 98.196 Data reporting requirements.

* * * * *

(b) If a CEMS is not used to measure CO_2 emissions, then you must report the information listed in paragraphs (b)(1) through (18) of this section.

* * * * *

(18) Annual quantity (tons) of lime product sold, by type.

■ 28. Section 98.197 is amended by revising the introductory text and adding paragraph (c) to read as follows:

§ 98.197 Records that must be retained.

In addition to the records required by § 98.3(g), you must retain the records specified in paragraphs (a) through (c) of this section.

* * * * *

(c) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (c)(1) through (9) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (c)(1) through (9) of this section.

(1) Monthly calcium oxide content for each lime type, determined according to § 98.194(c) (metric tons CaO/metric ton lime) (Equation S–1 of § 98.193).

(2) Monthly magnesium oxide content for each lime type, determined according to § 98.194(c) (metric tons MgO/metric ton lime) (Equation S–1).

(3) Monthly calcium oxide content for each calcined lime byproduct or waste type sold (metric tons CaO/metric ton lime) (Equation S–2 of § 98.193).

(4) Monthly magnesium oxide content for each calcined lime byproduct or waste type sold (metric tons MgO/metric ton lime) (Equation S–2).

(5) Calcium oxide content for each calcined lime byproduct or waste type that is not sold (metric tons CaO/metric ton lime) (Equation S–3 of § 98.193).

(6) Magnesium oxide content for each calcined lime byproduct or waste type that is not sold (metric tons MgO/metric ton lime) (Equation S–3).

(7) Annual weight or mass of calcined byproducts or wastes for lime type that is not sold (tons) (Equation S–3).

(8) Monthly weight or mass of each lime type produced (tons) (Equation S–4 of § 98.193).

(9) Monthly weight or mass of each calcined byproducts or wastes sold (tons) (Equation S–4).

Subpart U—Miscellaneous Uses of Carbonate

§ 98.216 [Amended]

■ 29. Section 98.216 is amended by removing and reserving paragraphs (b), (e)(1) and (2), and (f).

■ 30. Section 98.217 is amended by revising the introductory text and adding paragraph (e) to read as follows:

§ 98.217 Records that must be retained.

In addition to the records required by § 98.3(g), you must retain the records specified in paragraphs (a) through (e) of this section:

* * * * *

(e) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (e)(1) through (4) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (e)(1) through (4) of this section.

(1) Fraction calcination achieved for each particular carbonate type. As an alternative to measuring the calcination fraction, a value of 1.0 can be used (decimal fraction) (Equation U–1 of § 98.213).

(2) Annual mass of each carbonate type consumed (tons) (Equation U–1).

(3) Annual mass of each input carbonate type (tons) (Equation U–2 of § 98.213).

(4) Annual mass of each output carbonate type (tons) (Equation U–2).

Subpart V—Nitric Acid Production

■ 31. Section 98.226 is amended by:

■ a. Revising the introductory text;

■ b. Removing and reserving paragraphs (c), (d), (i), (j), (m)(1), (m)(3), (m)(4), (m)(5), (m)(6), and (p); and

■ c. Adding paragraph (q).

The revisions and addition read as follows:

§ 98.226 Data reporting requirements.

In addition to the information required by § 98.3(c), each annual report must contain the information specified in paragraphs (a) through (q) of this section.

* * * * *

(q) Annual percent N_2O emission reduction for all nitric acid trains combined.

■ 32. Section 98.227 is amended by revising the introductory text and adding paragraph (h) to read as follows:

§ 98.227 Records that must be retained.

In addition to the information required by § 98.3(g), you must retain the records specified in paragraphs (a) through (h) of this section for each nitric acid production facility:

* * * * *

(h) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (h)(1) through (10) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (h)(1) through (10) of this section.

(1) Annual nitric acid produced from each nitric acid train (tons nitric acid produced, 100% acid basis).

(2) Indicate which equation was used to calculate emissions for each nitric acid train.

(3) N_2O concentration per test run during the performance test (ppm N_2O) (Equation V–1 of § 98.223).

(4) Volumetric flow rate of effluent gas per test run during the performance test (dscf/hr) (Equation V–1).

(5) Production rate per test run during the performance test (tons nitric acid produced per hour, 100 percent acid basis) (Equation V–1).

(6) Annual nitric acid production from each nitric acid train during which each N_2O abatement technology was operational (tons nitric acid produced, 100 percent acid basis) (Equation V–2 of § 98.223).

(7) Destruction efficiency of N_2O abatement technology that is used on each nitric acid train (decimal fraction of N_2O removed from vent stream) (Equation V–3a of § 98.223).

(8) Destruction efficiency of each N_2O abatement technology that is used on each nitric acid train (decimal fraction of N_2O removed from vent stream) (Equation V–3b of § 98.223).

(9) Destruction efficiency of each N_2O abatement technology that is used on each nitric acid train (decimal fraction of N_2O removed from vent stream) (Equation V–3c of § 98.223).

(10) Fraction control factor of each N_2O abatement technology that is used on each nitric acid train (decimal fraction of total emissions from nitric acid train ''t'' that are sent to abatement technology ''n'') (Equation V–3c).

