6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 98

[EPA-HQ-OAR-2015-0764; FRL-9941-80-OAR]

RIN 2060-AS73

Greenhouse Gas Reporting Rule: Leak Detection Methodology Revisions and Confidentiality Determinations for Petroleum and Natural Gas Systems

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The EPA is proposing revisions and confidentiality determinations for the petroleum and natural gas systems source category of the Greenhouse Gas Reporting Program (GHGRP). In particular, the EPA is proposing to add new monitoring methods for detecting leaks from oil and gas equipment in the petroleum and natural gas systems source category consistent with the leak detection methods in the recently proposed new source performance standards (NSPS) for the oil and gas industry. The EPA is also proposing to add emission factors for leaking equipment to be used in conjunction with these monitoring methods to calculate and report greenhouse gas (GHG) emissions resulting from equipment leaks. Further, the EPA is proposing

reporting requirements and confidentiality determinations for nine new or substantially revised data elements.

DATES: *Comments*. Comments must be received on or before **[INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**. Under the Paperwork Reduction Act (PRA), comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before **[INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**.

Public hearing. The EPA does not plan to conduct a public hearing unless requested. To request a hearing, please contact the person listed in the following **FOR FURTHER INFORMATION CONTACT** section by **[INSERT DATE 7 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**. If requested, the hearing will be conducted on **[INSERT DATE 15 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**, in the Washington, DC area. The EPA will provide further information about the hearing on the GHGRP Web site, *http://www.epa.gov/ghgreporting/index.html* if a hearing is requested.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2015-0764 to the *Federal eRulemaking Portal*: *http://www.regulations.gov*. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or withdrawn. The EPA may publish any comment received to its

public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *http://www2.epa.gov/dockets/commenting-epa-dockets*.

FOR FURTHER INFORMATION CONTACT: Carole Cook, Climate Change Division, Office of Atmospheric Programs (MC-6207A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone number: (202) 343-9263; fax number: (202) 343-2342; e-mail address: *GHGReportingRule@epa.gov*. For technical information, please go to the GHGRP Web site, *http://www.epa.gov/ghgreporting/index.html*. To submit a question, select Help Center, followed by "Contact Us."

Worldwide Web (WWW). In addition to being available in the docket, an electronic copy of this proposal will also be

available through the WWW. Following the Administrator's signature, a copy of this action will be posted on the EPA's GHGRP Web site at *http://www.epa.gov/ghgreporting/index.html*.

SUPPLEMENTARY INFORMATION:

Regulated Entities. These proposed revisions affect entities that must submit annual GHG reports under the GHGRP (40 CFR part 98). This proposed rule would impose on entities across the U.S. a degree of reporting consistency for GHG emissions from the petroleum and natural gas sector of the economy and therefore is "nationally applicable" within the meaning of section 307(b)(1) of the Clean Air Act (CAA). Although the EPA concludes that the rule is nationally applicable, the EPA is also making a determination, for purposes of CAA section 307 (b)(1), that this action is of nationwide scope and effect and is based on such a determination. (See CAA section 307(b)(1) (a petition for review may be filed in the United States Court of Appeals for the District of Columbia "if such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination").) Further, the Administrator has determined that rules codified in 40 CFR part 98 are subject to the provisions of CAA section 307(d). (See CAA section 307(d)(1)(V) (the provisions of section 307(d) apply to "such other actions as the Administrator may determine").) These

are proposed amendments to existing regulations. If finalized, these amended regulations would affect owners or operators of petroleum and natural gas systems that directly emit GHGs. Regulated categories and entities include, but are not limited to, those listed in Table 1 of this preamble:

Table 1. Examples of Affected Entities by Category

Category	NAICS[a]	Examples of affected facilities
Petroleum and Natural Gas Systems	486210	Pipeline transportation of natural gas.
	221210	Natural gas distribution.
	211111	Crude petroleum and natural gas extraction.
	211112	Natural gas liquid extraction.

[a] North American Industry Classification System.

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

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

CAA	Clean Air Act
CBI	confidential business information
CFR	Code of Federal Regulations
CH_4	methane
CO_2	carbon dioxide
DOT	Department of Transportation
EPA	U.S. Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
FR	*Federal Register*
GHG	greenhouse gas
GHGRP	Greenhouse Gas Reporting Program
GRI	Gas Research Institute
ICR	Information Collection Request
LDAR	leak detection and repair
LNG	liquefied natural gas
NAICS	North American Industry Classification System
NSPS	new source performance standards
NTTAA	National Technology Transfer and Advancement Act
OGI	optical gas imaging
OMB	Office of Management and Budget
PRA	Paperwork Reduction Act
RFA	Regulatory Flexibility Act
U.S.	United States
UMRA	Unfunded Mandates Reform Act
VOC	volatile organic compounds
WWW	Worldwide Web

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

I. Background

A. Organization of this Preamble

The first section of this preamble provides background information regarding the proposed amendments. This section also discusses the EPA's legal authority under the CAA to promulgate

and amend 40 CFR part 98 of the Code of Federal Regulations, Mandatory Greenhouse Gas Reporting (hereafter referred to as "part 98") as well as the legal authority for making confidentiality determinations for the data to be reported. Section II of this preamble contains information on the proposed revisions to 40 CFR part 98, subpart W (hereafter referred to as "subpart W"). Section III of this preamble discusses proposed confidentiality determinations for the reporting of new and substantially revised data elements. Section IV of this preamble discusses the impacts of the proposed amendments to subpart W. Finally, section V of this preamble describes the statutory and executive order requirements applicable to this action.

B. Background on the Proposed Action

On October 30, 2009, the EPA published part 98 for collecting information regarding GHGs from a broad range of industry sectors (74 FR 56260). Although reporting requirements for petroleum and natural gas systems were originally proposed to be part of part 98 (75 FR 16448, April 10, 2009), the final October 2009 rulemaking did not include the petroleum and natural gas systems source category as one of the 29 source categories for which reporting requirements were finalized. The EPA re-proposed subpart W in 2010 (79 FR 18608; April 12, 2010), and a subsequent final rulemaking was published on November 30, 2010, with the requirements for the petroleum and natural gas

systems source category at 40 CFR part 98, subpart W (75 FR 74458) (hereafter referred to as "the final subpart W rulemaking"). Following promulgation, the EPA finalized several actions revising subpart W (76 FR 22825, April 25, 2011; 76 FR 53057, August 25, 2011; 76 FR 59533, September 27, 2011; 76 FR 80554, December 23, 2011; 77 FR 51477, August 24, 2012; 78 FR 25392, May 1, 2013; 78 FR 71904, November 29, 2013; 79 FR 70352, November 25, 2014; 80 FR 64262, October 22, 2015).

On March 28, 2014, the Obama Administration released the President's *Climate Action Plan – Strategy to Reduce Methane Emissions*. The strategy summarizes the sources of methane (CH_4) emissions, commits to new steps to cut emissions of this potent GHG, including both voluntary and regulatory programs aimed at reducing CH_4 emissions, and outlines the Administration's efforts to improve the measurement of these emissions. The strategy builds on progress to date and takes steps to further cut CH_4 emissions from several sectors, including the oil and natural gas sector.[1] In this strategy, the EPA was specifically tasked with continuing to review GHGRP regulatory requirements to address potential gaps in coverage, improve methods, and ensure

[1] *Climate Action Plan – Strategy to Reduce Methane Emissions*. The White House, Washington, D.C., March 2014. Available at *http://www.whitehouse.gov/sites/default/files/strategy_to_reduce_methane_emissions_2014-03-28_final.pdf*. Docket Item No. EPA-HQ-OAR-2014-0831-0007.

high quality data reporting. On January 14, 2015, the Obama administration provided additional direction to the EPA to "explore potential regulatory opportunities for applying remote sensing technologies and other innovations in measurement and monitoring technology to further improve the identification and quantification of emissions" in the oil and natural gas sector, such as the emissions submitted as part of GHGRP annual reporting.[2]

Multiple studies have found that once leaks are detected, the vast majority can be repaired with a positive return to the operator. Often in these cases, a majority of emissions come from a minority of sources. Use of advanced monitoring methods, such as optical gas imaging (OGI), to detect these leaks as soon as practicable has several benefits: it reduces the amount of methane and other atmospheric pollutants that are emitted into our atmosphere, it reduces company losses of valuable commodities like methane, and improves operational and safety practices so that leaks can be identified and fixed more efficiently in the future.

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[2] *FACT SHEET: Administration Takes Steps Forward on Climate Action Plan by Announcing Actions to Cut Methane Emissions*. The White House, Office of the Press Secretary, January 14, 2015. Available at *https://www.whitehouse.gov/the-press-office/2015/01/14/fact-sheet-administration-takes-steps-forward-climate-action-plan-anno-1*.

Additionally, as part of the agency's broad-based strategy under the President's *Climate Action Plan*, the EPA proposed NSPS for oil and natural gas affected facilities for which owners or operators commence construction, modification or reconstruction after September 18, 2015 (40 CFR part 60, subpart OOOOa (80 FR 56593)) (hereafter referred to as the "NSPS subpart OOOOa"). As part of the proposed NSPS subpart OOOOa requirements, well site and compressor station affected sources would be required to implement a fugitive emissions monitoring and repair program for the first time.[3] For these proposed affected sources, the NSPS subpart OOOOa would require the monitoring of fugitive emissions components, which includes equipment such as valves, pumps, connectors, and pressure relief devices, for fugitive emissions and the subsequent repair of those fugitive emissions components. The EPA also proposed the use of OGI to identify fugitive emissions from the proposed NSPS subpart OOOOa affected sources.[4,5] Currently, GHGRP subpart W sources that are part of

[3] Natural gas processing plants subject to 40 CFR part 60, subpart OOOO are already required to monitor for volatile organic compound (VOC) emissions from equipment leaks; NSPS subpart OOOOa would include requirements to monitor for VOC and CH_4 emissions from equipment leaks using the same methods as 40 CFR part 60, subpart OOOO.

[4] The proposal identified EPA Method 21 as a monitoring method that may also be used to verify repair of leaks, and the EPA requested comment on the use of Method 21 for leak surveys as well.

[5] See 80 FR 56593, 56667 (September 18, 2015).

the Onshore Petroleum and Natural Gas Production and Onshore Petroleum and Natural Gas Gathering and Boosting segments, which include certain well sites and compressor stations, calculate equipment leak emissions based on a count of equipment rather than from leak surveys. As a result, emissions from leak surveys at well sites or compressor stations in these segments that would be conducted as a result of NSPS subpart OOOOa compliance would not be reflected in calculations for GHGRP subpart W reporting in the current rule. In addition, for industry segments that do have GHGRP leak survey requirements, including the Onshore Natural Gas Transmission Compression, Underground Natural Gas Storage, Liquefied Natural Gas (LNG) Storage, and LNG Import and Export Equipment segments, augmenting GHGRP methods with methods proposed in the NSPS subpart OOOOa would avoid the need for sources that are subject to both programs to conduct two different sets of leak/fugitive emission surveys.

