**Interstate Natural Gas Association of America**

August 2, 2016

*Via www.regulations.gov and email*

Attention Docket ID Number EPA–HQ–OAR–2016–0204
EPA Docket Center (EPA/DC)
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

**Re: Docket ID No. EPA-HQ-OAR-2016-0204 – INGAA's Response to EPA's Request for Comment on the Proposed Information Collection Request for Oil and Gas Facilities**

Dear Docket Clerk:

The Interstate Natural Gas Association of America (INGAA), a trade association of the interstate natural gas pipeline industry, respectfully submits these comments in response to the Environmental Protection Agency's (EPA) notice, "Proposed Information Collection Request; Comment Request; Information Collection Effort for Oil and Gas Facilities" (Proposed ICR). The notice published on June 3, 2016 (81 Fed. Reg. 35,763) requesting comments on the Proposed ICR initiates a process that will significantly affect INGAA members, and INGAA welcomes the opportunity to provide comments.

Natural gas provides 25 percent of the basic energy needs in the United States. INGAA's members represent the vast majority of the interstate natural gas transmission pipeline companies in the United States, operating approximately 200,000 miles of pipelines, and serving as an indispensable link between natural gas producers and consumers. The North American natural gas pipeline system is an energy highway integral to U.S. energy infrastructure. INGAA and its members have a long history of working collaboratively with a variety of stakeholders on air quality and greenhouse gas (GHG) issues, including on methane. INGAA appreciates your consideration of these comments. Please contact me at 202-216-5955 or ssnyder@ingaa.org if you have any questions.

Thank you.

Sincerely,

Sandra Y. Snyder
Regulatory Attorney for Environment & Personnel Safety

cc: Joe Goffman, U.S. EPA (via email)
Brenda Shine, U.S. EPA (via email)
Bruce Moore, U.S. EPA (via email)

# INGAA RESPONSE TO EPA NOTICE, "PROPOSED INFORMATION COLLECTION REQUEST; COMMENT REQUEST; INFORMATION COLLECTION EFFORT FOR OIL AND GAS FACILITIES"

**81 Fed. Reg. 35,763 (June 3, 2016)**

Submitted: August 2, 2016

The Interstate Natural Gas Association of America (INGAA) respectfully submits these comments in response to the EPA Notice, "Proposed Information Collection Request; Comment Request; Information Collection Effort for Oil and Gas Facilities" (Proposed ICR).

## Executive Summary

EPA has issued the ICR to better understand existing sources in the oil and gas industry before the Agency embarks on an effort to develop standards of performance for existing oil and gas sources. INGAA is offering the following comments on the Proposed ICR, which will result in a better data collection effort and contribute to more informed rulemaking while reducing industry burden. Rulemaking should be based on the best available data, and much of the information is already available to EPA. INGAA is committed to working with EPA to ensure the best and most appropriate information is collected while minimizing the burden on industry.

In the pages that follow, INGAA has provided specific suggestions to address the issues that it has identified. Some of INGAA's key comments include:

1. There is a significant amount of information that is already available on sources in the Transmission and Storage (T&S) segments through the GHG reporting program (GHGRP) and air permits. INGAA encourages EPA to integrate information that is already available and that will be received through the 2016 GHGRP annual reports, thus avoiding duplication of data collection in this process.
2. For the T&S segments, EPA plans to mail the detailed Part 2 request to a high percentage of facilities – far more than is necessary to obtain representative information on T&S operations. Due to the limited variability in the types of sources and operation and/or availability of information through other regulatory programs, a smaller percentage of facilities will be sufficient to provide a representative sample for the T&S segment, reducing the amount of resources needed to respond to the ICR and to analyze the information submitted.
3. EPA significantly underestimates the costs necessary to complete the Part 2 ICR request.
4. Additional time is needed to complete the ICR Part 2 survey, regardless of when it is mailed. INGAA recommends that EPA delay the submission of the Part 2 ICR responses to mid-2017 as opposed to the March 2017 deadline currently planned. Since the planned 120-day period overlaps with significant air quality and GHG reporting requirements due in March 2017 and over year-end holidays and winter season demands, a mid-2017 deadline will ensure availability of needed resources to complete the ICR. With an earlier deadline, the resulting conflicts will require facility operators to use third party resources to respond to the ICR, and these costs are not accounted for in the Proposed ICR.
5. Many of the Part 2 ICR data elements are unclear, and would require recipients to use reasonable (but subjective) judgment in addressing the EPA questions. Subjective responses will affect data utility and accuracy. In addition, some data elements are unavailable or would pose significant resource needs with limited benefit to any future rulemaking. INGAA recommends changes to the data elements requested in Part 2.
6. Tank feed sampling should not be required for T&S because liquids in this segment are minimal and processing has already removed volatiles. If retained, due to limited anticipated variability in the T&S sample results, sampling a smaller subset of separators leading to

atmospheric tanks will be sufficient to provide a comprehensive data set for any future rulemaking.

7. ICR definitions should be consistent with existing regulations. Definitions from the GHGRP or oil and gas NSPS (40 CFR, Part 60, Subpart OOOOa) should be used when available.

Details on these items and additional issues are included in INGAA's comments below.

## Detailed Comments

**1. The ICR should avoid duplication of information already submitted for the GHG Reporting Program (GHGRP) and from reporting associated with air permits. EPA should carefully assess available data and information to avoid duplication of effort. EPA plans to use the e-GGRT platform for data collection and should thoroughly test the software tool updates before implementation.**

INGAA appreciates EPA's objective to avoid duplication of effort. The Proposed ICR includes a significant amount of data that is readily available from other reporting required by EPA and other federal and state agencies. The Proposed ICR includes a Supporting Statement[1] that provides background on the proposed process. EPA indicates that data available from the GHGRP, including 40 CFR Part 98 Subpart W data, will not be duplicated. However, EPA should clarify how the ICR reporting system will achieve that goal. EPA indicates that the existing GHGRP e-GGRT system will be used for reporting, but that software tool is not yet available. EPA should allow time for stakeholder testing of the software tool (e.g., "sandbox" testing similar to the process used as e-GGRT was developed). An ample period of time to test and troubleshoot the reporting platform is imperative; the numerous issues and delays that occurred during EPA's development of e-GGRT demonstrates the need to thoroughly vet the reporting tool before implementation.

Examples of data sources where information on existing sources can be found include:

1. EPA's GHG Reporting Program;
2. Title V or other operating permits for T&S sources;
3. Background documents for other regulations promulgated by EPA for the T&S segment.

Seamless and quality importation of GHGRP data is imperative to a successful ICR. Based on review of the Proposed ICR, INGAA recommends changes to the ICR to improve the likelihood of success, and to enable consistency between the GHGRP and ICR. For example, as discussed in Comment 5 and elsewhere in these comments, Proposed ICR definitions and equipment categories differ from Subpart W definitions and categories. Thus, the GHGRP data does not correlate to the Proposed ICR data fields and there is a risk that operators might interpret the same data fields differently, resulting in inconsistent responses. INGAA recommends that EPA review and reconcile differences between the Proposed ICR and data sources available. If not, facility operators will have to gather some information twice: once for the GHGRP and then again, in a slightly different form, for the ICR. Comment 5 and the associated attachment include many details on related issues.

[1] Supporting Statement for Public Comment – Information Collection Effort for Oil and Gas Facilities, U.S. EPA Sector Policies and Programs Division (May 12, 2016).

In addition to GHGRP data, many data elements requested in the Proposed ICR are available to EPA through federal Title V operating permits and EPA administered state programs. For example, for facilities not subject to the GHGRP, information on facility equipment (e.g., compressors) is included in permits, and annual emission inventory and compliance reports. EPA does not discuss this existing information or explain why it cannot use the information already available through Title V operating permits rather than requesting some of this information in the ICR.

Additional information on pipeline system blowdowns and gathering system emissions will be available to EPA by no later than March 31, 2017, as required by the October 22, 2015 amendments to Subpart W of the GHGRP. The GHGRP requires that pipeline operators report total blowdowns from their pipeline systems starting with the 2016 reporting year. Gathering system operators are also required to submit initial reports of total emissions from their gathering systems aggregated by reporting basin. These reports will be submitted to EPA by March 31, 2017, essentially the same time period as identified for the ICR Part 2 data responses. For these two segments, the GHGRP reports will provide EPA with many data elements that are the same as that required by the ICR, and the GHGRP may include a larger set of facilities (based on the number of facilities that exceed the reporting threshold). For example, since gathering and boosting facility data are aggregated at the basin level, the majority of these facilities will be required to report this data to the GHGRP. Thus, it would be appropriate to wait until after this data is reported under the GHGRP in March 2017 to determine whether the GHGRP data are sufficient or whether (and which) additional ICR data are still needed to inform potential rulemaking on existing sources.

Previous rulemakings for NSPS and NESHAP standards also include information on sources, emissions, and mitigation options. These include new source regulations (e.g., Part 60, Subparts OOOO and OOOOa) and regulations that affect new and existing sources (e.g., Part 63, Subparts ZZZZ, HH and HHH). Before finalizing the ICR, INGAA recommends that EPA perform a comprehensive search of existing applications, permits, and compliance reports, and also consider the information in the background documents associated with the above rulemakings to avoid duplication in the ICR process. As discussed in Comment 10, EPA should also consider an approach that utilizes information (e.g., model facilities) from previous rulemakings to supplant ICR queries or data fields and streamline the ICR process.

**2. For the T&S segments, due to the limited variability in the types of sources and operation, and/or availability of information through other regulatory programs, a smaller percentage of facilities will be sufficient to provide a representative sample, reducing the amount of resources needed to respond to the ICR and to analyze the information submitted.**

Table B-3 in EPA's Supporting Statement lists the number of detailed Part 2 survey requests to be sent by segment. This count is based on an EPA statistical analysis and inflated by 25% because EPA "estimates that facility response rates will be approximately 75 percent due to inaccurate contact information and facility closures." INGAA expects a higher response rate from T&S sources because the companies and facility inventory are well known.

With the 25% cushion included, EPA envisions 403 of 1,400 compressor stations (29%), 364 of 939 transmission pipelines facilities (39%), and 268 of 418 underground storage facilities (64%)

will receive a request. All LNG storage facilities, an estimated total of 100, would receive the request. Collectively for these segments, 1,135 of 2,857 (40%) would receive the request. INGAA's comments include recommendations (e.g., see Comment 8) to increase the response rate and eliminate the need to increase the number of ICR letters mailed by 25% for the T&S segments.

This high volume of requests is not warranted to receive adequate information to inform the data gathering process. INGAA did not conduct a statistical analysis, but a common sense review can inform this question.

The types of equipment and emission sources (e.g., compressors, pneumatic devices, equipment leaks, blowdowns) are similar across the T&S segments. Thus, when considering the sample size, it is reasonable to group facilities in T&S into a single sample. With the resulting higher facility count from grouping facilities in T&S, a smaller total sample size is justified. In addition, EPA has received significant amounts of equipment information and emissions data from the T&S segments since 2011 under the GHGRP. Considering the significant amount of data EPA received for the T&S sector under Subpart W, a smaller total sample size is warranted. Unlike most other industry sectors, the T&S data includes *measurement* data required by Subpart W, and operators have been measuring and reporting GHG emissions from their facilities for several years.

EPA's concerns about a low response rate can be addressed by engaging in pre-planning before issuing the ICR. The most likely reason for a source not providing EPA with a response to the ICR request will likely be that request was sent to an incorrect mailing address or was not sent to the appropriate personnel within the company. In Comment 8, INGAA recommends that EPA send ICR letters to designated representatives identified in the GHGRP. INGAA also recommends that before mailing any ICR requests, EPA publish the list of facilities that will receive ICR letters for each segment, and provide the opportunity for companies to review the appropriate contacts along with the mailing addresses. This will ensure that respondents receive the ICR letter in a timely manner and can respond comprehensively.

In addition, the inventory of T&S facilities is well known, and thus a much higher response rate can be anticipated. Considering the larger cumulative sample size, 25% or less of T&S facilities should be targeted for the ICR. INGAA recommends, at most, ICR mailings to T&S facilities should not exceed 25% of the total facility count from Table B-3, or 714 facilities, and INGAA believes that a much smaller sample of T&S sources can provide ample data to support the ICR objective. An example alternative approach is discussed in Comment 10.

Additionally, EPA has at its disposal extensive information that is responsive to various questions in the ICR. For example, EPA has access to substantial amounts of relevant data from facilities that submit reports to EPA or state/local agencies as a condition of existing permit requirements or to comply with GHGRP obligations. EPA also has access to reports developed through the voluntary Natural Gas STAR program[2] that provide background on emission sources and reductions opportunities.

[2] https://www3.epa.gov/gasstar/.

### 3. EPA significantly underestimates the burden associated with completing the Part 2 survey.

EPA's ICR Supporting Statement estimates the burden and cost to complete the ICR in Section 6, with cost estimate details provided in Attachments 3A, 3B and 4. INGAA reviewed these costs and the Proposed ICR and then estimated their anticipated resource requirements and costs to respond. Based on these reviews, EPA has significantly underestimated the burden of the Proposed ICR. INGAA's cost estimates provide more realistic values, as discussed below.

EPA's Supporting Statement does not include all assumptions and costs and it significantly underestimate the resources (and associated costs) that will be needed to respond to the ICR. The Part 2 survey cost estimates for industry are provided in Attachment 3B of the Supporting Statement. INGAA suggests alternatives below. Some examples of key resource requirements that are underestimated include:

- EPA's estimate does not adequately consider requirements for facility visits, which will be necessary to identify and count equipment components, pneumatic devices, etc. EPA estimates 2.3 hours to complete the equipment leak survey, but does not consider the planning, travel and other logistical requirements to complete field visits. The analysis also fails to consider that technical expertise (e.g., third parties) may be required to execute these activities in many cases. As discussed below, INGAA members have indicated that it may cost $5,000 for a third party to conduct the survey, or up to 12 hours to conduct the survey. INGAA's estimates also include travel costs.
- The Proposed ICR uses new definitions and equipment categories for sources such as pneumatic controllers and equipment leak components. The inconsistencies with Subpart W definitions will preclude the use of existing data and associated processes for data collection, require a new effort to understand the applicability of the revised definitions and categories, and require operators to implement a program to gather the data. EPA did not account for the costs of these duplicative efforts in the Proposed ICR, and these costs are difficult to estimate due to uncertainties with interpretations and requests for EPA to provide clarifications.
- EPA underestimates the level of effort required to understand the ICR and to develop plans to implement a response. EPA's estimate is 3.45 hours per response for reading instructions. These costs are coupled with the costs discussed in the previous bullet. This estimate is too low. In order to review the Proposed ICR, multiple staff within a given company have spent dozens of hours interpreting the Proposed ICR and discussing planning requirements.
- EPA's aggressive schedule will require companies to engage third party contractors; therefore, if the ICR schedule is unchanged, EPA's resource estimates should consider both company time and contractor time dedicated to responding to the ICR. Billing rates and required labor hours for third party technical consultants will exceed EPA's estimate, and the underestimates are compounded by loss of efficiency from requiring both operator resources to plan and administer the response and third party costs.

*Comparison of EPA and INGAA estimates of industry costs to complete Part 2 survey*

The estimated burden for completing the Part 2 survey presented in Attachment 3B of the Supporting Statement can be contrasted with INGAA member companies' determination of the level of effort and costs that will be necessary. The burden for completing the survey varies depending on the type and size of facility. INGAA member companies took steps to assemble

the data necessary to respond to the Proposed ICR to determine an accurate estimate of time and other costs (e.g., third parties) that will be needed to respond. The INGAA data demonstrates that the true costs will be over four times higher than the costs estimated by EPA.