Subpart W—Petroleum and Natural Gas Systems

■ 33. Section 98.236 is amended by revising paragraphs (c)(6)(i)(B), (D), (E), and (F), (c)(8)(i)(F), and (c)(8)(ii)(A) and adding paragraph (c)(20) to read as follows:

§ 98.236 Data reporting requirements.

* * * * *

(c) * * *

(6) * * *

(i) * * *

(B) When using Equation W–10A of § 98.233, measured flow rate of backflow during well completion in standard cubic feet per hour. You may delay the reporting of this data element if you indicate in the annual report that wildcat wells and/or delineation wells are the only wells that can be used for the measurement. If you elect to delay reporting of this data element, you must report by the date specified in § 98.236(c)(20) the measured flow rate of backflow during well completion and the API Well Number(s) for the wells included in the measurement.

* * * * *

(D) When using Equation W–10A, measured flow rate of backflow during well workover in standard cubic feet per hour. You may delay the reporting of this data element if you indicate in the annual report that wildcat wells and/or delineation wells are the only wells that can be used for the measurement. If you elect to delay reporting of this data element, you must report by the date specified in § 98.236(c)(20) the flow rate of backflow during well workover and the API Well Number(s) for the well(s) included in the measurement.

(E) When using Equation W–10A, total number of days of backflow from all wells during completions. You may delay the reporting of this data element if you indicate in the annual report that wildcat wells and/or delineation wells are the only wells included in this number. If you elect to delay reporting of this data element, you must report by the date specified in § 98.236(c)(20) the total number of days of backflow from all wells during completions and the API Well Number(s) for the well(s) included in the number.

(F) When using Equation W–10A, total number of days of backflow from all wells during workovers. You may delay the reporting of this data element if you indicate in the annual report that wildcat wells and/or delineation wells are the only wells included in this number. If you elect to delay reporting of this data element, you must report by the date specified in § 98.236(c)(20) the total number of days of backflow from all wells during workovers and the API Well Number(s) for the well(s) included in the number.

* * * * *

(8) * * *

(i) * * *

(F) Total volume of oil from all wellhead separators sent to tank(s) in barrels per year. You may delay the reporting of this data element if you indicate in the annual report that only wildcat and delineation wells in the sub-basin have wellhead separators. If you elect to delay reporting the this data element, you must report by the date specified in § 98.236(c)(20) the total volume of oil from all wellhead separators sent to tank(s) and the API

Well Number(s) for the well(s) included in this volume.

* * * * *

(ii) * * *

(A) Total volume of sales oil from all wells in barrels per year. You may delay the reporting of this data element if you indicate in the annual report that wildcat wells and delineation wells are the only wells in the sub-basin with oil production greater than or equal to 10 barrels per day. If you elect to delay reporting of this data element, you must report by the date specified in § 98.3236(c)(20) the total volume of sales oil from all wells and the API Well Number(s) for the well(s) included in this volume.

* * * * *

(20) If you elect to delay reporting the information in paragraph (c)(6)(i)(B), (D), (E), (F), (c)(8)(i)(F), or (c)(8)(ii)(A) of this section, you must report the information required in that paragraph no later than the date specified in paragraphs (c)(20)(i) through (iii) of this section, as applicable.

(i) March 31, 2016, for reporting year 2013.

(ii) March 31, 2017, for reporting year 2014.

(iii) The date 2 years following the date specified in § 98.3(b) introductory text, for reporting year 2015 and thereafter.

■ 34. Section 98.238 is amended by adding definitions for ''Delineation well'' and ''Wildcat well'' in alphabetical order to read as follows:

§ 98.238 Definitions.

* * * * *

Delineation well means a well drilled in order to determine the boundary of a field or producing reservoir.

* * * * *

Wildcat well means a well outside known fields or the first well drilled in an oil or gas field where no other oil and gas production exists.

Subpart X—Petrochemical Production

■ 35. Section 98.246 is amended by:

■ a. Revising paragraph (a) introductory text and paragraphs (a)(2) and (4);

■ b. Adding paragraphs (a)(12) and (13);

■ c. Revising paragraph (b) introductory text; and

■ d. Adding paragraphs (b)(9) and (10).

The revisions and additions read as follows:

§ 98.246 Data reporting requirements.

* * * * *

(a) If you use the mass balance methodology in § 98.243(c), you must report the information specified in paragraphs (a)(1) through (13) of this section for each type of petrochemical produced, reported by process unit.

* * * * *

(2) The type of petrochemical produced, names of products, and names of carbon-containing feedstocks.

* * * * *

(4) The temperature (in °F) at which the gaseous feedstock and product volumes used in Equation X–1 of § 98.243 were determined.

* * * * *

(12) Name and annual quantity (in metric tons) of each carbon-containing feedstock included in Equations X–1, X–2, and X–3 of § 98.243.

(13) Name and annual quantity (in metric tons) of each product included in Equations X–1, X–2, and X–3.

(b) If you measure emissions in accordance with § 98.243(b), then you must report the information listed in paragraphs (b)(1) through (10) of this section.

* * * * *

(9) Name and annual quantity (in metric tons) of each carbon-containing feedstock.

(10) Name and annual quantity (in metric tons) of each product.

* * * * *

■ 36. Section 98.247 is amended by revising the introductory text and adding paragraph (d) to read as follows:

§ 98.247 Records that must be retained.

In addition to the recordkeeping requirements in § 98.3(g), you must retain the records specified in paragraphs (a) through (d) of this section, as applicable.