As another part of the EPA's response to the President's *Climate Action Plan*, in July 2015 the EPA proposed the voluntary Natural Gas STAR Methane Challenge Program (hereafter referred to as "Methane Challenge Program"), which would provide a new mechanism through which companies could make and track ambitious

commitments to reduce CH_4 emissions.[6] While tremendous progress has been made during the last 20 years through the Natural Gas STAR Program, significant opportunities remain to reduce CH_4 emissions, improve air quality, and capture and monetize this valuable energy resource. The Methane Challenge Program would create a platform for leading companies to go above and beyond existing voluntary action and make meaningful and transparent commitments to yield significant CH_4 emissions reductions in a quick, flexible, and cost-effective way. The Methane Challenge Program plans to leverage the significant amount of data reported by facilities to the GHGRP, plus voluntarily supplied supplemental data (as needed), to serve as the basis for tracking specific company actions. This proposed rulemaking would create a mechanism for Methane Challenge Program participants to track their voluntary leak detection and repair efforts.[7]

As a result of the proposed NSPS subpart OOOOa requirements for fugitive emissions monitoring and repair, plus voluntarily implemented leak detection and repair (LDAR) programs that companies may be undertaking through the Methane Challenge

[6] See the Natural Gas STAR Methane Challenge Program Proposal website, *http://www3.epa.gov/gasstar/methanechallenge/*, for more information.

[7] The Methane Challenge Program plans to phase-in a proposal related to mitigation options for equipment leaks/fugitive emissions at a later date.

Program or other voluntary efforts, more facilities would have site-specific information on the types and number of components with fugitive emissions or leaks from each leak detection/monitoring survey. These data could be used to improve facility-level GHG emission estimates and track facility-level GHG emission reductions from equipment leaks for a variety of subpart W industry segments, including: Onshore Petroleum and Natural Gas Production; Onshore Petroleum and Natural Gas Gathering and Boosting; Onshore Natural Gas Processing; Onshore Natural Gas Transmission Compression; Underground Natural Gas Storage; LNG Storage; and LNG Import and Export Equipment.[8]

In this action, the EPA is proposing to amend subpart W to add new monitoring methods for detecting leaks from oil and gas equipment as well as to add emission factors to estimate emissions from leaking components (hereafter referred to as "leaker emission factors") for multiple industry segments. The new monitoring methods would augment the equipment leak requirements in subpart W with the fugitive emissions detection methods proposed for the NSPS subpart OOOOa. If the NSPS subpart OOOOa is amended in the future to incorporate other emerging

[8] As proposed, NSPS subpart OOOOa would not cover components in the Natural Gas Distribution subpart W segment, so no additional information on fugitive emissions is expected from this segment beyond information already collected by subpart W. However, it is possible that future voluntary programs could result in improved information on fugitive emissions for this segment.

technologies and/or major advances in fugitive monitoring, then the subpart W requirements will be updated by reference as well. Under these proposed amendments, facilities with an NSPS subpart OOOOa affected well site or compressor station fugitive emissions source would use the data derived from the proposed NSPS subpart OOOOa fugitive emissions requirements along with the subpart W equipment leak survey calculation methodology and leaker emission factors to calculate and report their GHG emissions to the GHGRP. These proposed revisions would also provide the opportunity for other sources at subpart W facilities not covered by the proposed NSPS subpart OOOOa fugitive emissions standards (*e.g.*, sources subject to state regulations and sources participating in the Methane Challenge Program or other voluntarily implemented program) to voluntarily use the proposed leak detection methods to calculate and report their GHG emissions to the GHGRP.

The amendments in this proposed rulemaking would advance the EPA's goal of maximizing rule effectiveness. For example, these amendments would align the monitoring requirements in subpart W with those in the NSPS subpart OOOOa, reducing burden for entities subject to the fugitive leak detection requirements in both programs. In addition, this proposed rulemaking provides clear calculation and reporting requirements in subpart W for the proposed new leak detection method, thus enabling

government, regulated entities, and the public to easily identify and understand rule requirements.

The EPA is seeking comment only on the issues specifically identified in this proposed rulemaking. We will not consider comments that are outside the scope of this proposed rulemaking, such as comments on the proposed requirements of the NSPS subpart OOOOa or the proposed Methane Challenge Program, in this rulemaking process.

C. Legal Authority

The EPA is proposing these rulemaking amendments under its existing CAA authority provided in CAA section 114. As stated in the preamble to the 2009 final GHG reporting rulemaking (74 FR 56260, October 30, 2009), CAA section 114(a)(1) provides the EPA broad authority to require the information proposed to be gathered by this rulemaking 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 GHG reporting rulemaking (74 FR 56260, October 30, 2009) for further information.

In addition, the EPA is proposing confidentiality determinations for proposed new data elements in subpart W under its authorities provided in sections 114, 301, and 307 of the CAA. Section 114(c) of the CAA requires that the EPA make information obtained under section 114 available to the public,

except where information qualifies for confidential treatment. The Administrator has determined that this proposed rulemaking is subject to the provisions of section 307(d) of the CAA.

D. How Would These Amendments Apply to 2016 and 2017 Reports?

The EPA is planning to address the comments we receive on these proposed changes and finalize the proposed amendments before the end of 2016. The EPA expects that the final amendments would be published at the same time as or soon after the final NSPS subpart OOOOa is published to ensure that these amendments are aligned. Owners or operators of facilities in the petroleum and natural gas system industry segments that conduct equipment leak detection surveys between the effective date of these final amendments and the end of 2016 would use that information along with information satisfying the provisions of the final amendments to subpart W (including final leaker emission factors) to calculate and report their 2016 reporting year equipment leak emissions. Starting with the 2017 reporting year, owners or operators of the petroleum and natural gas system industry segments that conduct equipment leak detection surveys any time during the year would be required to use that information along with information satisfying the provisions of the final amendments to subpart W (including final leaker emission factors) to calculate and report their annual equipment leak emissions.

II. Revisions and Other Amendments

A. Why Are We Proposing to Add New Monitoring Methods for Detecting Leaks?

As noted in section I.B of this preamble, we are proposing to add new monitoring methods for detecting leaks and to add leaker emission factors to align the equipment leak requirements in subpart W with the fugitive emissions monitoring methods proposed for the NSPS subpart OOOOa. These proposed additions would refine the site-specific equipment leak emission estimates provided under the GHGRP for facilities conducting fugitive emissions monitoring. The proposed amendments would also allow facilities to use a consistent method to demonstrate compliance with multiple EPA programs. This proposal would limit burden for subpart W facilities with affected sources that would also be required to comply with the proposed NSPS subpart OOOOa by allowing them to use data derived from the implementation of the NSPS subpart OOOOa to calculate emissions for the GHGRP rather than requiring the use of different monitoring methods or requiring the use of population emission factors even though additional information using a direct leak detection method is available.

In addition, these proposed amendments are responsive to comments received on previous subpart W rulemaking efforts. For example, as part of the amendments proposed on December 9, 2014

(79 FR 73148), we received comments generally requesting that reporters be allowed to use information that provides the best representation of emissions from specific sources, including monitoring for equipment leaks, rather than prescribing one specific calculation method across the industry segment. As noted in section I.B of this preamble, reporters in the Onshore Petroleum and Natural Gas Production and Onshore Petroleum and Natural Gas Gathering and Boosting industry segments currently must use facility equipment counts and population emission factors to estimate equipment leak emissions. These proposed amendments would allow reporters in those segments to use the information from a leak survey conducted on their equipment to calculate and report GHG emissions to the GHGRP, which may provide more accurate estimates than the current method used for their equipment leak emissions. In the same December 2014 proposed rulemaking, we specifically requested comment on the use of advanced innovative monitoring methods for compliance with subpart W monitoring requirements (see 79 FR 73158). Commenters from several environmental organizations supported the addition of such methods; industry commenters generally stated that optical remote sensing or real time monitoring methods should not be required in subpart W, but they noted that if owners or operators already use these methods, then they should be allowed to use the results as alternatives to other

required subpart W monitoring requirements.[9] While the use of OGI for leak detection was not the primary focus of this request for comment, allowing facilities to use facility-specific OGI monitoring methods as an alternative to the other required methods in subpart W is consistent with the comments we received on advanced innovative monitoring methods. Where a site-specific OGI monitoring program is used (such as those proposed in the NSPS subpart OOOOa), the facility will have specific information on the number and type of components with active leaks. We consider it reasonable to allow reporters to use this information to estimate their reported emissions.

B. How Would the Proposed Amendments Differ from the Current Subpart W Requirements for Emissions from Equipment Leaks?

As a first step, the EPA is proposing to add OGI as specified in the proposed NSPS subpart OOOOa to the list of methods for detecting equipment leaks in 40 CFR 98.234(a). Subpart W currently includes an OGI method in this list of methods (see 40 CFR 98.234(a)(1)), but the current subpart W OGI method is not consistent with the OGI method in the proposed NSPS subpart OOOOa. As part of the NSPS subpart OOOOa, the EPA

[9] U.S. EPA, Office of Atmospheric Programs, Climate Change Division. *Response to Public Comments on the Greenhouse Gas Reporting Rule: 2015 Revisions and Confidentiality Determinations for Petroleum and Natural Gas Systems*. September 2015. Docket Item No. EPA-HQ-OAR-2014-0831-0189.

is proposing that the OGI monitoring of fugitive emissions components be carried out through the development and implementation of monitoring plans, which would specify the measures for locating fugitive emissions components and the detection technology to be used. Specifically, the proposed NSPS subpart OOOOa would require affected facilities to develop a corporate-wide fugitive emissions monitoring plan that describes the OGI instrument and how the OGI survey would be conducted to ensure that fugitive emissions can be imaged effectively pursuant to specified criteria in the proposed rulemaking, as well as a site-specific fugitive emissions monitoring plan that includes a sitemap and defines the path the operator will take to ensure all fugitive emissions components are monitored. The proposed addition of this specific OGI method to subpart W as 40 CFR 98.234(a)(6) would align the methods in the two rulemakings and allow subpart W facilities to directly use information derived from the implementation of the fugitive emissions monitoring conducted under the NSPS subpart OOOOa to calculate and report emissions to the GHGRP. Consistent with that goal, the EPA expects that the final amendments to subpart W would reference the final version of the method(s) in the NSPS subpart OOOOa, including any changes made to the NSPS subpart OOOOa in response to comments on the proposed method.

We request comment on whether there are other methods for detecting equipment leaks that should be added to subpart W, either because they are commonly used across the industry or because they would align the subpart W methods with the methods in another federal, state, or local regulation.