INGAA members provided estimates for transmission compressor stations that included stations ranging from small to large (e.g., one or two compressors to many compressors). The size does not necessarily correlate to the cost to complete the Part 2 survey. For example, some costs for larger stations may be reduced by relying on GHGRP data, but smaller facilities that are not required to report would not have that GHGRP data available. The range of costs for the three facility types is as follows:

- Transmission Compressor Station costs ranged from approximately $10,000 to $16,400, with the higher cost being for a medium size station.
- Transmission Pipeline Facility costs ranged from $9,300 to $10,225.
- Underground Storage Facility costs ranged from $10,000 to $16,370.

Actual costs would likely trend toward the higher end of the range due to the need for third party support, and travel costs for field surveys. In addition, costs could be *higher* than the upper end of the ranges presented depending on the prevalence of third party support and complications from completing site visits in the winter months. Table 1 below compares EPA's cost estimates to INGAA's estimates for the three affected segments. The upper end estimate from INGAA's ranges above were used in this table. Note that even though INGAA member cost estimates for responding to the Proposed ICR are higher than estimated by EPA, these INGAA costs do not include additional costs that could be incurred due to some of the "unknowns" associated with completing the Part 2 survey, such as issues associated with data element clarifications (discussed in Comment 5) and costs associated with potential surveys of pipeline ancillary equipment (discussed in Comment 6). In addition to comparing costs per facility, total costs are shown based on the number of requests EPA plans to send. This is shown in EPA's Supporting Statement, Table B-3, which lists the sample size for Transmission Compressor Stations, Transmission Pipeline Facilities, and Underground Natural Gas Storage Facilities.

**Table 1. Comparison of Estimated Burden for Completing the Part 2 Survey.**

| Facility Type | No. of Requests Sent | Estimated Facility Burden (EPA)[A] | Estimated Facility Burden (INGAA)[B] | Total Estimated Segment Burden (EPA) | Total Estimated Segment Burden (INGAA) |
|---|---|---|---|---|---|
| Transmission Compressor Station | 403 | $4,450 | $16,406 | $1,793,350 | $6,611,618 |
| Transmission Pipeline Facility | 364 | $2,331 | $10,225 | $ 848,484 | $3,721,900 |
| Underground Storage Facility | 268 | $2,608 | $16,368 | $ 698,944 | $4,386,624 |
| | | | Total | $3,340,778 | $14,720,142 |

A. EPA estimated burden using assumptions provided in EPA Supporting Statement: Table 2 and Attachment 3B.

B. INGAA estimated burden using format of Attachment 3B and Facility Information.

Key reasons for EPA's underestimates in Table 1 include:

- As noted in reference A for the table above, EPA made assumptions to estimate the respondent burden to complete the Part 2 survey, and some of those assumptions are listed in Table 2 of the Supporting Statement (e.g., the percentage of facilities within a segment that include certain types of equipment). These assumptions are inconsistent with the equipment typically found at T&S facilities. The Part 2 survey "Intro" worksheet directs facilities to report the information for all equipment / emission sources present, and EPA underestimates the prevalence of equipment at T&S segment facilities.

  For example, EPA's Supporting Statement assumes that tanks/separators are not present at underground storage facilities, which is incorrect. EPA estimates that pneumatic devices are located at 50% of compressor stations and transmission pipelines, but not at storage facilities. These assumptions are also flawed because the Part 2 survey requests information of pneumatic devices that are *not* driven by natural gas (e.g., air systems), and the EPA cost estimate does not adequately consider costs associated with acquiring that data.

- An additional consequence of assumptions regarding the prevalence of separators and tanks is that the Feed Sample Analysis costs ("Collection activity 4" in Supporting Statement Attachment 3B) have been underestimated.
  - INGAA used an actual cost estimate of $1,700 for the analysis (compared to $1,000 assumed by EPA).
  - At some facilities, there are multiple tanks or separators, and, therefore, the O&M cost for sample analysis is $3,400 or $5,100 (for analysis of two or three samples). EPA assumed four samples per facility at $1,000 per sample, and assumed that this sampling would occur at compressor stations but not at underground storage facilities (i.e., EPA assumed there are no tanks or separators at storage facilities). While the EPA sample analysis cost may be fairly representative for compressor stations, it is not the case for storage facilities.
- In Attachment 3B, EPA underestimated the time required for equipment leaks (Collection activity 2H), blowdown events (2I), pneumatic counts (3A) and equipment counts (3B).
  - INGAA member company time estimates to address equipment leaks ranged from 3 to 6 hours of engineering time depending upon the facility; EPA estimates 2 hours.
  - Member company time estimates for blowdowns ranged from 4 to 8 hours of engineering time depending upon the facility; EPA estimates 1 hour.
  - Member company time estimates for pneumatic counts includes 2 to 12 hours of engineering time; EPA estimates 0 engineering hours and 4 operator hours.
  - Member company estimates for equipment counts include 2 to 28 hours of engineering time; EPA estimates 0 engineering hours and 6 operator hours.
- Member companies have estimated between $2,000 and $5,000 per facility for travel associated with the survey inspections and counts. EPA's estimate does not include logistical costs associated with conducting site visits.
- Member estimates included costs for third party support. Examples included contractor costs of $5,000 for conducting a site component count, and $70,000 for a consultant to complete other compliance reporting while internal resources complete the Part 2 survey. The costs

for external support of reporting are based on significant preexisting reporting obligations in the first quarter of 2017, and reporting examples are included in Comment 4 below.

This is a partial list of primary drivers for the substantial difference between the respondent burdens estimated by EPA contrasted with INGAA member company estimates. There are numerous additional discrepancies that are facility- and task-specific that are not detailed in these comments.

*Cost estimate for Agency burden*

INGAA also reviewed Agency burden estimates in Attachment 4 because the perceived burden has implications for the schedule (discussed in Comment 4) and practical utility of the data. Even though EPA's estimate indicates significant resource needs (i.e., cumulatively approaching 10 person-years), this still underestimates the burden. Examples of EPA's underestimates of the Agency burden include:

- EPA's estimate dedicates inadequate time to identifying and vetting the mailing list and sending the ICR letters (e.g., estimate of 3 minutes per mailing for clerical staff).
- EPA's estimate dedicates inadequate time to project management to administer and organize this significant activity.
- EPA's estimate dedicates inadequate time to compiling and analyzing the responses (for each response, 17 minutes for the Part 1 survey and 75 minutes for the Part 2 survey).
- EPA's estimate utilizes labor rates that are not reflective of third party rates. EPA will likely need to use outside support given that the estimate of resources required is low, but this estimate still equals about 10 person-years (which would need to be fulfilled over much less than a calendar year).

**4. Respondents need additional time to reply to the Part 2 survey. If EPA issues ICR Part 2 survey letters in the fourth quarter of 2016, INGAA recommends delaying the deadline to respond to June 30, 2017. If EPA mails the ICR Part 2 survey letters in 2017, the deadline to respond should be at least 180 days from the date of receipt.**

EPA intends to mail the ICR letters in late October, and proposes to allow 120 days to respond to the Part 2 survey. This schedule imposes nearly insurmountable challenges, and/ or will result in the need for extraordinary actions, with associated high costs. INGAA recommends providing additional time, and a deadline at the end of the second quarter of 2017 to provide respondents the ability to utilize 2016 GHGRP data which will be submitted to EPA in late March 2017. If EPA issues the ICR Part 2 survey letters later (e.g., in the first quarter of 2017 rather than the fourth quarter 2016), INGAA recommends that EPA allow a minimum of 180 days from the date of receipt to respond to the Part 2 survey.

*Issuing ICR letters in the fourth quarter of 2016 will create significant resource challenges*

Companies need more than 120 days to respond to Part 2 of the ICR regardless of when EPA mails the ICR letters, but issuing the Part 2 surveys in late October or early November will be especially challenging because:

(1) The schedule overlaps with extraordinarily busy first quarter schedules for submitting GHG and air permitting reports. This overlap will strain environmental staff due to

annual regulatory reports due March 31 for the GHGRP, annual state reporting obligations (e.g., annual emission inventories), and permit compliance reports to address annual reporting from the plethora of NSPS and NESHAPs applicable to oil and gas facilities (e.g., Part 60, Subparts JJJJ, KKKK, OOOO; Part 63 Subparts ZZZZ, HHH, HH).

(2) The schedule overlays the winter heating season when natural gas demand is higher and natural gas transmission and storage personnel are already stretched thin during the busiest time of the year.

(3) The schedule needs to accommodate planning for and executing site visits.

(4) The schedule should leverage GHG reports that are due by March 31, 2017.

(5) The schedule falls over year-end holidays when staff are less available.

(6) The Proposed ICR requires site visits for component and equipment counts, and may require third party support. Winter weather site visits that require surveys over the entire property raise safety concerns for facilities in the northern U.S. where grounds may be snow or ice covered.

Several of these items are discussed further below. However, in summary, with a 120-day schedule, EPA could not have picked a worse time to initiate Part 2 of the ICR than the fourth quarter of 2016. As an example for item 1 above, in addition to GHGRP reports for numerous compressor stations, storage fields, and first time reporting for pipelines – which are due in March 2017, one INGAA member is also obligated to submit 120 emission inventory reports across 10 states and dozens of compliance reports across 21 states. Another company is obligated to do the same and also perform Part 60 Subpart OOOO and Part 63 Subpart ZZZZ reporting, testing notification and reporting, fuel and operating data recording for ongoing GHG inventories, and CERCLA/EPCRA reporting.

*Site visits must be scheduled*

The Part 2 template includes data requests for information that is not available, such as component population counts for equipment leaks and pneumatic device counts by categories. If retained in the final ICR, in order to obtain these data, companies would need to conduct site-specific surveys for every affected facility. The schedule must account for time for the facility operator to plan staffing or third party support, coordinate with sites, and have personnel travel to each site to conduct the work. Dealing with winter weather will add uncertainties and complexities over the holiday season and early 2017. Because of the existing burden on staff during the proposed timeframe, companies will likely need to engage third party contractors, and their availability may be limited if hundreds or potentially thousands of facilities require equipment leak component counts and pneumatic device counts. A more deliberate schedule will provide respondents with a better ability to plan and manage site visits.

*Potential software tool challenges*

The Supporting Statement indicates that EPA will require electronic reporting via EPA's e-GGRT tool (i.e., the GHGRP tool). Based on GHGRP experience, there will be challenges and issues associated with developing and testing the reporting format. INGAA recommends adopting a similar approach for the ICR to the process EPA followed for development and previous revisions to e-GGRT, with "sandbox" testing of the initial release. This developmental process will surely

require some troubleshooting and have scheduling implications. A compressed 120-day schedule increases the probability that the reporting tool will not be ready by the proposed deadline, and could cause issues related to timely report submittal. Missing a reporting deadline is an unacceptable compliance risk.

*The proposed schedule precludes the ability to leverage GHGRP reporting*

The GHGRP reports for 2016 are due March 31, 2017, and include first time reporting for a number of new sources and segments, including the initial reporting of blowdowns for transmission pipelines. The process of completing that reporting effort, including data quality assurance, provides an opportunity to leverage that effort with the ICR. However, EPA's proposed schedule does not take advantage of that opportunity. A sequential schedule that allows operators to follow their planned schedule for GHGRP reporting, followed by responding to ICR letters, would provide the best opportunity to leverage the GHGRP results, improve data quality, and manage costs. ICR respondents need sufficient time after the March 31, 2017 GHGRP deadline to avoid staffing strains and burden. Presuming the ICR Part 2 survey letters are mailed in the fourth quarter of 2016, INGAA recommends a June 30, 2017, deadline for those responses – i.e., allow an additional quarter.

*The proposed schedule will increase ICR costs*

Responding to the Part 2 survey will take a significant amount of time that is not available within the schedules of existing staff. Thus, staffing constraints will require operators to heavily rely on third parties to assist with information gathering, organization, field support, and response preparation. More reliance on outside parties instead of in-house resources will result in higher costs. In addition, there will very likely be high demand for support services in the 2 – 3 month window available, so contracting costs will be higher. Outside resource constraints may impact both costs and schedule. For example, Comment 7 discusses feed stream sampling for separators and tanks, and potential constraints in the availability of analytical lab support.

*EPA time estimates likely underestimate the level of Agency effort required*

The Supporting Statement estimates Agency burden and cost in Attachment 4. While INGAA cannot comment on the details of Agency tasks, it appears that EPA's time estimates are inadequate, as discussed in Comment 3. For example, for the Part 2 survey, EPA estimates 3 minutes associated with each mailing (i.e., the document does not explain how facilities will be developed or mailing lists identified), and 69 minutes across 3 labor categories to review and analyze each Part 2 survey response. With the large amount of detail in the survey, this appears woefully inadequate. Or, if accurate, then it appears EPA will make limited constructive use of the responses which require a monumental effort from stakeholders. While EPA's obligations may not be INGAA's concern, it appears that the Agency will also be challenged to execute the ICR within such a compressed timeframe. INGAA is concerned that the information submitted is properly organized and analyzed so that it provides practical utility in the long-term, and the limited time commitment reflected in the EPA cost analysis raises questions in that regard.

*Conclusion: A longer schedule is imperative*

Based on the items discussed above, INGAA very strongly believes that a 120-day response period is untenable, especially if the schedule overlays late 2016 and the first quarter of 2017. The aggressive schedule will increase ICR costs, and may impact data quality. Assuming the

ICR letters are mailed to companies in the fourth quarter of 2016, EPA should revise the schedule for submitting the Part 2 response to the end of the second quarter (June 30, 2017). This will provide respondents the ability to more economically and efficiently plan and execute their response, leverage the March 2017 GHGRP reports, and will very likely improve data quality. If ICR letter mailing occurs later (e.g., in the first quarter of 2017), the schedule should allow at least 180 days from the date of receipt to respond.

**5. Many of the Part 2 ICR data elements are either unclear, unavailable or would pose significant resource needs with limited benefit to any future rulemaking. INGAA recommends clarification and revisions to the data elements requested in the Part 2 survey.**

The Part 2 survey will require significant resources to complete for a single facility. It is anticipated that most companies will receive multiple Part 2 surveys, thereby increasing the amount of resources necessary to accurately complete the survey. EPA should ensure that there is a compelling need for each data element, and that the requested data is relevant and needed to understand the environmental impact and/or mitigation options for each specific industry sector. As noted in the detailed review in Attachment 2 to these comments, it is apparent that is not the case for all data elements in the draft Part 2 survey.

For example, the "Pneumatics" worksheet requests *detailed* information on *air-driven* pneumatics, which are not an emissions source. EPA should explain the basis for this request. If EPA is interested in the prevalence of air-driven systems as an alternative to using natural gas driven pneumatics, EPA could inquire whether there is an available air system capable of supporting all of the pneumatics at the facility rather than requesting the categorical details proposed. The Proposed ICR requests details on device counts for various types of air-driven pneumatics, and uses new category descriptions (i.e., not consistent with Subpart W definitions) that are not defined. *This information will not be readily available for ANY facility*, and it would require a significant effort to: (1) develop a methodology for segregating air driven devices into the categories requested; (2) train facility / station personnel on the methodology; and (3) gather the information for each affected site. Some information, such as the number of actuations for natural gas driven pneumatics, will also not be available. This particular request is an example of the over-reach of the Proposed ICR. Collecting detailed information on equipment like air-driven pneumatic devices is not warranted.