* * * * *

(d) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (d)(1) through (30) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (d)(1) through (30) of this section.

(1) Indicate whether the feedstock is measured as mass or volume (Equation X–1 of § 98.243).

(2) Indicate whether you used the alternative to sampling and analysis specified in § 98.243(c)(4) (Equation X–1).

(3) Volume of gaseous feedstock introduced per month (scf) (Equation X–1).

(4) Mass of gaseous feedstock introduced per month (kg) (Equation X–1).

(5) Average carbon content of the gaseous feedstock per month (kg C per kg of feedstock) (Equation X–1).

(6) Molecular weight of gaseous feedstock per month (kg per kg-mole) (Equation X–1).

(7) Indicate whether the gaseous product is measured as mass or volume (Equation X–1).

(8) Volume of gaseous product produced per month (scf) (Equation X–1).

(9) Mass of gaseous product produced per month (kg) (Equation X–1).

(10) Average carbon content of gaseous product (including streams containing CO_2 recovered for sale or use in another process) per month (kg C per kg of product) (Equation X–1).

(11) Molecular weight of gaseous product per month (kg per kg-mole) (Equation X–1).

(12) Molar volume conversion factor of product (scf per kg-mole) (Equation X–1).

(13) Indicate whether feedstock is measured as mass or volume (Equation X–2 of § 98.243).

(14) Indicate whether you used the alternative to sampling and analysis specified in § 98.243(c)(4) (Equation X–2).

(15) Volume of liquid feedstock introduced per month (gallons) (Equation X–2).

(16) Mass of liquid feedstock introduced per month (kg) (Equation X–2).

(17) Average carbon content of liquid feedstock per month (kg C per gallon) (Equation X–2).

(18) Average carbon content of liquid feedstock per month (kg C per kg of feedstock) (Equation X–2).

(19) Indicate whether product is measured as mass or volume per month (Equation X–2).

(20) Volume of liquid product produced per month (gallons) (Equation X–2).

(21) Mass of liquid product produced per month (kg) (Equation X–2).

(22) Average carbon content of liquid product per month, including organic liquid wastes (kg C per gallon) (Equation X–2).

(23) Average carbon content of liquid product, including organic liquid wastes (kg C per kg of product) (Equation X–2).

(24) Indicate whether you used the alternative to sampling and analysis specified in § 98.243(c)(4) (Equation X–3 of § 98.243).

(25) Mass of solid feedstock introduced per month (kg) (Equation X–3).

(26) Average carbon content of solid feedstock per month (kg C per kg of feedstock) (Equation X–3).

(27) Mass of solid product produced per month (kg) (Equation X–3).

(28) Average carbon content of solid product per month (kg C per kg of product) (Equation X–3).

(29) Records required in § 98.257(b)(1) through (8) of this section for each flare that burns ethylene process off-gas.

(30) Records required in § 98.37 for each stationary fuel combustion unit (or group of stationary sources with a common pipe) that burns ethylene process off-gas, except flares.

Subpart Y—Petroleum Refineries

■ 37. Section 98.256 is amended by:
■ a. Revising paragraph (e)(6) and paragraph (e)(7) introductory text;
■ b. Removing and reserving paragraph (e)(7)(ii);
■ c. Revising paragraphs (e)(9) and (10);
■ d. Revising paragraphs (f)(7) and (f)(10) through (13);
■ e. Removing and reserving paragraph (h)(4);
■ f. Revising paragraphs (h)(5) and (i)(5), (7), and (8);
■ g. Removing and reserving paragraph (j)(2);
■ h. Revising paragraphs (j)(5) through (9), (k)(3) and (4), (l)(5), and (m)(3);
■ i. Removing and reserving paragraphs (o)(2)(ii) and (o)(4)(ii) through (iv);
■ j. Revising paragraph (o)(4)(v);
■ k. Removing and reserving paragraphs (o)(6) and (7); and
■ l. Revising paragraph (p)(2).

The revisions read as follows:

§ 98.256 Data reporting requirements.

* * * * *

(e) * * *

(6) If you use Equation Y–1a of § 98.253, an indication of whether daily or weekly measurement periods are used, the annual volume of flare gas combusted (in scf/year) and the annual average molecular weight (in kg/kg-mole), and annual average carbon content of the flare gas (in kg carbon per kg flare gas).

(7) If you use Equation Y–1b of § 98.253, an indication of whether daily or weekly measurement periods are used, the annual volume of flare gas combusted (in scf/year), the annual average CO_2 concentration (volume or mole percent), the number of carbon containing compounds other than CO_2 in the flare gas stream, and for each of the carbon containing compounds other than CO_2 in the flare gas stream:

* * * * *

(9) If you use Equation Y–3 of § 98.253, the number of SSM events exceeding 500,000 scf/day.

(10) The basis for the value of the fraction of carbon in the flare gas contributed by methane used in Equation Y–4 of § 98.253.

(f) * * *

(7) If you use Equation Y–6 of § 98.253, the annual average exhaust gas flow rate, $\%CO_2$, and %CO.

* * * * *

(10) If you use Equation Y–8 of § 98.253, the basis for the value of the average carbon content of coke.

(11) Indicate whether you use a measured value, a unit-specific emission factor, or a default for CH_4 emissions. If you use a unit-specific emission factor for CH_4, report the basis for the factor.