The EPA is also proposing to provide the opportunity to use the leak survey monitoring and calculation methodology to additional reporters in subpart W. For example, in the Onshore Petroleum and Natural Gas Production and the Onshore Petroleum and Natural Gas Gathering and Boosting industry segments, subpart W presently requires reporters to count the number of equipment components of each type (*e.g.*, valve, connector, open-ended line, or pressure relief valve) or to count the number of major production equipment at the facility and then estimate the number of equipment components of each type using default average component counts for each piece of equipment in Tables W-1B and W-1C of subpart W. The resulting equipment component counts are then multiplied by default "population emission factors" in Table W-1A of subpart W to calculate emissions from equipment leaks. These population emission factors represent an average emission rate for each equipment component of a certain type, based on the fugitive emissions rates observed during the study that is the basis for the factors.

Some studies have found that the majority of a facility's mass emissions from equipment leaks come from a small percentage of equipment components that have high leak rates.[10] In general, the implementation of a program to identify and repair leaking equipment components (*e.g.*, an LDAR program) or fugitive emissions components will tend to reduce emissions once the leaking components are repaired. Therefore, a facility with an ongoing monitoring and repair program will have fewer pieces of equipment with high leak rates and lower equipment leak emissions than prior to implementation of the program. However, no emission reduction will be observed in the subpart W emission estimates if the reporter continues to use equipment component counts and the default population emission factors in subpart W. Therefore, to track changes in emissions in the data reported to the GHGRP from year to year (*e.g.*, to show reduced emissions for facilities implementing a regulatory or voluntary LDAR program or a fugitive emissions monitoring and repair program), we are proposing that facilities that conduct leak surveys use the actual number of leaks identified and the proposed leaker emission factors to determine their equipment leak emissions instead of the default population emission factors.

[10] See, for example, Epperson, D., *et al.*, "Equivalent leak definitions for Smart LDAR (leak detection and repair) when using optical imaging technology." *J Air Waste Manag Assoc*, 57:9, 1050-1060 (2007).

Specifically, facilities with affected sources that are required to conduct fugitive emissions monitoring to comply with the proposed NSPS subpart OOOOa would be required to count the actual number of components with fugitive emissions identified through implementation of the NSPS subpart OOOOa as leaks for purposes for subpart W and use those counts with the leak survey calculation methodology in subpart W to determine equipment leak emissions for those components. If equipment leak surveys are conducted for other purposes, and the other sources and/or facilities are using one of the methods in 40 CFR 98.234(a), the reporter would have the option to use either the number of leaks with the equipment leak survey methodology in subpart W or the facility component counts with the population emission factors. The EPA's intent with this provision is to allow flexibility for Onshore Petroleum and Natural Gas Production and Onshore Petroleum and Natural Gas Gathering and Boosting reporters whose leak survey method may not align exactly with one of the existing methods in subpart W or the NSPS subpart OOOOa proposed method to continue to use component counts as needed. However, the EPA would expect that any reporter conducting leak surveys that align with the proposed method (or any existing leak detection method in subpart W), whether required by the NSPS subpart OOOOa or part of a voluntary program such as the Methane Challenge Program, would use those results for their subpart W

annual reporting, because the additional burden of completing the emissions calculation after a leak survey has been conducted would be similar to using the existing subpart W facility equipment count and population emission factor method and the results would be more representative of the number of leaks at the facility than the existing subpart W method. We request comment on whether there are other situations for which subpart W should require a reporter to use the results of equipment leak surveys conducted using one of the methods in subpart W (*e.g.*, if the survey is conducted pursuant to a federal regulation other than the NSPS subpart OOOOa or pursuant to a state regulation).

To quantify emissions from the leaking components, subpart W includes leaker emission factors for each segment using the equipment leak survey methodology. In contrast to the population emission factors, which are multiplied by the total facility component counts, leaker emission factors are multiplied by the actual number of leaks identified by the leak survey for each component type. Subpart W does not currently include leaker emission factors for: (1) the Onshore Petroleum and Natural Gas Production industry segment; (2) the Onshore Petroleum and Natural Gas Gathering and Boosting industry segment; (3) storage wellheads in gas service in the Underground Natural Gas Storage industry segment; (4) LNG storage components in gas service in

the LNG Storage industry segment; or (5) LNG terminals components in gas service for the LNG Import and Export Equipment industry segment. In this rulemaking, we are proposing a new set of leaker emission factors for these sources/segments. For industry segments that already include a set of leaker emission factors, we are proposing to expand that set of leaker emission factors to include certain additional components to fully encompass the fugitive emissions components as defined in the proposed NSPS subpart OOOOa. See section II.C of this preamble for more information on the development of the proposed leaker emission factors.

The EPA is also proposing to add new reporting requirements for facilities conducting equipment leak surveys to report equipment leak emissions under subpart W. Reporters in the Onshore Petroleum and Natural Gas Production and the Onshore Petroleum and Natural Gas Gathering and Boosting industry segments that begin reporting emissions using the leak survey methodology would be required to report the information currently listed in 40 CFR 98.236(q)(1) and (2), including the number of equipment leak surveys, component type, number of leaking components, average time the components were assumed to be leaking, and annual carbon dioxide (CO_2) and CH_4 emissions. These data elements are already required to be reported by facilities conducting leak detection surveys in the Onshore

Natural Gas Processing, Onshore Natural Gas Transmission Compression, Underground Natural Gas Storage, LNG Storage and LNG Import and Export Equipment industry segments; however, facilities in those segments conducting equipment leak surveys using the OGI method as specified in the NSPS subpart OOOOa would begin reporting leaks for component types with proposed new leaker emission factors. Table 2 provides a summary of the equipment leak methodologies that would be available to each industry segments covered by subpart W under these proposed amendments.

Table 2. Proposed Equipment Leak Requirements for Subpart W

	Subpart W Calculation Methodology			
	Components Subject to the NSPS Subpart OOOOa		**Components Not Subject to the NSPS Subpart OOOOa**	
Subpart W Industry Segments	**Calculation Methodology**	**Method for Leak Detection[a]**	**Calculation Methodology**	**Method for Leak Detection[b]**
Onshore Petroleum and Natural Gas Production; Onshore Petroleum and Natural Gas Gathering and Boosting	Leak survey (40 CFR 98.233(q))	OGI as specified in the proposed NSPS subpart OOOOa	Leak survey (40 CFR 98.233(q)); OR	Any method in 40 CFR 98.234(a)
			Population count (40 CFR 98.233(r))	N/A
Onshore Natural Gas Processing	Leak survey (40 CFR 98.233(q))	Method 21	Leak survey (40 CFR 98.233(q))[c]	Any method in 40 CFR 98.234(a)
Onshore Natural Gas Transmission Compression; Underground	Leak survey (40 CFR 98.233(q))	OGI as specified in the proposed NSPS	Leak survey (40 CFR 98.233(q))[d]	Any method in 40 CFR 98.234(a)

Natural Gas Storage: Storage stations, gas service		subpart OOOOa		
Underground Natural Gas Storage: Storage wellheads, gas service	Leak survey (40 CFR 98.233(q))	OGI as specified in the proposed NSPS subpart OOOOa	Leak survey (40 CFR 98.233(q)); OR	Any method in 40 CFR 98.234(a)
			Population count (40 CFR 98.233(r))	N/A
LNG Storage: LNG Service LNG Import and Export Equipment: LNG Service	Leak survey (40 CFR 98.233(q))	OGI as specified in the proposed NSPS subpart OOOOa	Leak survey (40 CFR 98.233(q))	Any method in 40 CFR 98.234(a)
LNG Storage: Gas Service LNG Import and Export Equipment: Gas Service	Leak survey (40 CFR 98.233(q))	OGI as specified in the proposed NSPS subpart OOOOa	Leak survey (40 CFR 98.233(q)); OR	Any method in 40 CFR 98.234(a)
			Population count (40 CFR 98.233(r))[e]	N/A
Natural Gas Distribution: Transmission-distribution transfer stations	N/A	N/A	Leak survey (40 CFR 98.233(q))	Any method in 40 CFR 98.234(a)
Natural Gas Distribution: Below grade metering-regulating stations and Distribution Mains and Services	N/A	N/A	Population count (40 CFR 98.233(r))	N/A

[a] The methods in this column are the methods in the proposed NSPS subpart OOOOa. The final amendments to subpart W would

reference the final version of the method(s) in the NSPS subpart OOOOa, including any changes made to the NSPS subpart OOOOa in response to comments on the proposed method.

[b] "Any method in 40 CFR 98.234(a)" means any of the following methods: OGI as specified in 40 CFR 60.18 (40 CFR 98.234(a)(1)), Method 21 (40 CFR 98.234(a)(2)), Infrared laser beam illuminated instrument (40 CFR 98.234(a)(3)), Acoustic leak detection device (40 CFR 98.234(a)(5)), or OGI as specified in the proposed NSPS subpart OOOOa (40 CFR 98.234(a)(6)).

[c] Reporting is required for emissions from valves, connectors, open-ended lines, pressure relief valves, and meters but is optional for pumps.

[d] Reporting is required for emissions from valves, connectors, open-ended lines, pressure relief valves, and meters but is optional for flanges, instruments, and other components.

[e] Reporting is only required for emissions from vapor recovery compressors if this option is chosen.

In addition, the EPA is proposing to add three new reporting requirements for facilities conducting equipment leak surveys in all of the above segments as well as the Natural Gas Distribution segment. First, facilities in those segments would be required to report the method(s) in 40 CFR 98.234(a) used to conduct the survey(s). Second, facilities would be required to indicate whether any of their component types are subject to the NSPS subpart OOOOa. Finally, facilities would be required to indicate whether they elected to use the equipment leak survey methodology for any of their component types.

C. How Did We Select the Proposed Leaker Emission Factors?

As a first step, the EPA is proposing to align the subpart W equipment components with the proposed NSPS subpart OOOOa definition of "fugitive emissions component," to the extent

practical. A "fugitive emissions component" is proposed by the NSPS subpart OOOOa to include any component that has the potential to emit fugitive emissions of CH_4 or volatile organic compounds (VOC) at a well site or compressor station site, including but not limited to valves, connectors, pressure relief devices, open-ended lines, access doors, flanges, closed vent systems, thief hatches or other openings on storage vessels, agitator seals, distance pieces, crankcase vents, blowdown vents, pump seals or diaphragms, compressors, separators, pressure vessels, dehydrators, heaters, instruments, and meters. We are not proposing to consider devices that vent as part of normal operations, such as natural gas-driven pneumatic controllers or natural gas-driven pumps, as fugitive emissions components, as the natural gas discharged from the device's vent is not considered a fugitive emission. Emissions originating from a location other than the vent, such as the seals around the bellows of a diaphragm pump, would be considered fugitive emissions.

Some of the components listed in the NSPS subpart OOOOa proposed definition of fugitive emissions component are already included as part of the subpart W equipment leaks calculation methodology, while other fugitive emissions components are specifically addressed in other calculation methodologies in subpart W. For example, subpart W includes specific calculation

methodologies for centrifugal and reciprocating compressors. If emissions from these certain compressor sources are observed during an OGI survey and these emissions are included as leaks in the subpart W equipment leak emissions calculation, then emissions from these sources could be double-counted. Therefore, we compared the list of components in the NSPS subpart OOOOa proposed definition of fugitive emissions component with the current methodologies in subpart W to identify which fugitive emissions components are already covered by an existing requirement in subpart W and which fugitive emissions components would be specifically covered as an equipment leak component in subpart W when using the OGI method as specified in the proposed NSPS subpart OOOOa.