This is one example provided to illustrate data requests that appear to be excessive or nonessential. A data-specific economic analysis for the data elements associated with air-driven pneumatics would be very costly and would provide *no direct benefits*. EPA should eliminate the detailed inquiry regarding air-driven pneumatics. In addition, EPA should consider *each* requested data element with a similar mind set – i.e., whether a review of the associated cost-benefit for that particular data element would withstand scrutiny.

The example is illustrative, and a detailed accounting has not been included in these comments for *every* Part 2 data element. However, detailed review of the Part 2 survey is attached, and this review includes questions, commentary and recommendations for each line item of concern for T&S sources.

*Part 2 survey – General / over-arching comments*

A detailed review of the Part 2 survey is included as Attachment 2. In addition to those detailed comments, INGAA provides the following general and summary comments regarding definitions and terminology as follows:

- Ambiguity / clarity. It is often difficult to interpret the survey question due to EPA's use of undefined or ambiguous terms. EPA should develop *descriptions* for many of the data fields / survey questions to improve clarity, provide context, etc.
- "Applicable regulations" checklists. The current format includes "applicable regulations" checklists in most of the individual source-specific forms. This inquiry is redundant, and INGAA recommends including a single checklist in the "Facilities" worksheet. This simplifies the request, eliminates redundancies, and provides a single point of reference regarding facility regulatory applicability.
- Inter-related fields. There are some instances where the draft Part 2 survey locks out data fields (i.e., blacks out the cell) if it is not applicable once another answer is completed (e.g., if answer "no" to a survey question, fields that follow are blacked out). However, there are *many* examples in the draft survey that afford that opportunity, but it is not utilized. EPA should closely scrutinize each worksheet to ensure that functionality is enabled where possible. Otherwise, facility operators will be confused as to which fields they are required to complete.
- Consistencies with GHGRP Subpart W and NSPS Part 60 Subparts OOOO and OOOOa. The survey adds unnecessary complexity by failing to use definitions, equipment categories, etc., that are already available or established in other regulations, including Subpart W of the GHGRP and the oil and gas NSPS, Subparts OOOO and OOOOa. More detailed discussion regarding definitions is provided below and in Attachment 1. There are also many examples in the detailed review of survey questions / data elements provided in Attachment 2. One illustrative example is discussed here:

  > For equipment leaks, Subpart W provides component categories – e.g., connectors, valves, open-ended lines, etc. In some cases, the categories differ depending on the sector. For example, storage wellheads have a similar but different list of component types than compressor stations. In contrast, the component list in the Proposed ICR Equipment Leaks worksheet is *not consistent* with Subpart W, and provides a longer list that segregates some categories (e.g., "connectors" in Subpart W versus "connectors (not flanges)" and "flanges" in the Part 2 survey). Additionally, the Proposed ICR does not provide the exemption to component leak counts established in the GHGRP. The GHGRP establishes that tubing systems less than or equal to one half inch diameter do not need to be reported. To leverage available data for reporting equipment leak information, the Part 2 survey should use the *same categories* and exemptions as Subpart W, while noting that the categories may differ depending on the sector. If not, the ICR will create significant additional burdens because respondents will not be able to use existing data so respondents will likely expend effort trying to reconcile the differences in reporting between Subpart W and the ICR.
- Applicable year. The survey should clearly indicate the applicable year upon which the response should be based. The ICR should clearly state that only a single year applies, unless otherwise stated, because some questions / fields could be interpreted as requiring information for multiple years. There are instances where the survey requests *measurement*

data with a five year look back, and that is appropriately noted for those queries in several worksheets. However, unless otherwise indicated, EPA should more clearly indicate the single applicable year for the response.

- Acronyms. The Part 2 survey includes an Acronyms worksheet, but there are a number of acronyms throughout the worksheets that are not included on that sheet or defined. EPA should thoroughly review all worksheets and list all acronyms in the Acronym worksheet.
- Access to historical information. Divestitures and acquisitions can raise significant challenges regarding access to data. EPA should acknowledge that there may be instances where respondents cannot answer survey questions because historical information is unavailable.
- The reporting tool should be flexible and allow rows, etc., to be added to accommodate facility equipment counts. The draft Part 2 survey is "locked," does not allow the addition of rows (e.g., to include all of the compressors located at a facility), and inter-related tables sometime do not allow the same number of data entries.

*Part 2 survey – Definitions*

Attachment 1 addresses Part 2 survey definitions. This attachment provides a tabular summary that lists terms applicable to the T&S sectors, includes the ICR definition, and includes definitions from existing regulatory definitions. Many of the terms used in the ICR are already defined in the GHGRP (Subpart W or Subpart A definitions section) or NSPS Subpart OOOO or OOOOa. EPA should use existing definitions rather than creating new and competing definitions.

Because GHGRP information will be a key resource in completing the ICR, INGAA recommends that GHGRP definitions should be used unless there is a compelling reason otherwise. If there is not a GHGRP definition, but Subpart OOOO(a) provides a definition, that definition should be used.

*Definitions and terminology for pneumatic devices*

As discussed above, definitions are listed in Attachment 1, and comments on survey questions / data fields are included in Attachment 2. However, because the issue is especially problematic and also illustrates problems caused by inconsistencies between the Proposed ICR and existing regulations, additional discussion is provided here regarding pneumatic devices. The ICR introduces new terms and device categories that are not consistent with Subpart W. As a result, respondents cannot use existing Subpart W device counts and they will need to expend additional effort to understand the Proposed ICR categories, and develop plans to collect data according to those categories.

The ICR introduces "snap acting" intermittent controllers and "throttling" low continuous bleed, throttling intermittent bleed, and throttling high continuous bleed controller categories. The three throttling controller category bleed rate thresholds are not defined. The ICR also includes two categories for isolation valve actuators. The ICR terminology is not related to the existing Subpart W (or Subpart OOOOa) equipment types and the relationship between the ICR and existing regulations is not defined.

The ICR continuous bleed devices are further subdivided into two types based on their bleed rate, and in this case the Proposed ICR uses the bleed rate threshold in Subpart W and the NSPS rules. A low continuous bleed controller has a bleed rate of less than or equal to 6 standard cubic feet per hour (scf/hr). A high continuous bleed controller has a bleed rate of greater than 6 scf/hr.

Subpart W categories include continuous high bleed natural gas pneumatic devices, continuous low bleed natural gas pneumatic devices, and intermittent bleed natural gas pneumatic devices. Other than the high and low bleed device categories, the ICR categories are inconsistent or do not directly map to Subpart W pneumatic controller categories. This discrepancy will result in unnecessary field surveys, difficulty in categorizing pneumatic devices, and differences between ICR and Subpart W data.

For T&S sources, this is concerning because GHGRP data indicates pneumatic devices are a relatively small contributor to the inventory. This issue relates to Comment 1, where INGAA requests that EPA use available information and avoid duplication of effort. While Comment 1 focuses on avoiding duplicative data collection, it also highlights that significant data is available to EPA. EPA should review that data when assessing ICR needs. GHGRP data on pneumatic devices indicate T&S emissions are lower than historical estimates and a relatively small contributor to the methane inventory. Thus, the Proposed ICR would introduce significant burden to collect details regarding trivial emissions sources.

INGAA encourages EPA to request information through the ICR data collection effort that is needed to inform rulemaking for existing sources in the T&S segment. EPA should explain why these details are necessary, the value of these data, and how EPA envisions using the ICR results. Or, EPA should remove some of the data elements and include the same categories as established in the GHGRP. EPA should closely evaluate whether the data provides meaningful benefits that outweigh the costs to acquire and analyze that information. In making these decisions, sector-specific characteristics should also be considered because a question or data element may be meaningful for one segment and insignificant for another. The pneumatic device issues highlighted here are one area that warrants additional scrutiny.

*Part 2 survey – Detailed comments and questions on data elements / survey questions*

Attachment 2 is a lengthy tabular summary that provides comments on survey questions / data elements for eight of the Part 2 survey worksheets:

- Facility,
- Tanks Separators,
- Pneumatics,
- Dehyd(rators),
- Eq(uipment) Leaks,
- Comp(ressors),
- Blowdown,
- Control Device.

The "Intro" worksheet states that the "Well Sites" worksheet is, "…applicable only for production facilities." Thus, INGAA did not provide comments on that worksheet because it does not apply to underground natural gas storage wells. INGAA understands that underground

storage facilities would report information related to storage well equipment leaks in the "EqLeaks" worksheet, but the Well Sites worksheet does not apply. Should EPA choose to add *storage well* requirements to the "Well Sites" worksheet, then stakeholders should be allowed an additional opportunity to comment.

For each of the worksheets listed, Attachment 2 includes a table that lists the worksheet, identifies the data field (i.e., row, columns) and includes several fields that highlight INGAA's concerns (e.g., purpose, clarity of the request) and INGAA's recommendations (e.g., eliminate the data element from the survey). The data field comment summary includes the following comments and queries, and each item is not always relevant (i.e., cell is blank in Attachment 2 if not relevant):

- To identify the data element, the top four rows include the survey Tab (i.e., Worksheet), Row, Column, and Item (i.e., survey question / data field).
- INGAA Question: INGAA's question or query regarding the data field – e.g., in many cases the purpose or need for the data field is unclear or questionable, and clarification or additional feedback is warranted.
- Comment: INGAA's comment or description of the concern regarding the data element.
- Concerns with availability: In a number of cases the data field is not available or is burdensome to collect.
- Recommendation (action): INGAA's recommendation, such as removing the survey question or eliminating the survey question for the T&S sectors.
- Alternative (action): Additional INGAA recommendations that may supplement or provide an alternative if the INGAA recommendation is not accepted.

The two attachments include a significant amount of information, and in many cases what may have seemed to EPA to be a simple survey question may be nuanced, depending on the applicable definitions, context, etc. INGAA offers its assistance in working with EPA to better identify and define the necessary data elements, and streamlining the ICR to focus on imperative data.

**6. EPA should not include equipment leak and pneumatic devices in the Part 2 survey for Natural Gas Transmission Pipeline facilities.**

The Proposed ICR includes "natural gas transmission pipeline" facilities (Pipeline Facilities) as a separate facility type. EPA amended the GHGRP to add reporting requirements for the "onshore natural gas transmission pipeline" segment starting with the 2016 reporting year. The initial reports for this segment are due by March 31, 2017. These amendments to the GHGRP focus on pipeline blowdown emissions and will provide EPA with significant new information. However, the Proposed ICR appears to require reporting for emission sources other than blowdowns, and the effort to gather this additional data will add significant burden to reporters and would be very difficult to complete in 120 days.

EPA needs to clarify the sources included in the Proposed ICR for Pipeline Facilities and to re-assess the ICR cost / burden estimates and schedule implications if equipment leaks / component counts and pneumatic device counts are required along pipelines (e.g., at metering or regulator stations). The Proposed ICR defines a natural gas transmission pipeline facility as:

> A site consisting of a Federal Energy Regulatory Commission rate-regulated Interstate pipeline, a state rate-regulated Intrastate pipeline, or a pipeline that falls under the "Hinshaw Exemption" as referenced in section 1(c) of the Natural Gas Act, 15 U.S.C. 717-717 (w)(1994) used for the long distance transport of natural gas (excluding processing).[3]

The boundaries associated with this definition are not completely clear, and would appear to include ancillary equipment located along pipelines. The ICR Supporting Statement, Footnote #4 to Attachment 3B (p. 76) indicates blowdowns, equipment leaks, and pneumatic devices would be reported for Pipeline Facilities. The "Intro" worksheet in the Part 2 survey also indicates that sources would be reported if they are present at the facility.

Natural gas transmission pipelines consist of tens of thousands of miles of pipeline, and also include numerous remote meter and regulator stations, pig launching and receiver locations, farm taps, and other ancillary facilities spread across all states in the U.S. It is not clear if EPA intends for remote ancillary equipment to be included in Part 2 survey responses for Pipeline Facilities. If so, then it does not appear that EPA has considered the implementation challenges and costs to complete the survey for meters, regulators, interconnections, and other remote ancillary facilities for transmission pipelines. There are typically hundreds or thousands of these remote ancillary facilities for each transmission pipeline operator, depending upon pipeline size and number of customers or interconnections with other pipelines.

If the ICR requests are issued to the transmission pipeline operators, each operator could be required to submit ICR responses that include its ancillary facilities in addition to its pipeline blowdown events (and surveys required for compressor stations, which are a separate facility type covered by the ICR). If the Part 2 survey "Equipment Leaks" form must be completed for each of these ancillary facilities, site-specific component counts would be necessary. Similarly, some remote locations (e.g., metering or regulator) may include pneumatic devices that would need to be counted and categorized if the "Pneumatics" form applies to Pipeline Facilities. In order to complete such an effort, companies would need to have someone travel nearly every mile of transmission pipeline to gather this site-specific component / device level data. EPA has not assessed the level of effort required by industry or by EPA to compile and report this information for the thousands of these remote ancillary facilities across the industry. INGAA requests that EPA either: (1) clarify that only the "Blowdown" and "Facility" forms need to be completed for Pipeline Facilities and that Equipment Leaks and Pneumatics forms are not required for the small ancillary facilities along pipeline; or (2) allow operators to use an alternative based on representative or typical component counts per major piece of equipment or ancillary facility type (i.e., meter, regulator, pig launcher or receiver site, etc.). The latter approach is similar to that used by the onshore production and gathering and boosting segments for estimating emissions from numerous remote sources under the GHGRP. If EPA chooses this second option, INGAA offers its assistance in devising a reasonable approach.

If EPA does not accept INGAA's recommendations and chooses to require Equipment Leak and Pneumatic forms for all surveyed Pipeline Facilities, then EPA needs to properly assess costs to complete those forms. The Supporting Statement indicates EPA intends to send ICR letters to 364 (of 939) Pipeline Facilities, which implies that every U.S. natural gas transmission company

[3] EPA, ICR part 2 form: facility survey (Excel), Definitions tab.

would likely receive requests for multiple lines. This would result in nearly 40% of pipeline facilities receiving requests, and assuming approximately 300,000 miles of transmission pipeline in the U.S., about 120,000 miles would be included. Because companies have not previously conducted pneumatic device and equipment leak component counts, extraordinary effort (including additional time and expense) would be required to survey the ancillary equipment associated with this length of pipeline. INGAA has not developed a detailed estimate of the level of effort required because EPA's proposed requirements are unclear. However, if 50 miles could be surveyed each day, it would take 2,400 days to survey 120,000 pipeline miles.

INGAA requests that EPA clarify the requirements for Pipeline Facilities, and include only Blowdown reporting in the Part 2 survey. If not, EPA should develop an alternative option that selectively gathers information on ancillary equipment located along pipelines.

**7. Separator and atmospheric tank flashing emissions are trivial in the T&S segment because the natural gas has already been processed. Therefore, the tank reporting form should not be required for T&S. If required, the Part 2 "Tanks Separators" form should be modified for T&S.**

The Part 2 survey indicates that all respondents must complete the source worksheets if such equipment is present at the site. For example, storage facilities sometimes include dehydrators, and that form would be completed even though storage fields do not report dehydrator emissions for Subpart W. This implies that the "Tanks Separators" worksheet would be completed for T&S facilities. The ICR requires detailed information about tanks, and also includes sampling and flash analysis. While the T&S segments include such vessels, there are minimal liquids volumes and flash emissions are negligible or non-existent. Therefore, EPA should *exclude* the Tanks Separators worksheet for T&S facilities.