(12) Indicate whether you use a measured value, a unit-specific emission factor, or a default emission factor for N_2O emissions. If you use a unit-specific emission factor for N_2O, report the basis for the factor.

(13) If you use Equation Y–11 of § 98.253, the number of regeneration cycles or measurement periods during the reporting year and the average coke burn-off quantity per cycle or measurement period.

* * * * *

(h) * * *

(5) If you recycle tail gas to the front of the sulfur recovery plant, indicate whether the recycled flow rate and carbon content are included in the measured data under § 98.253(f)(2) and (3). Indicate whether a correction for CO_2 emissions in the tail gas was used in Equation Y–12 of § 98.253. If so, then report:

(i) Indicate whether you used the default (95 percent) or a unit specific correction, and if a unit-specific correction was used, report the value of the correction and the approach used.

(ii) If the following data are not used to calculate the recycling correction factor, report the information specified in paragraphs (h)(5)(ii)(A) through (B) of this section.

(A) The annual volume of recycled tail gas (in scf/year) only.

(B) The annual average mole fraction of carbon in the tail gas (in kg-mole C/kg-mole gas).

* * * * *

(i) * * *

(5) If you use Equation Y–13 of § 98.253, an indication of whether coke dust is recycled to the unit (e.g., all dust is recycled, a portion of the dust is recycled, or none of the dust is recycled).

* * * * *

(7) Indicate whether you use a measured value, a unit-specific emission factor or a default emission factor for CH_4 emissions. If you use a unit-specific emission factor for CH_4, report the basis for the factor.

(8) Indicate whether you use a measured value, a unit-specific emission factor, or a default emission factor for N_2O emissions. If you use a unit-specific emission factor for N_2O, report the basis for the factor.

(j) * * *

(5) If you use Equation Y–14 of § 98.253, the basis for the CO_2 emission factor used.

(6) If you use Equation Y–15 of § 98.253, the basis for the CH_4 emission factor used.

(7) If you use Equation Y–16a of § 98.253, the basis for the carbon emission factor used.

(8) If you use Equation Y–16b of § 98.253, the basis for the CO_2 emission factor used and the basis for the carbon emission factor used.

(9) If you use Equation Y–17 of § 98.253, the basis for the CH_4 emission factor used.

* * * * *

(k) * * *

(3) The total number of delayed coking units at the facility; the total number of delayed coking drums at the facility; and, for each coke drum or vessel, the typical drum outage (*i.e.* the unfilled distance from the top of the drum, in feet).

(4) For each set of coking drums that are the same dimensions, the number of coking drums in the set, and the mole fraction of methane in coking gas (in kg-mole CH_4/kg-mole gas, wet basis).

* * * * *

(l) * * *

(5) The annual volumetric flow discharged to the atmosphere (in scf), and an indication of the measurement or estimation method, annual average mole fraction of each GHG above the concentration threshold or otherwise required to be reported and an indication of the measurement or estimation method, and for intermittent vents, the number of venting events and the cumulative venting time.

* * * * *

(m) * * *

(3) For uncontrolled blowdown systems reporting under § 98.253(k), the basis for the value of the methane emission factor used for uncontrolled blowdown systems.

* * * * *

(o) * * *

(4) * * *

(v) The basis for the mole fraction of CH_4 in vent gas from unstabilized crude oil storage tanks.

* * * * *

(p) * * *

(2) The types of materials loaded that have an equilibrium vapor-phase concentration of methane of 0.5 volume percent or greater, and the type of vessel

(barge, tanker, marine vessel, etc.) in which each type of material is loaded.

* * * * *

■ 38. Section 98.257 is amended to read as follows:

§ 98.257 Records that must be retained.

In addition to the records required by § 98.3(g), you must retain the records specified in paragraphs (a) and (b) of this section.

(a) The records of all parameters monitored under § 98.255. If you comply with the combustion methodology in § 98.252(a), then you must retain under this subpart the records required for the Tier 3 and/or Tier 4 Calculation Methodologies in § 98.37 and you must keep records of the annual average flow calculations.

(b) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (b)(1) through (67) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (b)(1) through (67) of this section.

(1) Volume of flare gas combusted during measurement period (scf) (Equation Y–1b of § 98.253).

(2) Mole percent CO_2 concentration in the flare gas stream during the measurement period (mole percent) (Equation Y–1b).

(3) Mole percent concentration of compound ''x'' in the flare gas stream during the measurement period (mole percent) (Equation Y–1b).

(4) Carbon mole number of compound ''x'' in the flare gas stream during the measurement period (mole carbon atoms per mole compound) (Equation Y–1b).

(5) Molar volume conversion factor (scf per kg-mole) (Equation Y–1b).

(6) Annual volume of flare gas combusted for each flare during normal operations from company records (million (MM) standard cubic feet per year, MMscf/year) (Equation Y–3 of § 98.253).

(7) Higher heating value for fuel gas or flare gas for each flare from company records (British thermal units per scf, Btu/scf = MMBtu/MMscf) (Equation Y–3).

(8) Volume of flare gas combusted during indexed start-up, shutdown, or malfunction event from engineering calculations (scf) (Equation Y–3).

(9) Average molecular weight of the flare gas, from the analysis results or engineering calculations for the event (kg/kg-mole) (Equation Y–3).