Based on this evaluation, we determined that the subpart W calculation methodology for storage tanks already generally includes emissions from thief hatches or other openings on storage vessels. Similarly, the subpart W methodologies for gas-liquid separators include all potential emissions from these sources. Therefore, these sources are not considered equipment leak components in the proposed amendments to subpart W. We request comment on whether the EPA should consider separate approaches for controlled storage tanks and uncontrolled storage tanks.

We also evaluated the subpart W compressor emission calculation methodologies to identify sources of overlap between these methodologies and the fugitive emission components included in the proposed NSPS subpart OOOOa. As noted previously, subpart W has specific calculation methodologies for centrifugal and reciprocating compressors. For centrifugal compressors, emission sources include wet seal oil degassing vent (for centrifugal compressors with wet seals), blowdown valve leakage, and isolation valve leakage. For reciprocating compressors, emission sources include reciprocating compressor rod packing vents, blowdown valve leakage, and isolation valve leakage. For compressors in the Onshore Petroleum and Natural Gas Production and the Onshore Petroleum and Natural Gas Gathering and Boosting industry segments, the compressor methods only cover emissions from the centrifugal compressor wet seal oil degassing vent and from the reciprocating compressor rod packing vent. Thus, for these industry segments, blowdown valve leakage and isolation valve leakage are proposed to be included as equipment leaks. For the Natural Gas Processing, Onshore Natural Gas Transmission Compression, Underground Natural Gas Storage, LNG Storage, and LNG Import and Export Equipment segments, subpart W requires reporters to make “as found” or continuous measurements for compressor emission sources, so the reporters will have either direct measurement data or site-

specific emission factors by which to calculate emissions from all of the compressor sources listed above. Therefore, we are proposing to exclude these sources from the equipment leak calculation requirements.

We are also proposing that for purposes of subpart W, all other fugitive emissions components as defined in the proposed NSPS subpart OOOOa not specifically identified above (*e.g.*, storage tanks, gas-liquid separators, and compressor sources with explicit calculation methods in subpart W) would be considered equipment components when conducting an equipment leak survey using the OGI method as specified in the proposed NSPS subpart OOOOa.

We note that some studies have identified unusually large fugitive emissions from some sources while conducting OGI or other advanced innovative monitoring studies. Often in these cases, a majority of emissions come from a minority of sources. This means that some sources have emissions significantly higher than would be calculated using average emission factors and average component types. Sources included in the subset of a data set that contribute to the majority of emissions are sometimes referred to as "super emitters."[11] These "super

[11] For example: Subramanian, R., *et al.*, 2015, "Methane Emissions from Natural Gas Compressor Stations in the Transmission and Storage Sector: Measurements and Comparisons with the EPA

emitters" may include emissions from a number of different components, including thief hatches and holes that develop in equipment or vessels due to corrosion. As noted previously, these emission sources are already generally included in the subpart W calculation methodology for storage tanks, but for most other emission source types, we are proposing to include holes and other openings as part of the equipment leak requirements. We request comment on ways to more accurately account for these and other "super emitting" sources in the proposed calculation methods for equipment leaks.

Next, we reviewed available literature studies in order to determine appropriate leaker emission factors separately for the relevant industry segments. For the Onshore Petroleum and Natural Gas Production industry segment, we first evaluated the EPA/Gas Research Institute (GRI) data set on which the current subpart W population emission factors are based. The EPA/GRI data set is based on surveys conducted using EPA Method 21 with a leak defined as a monitor reading of 10,000 ppmv or higher. We also evaluated more recent studies conducted at natural gas production facilities. As described in greater detail in the memorandum entitled "Technical Support for Leak Detection

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Greenhouse Gas Reporting Program Protocol," *Environ. Sci. Technol.*, vol. 49, pp. 3252-3261, February 10, 2015.

Methodology Revisions and Confidentiality Determinations for Petroleum and Natural Gas Systems" in Docket ID No. EPA-HQ-OAR-2015-0764, we concluded that the EPA/GRI data set provides sufficient data to develop leaker emission factors for this industry segment and that using this data set for the leaker emission factors provides consistency with the population emission factors used by reporters that do not conduct leak detection surveys. Due to differences in the monitoring methods, it is possible that the average emissions rate of a leak identified using EPA Method 21 may be different from the average emissions rate of a leak identified using OGI. While the OGI study data generally yielded larger leaker factors than those developed from the EPA/GRI data set, we found that leaker emission factors determined from more recent OGI study data for natural gas production facilities agreed reasonably well with the leaker emission factors developed from the EPA/GRI data set, suggesting that the EPA/GRI leaker emission factor estimates are still valid for this industry segment. Furthermore, the EPA/GRI data set is more robust for some components than some of the other studies, and the resulting leaker emission factors are well-established. We request comment on the basis for the leaker emission factors for the Onshore Petroleum and Natural Gas Production industry segment (*i.e.*, whether it is appropriate to use solely the EPA/GRI data, use solely data from OGI monitoring

studies, composite all available data to develop the leaker emission factors, or use other study data).

For the Onshore Petroleum and Natural Gas Gathering and Boosting industry segment, the more recent OGI studies again suggested that the average leaker emissions may be somewhat higher than those developed from the EPA/GRI data set for most components. However, when we considered only those component types that had a high number of measurements, there was generally reasonable agreement between the emission factors developed from the more recent OGI studies and those developed from the EPA/GRI data set. It is unclear if the differences noted are due to differences in the leak detection method, differences in the industry components or both. However, after reviewing the available data, we determined it was appropriate to use the leaker emission factors developed from the EPA/GRI data set for the Onshore Petroleum and Natural Gas Gathering and Boosting industry segment, so that the Onshore Petroleum and Natural Gas Production and Onshore Petroleum and Natural Gas Gathering and Boosting industry segments would share a common set of leaker factors, consistent with the use of the same population emission factors for these industry segments. We request comment on the basis for the leaker emission factors for the Onshore Petroleum and Natural Gas Gathering and Boosting industry segment.

The Onshore Natural Gas Processing industry segment has leaker emission factors in subpart W for most traditional equipment leak components. Based on the proposed NSPS subpart OOOOa, the fugitive emissions monitoring requirements for this industry segment would be limited to "equipment," which includes pumps, pressure relief devices, open-ended lines, valves, flanges and other connectors. Subpart W currently includes leaker emission factors in Table W-2 for all of these equipment component types except pumps. Therefore, we are proposing to add a leaker emission factor for pumps to Table W-2 based on the data set used to develop the existing leaker emission factors for the Onshore Natural Gas Processing industry segment. We request comment on the basis for the leaker emission factors for pumps in the Onshore Natural Gas Processing industry segment.

The NSPS subpart OOOOa proposed definition of fugitive emissions components includes a number of other components that are not the traditional "equipment" covered by traditional EPA Method 21 monitoring programs. In many cases, these additional components are not already included in other calculation methodologies in subpart W and should be considered within the subpart W equipment leak calculation methodologies. Therefore, we determined it necessary to develop additional leaker emission factors to augment the existing leaker emission factors in Tables W-3 through W-6 of subpart W in order to harmonize the

subpart W equipment leak calculations with the proposed requirements in the NSPS subpart OOOOa. First, we reviewed the existing leaker emission factors in Tables W-3 through W-6 compared to the proposed definition of "fugitive emissions components" in the proposed NSPS subpart OOOOa to identify any discrepancies. Based on this review, we identified certain fugitive emissions components for which new leaker emission factors were needed. Therefore, we are proposing new leaker emission factors for flanges and "other" fugitive components and proposing to expand the existing leaker emission factor for meters to also include instruments in Tables W-3 and W-4 for the Onshore Natural Gas Transmission Compression and Underground Natural Gas Storage industry segments, respectively. We are also proposing to add leaker emission factors for traditional equipment components for storage wellheads for equipment in gas service within Table W-4. We are proposing to add these same leaker emission factors for traditional equipment components in gas service for LNG storage components within Table W-5 and for LNG terminal components within Table W-6.

Consistent with the approach used for developing the new leaker emission factors for the Onshore Petroleum and Natural Gas Production and Onshore Petroleum and Natural Gas Gathering and Boosting segments, we used the same historic data sets upon which the existing leaker emission factors were developed to

develop leaker emission factors for these additional components. For more detail regarding the development of these additional leaker emission factors for the Onshore Natural Gas Transmission Compression, the Underground Natural Gas Storage, the LNG Storage, and the LNG Import and Export Equipment industry segments, see the memorandum "Technical Support for Leak Detection Methodology Revisions and Confidentiality Determinations for Petroleum and Natural Gas Systems" in Docket ID No. EPA-HQ-OAR-2015-0764. We request comment on the basis for the proposed new leaker emission factors for these industry segments.

III. Proposed Confidentiality Determinations

A. Overview and Background

In this proposed rulemaking, we are proposing confidentiality determinations for nine new or substantially revised data elements proposed to be reported by the following segments: Onshore Petroleum and Natural Gas Production; Onshore Petroleum and Natural Gas Gathering and Boosting; Onshore Natural Gas Processing; Onshore Natural Gas Transmission Compression; Underground Natural Gas Storage; LNG Storage; LNG Import and Export Equipment, and Natural Gas Distribution. These data elements include new or substantially revised reporting requirements for existing facilities already reporting under subpart W. The data elements are: (1) the number of complete

equipment leak surveys performed during the calendar year; (2) whether any equipment leak component types are subject to the NSPS subpart OOOOa; (3) whether a reporter elected to report to subpart W using the equipment leak survey methodology; (4) the method(s) in 40 CFR 98.234(a) used to conduct the leak survey; (5) component type; (6) the number of each type of component identified as leaking; (7) the average time each type of surveyed components is assumed to be leaking and operational; (8) annual CO_2 emissions by component type; and (9) annual CH_4 emissions by component type.

The final confidentiality determinations the EPA has previously made for the remainder of the subpart W data elements are unaffected by these proposed amendments and continue to apply. For information on confidentiality determinations for the GHGRP and subpart W data elements, see: 75 FR 39094, July 7, 2010; 76 FR 30782, May 26, 2011; 77 FR 48072, August 13, 2012; 79 FR 63750, October 24, 2014; 79 FR 70385, November 25, 2014; and 80 FR 64262, October 22, 2015. These proposed confidentiality determinations would be finalized after considering public comment. The EPA plans to finalize these determinations at the same time the proposed amendments described in this rulemaking are finalized.