If EPA is concerned that data is not currently available to support low T&S emission levels and intends to retain this requirement, then very limited testing should be required for the T&S segment. INGAA believes that a basic understanding of natural gas industry processes (i.e., potential flashing emissions in upstream versus downstream operations), as well as five years of Subpart W measurement data from transmission tanks support the assertion that these emissions are not significant for T&S facilities.

Transmission condensate tanks are included in Subpart W reporting, but the emissions source is a leaking dump valve (i.e., gas blow by a poorly seated valve) and not flash emissions. Subpart W reporting includes annual screening of tank vents for emissions, and GHGRP reports submitted for the 2011 – 2014 reporting years are publicly available. That data indicates that T&S storage tank emissions are a very small contributor to the inventory. For the rare source that reports measurable emissions, those emissions are from a leaking dump valve and not flash emissions. Flashing emissions occur in upstream operations when liquids from wells are exposed to lower (e.g., atmospheric) pressure. This generally occurs at an initial separator and associated storage tanks. In proximity to the production well or at gas processing plants streams are processed to separate liquids from gas and separate the resulting hydrocarbon streams into different product streams (e.g., oil, natural gas liquids, propane, butane, natural gas). These upstream processes are where flashing emissions occur. For this reason, it is reasonable to exclude T&S tanks from the ICR.

Alternatively, if EPA retains the "Tanks Separators" worksheet for T&S in the final ICR, INGAA recommends that the request focus on an inventory of T&S *tanks*. Compressor stations may include small separators that are used to protect equipment (e.g., compressor drivers) from small amounts of liquids that may accumulate along a pipeline, and those small separators should be excluded. In this case, detailed information, including flash analysis sampling, would not be required for T&S tanks. If a request for more detailed information (including sampling) is retained, EPA should establish a throughput threshold. The worksheet currently asks for (i) a count of atmospheric storage tanks with a throughput less than ten barrels per day and (ii) a count of atmospheric storage tanks with a throughput of ten barrels per day or more. Vessels that are considered "separators" are also located at T&S facilities. The throughput threshold should also be applied to separators. Moreover, EPA should only require equipment details, feed material sampling and flash analysis if the separator or tank throughput is greater than or equal to 10 barrels per day. In this way, EPA would get data that it seeks in a manner that is much less burdensome.

INGAA strongly opposes an ICR requirement that requires detailed information and feed sampling and analysis for trivial separator and tank equipment at T&S facilities. EPA should provide details in the administrative record regarding the perceived benefit of this data if it proceeds with that inquiry. If this requirement is retained in the final ICR, INGAA recommends the following changes to the feed material sampling requirements at T&S facilities:

- Multiple, similar streams may be present at a T&S facility because there is little variability in the streams at these facilities as all streams are associated with pipeline quality natural gas. Therefore, EPA should allow the use of a single analysis of feed material for the facility.
- EPA should allow the use of available information from previous sampling. For example, a facility may have been required to conduct an analysis for a state or permitting requirement. If a T&S facility has such an analysis, it should be able to use it because gas composition at T&S facilities does not significantly change over time.
- The Proposed ICR would require the use of a California Air Resources Board (CARB) method. This method is undergoing review and comment during an ongoing rulemaking. The CARB method is not well-established nationally nor has it been validated. Additionally, many analytical labs are not familiar with this method. Other peer reviewed and approved methods (e.g., from GPA) are available. Feed material analysis using other standard methods should be allowed. If not, there may be issues associated with analytical lab support because the CARB method is not broadly practiced.
- Analytical lab resources may be strained to complete analysis of thousands of samples during the limited time available with a 120-day schedule. This issue is compounded if analysis is limited to the CARB method. Additional time should be allowed to complete feed material sampling and flash analysis.

**8. Corporate representatives such as the "designated representative" in e-GGRT should be the target recipients of the Final ICR.**

Transmission pipelines extend across the U.S. and environmental staff are usually at corporate or regional offices rather than at individual compressor stations. The Proposed ICR does not explain how EPA plans to issue ICR letters and who or which facilities will receive the requests. INGAA is concerned that if letters are mailed to the physical locations of compressor stations or storage facilities, routing to the proper person within the company will result in some lost time to respond.

To avoid this, INGAA recommends mailing the ICR letters to corporate locations and that EPA address the letters to the "designated representative" identified in e-GGRT. If an e-GGRT contact is not available, EPA should address the letter to the "responsible official" or other contact under the existing facility air permit. As discussed in Comment 2, INGAA also recommends that EPA publish the list of facilities which will receive ICR letters for each segment, and provide the opportunity for companies to review and provide comment on the appropriate contacts and mailing addresses.

INGAA expects that all or nearly all T&S companies include at least one facility that reports under the GHGRP. Thus, EPA knows the designated representatives and mailing locations and these locations and people should be the point of contact for T&S facilities that receive the ICR.

INGAA strongly recommends against sending the ICR to physical locations along the pipeline. By targeting a known company representative, EPA will increase the probability that T&S facilities will have a very high response rate to the ICR. If EPA envisions a different approach than recommended by INGAA, that process should be shared in advance, and stakeholders should have a separate opportunity to provide feedback.

**9. EPA should ensure an equitable distribution of the burden of complying with the ICR.**

It is not clear how "random" sampling will be implemented to identify ICR recipients. INGAA recommends that EPA include an interim review step to assess equitable distribution of burden for all affected companies – i.e., a proportionate share of ICR letters. The random process should not culminate with certain companies bearing a disproportionate amount of burden due to "bad luck" in the selection process. EPA should ensure an equitable distribution across all companies within each segment, and should also consider that some companies operate across most or all affected oil and gas segments, and could be unduly burdened if they receive a disproportionate number of requests for several segments.

**10. In lieu of conducting this burdensome exercise, EPA should consider developing a stakeholder group to develop "model facilities" and related information that can be used to assess equipment, emissions, and reduction opportunities.**

Typically, EPA develops "model facilities" in its support analysis for rulemakings to provide a basis for estimating emissions, assessing mitigation options, and completing an economic cost-benefit analysis. The recent NSPS rulemakings, Part 60, Subpart OOOO and Subpart OOOOa, included model facilities for VOC and methane emissions from oil and gas operations. The Proposed ICR will be a burdensome process, and there may be questions about the practical use of the data due to ambiguity in the survey questions (e.g., see Comment 5 and Attachment 2). Alternatively, EPA should consider engaging stakeholders in a process to develop and refine model facilities for existing sources. This could include a streamlined ICR to better understand details about model facilities, with a focus on substantive emission sources.

For example, emissions information from the GHGRP could be better integrated into this process to understand substantive emission sources from each segment. For T&S, GHGRP data indicates pneumatic devices are relatively inconsequential emissions sources, yet the Proposed ICR requires a significant amount of detailed information on pneumatic devices and introduces nomenclature and definitions that differ from Subpart W (see Comment 5). If there are questions about the

inventory of facilities and associated emission sources, EPA could consider a Part 1 "inventory-based" survey for segments other than production, and limit the need for Part 2 surveys and the data elements therein. As an example, EPA may be interested in the inventory and characteristics (e.g., number of reciprocating and centrifugal compressors) at T&S facilities not subject to the GHGRP. Related questions could be answered more simplistically than requiring a detailed Part 2 survey.

At a minimum, an approach that collaboratively develops model facilities, and integrates available information from Subpart W could be used to significantly streamline the ICR, reduce the amount of data in the ICR Part 2 survey request, and reduce the number of ICR letters mailed. EPA should consider such alternatives to reduce the burden of the Proposed ICR and improve the quality of information collected, while ensuring information is available to support a rulemaking for existing sources.

The technical support document[4] (TSD) for the Subpart OOOOa rulemaking provides examples of model facilities that could be used as a starting point. In general, the TSD includes the appropriate types of equipment and emissions sources for T&S facilities, but revisions would be needed to more accurately characterize model facility attributes such as equipment counts, component counts, and associated emissions. INGAA offers its assistance in developing model facilities for the T&S segments, and would likely recommend multiple model facilities (e.g., compressor station sizes, compressor types) to better characterize the range of existing facilities.

**11. The response to the Part 2 survey question asking whether a facility is manned should be classified as CBI.**

The Proposed ICR does not designate any data elements as confidential business information (CBI) for the T&S segments. INGAA recommends that EPA classify an important data element in the Part 2 survey as CBI. In the Part 2 survey "Facilities" worksheet, EPA requests information regarding whether or not a facility is manned (row 48). Due to security and safety concerns, this data element should be CBI.

[4] Docket document number EPA-HQ-OAR-2010-0505-7631. "Background Technical Support Document for the Final New Source Performance Standards, 40 CFR Part 60, subpart OOOOa," (May 2016).

# INGAA ICR Comments – Attachment 1:

# Review of Part 2 Survey Definitions

# and GHGRP (Subpart W or A) and Subpart OOOO(a) Alternatives

## Attachment 1: Review of Part 2 Survey Definitions and GHGRP (Subpart W or A) and Subpart OOOO(a) Alternatives

The following table lists definitions for Transmission and Storage sector terms in the Part 2 survey worksheet. The proposed ICR definition is provided, along with existing definitions from the GHGRP (Subpart W or Subpart A) or NSPS definitions (i.e., Subpart OOOO or OOOOa). The final ICR should strive for consistency with existing definitions. In some cases, the GHGRP definition differs from the NSPS. **Because GHGRP reporting will be a primary resource for completing the ICR for transmission and storage facilities, the GHGRP definition should be preferred when it differs from the NSPS, unless there is a compelling reason otherwise.** If there is not a GHGRP definition but the NSPS provides a definition, then the NSPS definition should be used. With limited time to respond to the Proposed ICR, INGAA has not provided alternative definitions or definitions that integrate text from multiple regulations (and the Proposed ICR). However, INGAA welcomes an opportunity to work with EPA to appropriately define and consistently apply definitions that would assist with obtaining consistent ICR data responses that enhance the quality, utility, and clarity of the information requested. Aligning the final ICR definitions with GHGRP definitions and vernacular and common sector understanding and interpretation of these terms is paramount to obtaining consistent, quality data.

| Term | ICR Definition (Part 2 survey worksheet) | Existing Definition and Citation | INGAA Comments |
|---|---|---|---|
| Blowdown | To vent gas from a well, process unit, or pipeline to reduce the pressure of the system. | 40 CFR 98 subpart A, section 98.6<br><br>**Blowdown** mean the act of emptying or depressuring a vessel. This may also refer to the discarded material such as blowdown water from a boiler or cooling tower.<br><br>40 CFR 98 subpart A, section 98.6<br><br>**Blowdown vent stack emissions** mean natural gas and/or CO2 released due to maintenance and/or blowdown operations including compressor blowdown and emergency shut-down (ESD) system testing. | A clear and concise blowdown definition for Transmission & Storage (T&S) is necessary. Differences in sector blowdown sources and operations, and definition interpretation may result in inconsistent ICR responses.<br><br>The proposed ICR definition uses the term "vent" which is not preferred; GHGRP definition is preferred for consistency and to avoid the general ICR reference, "to vent gas…", because that can include other actions (e.g., pneumatic device venting) that is clearly not a blowdown. |
| Blowdown (cont.) | | 40 CFR 98.233(i)<br><br>(i) Blowdown vent stacks. Calculate CO2 and CH4 blowdown vent stack emissions from the depressurization of equipment to reduce system pressure for planned or emergency shutdowns resulting from human intervention or to take equipment out of service for maintenance … Equipment with a unique physical volume of less | Although not defined in section 98.238, Subpart W section 98.233 (Calculating GHG emissions) contains an important description, explanation and distinctions for this unique source.<br><br>For consistency with the GHGRP, the final ICR should include and exclude the |

| Term | ICR Definition (Part 2 survey worksheet) | Existing Definition and Citation | INGAA Comments |
|---|---|---|---|
| | | than 50 cubic feet as determined in paragraph (i)(1) of this section are not subject to the requirements in paragraphs (i)(2) through (4) of this section. The requirements in this paragraph (i) do not apply to blowdown vent stack emissions from depressurizing to a flare, over-pressure relief, operating pressure control venting, blowdown of non-GHG gases, and desiccant dehydrator blowdown venting before reloading. | same type of events for blowdown reporting. |
| Compressor | Any machine for raising the pressure of a gaseous stream by drawing in low pressure gas and discharging significantly higher pressure gas. | 40 CFR 98 subpart W, section 98.238<br><br>**Compressor source** means the source of certain venting or leaking emissions from a centrifugal or reciprocating compressor. For centrifugal compressors, "source" refers to blowdown valve leakage through the blowdown vent, unit isolation valve leakage through an open blowdown vent without blind flanges, and wet seal oil degassing vents. For reciprocating compressors, "source" refers to blowdown valve leakage through the blowdown vent, unit isolation valve leakage through an open blowdown vent without blind flanges, and rod packing emissions. | |
| Compressor station | Any permanent combination of one or more compressors that move natural gas at increased pressure from fields, in transmission pipelines, or into storage. | 40 CFR 60 Subpart OOOOa, section 60.5430a<br><br>**Compressor station** means any permanent combination of one or more compressors that move natural gas at increased pressure through gathering or transmission pipelines, or into or out of storage. This includes, but is not limited to, gathering and boosting stations and transmission compressor stations. The combination of one or more compressors located at a well site, or located at an onshore natural gas processing plant, is not a compressor station for purposes of § 60.5397a. | The proposed ICR definition is identical to NSPS Subpart OOOO. This definition should clearly delineate the sector boundary and what equipment/sources are to be included and excluded. |

| Term | ICR Definition (Part 2 survey worksheet) | Existing Definition and Citation | INGAA Comments |
|---|---|---|---|
| Condensate | Hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature, pressure, or both, and remains liquid at standard conditions. | 40 CFR 98 Subpart W, section 98.238<br>**Condensate** means hydrocarbon and other liquid, including both water and hydrocarbon liquids, separated from natural gas that condenses due to changes in the temperature, pressure, or both, and remains liquid at storage conditions.<br>40 CFR 60 Subpart OOOO, section 60.5430<br>**Condensate** means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature, pressure, or both, and remains liquid at standard conditions. | Subpart W definition is different.<br>Definition is identical to NSPS subpart OOOO. Subpart W definition is preferred. |
| Continuous bleed pneumatic controller | A pneumatic controller that uses a continuous flow of pneumatic supply gas to the process control device (e.g., level control, temperature control, pressure control) where the supply gas pressure is modulated by the process condition, and then flows to the valve controller where the signal is compared with the process set-point to adjust gas pressure in the valve actuator. For the purposes of this paper, continuous bleed controllers are further subdivided into two types based on their bleed rate. A low continuous bleed controller has a bleed rate of less than or equal to 6 standard cubic feet per hour (scf/hr). A high continuous bleed controller has a bleed rate of greater than 6 scf/hr. | 40 CFR 60 Subpart OOOO, section 60.5430<br>**Continuous bleed** means a continuous flow of pneumatic supply natural gas to the process control device (e.g., level control, temperature control, pressure control) where the supply gas pressure is modulated by the process condition, and then flows to the valve controller where the signal is compared with the process set-point to adjust gas pressure in the valve actuator.<br>40 CFR 60 Subpart OOOOa, section 60.5430a<br>**Bleed rate** means the rate in standard cubic feet per hour at which natural gas is continuously vented (bleeds) from a pneumatic controller. | NSPS Subparts OOOO and OOOOa definitions for “continuous bleed” and “bleed rate” are similar to the proposed ICR definition. These categories for high and low bleed devices are also consistent with Subpart W. These definitions should be followed; the proposed ICR definition adds more categories and definitions (see items that follow) that cause inconsistencies and should be eliminated. |