(10) Molar volume conversion factor (scf per kg-mole) (Equation Y–3).

(11) Average carbon content of the flare gas, from analysis results or engineering calculations for the event (kg C per kg flare gas) (Equation Y–3).

(12) Weight fraction of carbon in the flare gas prior to combustion in each flare that is contributed by methane from measurement values or engineering calculations (kg C in methane in flare gas/kg C in flare gas) (Equation Y–4 of § 98.253).

(13) Annual throughput of unit from company records for each catalytic cracking unit or fluid coking unit (barrels/year) (Equation Y–8 of § 98.253).

(14) Coke burn-off factor from engineering calculations (default for catalytic cracking units = 7.3; default for fluid coking units = 11) (kg coke per barrel of feed) (Equation Y–8).

(15) Carbon content of coke based on measurement or engineering estimate (kg C per kg coke) (Equation Y–8).

(16) Value of unit-specific CH_4 emission factor, including the units of measure, for each catalytic cracking unit, traditional fluid coking unit, catalytic reforming unit, and coke calcining unit (calculation method in § 98.253(c)(4)).

(17) Annual activity data (e.g., input or product rate), including the units of measure, in units of measure consistent with the emission factor, for each catalytic cracking unit, traditional fluid coking unit, catalytic reforming unit, and coke calcining unit (calculation method in § 98.253(c)(4)).

(18) Value of unit-specific N_2O emission factor, including the units of measure, for each catalytic cracking unit, traditional fluid coking unit, catalytic reforming unit, and coke calcining unit (calculation method in § 98.253(c)(5)).

(19) Annual activity data (e.g., input or product rate), including the units of measure, in units of measure consistent with the emission factor, for each catalytic cracking unit, traditional fluid coking unit, catalytic reforming unit, and coke calcining unit (calculation method in § 98.253(c)(5)).

(20) Carbon content of coke based on measurement or engineering estimate (default = 0.94) (kg C per kg coke) (Equation Y–11 of § 98.253).

(21) Volumetric flow rate of sour gas (including sour water stripper gas) feed sent off site for sulfur recovery in the year (scf/year) (Equation Y–12 of § 98.253).

(22) Mole fraction of carbon in the sour gas feed sent off site for sulfur recovery (kg-mole C/kg-mole gas) (Equation Y–12).

(23) Molar volume conversion factor for sour gas sent off site (scf per kg-mole) (Equation Y–12).

(24) Volumetric flow rate of sour gas (including sour water stripper gas) fed to the onsite sulfur recovery plant (scf/year) (Equation Y–12).

(25) Mole fraction of carbon in the sour gas fed to the onsite sulfur recovery plant (kg-mole C/kg-mole gas) (Equation Y–12).

(26) Molar volume conversion factor for onsite sulfur recovery plant (scf per kg-mole) (Equation Y–12).

(27) Annual mass of green coke fed to the coke calcining unit from facility records (metric tons/year) (Equation Y–13 of § 98.253).

(28) Annual mass of marketable petroleum coke produced by the coke calcining unit from facility records (metric tons/year) (Equation Y–13).

(29) Annual mass of petroleum coke dust removed from the process through the dust collection system of the coke calcining unit from facility records. For coke calcining units that recycle the collected dust, the mass of coke dust removed from the process is the mass of coke dust collected less the mass of coke dust recycled to the process (metric tons/year) (Equation Y–13).

(30) Average mass fraction carbon content of green coke from facility measurement data (metric tons C per metric ton green coke) (Equation Y–13).

(31) Average mass fraction carbon content of marketable petroleum coke produced by the coke calcining unit from facility measurement data (metric tons C per metric ton petroleum coke (Equation Y–13).

(32) Quantity of asphalt blown for each asphalt blowing unit (million barrels per year (MMbbl/year)) (Equation Y–14 of § 98.253).

(33) Emission factor for CO_2 from uncontrolled asphalt blowing from facility-specific test data for each asphalt blowing unit (metric tons CO_2/MMbbl asphalt blown) (Equation Y–14).

(34) Emission factor for CH_4 from uncontrolled asphalt blowing from facility-specific test data for each asphalt blowing unit (metric tons CH_4/MMbbl asphalt blown) (Equation Y–15 of § 98.253).

(35) Quantity of asphalt blown (million barrels/year (MMbbl/year)) (Equation Y–16a of § 98.253).

(36) Carbon emission factor from asphalt blowing from facility-specific test data (metric tons C/MMbbl asphalt blown) (Equation Y–16a).

(37) Quantity of asphalt blown for each asphalt blowing unit (million barrels per year (MMbbl/year)) (Equation Y–16b of § 98.253).

(38) Emission factor for CO_2 from uncontrolled asphalt blowing from facility-specific test data for each asphalt blowing unit (metric tons CO_2/MMbbl asphalt blown) (Equation Y–16b).

(39) Carbon emission factor from asphalt blowing from facility-specific test data for each asphalt blowing unit (metric tons C/MMbbl asphalt blown) (Equation Y–16b).

(40) Emission factor for CH_4 from uncontrolled asphalt blowing from facility-specific test data for each asphalt blowing unit (metric tons CH_4/MMbbl asphalt blown) (Equation Y–17 of § 98.253).