B. Approach to Proposed CBI Determinations

We are applying the same approach as previously used for making confidentiality determinations for data elements reported under the GHGRP. In the "Confidentiality Determinations for Data Required Under the Mandatory Greenhouse Gas Reporting Rule and Amendments to Special Rules Governing Certain Information Obtained Under the Clean Air Act" (hereafter referred to as "2011 Final CBI Rulemaking") (76 FR 30782, May 26, 2011), the EPA grouped part 98 data elements into 22 data categories (11 direct emitter data categories and 11 supplier data categories) with each of the 22 data categories containing data elements that are similar in type or characteristics. The EPA then made categorical confidentiality determinations for eight direct emitter data categories and eight supplier data categories and applied the categorical confidentiality determination to all data elements assigned to the category. Of these data categories with categorical determinations, the EPA determined that four direct emitter data categories are comprised of those data elements that meet the definition of "emissions data," as defined at 40 CFR 2.301(a), and are, therefore, not entitled to confidential treatment under section 114(c) of the CAA.[12] The EPA

[12] Direct emitter data categories that meet the definition of "emission data" in 40 CFR 2.301(a) are "Facility and Unit Identifier Information," "Emissions," "Calculation Methodology and Methodological Tier," and "Data Elements Reported for

determined that the other four direct emitter data categories and the eight supplier data categories do not meet the definition of "emission data." For these data categories that are determined not to be emission data, the EPA determined categorically that data in three direct emitter data categories and five supplier data categories are eligible for confidential treatment as CBI, and that the data in one direct emitter data category and three supplier data categories are ineligible for confidential treatment as CBI. For two direct emitter data categories, "Unit/Process 'Static' Characteristics that Are Not Inputs to Emission Equations" and "Unit/Process Operating Characteristics that Are Not Inputs to Emission Equations," and three supplier data categories, "GHGs Reported," "Production/Throughput Quantities and Composition," and "Unit/Process Operating Characteristics," the EPA determined in the 2011 Final CBI Rulemaking that the data elements assigned to those categories are not emission data, but the EPA did not make categorical CBI determinations for them. Rather, the EPA made CBI determinations for each individual data element included in those categories on a case-by-case basis taking into consideration the criteria in 40 CFR 2.208. The EPA did not make

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Periods of Missing Data that are not Inputs to Emission Equations."

a final confidentiality determination for data elements assigned to the inputs to emission equation data category (a direct emitter data category) in the 2011 Final CBI Rulemaking. However, the EPA has since proposed and finalized an approach for addressing disclosure concerns associated with inputs to emissions equations.[13]

For this rulemaking, we are proposing to assign nine new or revised data elements to the appropriate direct emitter data categories created in the 2011 Final CBI Rulemaking based on the type and characteristics of each data element.[14] Note that subpart W is a direct emitter source category, thus, no data are assigned to any supplier data categories.

For the seven data elements that the EPA has assigned in this proposed rulemaking to a direct emitter category with a categorical determination (data elements (1) through (5), (8), and (9), as listed in section III.A of this preamble), the EPA is proposing that the categorical determination for the category be applied to the proposed new or revised data element. For the

[13] Revisions to Reporting and Recordkeeping Requirements, and Confidentiality Determinations Under the Greenhouse Gas Reporting Program; Final Rule. (79 FR 63750, October 24, 2014).
[14] For a description of the types and characteristics of the data elements in each of these data categories, please see "Proposed Confidentiality Determinations for Data Required Under the Mandatory Greenhouse Gas Reporting Rule and Proposed Amendment to Special Rules Governing Certain Information Obtained Under the Clean Air Act; Proposed Rule" (75 FR 39094; July 7, 2010).

proposed categorical assignment of the data elements in the eight categories with categorical determinations, see the memorandum "Data Category Assignments and Confidentiality Determinations for All Data Elements in the Proposed 'Leak Detection Methodology Revisions and Confidentiality Determinations for Petroleum and Natural Gas Systems'" in Docket ID No. EPA-HQ-OAR-2015-0764.

For the two data elements assigned to "Unit/Process Operating Characteristics that Are Not Inputs to Emission Equations" (data elements (6) and (7), as listed in section III.A of this preamble), we are proposing confidentiality determinations on a case-by-case basis taking into consideration the criteria in 40 CFR 2.208, consistent with the approach used for data elements previously assigned to this data category. For the proposed categorical assignment of these data elements, see the memorandum "Data Category Assignments and Confidentiality Determinations for All Data Elements in the Proposed 'Leak Detection Methodology Revisions and Confidentiality Determinations for Petroleum and Natural Gas Systems'" in Docket ID No. EPA-HQ-OAR-2015-0764. For the results of our case-by-case evaluation of these data elements, see section III.C of this preamble.

C. Proposed Confidentiality Determinations for Data Elements Assigned to the "Unit/Process Operating Characteristics That Are Not Inputs to Emission Equations" Data Category

The EPA is proposing to assign two proposed new or substantially revised data elements for subpart W to the "Unit/Process Operating Characteristics That Are Not Inputs to Emission Equations" data category because the proposed new or substantially revised data elements share the same characteristics as the other data elements previously assigned to the category in earlier EPA rulemakings (see 77 FR 48072, August 13, 2012; and 79 FR 70352, November 25, 2014). We are proposing confidentiality determinations for these proposed new or substantially revised data elements based on the approach set forth in the 2011 Final CBI Rulemaking for data elements assigned to this data category. In that rulemaking, the EPA determined categorically that data elements assigned to this data category do not meet the definition of emission data in 40 CFR 2.301(a); the EPA then made individual, instead of categorical, confidentiality determinations for these data elements. For more information on how the confidentiality determinations apply to specific industry segments, see the memorandum "Data Category Assignments and Confidentiality Determinations for All Data Elements in the Proposed 'Leak Detection Methodology Revisions and Confidentiality

Determinations for Petroleum and Natural Gas Systems'" in Docket ID No. EPA-HQ-OAR-2015-0764.

As with all other data elements assigned to this data category, the proposed new or substantially revised data elements do not meet the definition of emissions data in 40 CFR 2.301(a). The EPA then considered the confidentiality criteria at 40 CFR 2.208 in making our proposed confidentiality determinations. Specifically, we focused on whether the data are already publicly available from other sources and, if not, whether disclosure of the data is likely to cause substantial harm to the business' competitive position. Table 3 of this preamble lists the data elements that the EPA proposes to assign to the "Unit/Process Operating Characteristics That Are Not Inputs to Emission Equations" data category, the proposed confidentiality determination for each data element, and our rationale for each determination.

Table 3. Proposed Confidentiality for Data Elements Assigned to the "Unit/Process Operating Characteristics That Are Not Inputs to Emission Equations" Data Category

Citation	Data Element	Proposed Confidentiality Determination and Rationale
§ 98.236(q)(2)(ii)	For each component type that is located at your facility, total number of the surveyed component type that were identified as leaking in the	**Not CBI.** The term "equipment leaks" refers to those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening. Leaking components at a facility may have a correlation to the level of

Citation	Data Element	Proposed Confidentiality Determination and Rationale
	calendar year ("x_p" in Equation W-30).	maintenance at a facility. However, there is no direct correlation between the level of maintenance and process efficiency, *i.e.*, a higher number of leaks in one facility do not indicate that the processes have been running longer or more frequently than those processes at another facility that has a lower number of leaks. Furthermore, Department of Transportation (DOT) and Federal Energy Regulatory Commission (FERC) regulations require natural gas distribution companies and transmission pipeline companies, respectively, to conduct periodic leak detection and fix any leaking equipment. The number of leaks detected and fixed is reported to the DOT and is publicly available. Finally, 40 CFR part 60, subparts KKK and OOOO require natural gas processing facilities to monitor for VOC leaks and report them to the EPA, and proposed 40 CFR part 60, subpart OOOOa would require reporting for each component with visible emissions at affected well sites and compressor station sites. The EPA is proposing that this data element is not confidential; and that it will be considered non-CBI.
§ 98.236(q)(2)(iii)	For each component type that is located at your facility, average time the surveyed	**Not CBI.** This proposed data element would provide information on the amount of time operational components were found to be leaking. This

Citation	Data Element	Proposed Confidentiality Determination and Rationale
	components are assumed to be leaking and operational, in hours (average of "$T_{p,z}$" from Equation W-30).	information would provide little insight into maintenance practices at a facility because it would not identify the cause of the leaks or the nature and cost of repairs. Therefore, this information would not be likely to cause substantial competitive harm to reporters. For this reason, we are proposing the average time operational components were found leaking be designated as "not CBI."

D. Request for Comments on Proposed Confidentiality Determinations

For the CBI component of this rulemaking, we are specifically soliciting comment on the following issues. First, we specifically seek comment on the proposed data category assignments, and application of the established categorical confidentiality determinations to data elements assigned to categories with such determinations. If a commenter believes that the EPA has improperly assigned certain new or substantially revised data elements to any of the data categories established in the 2011 Final CBI Rulemaking, please provide specific comments identifying which of these data elements may be mis-assigned along with a detailed explanation of why you believe them to be incorrectly assigned and in which

data category you believe they belong. In addition, if you believe that a data element should be assigned to one of the two direct emitter data categories that do not have a categorical confidentiality determination, please also provide specific comment along with detailed rationale and supporting information on whether such a data element does or does not qualify as CBI.

We also seek comment on the proposed individual confidentiality determinations for the two new or substantially revised data elements assigned to the "Unit/Process Operating Characteristics That Are Not Inputs to Emission Equations" data category.

By proposing confidentiality determinations prior to data reporting through this proposal and rulemaking process, we provide reporters an opportunity to submit comments, in particular comments identifying data they consider sensitive and their rationales and supporting documentation; this opportunity is the same opportunity that is afforded to submitters of information in case-by-case confidentiality determinations made in response to individual claims for confidential treatment not made through a rulemaking. It provides an opportunity to rebut the agency's proposed determinations prior to finalization. We will evaluate the comments on our proposed determinations, including claims of confidentiality and information substantiating such claims, before finalizing the

confidentiality determinations. Please note that this will be a reporter's only opportunity to substantiate a confidentiality claim for the data elements identified in this rulemaking. Upon finalizing the confidentiality determinations of the data elements identified in this rulemaking, the EPA will release or withhold these data in accordance with 40 CFR 2.301, which contains special provisions governing the treatment of part 98 data for which confidentiality determinations have been made through rulemaking.

When submitting comments regarding the confidentiality determinations we are proposing in this rulemaking, please identify each individual data element you do or do not consider to be CBI or emission data in your comments. Please explain specifically how the public release of that particular data element would or would not cause a competitive disadvantage to a facility. Discuss how this data element may be different from or similar to data that are already publicly available. Please submit information identifying any publicly available sources of information containing the specific data elements in question. Data that are already available through other sources would likely be found not to qualify for CBI protection. In your comments, please identify the manner and location in which each specific data element you identify is publicly available, including a citation. If the data are physically published, such

as in a book, industry trade publication, or federal agency publication, provide the title, volume number (if applicable), author(s), publisher, publication date, and International Standard Book Number (ISBN) or other identifier. For data published on a Web site, provide the address of the Web site and the date you last visited the Web site and identify the Web site publisher and content author.