| Term | ICR Definition (Part 2 survey worksheet) | Existing Definition and Citation | INGAA Comments |
|---|---|---|---|
| Custody transfer | The transfer of natural gas after processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. | 40 CFR 60 Subpart OOOO, section 60.5430<br>**Custody transfer** means the transfer of natural gas after processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation.<br>40 CFR 60 Subpart OOOOa, section 60.5430a<br>**Custody transfer** means the transfer of crude oil or natural gas after processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. | The proposed ICR definition is identical to NSPS Subpart OOOO and is acceptable.<br>NSPS Subpart OOOOa definition is different (refers to oil as well as natural gas). |
| Facility | Any stationary source or group of stationary sources located on one or more contiguous or adjacent properties in actual physical contact or separated solely by a public roadway or other public right-of-way and under common ownership or common control. | 40 CFR 98 Subpart W, section 98.238<br>**Facility with respect to the onshore natural gas transmission pipeline segment** means the total U.S. mileage of natural gas transmission pipelines, as defined in this section, owned and operated by an onshore natural gas transmission pipeline owner or operator as defined in this section. The facility does not include pipelines that are part of any other industry segment defined in this subpart.<br>40 CFR 98 Subpart A, section 98.6<br>**Facility** means any physical property, plant, building, structure, source, or stationary equipment located on one or more contiguous or adjacent properties in actual physical contact or separated solely by a public roadway or other public right-of-way and under common ownership or common control, that emits or may emit any greenhouse gas. Operators of military installations may classify such installations as more than a single facility based on distinct and independent functional groupings within contiguous military properties. | GHGRP section 98.6 “facility” definition is preferred.<br>The final ICR should more clearly define “facility” for transmission pipelines, and Subpart W definition is available. |

| Term | ICR Definition (Part 2 survey worksheet) | Existing Definition and Citation | INGAA Comments |
|---|---|---|---|
| Intermittent bleed controller | A pneumatic controller that does not have a continuous bleed, but rather vents only when the controller is actuated. | 40 CFR 60 Subpart OOOO, section 60.5430<br>**Intermittent/snap-action pneumatic controller** means a pneumatic controller that vents non-continuously. | Pneumatic controller definitions should be consistent with the pneumatic categories in Subpart W and Subpart OOOO; eliminate all of the additional categories of pneumatic devices in the Proposed ICR.<br><br>The additional data is not readily available. |
| Isolation valve | A valve in a fluid handling system that stops the flow of process media to a given location, usually for maintenance or safety purposes. | | Isolation valve term is included in Subpart W, section 98.238 definition of compressor source but it is not defined. If this definition is retained in the final ICR, INGAA suggests deleting "usually for maintenance or safety purposes." |
| Maximum average daily throughput | The earliest calculation of daily average throughput during the 30-day potential-to-emit evaluation period employing generally accepted methods. | | Newly added term in the Proposed ICR. |
| Natural gas transmission pipeline facility | A site consisting of a Federal Energy Regulatory Commission rate-regulated Interstate pipeline, a state rate-regulated Intrastate pipeline, or a pipeline that falls under the "Hinshaw Exemption" as referenced in section 1(c) of the Natural Gas Act, 15 U.S.C. 717-717 (w)(1994) used for the long distance transport of natural gas (excluding processing). | 40 CFR 98 Subpart W, section 98.238<br>**Facility with respect to the onshore natural gas transmission pipeline segment** means the total U.S. mileage of natural gas transmission pipelines, as defined in this section, owned and operated by an onshore natural gas transmission pipeline owner or operator as defined in this section. The facility does not include pipelines that are part of any other industry segment defined in this subpart. | There is an associated definition in Subpart W for pipeline *operator* rather than "facility," which includes similar text to the proposed ICR definition (see next item below).<br><br>The final ICR definition needs to more clearly delineate the difference between "pipeline" facilities and "compressor station" facilities to ensure boundaries are defined and consistent responses are ensured. Additional text should be included in final ICR definitions or in final ICR support documents. |

| Term | ICR Definition (Part 2 survey worksheet) | Existing Definition and Citation | INGAA Comments |
|---|---|---|---|
| Natural gas transmission pipeline facility (cont.) | A site consisting of a Federal Energy Regulatory Commission rate-regulated Interstate pipeline, a state rate-regulated Intrastate pipeline, or a pipeline that falls under the "Hinshaw Exemption" as referenced in section 1(c) of the Natural Gas Act, 15 U.S.C. 717-717 (w)(1994) used for the long distance transport of natural gas (excluding processing). | 40 CFR 98 Subpart W, section 98.238<br><br>**Onshore natural gas transmission pipeline owner or operator** means, for interstate pipelines, the person identified as the transmission pipeline owner or operator on the Certificate of Public Convenience and Necessity issued under 15 U.S.C. 717f, or, for intrastate pipelines, the person identified as the owner or operator on the transmission pipeline's Statement of Operating Conditions under section 311 of the Natural Gas Policy Act, or for pipelines that fall under the "Hinshaw Exemption" as referenced in section 1(c) of the Natural Gas Act, 15 U.S.C. 717-717 (w)(1994), the person identified as the owner or operator on blanket certificates issued under 18 CFR 284.224. If an intrastate pipeline is not subject to section 311 of the Natural Gas Policy Act (NGPA), the onshore natural gas transmission pipeline owner or operator is the person identified as the owner or operator on reports to the state regulatory body regulating rates and charges for the sale of natural gas to consumers. | There is an associated definition in Subpart W containing owner or operator but it does not define "facility."<br><br>See comment above regarding the need for clear delineation of segments – i.e., "natural gas transmission *pipeline*" facilities and "natural gas transmission compressor station" facilities. |
| Natural gas transmission pipeline facility (cont.) | A site consisting of a Federal Energy Regulatory Commission rate-regulated Interstate pipeline, a state rate-regulated Intrastate pipeline, or a pipeline that falls under the "Hinshaw Exemption" as referenced in section 1(c) of the Natural Gas Act, 15 U.S.C. 717-717 (w)(1994) used for the long distance transport of natural gas (excluding processing). | 40 CFR 60 Subpart OOOO, section 60.5430<br><br>**Natural gas transmission** means the pipelines used for the long distance transport of natural gas (excluding processing). Specific equipment used in natural gas transmission includes the land, mains, valves, meters, boosters, regulators, storage vessels, dehydrators, compressors, and their driving units and appurtenances, and equipment used for transporting gas from a production plant, delivery point of purchased gas, gathering system, storage area, or other wholesale source of gas to one or more distribution area(s). | There is an associated definition in NSPS Subpart OOOO but it does not define "facility." |

| Term | ICR Definition (Part 2 survey worksheet) | Existing Definition and Citation | INGAA Comments |
|---|---|---|---|
| Onshore natural gas transmission compressor station | Any onshore site whose primary function is to move natural gas from production facilities, gathering and boosting facilities, natural gas processing plants, or other transmission compressor stations through transmission pipelines to natural gas distribution pipelines, LNG storage facilities, or into underground storage using a combination of compressors. *Onshore natural gas transmission compressor station* may include equipment for liquids separation, and tanks for the storage of water and hydrocarbon liquids. *Onshore natural gas transmission compressor stations* do not include facilities that also perform production, gathering, or processing of crude oil or natural gas. | 40 CFR 98 Subpart W, section 230(a)(4)<br>**Onshore natural gas transmission compression** means any stationary combination of compressors that move natural gas from production fields, natural gas processing plants, or other transmission compressors through transmission pipelines to natural gas distribution pipelines, LNG storage facilities, or into underground storage. In addition, a transmission compressor station includes equipment for liquids separation, and tanks for the storage of water and hydrocarbon liquids. Residue (sales) gas compression that is part of onshore natural gas processing plants are included in the onshore natural gas processing segment and are excluded from this segment. | There is an associated definition in Subpart W but it does not define "station."<br><br>See comments above on clear delineation of transmission facilities. |
| Onshore petroleum and natural gas gathering and boosting facility | Any onshore site with gathering pipelines and other equipment used to collect petroleum and/or natural gas from onshore petroleum and natural gas production facilities and to compress, dehydrate, sweeten, or transport the crude oil and/or natural gas to a natural gas processing facility, a natural gas transmission pipeline or to a natural gas distribution pipeline. | 40 CFR 98 Subpart W, section 98.230(a)(9)<br>**Onshore petroleum and natural gas gathering and boosting** means gathering pipelines and other equipment used to collect petroleum and/or natural gas from onshore production gas or oil wells and used to compress, dehydrate, sweeten, or transport the petroleum and/or natural gas to a natural gas processing facility, a natural gas transmission pipeline or to a natural gas distribution pipeline. Gathering and boosting equipment includes, but is not limited to gathering pipelines, separators, compressors, acid gas removal units, dehydrators, pneumatic devices/pumps, storage vessels, engines, boilers, heaters, and flares. Gathering and boosting equipment does not include equipment reported under any other industry segment defined in this section. Gathering pipelines operating on a vacuum and gathering pipelines with a GOR) less than 300 standard cubic feet per stock tank barrel (scf/STB) are not included in this industry segment (oil here refers to hydrocarbon liquids of all API gravities). | There is an associated definition in Subpart W that is preferred. |

| Term | ICR Definition (Part 2 survey worksheet) | Existing Definition and Citation | INGAA Comments |
|---|---|---|---|
| Owner or operator | Any person who owns, leases, operates, controls, or supervises an affected facility or a stationary source of which an affected facility is a part. | 40 CFR 98 Subpart A, section 98.6<br><br>**Owner** means any person who has legal or equitable title to, has a leasehold interest in, or control of a facility or supplier, except a person whose legal or equitable title to or leasehold interest in the facility or supplier arises solely because the person is a limited partner in a partnership that has legal or equitable title to, has a leasehold interest in, or control of the facility or supplier shall not be considered an "owner" of the facility or supplier.<br><br>40 CFR 98 Subpart A, section 98.6<br><br>**Operator** means any person who operates or supervises a facility or supplier. | |
| Pneumatic device | Any device which generates or is powered by compressed air or natural gas which includes pneumatic controllers, pneumatic valve actuators, and pneumatic pumps. | | Air driven pneumatics devices are not regulated equipment. Eliminate this separate definition for pneumatic device or ensure consistency with more specific terms/definitions of continuous bleed, intermittent bleed, zero bleed, no bleed pneumatics and pneumatic controllers. If this definition is retained in the final ICR, delete the word "pneumatic" prior to valve actuators and pumps. |
| Reciprocating compressor | A piece of equipment that increases the pressure of a gaseous stream by positive displacement, employing linear movement of the driveshaft. | 40 CFR 98 Subpart A, section 98.6<br><br>**Reciprocating compressor** means a piece of equipment that increases the pressure of a process natural gas or CO2 by positive displacement, employing linear movement of a shaft driving a piston in a cylinder. | |

| Term | ICR Definition (Part 2 survey worksheet) | Existing Definition and Citation | INGAA Comments |
|---|---|---|---|
| Rotary vane actuator | A type of pneumatic actuator that uses a system of chambers and vanes to produce rotational force on a shaft. The chambers typically contain a hydraulic fluid and pneumatic pressure is used to displace the hydraulic fluid from one chamber to apply pressure on one side of the shaft, which forces hydraulic fluid and venting of pneumatic gas from the other chamber. Also known as a displacement-type actuator. | | New definition that should be deleted. Rotary vane actuators should be covered in a broader category that is reported consistent with the GHGRP. Terms and definitions are introduced that are inconsistent with existing nomenclature and pneumatic source categorization.<br><br>If retained, remove the term "vane" and focus on defining a hydraulic gas actuated generic "Rotary Actuator." |
| Separator | A process tank specifically designed to separate gaseous fluids from liquid fluids produced from a well or as received via a pipeline. Generally, separators are operated at pressures greater than ambient air pressure. | 40 CFR 98 Subpart W, section 98.238<br><br>**Separator** means a vessel in which streams of multiple phases are gravity separated into individual streams of single phase. | |
| Snap acting controller | A controller that acts as an on/off switch and is either fully open or fully closed. Snap acting controllers, when functioning properly, do not have a continuous gas bleed and vent gas only when actuating are, therefore, designed as intermittent bleed pneumatic devices. | | Newly added pneumatic category and definition. Terms and definitions are introduced that may be inconsistent with existing nomenclature and pneumatic source categorization. Snap acting controllers should be covered in a broader category that is already reported consistent with the GHGRP.<br><br>The proposed definition is erroneous because "snap acting" refers to the controller *service* not the bleed/vent type, and continuous bleed controllers can be used for snap acting service. |

| Term | ICR Definition (Part 2 survey worksheet) | Existing Definition and Citation | INGAA Comments |
|---|---|---|---|
| Storage tank or vessel | A tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support. For the purposes of this ICR, pressure vessels (vessels designed to operate at pressures of 30 psig or higher) are not considered storage tanks. | 40 CFR 98 Subpart A, section 98.6<br><br>**Storage tank** means a vessel (excluding sumps) that is designed to contain an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water and that is constructed entirely of non-earthen materials (e.g., wood, concrete, steel, plastic) that provide structural support. | |
| Storage tank or vessel (cont.) | A tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support. For the purposes of this ICR, pressure vessels (vessels designed to operate at pressures of 30 psig or higher) are not considered storage tanks. | 40 CFR 60 Subpart OOOOa, section 60.5430a<br>**Storage vessel** means a tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support. A well completion vessel that receives recovered liquids from a well after startup of production following flowback for a period which exceeds 60 days is considered a storage vessel under this subpart. A tank or other vessel shall not be considered a storage vessel if it has been removed from service in accordance with the requirements of § 60.5395a(c)(1) until such time as such tank or other vessel has been returned to service. For the purposes of this subpart, the following are not considered storage vessels:<br>(1) Vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges or ships), and are intended to be located at a site for less than 180 consecutive days. If you do not keep or are not able to produce records, as required by § 60.5420a(c)(5)(iv), showing that the vessel has been located at a site | |

| Term | ICR Definition (Part 2 survey worksheet) | Existing Definition and Citation | INGAA Comments |
|---|---|---|---|
| | | for less than 180 consecutive days, the vessel described herein is considered to be a storage vessel from the date the original vessel was first located at the site. This exclusion does not apply to a well completion vessel as described above.<br><br>(2) Process vessels such as surge control vessels, bottoms receivers or knockout vessels.<br><br>(3) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere. | |
| Storage tank or vessel (cont.) | A tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support. For the purposes of this ICR, pressure vessels (vessels designed to operate at pressures of 30 psig or higher) are not considered storage tanks. | 40 CFR 98.233(j)<br>(j) Onshore production and onshore petroleum and natural gas gathering and boosting storage tanks. Calculate CH4, CO2, and N2O (when flared) emissions from atmospheric pressure fixed roof storage tanks receiving hydrocarbon produced liquids from onshore petroleum and natural gas production facilities and onshore petroleum and natural gas gathering and boosting facilities…. For gas-liquid separators or onshore petroleum and natural gas gathering and boosting non-separator equipment (e.g., stabilizers, slug catchers) with annual average daily throughput of oil greater than or equal to 10 barrels per day, calculate annual CH4 and CO2 using Calculation Method 1 or 2 as specified in paragraphs (j)(1) and (2) of this section. For wells flowing directly to atmospheric storage tanks without passing through a separator with throughput greater than or equal to 10 barrels per day, calculate annual CH4 and CO2 emissions using Calculation Method 2 as specified in paragraph (j)(2) of this section. For hydrocarbon liquids flowing to gas-liquid separators or non-separator equipment or directly to atmospheric storage tanks with throughput less than 10 barrels per day, use Calculation Method 3 as specified in | Although not defined in section 98.238, Subpart W section 98.233 (Calculating GHG emissions) contains important description, explanation and distinctions for this unique source.<br><br>The Subpart W section describes the tanks of interest for reporting flashing emissions, but these sections do not apply to T&S tanks. |