(41) Cumulative number of vessel openings for all delayed coking unit vessels of the same dimensions during the year (Equation Y–18 of § 98.253).

(42) Height of coking unit vessel for each set of coke drums or vessels of the same size (feet) (Equation Y–18).

(43) Gauge pressure of the coking vessel when opened to the atmosphere prior to coke cutting or, if the alternative method provided in § 98.253(i)(2) is used, gauge pressure of the coking vessel when depressurization gases are first routed to the atmosphere for each set of coke drums or vessels of the same size (pounds per square inch gauge (psig)) (Equation Y–18).

(44) Volumetric void fraction of coking vessel prior to steaming for each set of coke drums or vessels of the same size (cf gas/cf of vessel) (Equation Y–18).

(45) Diameter of coking unit vessel for each set of coke drums or vessels of the same size (feet) (Equation Y–18).

(46) Molar volume conversion factor for each set of coke drums or vessels of the same size (scf per kg-mole) (Equation Y–18).

(47) Average volumetric flow rate of process gas during the event from measurement data, process knowledge, or engineering estimates for each set of coke drums or vessels of the same size (scf per hour) (Equation Y–19 of § 98.253).

(48) Mole fraction of methane in process vent during the event from measurement data, process knowledge, or engineering estimates for each set of coke drums or vessels of the same size (kg-mole CH_4/kg-mole gas) (Equation Y–19).

(49) Venting time for the event for each set of coke drums or vessels of the same size (hours) (Equation Y–19).

(50) Molar volume conversion factor for each set of coke drums or vessels of the same size (scf per kg-mole) (Equation Y–19).

(51) Quantity of crude oil plus the quantity of intermediate products received from off site that are processed at the facility (MMbbl/year) (Equation Y–20 of § 98.253).

(52) Molar volume conversion factor (scf per kg-mole) (Equation Y–20).

(53) Methane emission factor for uncontrolled blown systems (scf CH_4/MMbbl) (Equation Y–20).

(54) Quantity of crude oil plus the quantity of intermediate products received from off site that are processed at the facility (MMbbl/year) (Equation Y–22 of § 98.253).

(55) Quantity of unstabilized crude oil received at the facility (MMbbl/year) (Equation Y–23 of § 98.253).

(56) Pressure differential from the previous storage pressure to atmospheric pressure (psi) (Equation Y–23).

(57) Average mole fraction of CH_4 in vent gas from the unstabilized crude oil storage tanks from facility measurements (kg-mole CH_4/kg-mole gas) (Equation Y–23).

(58) Molar volume conversion factor (scf per kg-mole) (Equation Y–23).

(59) Specify whether the calculated or default loading factor L specified in § 98.253(n) is entered, for each liquid loaded to each (methods specified in § 98.253(n)).

(60) Saturation factor specified in § 98.253(n), for each liquid loaded to each vessel (methods specified in § 98.253(n)).

(61) True vapor pressure of liquid loaded, for each liquid loaded to each vessel (psia) (methods specified in § 98.253(n)).

(62) Molecular weight of vapors (lb per lb-mole), for each liquid loaded to each vessel (methods specified in § 98.253(n)).

(63) Temperature of bulk liquid loaded, for each liquid loaded to each vessel (°R, degrees Rankine) (methods specified in § 98.253(n)).

(64) Total loading loss (without efficiency correction), for each liquid loaded to each vessel (pounds per 1000 gallons loaded) (methods specified in § 98.253(n)).

(65) Overall emission control system reduction efficiency, including the vapor collection system efficiency and the vapor recovery or destruction efficiency (enter zero if no emission controls), for each liquid loaded to each vessel (percent) (methods specified § 98.253(n)).

(66) Vapor phase concentration of methane in liquid loaded, for each liquid loaded to each vessel (percent by volume) (methods specified in § 98.253(n)).

(67) Quantity of material loaded, for each liquid loaded to each vessel (thousand gallon per year) (methods specified in § 98.253(n)).

Subpart Z—Phosphoric Acid Production

§ 98.266 [Amended]

■ 39. Section 98.266 is amended by removing and reserving paragraphs (f)(5) and (6).

■ 40. Section 98.267 is amended by revising the introductory text and adding paragraph (d) to read as follows:

§ 98.267 Records that must be retained.

In addition to the records required by § 98.3(g), you must retain the records specified in paragraphs (a) through (d) of this section for each wet-process phosphoric acid production facility.

* * * * *

(d) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (d)(1) through (4) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (d)(1) through (4) of this section.

(1) Inorganic carbon content of a grab sample batch of phosphate rock by origin obtained during month by wet-process phosphoric acid process line, from the carbon analysis results (percent by weight, expressed as a decimal fraction) (Equation Z–1a of § 98.263).

(2) Mass of phosphate rock by origin consumed in month by wet-process phosphoric acid process line (tons) (Equation Z–1a).

(3) Carbon dioxide content of a grab sample batch of phosphate rock by origin obtained during month by wet-process phosphoric acid process line (percent by weight, expressed as a decimal fraction) (Equation Z–1b of § 98.263).

(4) Mass of phosphate rock by origin consumed in month by wet-process phosphoric acid process line (tons) (Equation Z–1b).