If your concern is that competitors could use a particular data element to discern sensitive information, specifically describe the pathway by which this could occur and explain how the discerned information would negatively affect your competitive position. Describe any unique process or aspect of your facility that would be revealed if the particular data element you consider sensitive were made publicly available. If the data element you identify would cause harm only when used in combination with other publicly available data, then describe the other data, identify the public source(s) of these data, and explain how the combination of data could be used to cause competitive harm. Describe the measures currently taken to keep the data confidential. Avoid conclusory and unsubstantiated statements, or general assertions regarding potential harm. Please be as specific as possible in your comments and include all information necessary for the EPA to evaluate your comments.

IV. Impacts of the Proposed Amendments to Subpart W

As discussed in section II of this preamble, the EPA is proposing amendments to subpart W that would add equipment leak monitoring methods and would revise recordkeeping and reporting requirements for reporters in the following industry segments: Onshore Petroleum and Natural Gas Production, Onshore Petroleum and Natural Gas Gathering and Boosting, Onshore Natural Gas Processing, Onshore Natural Gas Transmission Compression, Underground Natural Gas Storage, LNG Storage, LNG Import and Export Equipment, and Natural Gas Distribution. Reporters in these industry segments would be required to use the results of fugitive emissions component monitoring required under the proposed NSPS subpart OOOOa or could voluntarily use the results of leak detection surveys that are conducted following a leak detection method listed in subpart W to determine the number of leaking components of a given type that are present at the facility. Facilities would use these results along with the proposed leaker emission factors to determine their emissions.

The proposed amendments to subpart W are not expected to significantly increase burden. We estimated that the additional costs to reporters in the Onshore Petroleum and Natural Gas Production and the Onshore Petroleum and Natural Gas Gathering and Boosting industry segments to transition their existing equipment leak recordkeeping, calculating, and reporting systems to use the proposed leaker emission factor approach would be

approximately $50,000 per year for all reporters, or about $200 per reporter. Reporters in the other industry segments in subpart W would only need to add a few new emission factors to their existing systems rather than transitioning their recordkeeping, calculating, and reporting systems, so we do not estimate any additional burden for these facilities. See the memorandum, "Assessment of Impacts of the Proposed Leak Detection Methodology Revisions to Subpart W" in Docket ID No. EPA-HQ-OAR-2015-0764 for additional information.

V. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *http://www2.epa.gov/laws-regulations/laws-and-executive-orders*.

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 and was therefore not submitted to the OMB for review.

B. Paperwork Reduction Act (PRA)

The information collection activities in this proposed rule have been submitted for approval to the OMB under the PRA. The Information Collection Request (ICR) document that the EPA prepared has been assigned EPA ICR number 2300.19. You can find

a copy of the ICR in the docket for this rule, and it is briefly summarized here.

This action proposes to increase burden related to recordkeeping and reporting requirements for reporters in two industry segments: Onshore Petroleum and Natural Gas Production and Onshore Petroleum and Natural Gas Gathering and Boosting. The changes to recordkeeping and reporting requirements for the other industry segments in this proposed rulemaking are not expected to increase burden. Impacts associated with the proposed changes to the recordkeeping and reporting requirements are detailed in the memorandum "Assessment of Impacts of the Proposed Leak Detection Methodology Revisions to Subpart W" (see Docket ID No. EPA-HQ-OAR-2015-0764).

Data collected must be made available to the public unless the data qualify for CBI treatment under the CAA and EPA regulations. All data determined by the EPA to be CBI are safeguarded in accordance with regulations in 40 CFR chapter 1, part 2, subpart B.

Respondents/affected entities: The respondents in this information collection include owners and operators of petroleum and natural gas systems facilities that report their GHG emissions from equipment leaks to the EPA to comply with subpart W.

Respondent's obligation to respond: The respondent's obligation to respond is mandatory under the authority provided in CAA section 114.

Estimated number of respondents: Approximately 251 respondents per year.

Frequency of response: Annual.

Total estimated burden: 502 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $50,000 (per year).

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.

Submit your comments on the agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the EPA using the docket identified at the beginning of this rule. You may also send your ICR-related comments to OMB's Office of Information and Regulatory Affairs via email to *oria_submissions@omb.eop.gov*, Attention: Desk Officer for the EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after receipt, OMB must receive comments no later than **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN**

THE FEDERAL REGISTER]. The EPA will respond to any ICR-related comments in the final rule.

C. Regulatory Flexibility Act (RFA)

I certify that this action would not have a significant economic impact on a substantial number of small entities under the RFA. The small entities directly regulated by this proposed rule include small businesses in the petroleum and natural gas industry. The EPA has determined that some small businesses would be affected because their production processes emit GHGs exceeding the reporting threshold. This action includes proposed amendments that may result in a small burden increase on some subpart W reporters, but the EPA has determined that the cost of less than $200 per reporter is not a significant increase. Details of this analysis are presented in "Assessment of Impacts of the Leak Detection Methodology Revisions and Confidentiality Determinations for Petroleum and Natural Gas Systems" in Docket ID No. EPA-HQ-OAR-2015-0764.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of $100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. This action would impose no enforceable duty on any state, local, or tribal governments or the private sector.

E. Executive Order 13132: Federalism

This action 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.

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

This action has tribal implications. However, it will neither impose substantial direct compliance costs on tribal governments, nor preempt tribal law. This regulation would apply directly to petroleum and natural gas facilities that emit greenhouses gases. Although few facilities that would be subject to the rule are likely to be owned by tribal governments, the EPA sought opportunities to provide information to tribal governments and representatives during the development of the proposed and final subpart W that was promulgated on November 30, 2010 (75 FR 74458).

The EPA consulted with tribal officials under the EPA Policy on Consultation and Coordination with Indian Tribes early in the process of developing this regulation to permit them to have meaningful and timely input into its development. A summary of that consultation is provided in section IV.F of the preamble to the re-proposal of subpart W published on April 12, 2010 (75

FR 18608), and section IV.F of the preamble to the subpart W 2010 final rule published on November 30, 2010 (75 FR 74458).

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

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks, that the EPA has reason to believe may disproportionately affect children, per the definition of "covered regulatory action" in section 2-202 of the Executive Order. This action is not subject to Executive Order 13045 because it does not concern an environmental health risk or safety risk.

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

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards.

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

The EPA believes the human health or environmental risk addressed by this action would not have potential

disproportionately high and adverse human health or environmental effects on minority, low-income or indigenous populations because the amendments would not affect the level of protection provided to human health or the environment. Instead, the proposed amendments address information collection and reporting and verification procedures.

List of Subjects in 40 CFR Part 98

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

Dated: January 21, 2016.

Gina McCarthy,
Administrator.

For the reasons stated in the preamble, title 40, chapter I, of the Code of Federal Regulations is proposed to be amended 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 W—PETROLEUM AND NATURAL GAS SYSTEMS

2. § 98.232 is amended by:

a. Adding paragraphs (d)(8) and (e)(8);

b. Revising paragraph (f)(5);

c. Adding paragraphs (f)(6) through (8);

d. Revising paragraphs (g)(3) and (4);

e. Adding paragraphs (g)(5) and (6);

f. Revising paragraphs (h)(4) and (5); and

g. Adding paragraphs (h)(6) and (7).

The revisions and additions read as follows:

§ 98.232 GHGs to report.

* * * * *

(d) * * *

(8) Equipment leaks from pumps that are subject to 40 CFR part 60, subpart OOOOa. You may also elect to report emissions from pumps if you survey them using a leak detection method

described in § 98.234(a) and are not subject to 40 CFR part 60, subpart OOOOa.

(e) * * *

(8) Equipment leaks from all equipment leak component types, except those listed in paragraph (e)(7) of this section, that are subject to 40 CFR part 60, subpart OOOOa. You may also elect to report emissions from these equipment leak component types if you survey them using a leak detection method described in § 98.234(a) and are not subject to 40 CFR part 60, subpart OOOOa.

(f) * * *

(5) Equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters associated with storage stations.

(6) Equipment leaks from all equipment leak component types associated with storage stations, except those listed in paragraph (f)(5) of this section, that are subject to 40 CFR part 60, subpart OOOOa. You may also elect to report emissions from these equipment leak component types if you survey them using a leak detection method described in § 98.234(a) and are not subject to 40 CFR part 60, subpart OOOOa.

(7) Equipment leaks from valves, connectors, open-ended lines, and pressure relief valves associated with storage wellheads.

(8) Equipment leaks from all equipment leak component types associated with storage wellheads, except those listed in paragraph (f)(7) of this section, that are subject to 40 CFR part 60, subpart OOOOa. You may also elect to report emissions from these equipment leak component types if you survey them using a leak detection method described in § 98.234(a) and are not subject to 40 CFR part 60, subpart OOOOa.

(g) * * *

(3) Flare stack emissions.

(4) Equipment leaks from valves, pump seals, connectors, and other equipment leak sources in LNG service.

(5) Equipment leaks from vapor recovery compressors that are not subject to 40 CFR part 60, subpart OOOOa.

(6) Equipment leaks from all equipment leak component types in gas service that are subject to 40 CFR part 60, subpart OOOOa. You may also elect to report emissions from these equipment leak component types if you survey them using a leak detection method described in § 98.234(a) and are not subject to 40 CFR part 60, subpart OOOOa.

(h) * * *

(4) Flare stack emissions.

(5) Equipment leaks from valves, pump seals, connectors, and other equipment leak sources in LNG service.

(6) Equipment leaks from vapor recovery compressors that are not subject to 40 CFR part 60, subpart OOOOa.

(7) Equipment leaks from all equipment leak component types in gas service that are subject to 40 CFR part 60, subpart OOOOa. You may also elect to report emissions from these equipment leak component types if you survey them using a leak detection method described in § 98.234(a) and are not subject to 40 CFR part 60, subpart OOOOa.

* * * * *

3. § 98.233 is amended by revising paragraph (q) and the first two sentences of paragraph (r)(1) introductory text to read as follows:

§ 98.233 Calculating GHG emissions.

* * * * *

(q) *Equipment leak surveys*. (1) *Applicability*. (i) Except as specified in paragraph (q)(1)(iv) of this section, you must use any of the methods described in § 98.234(a) to conduct leak detection(s) of equipment leaks from all equipment leak component types listed in § 98.232(d)(7), (e)(7), (f)(5), (g)(4), (h)(5), and (i)(1), and you must calculate equipment leak emissions for these equipment leak component types using the procedures specified in paragraph (q)(2) of this section.

(ii) Except as specified in paragraph (q)(1)(iv) of this section, equipment component types in § 98.232(c)(21), (d)(8),

(e)(8), (f)(6), (f)(7), (f)(8), (g)(6), (h)(7), and (j)(10) that are subject to 40 CFR part 60, subpart OOOOa are subject to the equipment leak emissions calculation procedures in paragraph (q)(2) of this section.