| Term | ICR Definition (Part 2 survey worksheet) | Existing Definition and Citation | INGAA Comments |
|---|---|---|---|
| | | paragraph (j)(3) of this section. If you use Calculation Method 1 or Calculation Method 2 for separators, you must also calculate emissions that may have occurred due to dump valves not closing properly using the method specified in paragraph (j)(6) of this section. If emissions from atmospheric pressure fixed roof storage tanks are routed to a vapor recovery system, you must adjust the emissions downward…. If emissions from atmospheric pressure fixed roof storage tanks are routed to a flare, you must calculate CH4, CO2, and N2O annual emissions as specified in…. | |
| Storage tank or vessel (cont.) | A tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support. For the purposes of this ICR, pressure vessels (vessels designed to operate at pressures of 30 psig or higher) are not considered storage tanks. | 40 CFR 98.233(k)<br>(k) Transmission storage tanks. For vent stacks connected to one or more transmission condensate storage tanks, either water or hydrocarbon, without vapor recovery, in onshore natural gas transmission compression, calculate CH4 and CO2 annual emissions from compressor scrubber dump valve leakage as specified in paragraphs (k)(1) through (k)(4) of this section. If emissions from compressor scrubber dump valve leakage are routed to a flare, you must calculate CH4, CO2, and N2O annual emissions as specified in paragraph (k)(5) of this section. | Although not defined in section 98.238, Subpart W section 98.233 (Calculating GHG emissions) contains important description, explanation and distinctions for this unique source. This section applies to transmission tanks, and the emissions source is dump valve leakage and not flashing emissions. |
| Throttling controller | A controller that can provide a variable signal based on the deviation from the desired set point. A throttling controllers generally have continuous bleeds; however, certain controller designs, such as a force balance piston device, only bleeds when it is out of the neutral position and may, therefore, be considered an intermittent device. | | New definition. The Proposed ICR introduces terms and definitions that are inconsistent with existing nomenclature and pneumatic source categorization. Throttling controllers should be covered in a broader category that is reported consistent with the GHGRP. |

| Term | ICR Definition (Part 2 survey worksheet) | Existing Definition and Citation | INGAA Comments |
|---|---|---|---|
| Total compressor power rating | The nameplate capacity of the compressor power output of the compressor drive. | | New definition. Reciprocating engine and turbine NSPS and NESHAPs include definitions for comparison and consistency. Those definitions rely on ISO rated hp for turbines & nameplate hp or site rated hp for reciprocating engines. |
| Turbine operated actuator | A type of pneumatic actuator that uses a small turbine to actuate a valve, ~~moos~~ **most** commonly a gate valve. Pneumatic gas is used to spin the turbine blades and the turbine shaft turns gears that actuates the gate valve system. | | New definition contains a typo. The Proposed ICR introduces terms and definitions that are inconsistent with existing nomenclature and pneumatic source categorization. Turbine operated actuators should be covered in a broader category that is reported consistent with the GHGRP. |
| Underground natural gas storage facility | A site used for subsurface storage (include storage in depleted gas or oil reservoirs and salt dome caverns) of natural gas that has been transferred from its original location for the primary purpose of load balancing (the process of equalizing the receipt and delivery of natural gas). | 40 CFR 98 Subpart W, section 98.230(a)(5)<br>**Underground natural gas storage** means subsurface storage, including depleted gas or oil reservoirs and salt dome caverns that store natural gas that has been transferred from its original location for the primary purpose of load balancing (the process of equalizing the receipt and delivery of natural gas); natural gas underground storage processes and operations (including compression, dehydration and flow measurement, and excluding transmission pipelines); and all the wellheads connected to the compression units located at the facility that inject and recover natural gas into and from the underground reservoirs. | |
| Well head (or wellhead) | The piping, casing, tubing and connected valves protruding above the earth's surface for an oil and/or natural gas well. The wellhead ends where the flow line connects to a wellhead valve. The wellhead does not include other equipment at the well site except for any conveyance through which gas is vented to the atmosphere. | 40 CFR 98 Subpart A, section 98.6<br>**Wellhead** means the piping, casing, tubing and connected valves protruding above the earth's surface for an oil and/or natural gas well. The wellhead ends where the flow line connects to a wellhead valve. Wellhead equipment includes all equipment, permanent and portable, located on the improved land area (i.e. well pad) surrounding one or multiple wellheads. | Distinction between production and storage wellhead desired. This definition should exclude storage wellheads.<br><br>Storage wellhead component counts are available in e-GGRT. |

| Term | ICR Definition (Part 2 survey worksheet) | Existing Definition and Citation | INGAA Comments |
|---|---|---|---|
| Zero bleed pneumatic controller | A pneumatic controller that does not bleed the pneumatic gas to the atmosphere. These pneumatic controllers are self-contained devices that release gas to a downstream pipeline instead of to the atmosphere. | 40 CFR 60 Subpart OOOOa, section 60.5430a<br><br>**Non-natural gas-driven pneumatic controller** means an instrument that is actuated using other sources of power than pressurized natural gas; examples include solar, electric, and instrument air. | New definition that is not complete in the Proposed ICR or other regulations. If this term is retained in the final ICR definitions, the definition should differentiate between no bleed, low bleed, and devices that may use solar, electric, or instrument air. This definition should also address pneumatic devices equipped with a gas capture system.<br><br>Related definition in NSPS Subpart OOOOa provides for pneumatics driven by a gas other than natural gas, with no natural gas emissions. |

# INGAA ICR Comments – Attachment 2:
# Detailed Review of Part 2 Survey Questions / Data Elements

| Tab | Facility |
|---|---|
| Row | 3 |
| Column | A |
| Item | Number of Employees: |
| INGAA Question | What is the purpose of this information to support Part 2 goals? |
| Comment (description) | The number of employees of the parent company is not pertinent to the identification of the types and prevalence of emission controls or emission reduction measures and potential costs for the measures and controls. |
| Concerns with availability | |
| Recommendation (action) | Remove question. |
| Alternative (action) | If field is retained, provide drop down with bracketed counts. Since this is for parent company, recommended drop down is [ <100 ] [ 101-5,000 ] [ >5,000 ] |

| Tab | Facility |
|---|---|
| Row | 4 |
| Column | A |
| Item | Dun and Bradstreet Number: |
| INGAA Question | What is the purpose of this information to support Part 2 goals? |
| Comment (description) | The purpose of a Dun and Bradstreet Number (DUN) is to establish a business credit file and is not pertinent to the identification of the types and prevalence of emission controls or emission reduction measures and potential costs for the measures and controls. Moreover the DUN information is sometimes inaccurate and it is difficult to get Dun and Bradstreet to correct the information. This could put the operator in the unfortunate position of having to report inaccurate information to EPA. |
| Concerns with availability | |
| Recommendation (action) | Remove question. |
| Alternative (action) | |

| Tab | Facility |
|---|---|
| Row | 25 |
| Column | B |
| Item | Facility Type: |
| INGAA Question | What if facility operations are in more than one segment? |
| Comment (description) | It is possible to have a natural gas transmission compressor station and an underground natural gas storage facility operating at the same facility. The pull down only permits the selection of one type. |
| Concerns with availability | |
| Recommendation (action) | Clarify which option to select if operations are in more than one segment. Definitions should clearly delineate what should be reported for each facility where multiple segments may be owned or operated by an ICR respondent. |
| Alternative (action) | |

| Tab | Facility |
|---|---|
| Row | 25 |
| Column | B |
| Item | Facility Type: |
| INGAA Question | |
| Comment (description) | The Facility Types are modeled after GHGRP Subpart W industry segments. However, related definitions from Subpart W are not consistently used for ICR. |
| Concerns with availability | |
| Recommendation (action) | In addition to consistency with GHGRP segment names in pull-down menu, consistent definitions are needed for segments / facilities. Not doing so creates an additional burden associated with gathering information using new (or unclear) categories. |
| Alternative (action) | |

| Tab | Facility |
|---|---|
| Row | 27 |
| Column | B |
| Item | Facility GHGRP ID, if applicable: |
| INGAA Question | Why is this cell blacked out? Answering "yes" to question in row 26 should activate this field. |
| Comment (description) | |
| Concerns with availability | |
| Recommendation (action) | This data field should be linked to the question in row 26. It should be pre-populated from e-GGRT and/or corrected to allow an entry. |
| Alternative (action) | |

| Tab | Facility |
|---|---|
| Row | 48 |
| Column | A |
| Item | Is this facility manned while in operation? |
| INGAA Question | What is the purpose of this information to support Part 2 goals? |
| Comment (description) | This information is Confidential Business Information (CBI) for both safety and security reasons. The presence or absence of personnel during operation is not pertinent to the identification of the types and prevalence of emission controls or emission reduction measures and potential costs for the measures and controls. |
| Concerns with availability | |
| Recommendation (action) | Remove question. |
| Alternative (action) | If field is retained, provide drop down to categories.<br>Recommended drop downs: [one shift] [always] [unmanned]<br>If field is retained, provide definition for the term "operation" (24/7, business hours). |

| Tab | Facility |
|---|---|
| Row | 48 |
| Column | A |
| Item | Is this facility manned while in operation? |
| INGAA Question | |
| Comment (description) | The question stated in Part 1, Section 3 is "Is the facility manned?" |
| Concerns with availability | |
| Recommendation (action) | Provide consistent questions in Parts 1 and 2 by deleting "while in operation." (See items below regarding complications associated with defining "operation.") |
| Alternative (action) | |

| Tab | Facility |
|---|---|
| Row | 49 |
| Column | A |
| Item | Does the facility have electricity available? |
| INGAA Question | Is this applicable to T&S? Is it intended for upstream only? |
| Comment (description) | Based upon the associated comments, it is possible that this question is intended for operations upstream of transmission and storage (i.e., production, gathering, boosting and processing). |
| Concerns with availability | |
| Recommendation (action) | Black out for T&S |
| Alternative (action) | |

| Tab | Facility |
|---|---|
| Row | 49 |
| Column | A |
| Item | Does the facility have electricity available? |
| INGAA Question | Can EPA clarify the information it is trying to obtain? |
| Comment (description) | The question as stated is vague and its relevance unclear. There are different levels of service of electricity. The availability depends upon the utility supplier. The presence of electricity does NOT mean that there is adequate electricity to support additional capacity. |
| Concerns with availability | |
| Recommendation (action) | Remove question. |
| Alternative (action) | If field is retained, an alternative question is "Does the facility use commercial electricity?" The answer will be YES for nearly all T&S compressor stations, but the answer will not provide any insight into the Part 2 goals. |

| Tab | Facility |
|---|---|
| Row | 49 |
| Column | A |
| Item | Does the facility have electricity available? |
| INGAA Question | What does "available" mean in this context? |
| Comment (description) | Question should not be posed to T&S because all facilities have electricity; however there may not be sufficient capacity to support additional equipment. |
| Concerns with availability | |
| Recommendation (action) | If field is retained for T&S, clarify the term "available." |
| Alternative (action) | |

| Tab | Facility |
|---|---|
| Row | 49 |
| Column | A |
| Item | Does the facility have electricity available? |
| INGAA Question | |
| Comment (description) | The question stated in Part 1, Section 3 is "Does the facility have electricity?" |
| Concerns with availability | |
| Recommendation (action) | Provide consistent questions in Parts 1 and 2. |
| Alternative (action) | |

| Tab | Facility |
|---|---|
| Row | 50 |
| Column | A |
| Item | Year the facility first began operations |
| INGAA Question | How does collecting this information support Part 2 goals? |
| Comment (description) | The answer to this question is not indicative of current operations, maintenance, applicable regulations, or state of equipment. |
| Concerns with availability | This information may not be readily available due to divestitures and acquisitions. |
| Recommendation (action) | Remove question. |
| Alternative (action) | If field is retained, provide drop down with bracketed years. Recommend drop down: [before 1960] [ 1961-1980] [1981-2000] [after 2000] |

| Tab | Facility |
|---|---|
| Row | 51 |
| Column | A |
| Item | Number of months the facility operated in 2015 |
| INGAA Question | How does collecting this information support Part 2 goals? |
| Comment (description) | The number of months the facility operated in 2015 is not pertinent to the identification of the types and prevalence of emission controls or emission reduction measures and potential costs for the measures and controls. Emissions can occur in "operating" mode or in "standby, not operating" mode. |
| Concerns with availability | Conducting a review of site-specific utilization for 2015 could be complicated or impose a high burden on respondents. |
| Recommendation (action) | Remove question. |
| Alternative (action) | If field is retained, clarify terms within the question (see additional notes that follow). For example, regarding equipment leak emissions, if the facility includes pressurized equipment (e.g., compressors, piping), then the facility would be "operational." |

| Tab | Facility |
|---|---|
| Row | 51 |
| Column | A |
| Item | Number of months the facility operated in 2015 |
| INGAA Question | What does "operated" mean? |
| Comment (description) | The question as stated will require respondents to make subjective judgments so the responses EPA receives will not be based on consistent assumptions. For example, a compressor at a station can be on stand-by (not compressing gas) due to pipeline conditions and demand. In another scenario, other parts of the facility such as pig launcher/receiver may operate while the compressors are on stand-by or shutdown. |
| Concerns with availability | Conducting a review of site-specific utilization for 2015 could be complicated or impose a high burden on respondents. |
| Recommendation (action) | Remove question. |
| Alternative (action) | If field is retained, revise header to:<br>Number of months the facility was ready for/capable of operation in 2015 |

| Tab | Facility |
|---|---|
| Row | 51 |
| Column | A |
| Item | Number of months the facility operated in 2015 |
| INGAA Question | Does this include emergency generator operation? |
| Comment (description) | There are many modes (e.g., not operating and depressurized) and interpretations of "operated." |
| Concerns with availability | Conducting a review of site-specific utilization for 2015 could be complicated or impose a high burden on respondents. |
| Recommendation (action) | Remove question. |
| Alternative (action) | If field is retained, clarify and define "operated." |

| Tab | Facility |
|---|---|
| Row | 51 |
| Column | B |
| Item | Number of months the facility operated in 2015 |
| INGAA Question | What constitutes a month? What constitutes a month *of operation*? |
| Comment (description) | What if a facility operated for only a few hours or days in a calendar month? |
| Concerns with availability | Conducting a review of site-specific utilization for 2015 could be complicated or impose a high burden on respondents. |
| Recommendation (action) | Remove question. |
| Alternative (action) | If field is retained, clarify and define "month." |

| Tab | Facility |
|---|---|
| Row | 54 |
| Column | B |
| Item | Quantity of all hydrocarbon liquids (crude oil and condensate, including NGLs) received by the facility in the 2015 calendar year (barrels). For production facilities, this is the quantity extracted from all wells. |
| INGAA Question | |
| Comment (description) | Not applicable to Transmission and Storage. |
| Concerns with availability | |
| Recommendation (action) | Black out for T&S |
| Alternative (action) | |

| Tab | Facility |
|---|---|
| Row | 55 |
| Column | B |
| Item | Quantity of all hydrocarbon liquids (crude oil and condensate, including NGLs) leaving the facility (sales) in the 2015 calendar year (barrels). |
| INGAA Question | |
| Comment (description) | Not applicable to Transmission and Storage. |
| Concerns with availability | |
| Recommendation (action) | Black out for T&S |
| Alternative (action) | |