Subpart AA—Pulp and Paper Manufacturing

■ 41. Section 98.276 is amended by:

■ a. Revising the introductory paragraph;

■ b. Removing and reserving paragraph (b);

■ c. Revising paragraph (c);

■ d. Removing and reserving paragraphs (d), (f), (g), (h) and (i); and

■ e. Adding paragraph (l).

The revisions and addition read as follows:

§ 98.276 Data reporting requirements.

In addition to the information required by § 98.3(c) and the applicable information required by § 98.36, each

annual report must contain the information in paragraphs (a) through (l) of this section as applicable:

* * * * *

(c) Basis for determining the annual mass of the spent liquor solids combusted (whether based on T650 om-05 Solids Content of Black Liquor, TAPPI (incorporated by reference, *see* § 98.7) or an online measurement system).

* * * * *

(l) For each pulp mill lime kiln, report the information specified in paragraphs (l)(1) and (2) of this section.

(1) The quantity of calcium oxide (CaO) produced (metric tons).

(2) The percent of annual heat input, individually for each fossil fuel type.

■ 42. Section 98.277 is amended by revising the introductory text and adding paragraph (g) to read as follows:

§ 98.277 Records that must be retained.

In addition to the information required by § 98.3(g), you must retain the records in paragraphs (a) through (g) of this section.

* * * * *

(g) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (g)(1) through (27) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (g)(1) through (27) of this section.

(1) Mass of the solid fuel combusted (tons/year) (Equation C–1 of § 98.33).

(2) Volume of the liquid fuel combusted (gallons/year) (Equation C–1).

(3) Volume of the gaseous fuel combusted (scf/year) (Equation C–1).

(4) Annual natural gas usage (therms/year) (Equation C–1a of § 98.33).

(5) Annual natural gas usage (mmBtu/year) (Equation C–1b of § 98.33).

(6) Mass of the solid fuel combusted (tons/year) (Equation C–2a of § 98.33).

(7) Volume of the liquid fuel combusted (gallons/year) (Equation C–2a).

(8) Volume of the gaseous fuel combusted (scf/year) (Equation C–2a).

(9) Annual mass of the solid fuel combusted (short tons/year) (Equation C–3 of § 98.33).

(10) Annual average carbon content of the solid fuel (percent by weight, expressed as a decimal fraction) (Equation C–3).

(11) Annual volume of the liquid fuel combusted (gallons/year) (Equation C–4 of § 98.33).

(12) Annual average carbon content of the liquid fuel (kg C per gallon of fuel) (Equation C–4).

(13) Annual volume of the gaseous fuel combusted (scf/year) (Equation C–5 of § 98.33).

(14) Annual average carbon content of the gaseous fuel (kg C per kg of fuel) (Equation C–5).

(15) Annual average molecular weight of the gaseous fuel (kg/kg-mole) (Equation C–5).

(16) Molar volume conversion factor at standard conditions, as defined in § 98.6 (scf per kg-mole) (Equation C–5).

(17) Identify if you will use the default high heat value from Table C–1 of subpart C of this part, or actual HHV data (Equation C–8 of § 98.33).

(18) High heat value of the fuel (mmBTU/tons) (Equation C–8).

(19) High heat value of the fuel (mmBTU/gallons) (Equation C–8).

(20) High heat value of the fuel (mmBTU/scf) (Equation C–8).

(21) Mass of spent liquor solids combusted from each chemical recovery furnace located at a kraft or soda facility, in short tons in year, determined according to § 98.274(b) (tons/year) (Equation AA–1 of § 98.273).

(22) Annual high heat value of the spent liquor solids from each chemical recovery furnace located at a kraft or soda facility determined according to § 98.274(b) (mmBtu per kilogram) (Equation AA–1).

(23) Annual high heat value of the spent liquor solids from each chemical recovery combustion unit located at a sulfite or stand-alone semichemical facility, determined according to § 98.274(b) (mmBtu per kilogram) (Equation AA–1).

(24) Mass of the spent liquor solids combusted in short tons per year determined according to § 98.274(b) (tons/year) (Equation AA–2 of § 98.273).

(25) Annual carbon content of the spent liquor solids, determined according to § 98.274(b) (percent by weight, expressed as a decimal fraction (e.g., 95% = 0.95)) (Equation AA–2).

(26) Make-up quantity of $CaCO_3$ used for the reporting year (metric tons/year) (Equation AA–3 of § 98.273).

(27) Make-up quantity of Na_2CO_3 used for the reporting year metric tons/year) (Equation AA–3).

Subpart BB—Silicon Carbide Production

§ 98.286 [Amended]

■ 43. Section 98.286 is amended by removing and reserving paragraphs (b)(1), (4), and (6).

■ 44. Section 98.287 is amended by revising the introductory text and adding paragraph (c) to read as follows:

§ 98.287 Records that must be retained.

In addition to the records required by § 98.3(g), you must retain the records specified in paragraphs (a) through (c) of this section for each silicon carbide production facility.

* * * * *

(c) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (c)(1) and (2) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (c)(1) and (2) of this section.

(1) Carbon content factor for petroleum coke consumed in month from the supplier or as measured by the applicable method (percent by weight expressed as a decimal fraction) (Equation BB–1 of § 98.283).

(2) Petroleum coke consumption in month (tons) (Equation BB–2 of § 98.283).

Subpart CC—Soda Ash Manufacturing

■ 45. Section 98.296 is amended by removing and reserving paragraphs (b)(5) through (7) and adding paragraphs (b)(10)(v) and (vi) to read as follows:

§ 98.296 Data reporting requirements.