(iii) Except as specified in paragraph (q)(1)(iv) of this section, you may elect to comply with this paragraph (q) (*i.e.*, use any of the methods described in § 98.234(a) to conduct leak detections, and use the procedures specified in paragraph (q)(2) of this section to calculate emissions) for any equipment leak component types in § 98.232(c)(21), (d)(8), (e)(8), (f)(6), (f)(7), (f)(8), (g)(6), (h)(7), and (j)(10) that are not subject to paragraph (q)(1)(ii) of this section.

(iv) This paragraph (q) applies to component types in streams with gas content greater than 10 percent CH_4 plus CO_2 by weight. Component types in streams with gas content less than or equal to 10 percent CH_4 plus CO_2 by weight are exempt from the requirements of this paragraph (q) and do not need to be reported. Tubing systems equal to or less than one half inch diameter are exempt from the requirements of this paragraph (q) and do not need to be reported.

(2) *Emission calculation methodology*. For industry segments listed in § 98.230(a)(2) through (9), if equipment leaks are detected for component types listed in paragraphs (q)(1)(i) through (iii) of this section, then you must calculate equipment

leak emissions per component type per reporting facility using Equation W-30 of this section and the requirements specified in paragraphs (q)(2)(i) through (xi) of this this section. For the industry segment listed in § 98.230(a)(8), the results from Equation W-30 are used to calculate population emission factors on a meter/regulator run basis using Equation W-31 of this section. If you chose to conduct equipment leak surveys at all above grade transmission-distribution transfer stations over multiple years, "n," according to paragraph (q)(2)(x)(A) of this section, then you must calculate the emissions from all above grade transmission-distribution transfer stations as specified in paragraph (q)(2)(xi) of this section.

$$E_{s,p,i} = GHG_i * EF_{s,p} * \sum_{z=1}^{x_p} T_{p,z} \qquad \text{(Eq. W-30)}$$

Where:

$E_{s,p,i}$ = Annual total volumetric emissions of GHG_i from specific component type "p" (in accordance with paragraphs (q)(1)(i) through (iii) of this section) in standard ("s") cubic feet, as specified in paragraphs (q)(2)(ii) through (x) of this section.

x_p = Total number of specific component type "p" detected as leaking in any leak survey during the year. A component found leaking in two or more surveys during the year is counted as one leaking component.

$EF_{s,p}$ = Leaker emission factor for specific component types listed in Table 1E and Table W-2 through Table W-7 of this subpart.

GHG_i = For onshore petroleum and natural gas production facilities and onshore petroleum and natural gas gathering and boosting facilities, concentration of

GHG_i, CH_4, or CO_2, in produced natural gas as defined in paragraph (u)(2) of this section; for onshore natural gas processing facilities, concentration of GHG_i, CH_4 or CO_2, in the total hydrocarbon of the feed natural gas; for onshore natural gas transmission compression and underground natural gas storage, GHG_i equals 0.975 for CH_4 and 1.1×10^{-2} for CO_2 ; for LNG storage and LNG import and export equipment, GHG_i equals 1 for CH_4 and 0 for CO_2 ; and for natural gas distribution, GHG_i equals 1 for CH_4 and 1.1×10^{-2} CO_2.

$T_{p,z}$ = The total time the surveyed component "z", component type "p", was assumed to be leaking and operational, in hours. If one leak detection survey is conducted in the calendar year, assume the component was leaking for the entire calendar year. If multiple leak detection surveys are conducted in the calendar year, assume a component found leaking in the first survey was leaking since the beginning of the year; assume a component found leaking in the last survey of the year was leaking from the preceding survey through the end of the year; assume a component found leaking in a survey between the first and last surveys of the year was leaking since the preceding survey; and sum times for all leaking periods. For each leaking component, account for time the component was not operational (*i.e.*, not operating under pressure) using an engineering estimate based on best available data.

(i) You must conduct either one leak detection survey in a calendar year or multiple complete leak detection surveys in a calendar year. The leak detection surveys selected must be conducted during the calendar year.

(ii) Calculate both CO_2 and CH_4 mass emissions using calculations in paragraph (v) of this section.

(iii) Onshore petroleum and natural gas production facilities must use the appropriate default whole gas leaker

emission factors for components in gas service, light crude service, and heavy crude service listed in Table W-1E of this subpart.

(iv) Onshore petroleum and natural gas gathering and boosting facilities must use the appropriate default whole gas leaker factors for components in gas service listed in Table W-1E of this subpart.

(v) Onshore natural gas processing facilities must use the appropriate default total hydrocarbon leaker emission factors for compressor components in gas service and non-compressor components in gas service listed in Table W-2 of this subpart.

(vi) Onshore natural gas transmission compression facilities must use the appropriate default total hydrocarbon leaker emission factors for compressor components in gas service and non-compressor components in gas service listed in Table W-3 of this subpart.

(vii) Underground natural gas storage facilities must use the appropriate default total hydrocarbon leaker emission factors for storage stations in gas service listed in Table W-4 of this subpart.

(viii) LNG storage facilities must use the appropriate default methane leaker emission factors for LNG storage components in gas service listed in Table W-5 of this subpart.

(ix) LNG import and export facilities must use the appropriate default methane leaker emission factors for LNG terminals components in LNG service listed in Table W-6 of this subpart.

(x) Natural gas distribution facilities must use Equation W-30 of this section and the default methane leaker emission factors for transmission-distribution transfer station components in gas service listed in Table W-7 of this subpart to calculate component emissions from annual equipment leak surveys conducted at above grade transmission-distribution transfer stations. Natural gas distribution facilities are required to perform equipment leak surveys only at above grade stations that qualify as transmission-distribution transfer stations. Below grade transmission-distribution transfer stations and all metering-regulating stations that do not meet the definition of transmission-distribution transfer stations are not required to perform equipment leak surveys under this section.

(A) Natural gas distribution facilities may choose to conduct equipment leak surveys at all above grade transmission-distribution transfer stations over multiple years “n”, not exceeding a five year period to cover all above grade transmission-distribution transfer stations. If the facility chooses to use the multiple year option, then the number of transmission-distribution transfer stations that are monitored

in each year should be approximately equal across all years in the cycle.

(B) Use Equation W-31 of this section to determine the meter/regulator run population emission factors for each GHG_i. As additional survey data become available, you must recalculate the meter/regulator run population emission factors for each GHG_i annually according to paragraph (q)(2)(x)(C) of this section.

$$EF_{s,MR,i} = \frac{\sum_{y=1}^{n}\sum_{p=1}^{7} E_{s,p,i,y}}{\sum_{y=1}^{n}\sum_{w=1}^{Count_{MR,y}} T_{w,y}} \qquad \text{(Eq. W-31)}$$

Where:

$EF_{s,MR,i}$ = Meter/regulator run population emission factor for GHG_i based on all surveyed above grade transmission-distribution transfer stations over "n" years, in standard cubic feet of GHG_i per operational hour of all meter/regulator runs.

$E_{s,p,i,y}$ = Annual total volumetric emissions at standard conditions of GHG_i from component type "p" during year "y" in standard ("s") cubic feet, as calculated using Equation W-30 of this section.

p = Seven component types listed in Table W-7 of this subpart for transmission-distribution transfer stations.

$T_{w,y}$ = The total time the surveyed meter/regulator run "w" was operational, in hours during survey year "y" using an engineering estimate based on best available data.

$Count_{MR,y}$ = Count of meter/regulator runs surveyed at above grade transmission-distribution transfer stations in year "y".

y = Year of data included in emission factor "$EF_{s,MR,i}$" according to paragraph (q)(2)(x)(C) of this section.

n = Number of years of data, according to paragraph (q)(8)(i) of this section, whose results are used to calculate emission factor "$EF_{s,MR,i}$" according to paragraph (q)(2)(x)(C) of this section.

(C) The emission factor "$EF_{s,MR,i}$", based on annual equipment leak surveys at above grade transmission-distribution transfer stations, must be calculated annually. If you chose to conduct equipment leak surveys at all above grade transmission-distribution transfer stations over multiple years, "n," according to paragraph (q)(2)(x)(A) of this section and you have submitted a smaller number of annual reports than the duration of the selected cycle period of 5 years or less, then all available data from the current year and previous years must be used in the calculation of the emission factor "$EF_{s,MR,i}$" from Equation W-31 of this section. After the first survey cycle of "n" years is completed and beginning in calendar year (n+1), the survey will continue on a rolling basis by including the survey results from the current calendar year "y" and survey results from all previous (n-1) calendar years, such that each annual calculation of the emission factor "$EF_{s,MR,i}$" from Equation W-31 is based on survey results from "n" years. Upon completion of a cycle, you may elect to change the number of years in the next cycle period (to be 5 years or less). If the number of years in the new cycle is greater than the number of years in the previous cycle, calculate "$EF_{s,MR,i}$" from Equation W-31 in each

year of the new cycle using the survey results from the current calendar year and the survey results from the preceding number years that is equal to the number of years in the previous cycle period. If the number of years, "n_{new}", in the new cycle is smaller than the number of years in the previous cycle, "n", calculate "$EF_{s,MR,i}$" from Equation W-31 in each year of the new cycle using the survey results from the current calendar year and survey results from all previous (n_{new}–1) calendar years.

(xi) If you chose to conduct equipment leak surveys at all above grade transmission-distribution transfer stations over multiple years, "n," according to paragraph (q)(2)(x)(A) of this section, you must use the meter/regulator run population emission factors calculated using Equation W-31 of this section and the total count of all meter/regulator runs at above grade transmission-distribution transfer stations to calculate emissions from all above grade transmission-distribution transfer stations using Equation W-32B in paragraph (r) of this section.

(r) * * * This paragraph (r) applies to emissions sources listed in § 98.232(c)(21), (f)(7), (g)(5), (h)(6), and (j)(10) that are not subject to the requirements in paragraph (q) of this section, and it applies to emission sources listed in § 98.232(i)(2), (i)(3), (i)(4), (i)(5), (i)(6), and (j)(11). To be subject to the requirements of this paragraph (r), the listed

emissions sources also must contact streams with gas content greater than 10 percent CH_4 plus CO_2 by weight. Emissions sources that contact streams with gas content less than or equal to 10 percent CH_4 plus CO_2 by weight are exempt from the requirements of this paragraph (r) and do not need to be reported. * * * * * * * * * *

4. § 98.234 is amended by revising paragraph (a) introductory text and the paragraph (a)(1) heading and adding paragraph (a)(6) to read as follows:

§ 98.234 Monitoring and QA/QC requirements.

* * * * *

(a) You must use any of the methods described in paragraphs (a)(1) through (5) of this section to conduct leak detection(s) of through-valve leakage from all source types listed in § 98.233(k), (o), and (p) that occur during a calendar year. You must use any of the methods described in paragraphs (a)(1) through (6) of this section to conduct leak detection(s) of equipment leaks from component types listed in § 98.233(q)(1)(i) and (iii) that occur during a calendar year. To conduct leak detection(s) of equipment leaks from component types listed in § 98.233(q)(1)(ii), you must use the method described in paragraph (a)(6) of this section.