| Tab | Facility |
|---|---|
| Row | 56 |
| Column | B |
| Item | Miles of natural gas transmission pipeline |
| INGAA Question | |
| Comment (description) | Applicable to Pipelines only, not applicable to Transmission and Storage facilities. Cannot assign pipeline miles to individual facilities. For pipelines, the "facility" boundary should be clearly identified. Without clarification, respondents will likely have different interpretations and data quality may be impacted. |
| Concerns with availability | |
| Recommendation (action) | Black out for T&S |
| Alternative (action) | |

| Tab | Tanks Separators |
|---|---|
| Row | All |
| Column | All |
| Item | All |
| INGAA Question | Is this tab applicable to T&S? Is this tab intended for upstream?<br>Can T&S omit? |
| Comment (description) | The source of emissions in T&S tanks are from a malfunctioning scrubber dump valve and not working / breathing /flashing losses (consistent with Subpart W). Subpart W data to date confirms this is an insignificant emissions source. In addition, questions may be appropriate for tanks and not separators (or vice versa), but delineation is not provided. |
| Concerns with availability | |
| Recommendation (action) | Black out for T&S |
| Alternative (action) | If retained for T&S, add clarification regarding applicability of questions for tanks, separators, or both. Or, provide separate fields or separate forms for tanks and separators. |

| Tab | Tanks Separators |
|---|---|
| Row | 3 |
| Column | A |
| Item | Number of Separators at the Facility |
| INGAA Question | Did EPA intend to request the number of separators from T&S? |
| Comment (description) | Separator information is not readily available for T&S. |
| Concerns with availability | Conducting a review of site-specific utilization for 2015 could be complicated or impose a high burden on respondents. |
| Recommendation (action) | Black out for T&S. If retained and applicable to T&S, recommend defining an applicability threshold based on size/throughput. |
| Alternative (action) | If included, define threshold to < 10 bbl/day and ≥ 10 bbl/day and add a second row. |

| Tab | Tanks Separators |
|---|---|
| Row | 7 |
| Column | A |
| Item | **2. General Tank / Separator Information - Complete for each Tank / Separator:** |
| INGAA Question | Is this tab applicable to T&S? Is this tab intended for upstream?<br>Can T&S omit? |
| Comment (description) | If separators are included, Table 2 should only apply to ≥ 10 bbl/day. |
| Concerns with availability | The bbl/day data may not be available or may be an engineering estimate instead of a measurement. |
| Recommendation (action) | Black out for T&S |
| Alternative (action) | Include a trigger in the row for Separators ≥ 10 bbl/day to provide information in Table 2. |

| Tab | Tanks Separators |
|---|---|
| Row | 8 |
| Column | E |
| Item | Vessel Height |
| INGAA Question | What if vessel is oriented horizontally? |
| Comment (description) | Some separators are oriented horizontally instead of vertically. |
| Concerns with availability | |
| Recommendation (action) | Specify Vessel Length if vessel is oriented horizontally. |
| Alternative (action) | |

| Tab | Tanks Separators |
|---|---|
| Row | 8 |
| Column | F and G |
| Item | Average vessel hydrocarbon (F) or water (G) throughput (bbl/day) |
| INGAA Question | If this applies to T&S, EPA should establish a hydrocarbon throughput threshold. Water throughput should not apply to T&S. |
| Comment (description) | For all or most facilities, hydrocarbon throughput is only available for the atmospheric storage tanks not for each separator vessel/filter separator. |
| Concerns with availability | Throughput information is not readily available and would be a burden to estimate. If EPA does not specify a method for estimating throughput, EPA will receive inconsistent responses. Water throughput should not apply to T&S. |
| Recommendation (action) | Black out for T&S |
| Alternative (action) | If included, establish a hydrocarbon threshold. Throughput volume available for T&S would include hydrocarbons and water (if any). |

| Tab | Tanks Separators |
|---|---|
| Row | 8-58 |
| Column | C |
| Item | List current environmental regulations to which the well site must comply.<br>Select all that apply. |
| INGAA Question | |
| Comment (description) | This should be consolidated in the facility tab and answered once for the facility. |
| Concerns with availability | |
| Recommendation (action) | Move to Facility tab. Change "well site" within column title to "facility" or appropriate term. Include 40 CFR 98 in the list of regulations. |
| Alternative (action) | |

| Tab | Tanks Separators |
|---|---|
| Row | 61 |
| Column | B |
| Item | Type of feed material |
| INGAA Question | If applicable to T&S, how do we classify type of feed material? |
| Comment (description) | Condensate and natural gas streams may contain trace amounts of water and "definitions" for pull down menu are not clear. The pull down menu does not include all of the possible options for stream types. |
| Concerns with availability | |
| Recommendation (action) | Black out for T&S |
| Alternative (action) | If included, EPA must clarify how to characterize tank/separator streams and select from menu; definitions, guidance, and instructions are needed and additional stream options may be needed. |

| Tab | Tanks Separators |
|---|---|
| Row | 77-86 |
| Column | A-B |
| Item | Separator ID/Tank ID |
| INGAA Question | |
| Comment (description) | Pull down menus are erroneous in columns A and B. |
| Concerns with availability | Unique IDs may not be available for each tank separator, meaning that respondents would likely make up IDs solely for the purpose of responding to this item. |
| Recommendation (action) | Remove question. |
| Alternative (action) | If applicable to T&S, correct pull down links for IDs |

| Tab | Tanks Separators |
|---|---|
| Row | 77-86 |
| Column | G |
| Item | Hours Dump Valve Stuck in 2015 |
| INGAA Question | |
| Comment (description) | This data element is not usually tracked. When a leaking dump valve is discovered in Subpart W tests, a worst case scenario option of 8,760 hours is usually used to calculate Subpart W emissions. The worst case assumption of 8,760 hours will not provide any utility to EPA for rulemaking. |
| Concerns with availability | This information is not usually tracked. |
| Recommendation (action) | Delete question. |
| Alternative (action) | Allow users to input "Data Not Available" for this field. |

| Tab | Pneumatics |
|---|---|
| Row | All |
| Column | All |
| Item | All |
| INGAA Question | Can T&S omit (rely on GHGRP data on device population and emissions)? |
| Comment (description) | As discussed in INGAA Comment 5, the GHGRP provides pneumatic device information for three device categories. Pneumatic device emissions are relatively low for T&S facilities, and additional data collection is not needed. This form should not apply for T&S facilities. |
| Concerns with availability | |
| Recommendation (action) | Black out for T&S |
| Alternative (action) | |

| Tab | Pneumatics |
|---|---|
| Row | 6-15 |
| Column | C |
| Item | **Number of Air-Driven Devices** |
| INGAA Question | How does this information support Part 2 goals? |
| Comment (description) | The number of air-driven devices is not pertinent to the identification of the types and prevalence of VOC or GHG emission controls or emission reduction measures and potential costs for the measures and controls. Air driven pneumatic actuators are not a source of VOC or GHG emissions. |
| Concerns with availability | The number of air-driven devices is not readily available information and therefore requiring field counts of air driven pneumatic devices can significantly increase the burden and complexity of the field data collection effort. |
| Recommendation (action) | Remove question. |
| Alternative (action) | If field is retained, recommend alternative question:<br>Is there an air system available for pneumatics at the facility? [Y/N] |

| Tab | Pneumatics |
|---|---|
| Row | 6-15 |
| Column | B |
| Item | **Number of Natural-Gas Driven Devices** |
| INGAA Question | |
| Comment (description) | There are safety concerns with requiring field counting and data gathering because it is difficult to access some pneumatic actuators to locate the nameplate. |
| Concerns with availability | EPA's anticipated schedule for completing the ICR is during the winter/early spring when there is snow/ice cover making it challenging to perform field counts and unsafe to cross over pipes. |
| Recommendation (action) | Allow sufficient time to collect data, which would provide the ability to address potential safety hazards. (See INGAA comments regarding schedule.) |
| Alternative (action) | Allow use of a surrogate count of the number of pneumatic devices per compressor or tank. |

| Tab | Pneumatics |
|---|---|
| Row | 6-15 |
| Column | A |
| Item | **Type of Pneumatic Device** |
| INGAA Question | |
| Comment (description) | The types in this list are not consistent with Subpart W or NSPS Subpart OOOO/OOOOa descriptors and definitions. |
| Concerns with availability | |
| Recommendation (action) | 1. Provide definitions and ensure definitions are consistent with Subparts W and OOOOa.<br>2. Clarify: service type is mixed with bleed type.<br>3. Carry revised definitions through entire pneumatic tab, tables and pull downs. |
| Alternative (action) | |

| Tab | Pneumatics |
|---|---|
| Row | 18 |
| Column | A,B |
| Item | How does the facility determine if a device is intermittent or continuous bleed? |
| INGAA Question | What is the purpose of this question? |
| Comment (description) | The pull down options are not complete. For example, manufacturer information may be used, but it may not be the minimum or maximum rate (which are menu options). |
| Concerns with availability | These data are not readily available and the focus has been on continuous high bleed rate of greater than 6 scf/hour pneumatics in Subpart W. |
| Recommendation (action) | Remove question. |
| Alternative (action) | If field is retained, add options such as "manufacturer specification" to current pull-down menu. |

| **Tab** | Pneumatics |
|---|---|
| **Row** | 19 |
| **Column** | B |
| **Item** | How does the facility determine if a continuous bleed device is high or low bleed? |
| **INGAA Question** | |
| **Comment (description)** | If available, response would be based on manufacturer information. Since pneumatic device emissions are relatively low for T&S segments, respondent should be allowed to use a default option of "high bleed." |
| **Concerns with availability** | Manufacturer data may not be available or the bleed rate may not have been measured if the facility does not report under Subpart W. Furthermore, the drop-down menu options presume that respondents would use the same method for all pneumatics at a facility. Determining the bleed rate for every pneumatic would impose an unnecessary burden on respondents. |
| **Recommendation (action)** | This is a not a significant source for T&S. Allow selection of higher bleed if bleed rate cannot be easily discerned. |
| **Alternative (action)** | |

| **Tab** | **Pneumatics** |
|---|---|
| **Row** | 20 |
| **Column** | B |
| **Item** | What work practices does the facility employ to identify malfunctioning controllers (e.g., intermittent devices continuously venting)? |
| **INGAA Question** | |
| **Comment (description)** | Incomplete pull down, include "audio" with visual in pull down menu. |
| **Concerns with availability** | |
| **Recommendation (action)** | Include routine audio/visual inspections of controllers. |
| **Alternative (action)** | |

| **Tab** | **Pneumatics** |
|---|---|
| **Row** | 21 |
| **Column** | A |
| **Item** | How many controllers were found malfunctioning in the past year? |
| **INGAA Question** | How will this provide any emissions information of value to the EPA? |
| **Comment (description)** | A device may have been malfunctioning for reasons that do not contribute to VOC or GHG emissions. Records may not be available for the number of malfunctioning components and the number of malfunctioning controllers is not determinable for the past year. |
| **Concerns with availability** | The number of malfunctioning controllers is typically information that is not recorded and not readily available. The best answer available for the past year would be an educated guess from operations. |
| **Recommendation (action)** | Remove question. |

| | |
|---|---|
| **Alternative (action)** | |

| **Tab** | **Pneumatics** |
|---|---|
| **Row** | 22 |
| **Column** | A |
| **Item** | What is the natural gas supply pressure for the pneumatic devices (psig)? |
| **INGAA Question** | What is the purpose of this information to support Part 2 goals? |
| **Comment (description)** | The supply pressure can be device specific (with a regulator). Facility pressure is available, through Subpart W, but it is not pertinent to device function. |
| **Concerns with availability** | This information is not available for a given device. |
| **Recommendation (action)** | Remove question. |
| **Alternative (action)** | |

| **Tab** | **Pneumatics** |
|---|---|
| **Row** | 27 |
| **Column** | C |
| **Item** | Actuator Size (include description, if "other" selected for type) |
| **INGAA Question** | What does EPA mean by actuator "size"? What is the purpose of this data? |
| **Comment (description)** | It is not clear what information EPA expects to receive in response to this question or its value. Actuators may have missing or illegible nameplates making it very difficult to accurately identify the size of the actuator. |
| **Concerns with availability** | This information is not readily available. |
| **Recommendation (action)** | Remove question. |
| **Alternative (action)** | Any related question retained requires clarification and a description of the value EPA hopes to gain from this data, and EPA estimates of additional costs to gather this data. |

| **Tab** | **Pneumatics** |
|---|---|
| **Row** | 27 |
| **Column** | D |
| **Item** | Cummulative [sic] Number of Actuation Cycles in 2015 (or most recent operating year). |
| **INGAA Question** | |
| **Comment (description)** | The information on actuations is not available and is indeterminate. Gathering surrogate information on Operations (unit Blowdowns) would not be accurate and would be very labor intensive. |
| **Concerns with availability** | Information on actuations is not available and is indeterminate. |
| **Recommendation (action)** | Remove question. |
| **Alternative (action)** | If this field is retained, correct typo "cumulative." If this item is retained, EPA should allow the use of engineering estimates. |

| Tab | Pneumatics |
|---|---|
| Row | 27 |
| Column | E |
| Item | Estimated Device Consumption Rate (scf/actuation) |
| INGAA Question | |
| Comment (description) | These records are not readily available and will likely require contacting the device manufacturer. If the device is missing the name plate or if it is not legible, it may not be possible to accurately obtain the consumption rate. |
| Concerns with availability | This information is not available and may be indeterminate. |
| Recommendation (action) | Remove question. |
| Alternative (action) | If retained, EPA should allow the use of engineering estimates or default to a conservative consumption rate of > 6 scf/hr. |

| Tab | Pneumatics |
|---|---|
| Row | 28-36 |
| Column | B |
| Item | Isolation Valve Actuator Type |
| INGAA Question | |
| Comment (description) | The pull down options are inconsistent with options in row 11 and 12. |
| Concerns with availability | |
| Recommendation (action) | Add “other” row to rows 11 and 12 to be consistent with the pull down options. |
| Alternative (action) | |

| Tab | Pneumatics |
|---|---|
| Row | 41-49 |
| Column | B |
| Item | Pneumatic Device Type |
| INGAA Question | |
| Comment (description) | The pull down options are inconsistent with options in row 28. |
| Concerns with availability | |
| Recommendation (action) | Add “other” to the pull down options to be consistent with row 28. |
| Alternative (action) | |

| Tab | Dehyd |
|---|---|
| Row | 8-43 |
| Column | D |
| Item | List current environmental regulations to which the well site must comply.<br>Select all that apply. |
| INGAA Question | |
| Comment (description) | This should be consolidated in the facility tab and answered once for the facility. |
| Concerns with availability | |
| Recommendation (action) | Move to Facility tab. Change "well site" to applicable term.<br>Include 40 CFR 98 in list. |
| Alternative (action) | |

| Tab | Dehyd |
|---|---|
| Row | 8-43 |
| Column | E-L |
| Item | Feed Gas and Treated Gas column headers |
| INGAA Question | |
| Comment (description) | For information on feed and treated gas, EPA should allow the use of GLYCalc runs instead. |
| Concerns with availability | |
| Recommendation (action) | Allow the use of GLYCalc run output files where available. |
| Alternative (action) | |

| Tab | Dehyd |
|---|---|
| Row | 47 |
| Column | C |
| Item | If yes, provide methane recovery efficiency (percent) |
| INGAA Question | |
| Comment (description) | For information on natural gas recovery efficiency, EPA should allow the use of GLYCalc runs instead. |
| Concerns with availability | |
| Recommendation (action) | Allow the use of GLYCalc run output files where available. |
| Alternative (action) | |