* * * * *

(b) * * *

(10) * * *

(v) Average process vent flow from mine water stripper/evaporator during performance test (pounds/hour).

(vi) Annual process vent flow rate from mine water stripper/evaporator (thousand pounds/hour).

* * * * *

■ 46. Section 98.297 is amended by revising the introductory text and adding paragraph (c) to read as follows:

§ 98.297 Records that must be retained.

In addition to the records required by § 98.3(g), you must retain the records specified in paragraphs (a) through (c) of this section for each soda ash manufacturing line.

* * * * *

(c) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (c)(1) through (4) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (c)(1) through (4) of this section

(1) Inorganic carbon content in trona input, from the carbon analysis results for month (percent by weight, expressed as a decimal fraction) (Equation CC–1 of § 98.293).

(2) Mass of trona input in month (tons) (Equation CC–1).

(3) Inorganic carbon content in soda ash output, from the carbon analysis results for month (percent by weight, expressed as a decimal fraction) (Equation CC–2 of § 98.293).

(4) Mass of soda ash output in month (tons) (Equation CC–2).

Subpart EE—Titanium Dioxide Production

§ 98.316 [Amended]

■ 47. Section 98.316 is amended by removing and reserving paragraphs (b)(6) and (9).

■ 48. Section 98.317 is amended by revising the introductory text and adding paragraph (c) to read as follows:

§ 98.317 Records that must be retained.

In addition to the records required by § 98.3(g), you must retain the records specified in paragraphs (a) through (c) of this section for each titanium dioxide production facility.

* * * * *

(c) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (c)(1) and (2) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (c)(1) and (2) of this section.

(1) Carbon content factor for petroleum coke consumed in month from the supplier or as measured by the applicable method incorporated by reference in § 98.7 according to § 98.314(c) (percent by weight, expressed as a decimal fraction) (Equation EE–2 of § 98.313).

(2) Calcined petroleum coke consumption for process line in month (tons) (Equation EE–2).

Subpart GG—Zinc Production

§ 98.336 [Amended]

■ 49. Section 98.336 is amended by removing and reserving paragraphs (b)(6), (7), and (10).

■ 50. Section 98.337 is amended by revising the introductory text and adding paragraph (c) to read as follows:

§ 98.337 Records that must be retained.

In addition to the records required by § 98.3(g), you must retain the records specified in paragraphs (a) through (c) of this section for each zinc production facility.

* * * * *

(c) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (c)(1) through (9) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (c)(1) through (9) of this section.

(1) Annual mass of zinc bearing material charged to kiln or furnace (tons) (Equation GG–1 of § 98.333).

(2) Carbon content of the zinc bearing material, from the annual carbon analysis for kiln or furnace (percent by weight, expressed as a decimal fraction) (Equation GG–1).

(3) Annual mass of flux materials (e.g., limestone, dolomite) charged to each kiln or furnace (tons) (Equation GG–1).

(4) Carbon content of the flux materials charged to each kiln or furnace, from the annual carbon analysis (percent by weight, expressed as a decimal fraction) (Equation GG–1).

(5) Annual mass of carbon electrode consumed in each furnace (tons) (Equation GG–1).

(6) Carbon content of the carbon electrode consumed in each furnace, from the annual carbon analysis (percent by weight, expressed as a decimal fraction) (Equation GG–1).

(7) Annual mass of carbonaceous materials (e.g., coal, coke) charged to each kiln or furnace (tons) (Equation GG–1).

(8) Carbon content of the carbonaceous materials charged to each kiln or furnace, from the annual carbon analysis (percent by weight, expressed as a decimal fraction) (Equation GG–1).

(9) Identify whether each unit is a Waelz kiln or an electrothermic furnace.

Subpart TT—Industrial Waste Landfills

■ 51. Section 98.466 is amended by:

■ a. Removing and reserving paragraph (c)(3)(i);

■ b. Revising paragraph (c)(3)(ii); and

■ c. Removing and reserving paragraph (c)(3)(iii).

The revisions read as follows:

§ 98.466 Data reporting requirements.

* * * * *

(c) * * *

(3) * * *

(ii) The year of the data used in Equation TT–2 of § 98.463 for the waste disposal quantity and production quantity, for each year used in Equation TT–2 to calculate the average waste disposal factor (WDF).

* * * * *

■ 52. Section 98.467 is amended to read as follows:

§ 98.467 Records that must be retained.

In addition to the information required by § 98.3(g), you must retain:

(a) The calibration records for all monitoring equipment, including the method or manufacturer's specification used for calibration, and all measurement data used for the purposes of § 98.460(c)(2)(xii) or (xiii) or used to determine waste stream-specific DOC_X values for use in Equation TT–1 of § 98.463.

(b) *Verification software records.* You must keep a record of the file generated by the verification software specified in § 98.5(b) for the applicable data specified in paragraphs (b)(1) and (2) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (b)(1) and (2) of this section.

(1) Quantity of each product produced or feedstock entering the process or facility per waste stream per year, from measurement data and/or other company records. You must use the same basis for all years in the calculation (i.e., based on production or based on quantity of feedstock) (metric tons) (Equation TT–2 of § 98.463).

(2) [Reserved]

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