(1) *Optical gas imaging instrument as specified in 40 CFR 60.18.* * * *

* * * * *

(6) *Optical gas imaging instrument as specified in 40 CFR 60.5397a.* Use an optical gas imaging instrument for equipment leak detection in accordance with § 60.5397a(b) through (e) and (g) through (i) of this chapter and paragraphs (a)(6)(i) through (v) of this section.

(i) For the purposes of this subpart, any fugitive emission from a fugitive emissions component, as defined in 40 CFR part 60, subpart OOOOa, that is detected by the optical gas imaging instrument is a leak.

(ii) For the purposes of this subpart, the term "fugitive emissions component" in § 60.5397a(b) through (i) of this chapter means "equipment leak component."

(iii) For the purpose of complying with § 98.233(q)(1)(iii), the phrases "the collection of fugitive emissions components at well sites and compressor stations" and "each collection of fugitive emissions components at a well site and each collection of fugitive emissions components at a compressor station" in § 60.5397a(b) and (g) of this chapter mean "the collection of equipment leak components for which you elect to comply with § 98.233(q)(1)(iii)."

(iv) The requirements in § 60.5397a(c)(4) and (5) of this chapter to include procedures and timelines for repair in your

monitoring plan do not apply to equipment leak components for which you elect to comply with § 98.233(q)(1)(iii).

(v) For the purpose of complying with § 98.233(q)(1)(iii), the reference in § 60.5397a(g) to "the initial survey" does not apply.

* * * * *

5. § 98.236 is amended by:

a. Redesignating paragraphs (a)(1)(xiv) through (xvii) as paragraphs (a)(1)(xv) through (xviii), respectively;

b. Adding paragraph (a)(1)(xiv);

c. Redesignating paragraphs (a)(9)(x) and (xi) as paragraphs (a)(9)(xi) and (xii), respectively;

d. Adding paragraph (a)(9)(x);

e. Revising paragraph (q)(1) introductory text;

f. Adding paragraphs (q)(1)(iii) through (v); and

g. Revising the first sentence of paragraph (q)(2) introductory text.

The revisions and additions read as follows:

§ 98.236 Data reporting requirements.

* * * * *

(a) * * *

(1) * * *

(xiv) *Equipment leak surveys*. Report the information specified in paragraph (q) of this section.

* * * * *

(9) * * *

(x) *Equipment leak surveys*. Report the information specified in paragraph (q) of this section.

* * * * *

(q) * * *

(1) You must report the information specified in paragraphs (q)(1)(i) through (v) of this section.

* * * * *

(iii) Indicate whether any equipment leak component types were subject to 40 CFR part 60, subpart OOOOa.

(iv) Indicate whether you elected to comply with § 98.233(q)(1)(iii).

(v) Report each type of method described in § 98.234(a) that was used to conduct leak surveys.

(2) You must indicate whether your facility contains any of the component types subject to § 98.233(q) that are listed in § 98.232(c)(21), (d)(7), (d)(8), (e)(7), (e)(8), (f)(5), (f)(6), (f)(7), (f)(8), (g)(4), (g)(5), (g)(6), (h)(5), (h)(6), (h)(7), (j)(10), or (i)(1), for your facility's industry segment. * * *

* * * * *

6. Add Table W-1E of subpart W of part 98 in numerical order to read as follows:

Table W-1E of Subpart W of Part 98—Default Whole Gas Leaker Emission Factors for Onshore Petroleum and Natural Gas Production and Onshore Petroleum and Natural Gas Gathering and Boosting

Equipment components	Emission factor (scf/hour/component)
Leaker Emission Factors—All Components, Gas Service[1]	
Valve	4.9
Flange	4.1
Connector (other)	1.3
Open-Ended Line[2]	2.8
Pressure Relief Valve	4.5
Pump Seal	3.7
Other[3]	4.5
Leaker Emission Factors—All Components, Light Crude Service[4]	
Valve	3.2
Flange	2.7
Connector (other)	1.0
Open-Ended Line	1.6
Pump	3.7
Agitator Seal	3.7
Other[3]	3.1
Leaker Emission Factors—All Components, Heavy Crude Service[5]	
Valve	3.2
Flange	2.7
Connector (other)	1.0
Open-Ended Line	1.6
Pump	3.7
Agitator Seal	3.7
Other[3]	3.1

[1] For multi-phase flow that includes gas, use the gas service emission factors.

[2] The open-ended lines component type includes blowdown valve and isolation valve leaks emitted through the blowdown vent stack for centrifugal and reciprocating compressors.

[3] "Others" category includes any equipment leak emission point not specifically listed in this table, except for the following: it excludes thief hatches and all other potential emission points in gas service on atmospheric storage tanks, all potential emission points in gas service on gas-liquid separators, wet seal oil degassing vents from centrifugal

compressors, and rod packing vents from reciprocating compressors.

[4] Hydrocarbon liquids greater than or equal to 20°API are considered "light crude."

[5] Hydrocarbon liquids less than 20°API are considered "heavy crude."

7. Revise Table W-2 of subpart W of part 98 to read as follows:

Table W-2 to Subpart W of Part 98—Default Total Hydrocarbon Emission Factors for Onshore Natural Gas Processing

Onshore natural gas processing plants	Emission factor (scf/hour/component)
Leaker Emission Factors—Compressor Components, Gas Service	
Valve[1]	14.84
Connector	5.59
Open-Ended Line	17.27
Pressure Relief Valve	39.66
Meter	19.33
Leaker Emission Factors—Non-Compressor Components, Gas Service	
Valve[1]	6.42
Connector	5.71
Open-Ended Line	11.27
Pressure Relief Valve	2.01
Meter	2.93
Pump	3.4

[1] Valves include control valves, block valves and regulator valves.

8. Revise Table W-3 of subpart W of part 98 to read as follows:

Table W-3 to Subpart W of Part 98—Default Total Hydrocarbon Emission Factors for Onshore Natural Gas Transmission Compression

Onshore natural gas transmission compression	Emission factor (scf/hour/component)
Leaker Emission Factors—Compressor Components, Gas Service	
Valve[1]	14.84
Connector	5.59
Flange	5.59
Open-Ended Line	17.27
Pressure Relief Valve	39.66
Meter or Instrument	19.33
Other[2]	4.1
Leaker Emission Factors—Non-Compressor Components, Gas Service	
Valve[1]	6.42
Connector	5.71
Flange	5.71
Open-Ended Line	11.27
Pressure Relief Valve	2.01
Meter or Instrument	2.93
Other[2]	4.1
Population Emission Factors—Gas Service	
Low Continuous Bleed Pneumatic Device Vents[3]	1.37
High Continuous Bleed Pneumatic Device Vents[3]	18.20
Intermittent Bleed Pneumatic Device Vents[3]	2.35

[1] Valves include control valves, block valves and regulator valves.

[2] Other includes any potential equipment leak emission point in gas service that is not specifically listed in this table, except it excludes thief hatches and all other potential emission points in gas service on transmission storage tanks, and it excludes compressor emission points that are subject to § 98.233(o) or (p).

[3] Emission Factor is in units of "scf/hour/device."

9. Revise Table W-4 of subpart W of part 98 to read as follows:

Table W-4 to Subpart W of Part 98—Default Total Hydrocarbon Emission Factors for Underground Natural Gas Storage

Underground natural gas storage	Emission factor (scf/hour/component)
Leaker Emission Factors—Storage Station, Gas Service	
Valve[1]	14.84
Connector	5.59
Flange	5.59
Open-Ended Line	17.27
Pressure Relief Valve	39.66
Meter and Instrument	19.33
Other[2]	4.1
Population Emission Factors—Storage Wellheads, Gas Service	
Connector	0.01
Valve	0.1
Pressure Relief Valve	0.17
Open-Ended Line	0.03
Leaker Emission Factors—Storage Wellheads, Gas Service	
Valve[1]	4.5
Connector	1.2
Flange	3.8
Open-Ended Line	2.5
Pressure Relief Valve	4.1
Other[2]	4.1
Population Emission Factors—Other Components, Gas Service	
Low Continuous Bleed Pneumatic Device Vents[3]	1.37
High Continuous Bleed Pneumatic Device Vents[3]	18.20
Intermittent Bleed Pneumatic Device	2.35

Vents[3]	

[1] Valves include control valves, block valves and regulator valves.

[2] Other includes any potential equipment leak emission point in gas service that is not specifically listed in this table except that it does not include compressor emission points that are subject to § 98.233(o) or (p).

[3] Emission Factor is in units of "scf/hour/device."

10. Revise Table W-5 of subpart W of part 98 to read as follows:

Table W-5 to Subpart W of Part 98—Default Methane Emission Factors for Liquefied Natural Gas (LNG) Storage

LNG storage	Emission factor (scf/hour/component)
Leaker Emission Factors—LNG Storage Components, LNG Service	
Valve	1.19
Pump Seal	4.00
Connector	0.34
Other[1]	1.77
Leaker Emission Factors—LNG Storage Components, Gas Service	
Valve[2]	14.84
Connector	5.59
Flange	5.59
Open-Ended Line	17.27
Pressure Relief Valve	39.66
Meter and Instrument	19.33
Other[3]	4.1
Population Emission Factors—LNG Storage Compressor, Gas Service	
Vapor Recovery Compressor[4]	4.17

[1] "Other" equipment type for components in LNG service should be applied for any equipment type other than connectors, pumps, or valves.

[2] Valves include control valves, block valves and regulator valves.

[3] "Other" equipment type for components in gas service should be applied for any equipment type other than valves, connectors, flanges, open-ended lines, pressure relief valves, and meters and instruments, except that it does not include compressor emission points that are subject to § 98.233(o) or (p).

[4] Emission Factor is in units of "scf/hour/device."

11. Revise Table W-6 of subpart W of part 98 to read as follows:

Table W-6 to Subpart W of Part 98—Default Methane Emission Factors for LNG Import and Export Equipment

LNG import and export equipment	Emission factor (scf/hour/component)
Leaker Emission Factors—LNG Terminals Components, LNG Service	
Valve	1.19
Pump Seal	4.00
Connector	0.34
Other[1]	1.77
Leaker Emission Factors—LNG Terminals Components, Gas Service	
Valve[2]	14.84
Connector	5.59
Flange	5.59
Open-Ended Line	17.27
Pressure Relief Valve	39.66
Meter and Instrument	19.33
Other[3]	4.1
Population Emission Factors—LNG Terminals Compressor, Gas Service	
Vapor Recovery Compressor[4]	4.17

[1] "Other" equipment type for components in LNG service should be applied for any equipment type other than connectors, pumps, or valves.

[2] Valves include control valves, block valves and regulator valves.

[3] "Other" equipment type for components in gas service should be applied for any equipment type other than valves, connectors, flanges, open-ended lines, pressure relief valves, and meters and instruments, except that it does not include compressor emission points that are subject to § 98.233(o) or (p).

[4] Emission Factor is in units of "scf/hour/compressor."

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