| Tab | Dehyd |
|---|---|
| Row | 47 |
| Column | C |
| Item | If yes, provide methane recovery efficiency (percent) |
| INGAA Question | |
| Comment (description) | Change “methane” to “natural gas” |
| Concerns with availability | |
| Recommendation (action) | Change “methane” to “natural gas” |
| Alternative (action) | |

| Tab | Dehyd |
|---|---|
| Row | 47 |
| Column | H |
| Item | Glycol reboiler/regenerator fuel gas consumption rate (scfm) |
| INGAA Question | |
| Comment (description) | The most readily available units for the fuel gas consumption rate are in MMBtu/hr. Operators should be able to select preferred engineering units. |
| Concerns with availability | |
| Recommendation (action) | Allow selection of scfm or MMBtu/hr for engineering units and input. |
| Alternative (action) | If only one option is allowed, use MMBtu/hr rather than scfm. |

| Tab | Dehyd |
|---|---|
| Row | 48 |
| Column | K |
| Item | Emission reduction work practices used |
| INGAA Question | |
| Comment (description) | Sometimes multiple work practices are used on a single glycol dehydrator. |
| Concerns w/ availability | |
| Recommendation (action) | Allow for “multiple” work practices in pull down options. |
| Alternative (action) | |

| Tab | Dehyd |
|---|---|
| Row | 57-63 |
| Column | C-F |
| Item | **4. Direct Emissions Measurements - Complete for each dehydrator for which emissions measurement data are available.** |
| INGAA Question | |
| Comment (description) | Allow the use of GLYCalc runs. Direct stack measurements are rarely completed since software tool is available and cited in related regulations. |
| Concerns with availability | |
| Recommendation (action) | Allow the use of GLYCalc run output files where available. |
| Alternative (action) | |

| Tab | EqLeaks |
|---|---|
| Row | 3-7 |
| Column | B |
| Item | List current environmental regulations to which the well site must comply.<br>Select all that apply. |
| INGAA Question | |
| Comment (description) | This should be consolidated in the facility tab and answered once for the facility. |
| Concerns with availability | |
| Recommendation (action) | Move to Facility tab. Change "well site" to applicable term.<br>Include 40 CFR 98 in pick list. |
| Alternative (action) | |

| Tab | EqLeaks |
|---|---|
| Row | 8 |
| Column | A |
| Item | Does the facility conduct routine inspections to identify leaking equipment components? |
| INGAA Question | |
| Comment (description) | The question as stated will not lead to a clear and concise answer. To clarify, suggest differentiating frequent "walk throughs" from regulatory driven surveys and eliminate "routine" as this is subject to interpretation. |
| Concerns with availability | If AVO option is added (see recommendations below), additional details on the inspections may not be readily available and no other details should be required. |
| Recommendation (action) | 1. Insert question: Does the facility conduct regular audio-visual-olfactory (AVO) inspections for leaks? [Y/N]<br>*and*<br>2. Restate original question: Does the facility conduct "other" inspections using instrumentation/regulatory methods to identify leaking equipment?<br>If YES, complete Table 2. |
| Alternative (action) | |

| Tab | EqLeaks |
|---|---|
| Row | 11 |
| Column | B |
| Item | Monitoring method used. |
| INGAA Question | |
| Comment (description) | In the pull down, one of the options is Method 21/OVA. The acronym OVA (organic vapor analyzer) is not defined and could easily be confused with the acronym AVO. |
| Concerns with availability | |
| Recommendation (action) | Define OVA (organic vapor analyzer) in acronyms to differentiate from AVO (audio-visual-olfactory) or spell out. |
| Alternative (action) | |

| Tab | EqLeaks |
|---|---|
| Row | 11 |
| Column | B |
| Item | Monitoring method used. |
| INGAA Question | |
| Comment (description) | There are occasions when multiple methods are used. |
| Concerns with availability | |
| Recommendation (action) | Add “multiple” to pull down. |
| Alternative (action) | |

| Tab | EqLeaks |
|---|---|
| Row | 12 |
| Column | A |
| Item | If Other method, specify. |
| INGAA Question | |
| Comment (description) | Include “multiple” to accommodate comment made on row 11. |
| Concerns with availability | |
| Recommendation (action) | “If other/multiple method(s), specify.” |
| Alternative (action) | |

| Tab | EqLeaks |
|---|---|
| Row | 16-45 |
| Column | B |
| Item | Total Number of Components contacting a process fluid that contains 5 percent by weight of any of the following pollutants: VOC, $CH_4$, $CO_2$ |
| INGAA Question | |
| Comment (description) | Subpart W and NSPS Subpart OOOOa at compressor stations do not require this information. This is not applicable for T&S. |
| Concerns with availability | These are not counted for Subpart W and NSPS Subpart OOOOa and these data are therefore not available. High burden to gather information. |
| Recommendation (action) | Remove question for T&S. If retained for T&S, 120 days is not enough time to complete this task given the number of facilities that will require a site survey. See INGAA Comments regarding schedule. |
| Alternative (action) | |

| Tab | EqLeaks |
|---|---|
| Row | 16-45 |
| Column | D |
| Item | Total Number of Components Monitored for Leaks During Most Recent Monitoring Survey |
| INGAA Question | |
| Comment (description) | Subpart W and NSPS Subpart OOOOa at compressor stations do not require this information. This is not applicable for T&S. |
| Concerns with availability | These are not counted for Subpart W and NSPS Subpart OOOOa and these data are therefore not available. High burden to gather information. |
| Recommendation (action) | Remove question. |
| Alternative (action) | If retained for T&S, 120 days is not enough time to complete this task given the number of facilities that will require a site survey. See INGAA Comments regarding schedule. |

| Tab | EqLeaks |
|---|---|
| Row | 16-45 |
| Column | D |
| Item | Total Number of Components Monitored for Leaks During Most Recent Monitoring Survey |
| INGAA Question | |
| Comment (description) | The term "most recent monitoring survey" could be confusing and the responses left to judgment and individual interpretation. More specific answers can be obtained by clarifying the question, see suggested rewording to include "using instrumentation/regulatory methods to identify...." |
| Concerns with availability | This information is not available from the last survey. Population component counts by service/component type are not available. |
| Recommendation (action) | Remove question (see item above). |
| Alternative (action) | If retained for T&S, the recommended header revision: Total Number of Components Monitored for Leaks during most recent inspections using instrumentation/regulatory methods to identify leaking equipment. |

| Tab | EqLeaks |
|---|---|
| Row | 16-45 |
| Column | F |
| Item | Definition of Leak used for Monitoring Components |
| INGAA Question | |
| Comment (description) | There may be other leak definitions. In addition, GHGRP exempts tubing $\leq$ ½ inch in diameter. Consistency with existing regulations is warranted. |
| Concerns with availability | |
| Recommendation (action) | Add "other" to pull down options. Add a column to specify. Include exemption for small diameter tubing consistent with Subpart W. |
| Alternative (action) | |

| Tab | EqLeaks |
|---|---|
| Row | 16-45 |
| Column | A |
| Item | Service / Component Type |
| INGAA Question | |
| Comment (description) | These do not match with Subpart W component types. There are differences in the component types listed depending on the service. |
| Concerns with availability | |
| Recommendation (action) | Consistent definitions and nomenclature with Subpart W and NSPS Subpart OOOOa. If retained, there is a significant burden to gather information using new categories. |
| Alternative (action) | |

| Tab | EqLeaks |
|---|---|
| Row | 61 |
| Column | A |
| Item | **4. Direct Emissions Measurements - Complete for each component or equipment type, as applicable, for which emissions measurement data are available.** |
| INGAA Question | |
| Comment (description) | Row 59 inquires about emissions testing, and should be linked to item 4. However, row 59 is only applicable to onshore petroleum and natural gas production facilities. The form should also inquire about data availability for other segments and the question should be linked to the table in item 4. |
| Concerns with availability | |
| Recommendation (action) | Clarify applicability to all segments or only production facilities, include the appropriate question(s) and link a "yes" answer to the Direct Emissions Measurements table. If "no," the table should be blacked out. |
| Alternative (action) | |

| Tab | Comp |
|---|---|
| Row | 7 |
| Column | F |
| Item | Engine Type |
| INGAA Question | |
| Comment (description) | This column describes the "Driver" not the engine. |
| Concerns with availability | |
| Recommendation (action) | Change from "Engine Type" to "Driver Type" |
| Alternative (action) | |

| Tab | Comp |
|---|---|
| Row | 9-48 |
| Column | F |
| Item | Engine Type |
| INGAA Question | |
| Comment (description) | A turbine is a commonly used Driver Type. |
| Concerns with availability | |
| Recommendation (action) | Include Turbine as an option in the pull down list. |
| Alternative (action) | |

| Tab | Comp |
|---|---|
| Row | 9-48 |
| Column | G |
| Item | Fuel Type |
| INGAA Question | |
| Comment (description) | Since Column F includes Electric Drive, this column should allow electricity as a "fuel." |
| Concerns with availability | |
| Recommendation (action) | Include Electricity as an option in the pull down list. |
| Alternative (action) | |

| Tab | Comp |
|---|---|
| Row | 9-48 |
| Column | D |
| Item | List current environmental regulations to which the well site must comply.<br>Select all that apply. |
| INGAA Question | |
| Comment (description) | This should be consolidated in the facility tab and answered once for the facility. |
| Concerns with availability | |
| Recommendation (action) | Move to Facility tab. Change "well site" to applicable term.<br>Include 40 CFR 98 in the pick list. |
| Alternative (action) | |

| Tab | Comp |
|---|---|
| Row | 9-48 |
| Column | H |
| Item | Emissions Tier |
| INGAA Question | Are these referring to Diesel Standards? |
| Comment (description) | It is not clear what emissions tiers are referred to here. The purpose is unclear; generally, the Proposed ICR is concerned with the compressor not the driver. EPA should provide further clarification in the final ICR and explain the purpose of this request. |
| Concerns with availability | This information is not readily available. |
| Recommendation (action) | Clarify; eliminate requirement for natural gas-fired engines (and other engines using fuel other than diesel). |
| Alternative (action) | |

| Tab | Comp |
|---|---|
| **Row** | 9-48 |
| **Column** | M |
| **Item** | Were direct emissions measurements made for compliance with the GHGRP in 40 CFR part 98, Subpart W? |
| **INGAA Question** | Column headings M-Q invite confusion, so EPA should simply request operating time in modes. If Q is yes, then EPA should populate using Subpart W data. |
| **Comment (description)** | When a "yes" is answered, then operating time fields should be pre-populated from GHGRP data. When a "no" is answered, then column N should be negated. |
| **Concerns with availability** | |
| **Recommendation (action)** | If the answer is "yes" then the EPA should populate the Operating Time Fields. If the answer is "no," then column N should be negated. |
| **Alternative (action)** | |

| Tab | Comp |
|---|---|
| **Row** | 9-48 |
| **Column** | O |
| **Item** | If no, please provide the total time the compressor was in operating-mode in RY 2015. (hours) |
| **INGAA Question** | |
| **Comment (description)** | Columns O-Q can be simple requests for operating time in mode. However, if this is not a Subpart W applicable facility, then this information is not readily available and there will be a high cost associated with gathering this information. |
| **Concerns with availability** | Operating hours in the 3 different modes is not readily available and obtaining this data would impose a significant burden (or an estimate could be provided). |
| **Recommendation (action)** | Per item above (row 9-48, column M), negate this field (black out) for non-Subpart W facilities. Rephrase question: "Total time in operating mode in RY 2015 (hrs)" and pre-populate with Subpart W data. |
| **Alternative (action)** | If retained, allow engineering estimate for facilities that do not report under Subpart W. |

| Tab | Comp |
|---|---|
| **Row** | 9-48 |
| **Column** | P |
| **Item** | If no, please provide the total time the compressor was in standby-pressurized-mode in RY 2015 (hours) |
| **INGAA Question** | |
| **Comment (description)** | Columns O-Q can be simple requests for operating time in mode. However, if this is not a Subpart W facility, then this information is not readily available and there will be a high cost associated with gathering this information. |
| **Concerns with availability** | Operating hours in the 3 different modes is not readily available and obtaining this data would impose a significant burden (or an estimate could be provided). |
| **Recommendation (action)** | Same as item above; negate for non-Subpart W facilities. Rephrase question: "Total time in standby-pressurized mode in RY 2015 (hrs)" and pre-populate with Subpart W data. |
| **Alternative (action)** | If retained, allow engineering estimate for facilities that do not report under Subpart W. |

| Tab | Comp |
|---|---|
| Row | 9-48 |
| Column | Q |
| Item | If no, please provide the total time the compressor was in not-operating-depressurized-mode in RY 2015 (hours) |
| INGAA Question | |
| Comment (description) | Columns O-Q can be simple requests for operating time in mode. However, if this is not a Subpart W facility, then this information is not readily available and there will be a high cost associated with gathering this information. |
| Concerns with availability | Operating hours in the 3 different modes is not readily available and obtaining this data may impose a significant burden (or an estimate could be provided). |
| Recommendation (action) | Same as item above; negate for non- Subpart W facilities. Rephrase question: "Total time in not-operating-depressurized mode in RY 2015 (hrs)" and pre-populate with Subpart W data. |
| Alternative (action) | If retained, allow engineering estimate for facilities that do not report under Subpart W. |

| Tab | Comp |
|---|---|
| Row | 51 |
| Column | G/H |
| Item | Emission Rate<br>(scf/hr) |
| INGAA Question | |
| Comment (description) | Units are noted in row 52, and should not be in row 51. |
| Concerns with availability | |
| Recommendation (action) | Delete (scf/hr) from row 51. |
| Alternative (action) | |

| Tab | Comp |
|---|---|
| Row | 51 |
| Column | NA |
| Item | NA |
| INGAA Question | |
| Comment (description) | Measurements are associated with an emission source, but there is no column for specifying the equipment type measured (e.g., rod packing, blowdown valve, unit isolation valve, etc.) |
| Concerns with availability | |
| Recommendation (action) | Add column for this data element. |
| Alternative (action) | |

| Tab | Comp |
|---|---|
| Row | 67 |
| Column | D |
| Item | If wet seals were replaced with dry seals on or after 1/1/2010, provide the cost. ($) |
| INGAA Question | |
| Comment (description) | Cost definition required. For example, does the cost include both equipment and labor? |
| Concerns with availability | |
| Recommendation (action) | Specifically define what is included in cost and provide columns as necessary. |
| Alternative (action) | |

| Tab | Comp |
|---|---|
| Row | 76 |
| Column | C |
| Item | Cost of last rod packing replacement ($) |
| INGAA Question | |
| Comment (description) | Cost definition required. For example, Equipment and Labor. |
| Concerns with availability | |
| Recommendation (action) | Specifically define cost and provide columns as necessary. |
| Alternative (action) | |

| Tab | Comp |
|---|---|
| Row | 76 |
| Column | C |
| Item | Cost of last rod packing replacement ($) |
| INGAA Question | |
| Comment (description) | A new rod packing seal may not yet have been replaced; therefore, include "or installation" to this header. |
| Concerns with availability | May employ condition based maintenance prior to replacing rod packing and may still have original packing. Also, costs may not be tracked by the operator at this level of detail – e.g., costs may be in maintenance budget and/or labor hours may not be tracked. |
| Recommendation (action) | "Cost of last rod packing replacement or installation ($)." Clearly indicate that respondents may provide an engineering estimate. |
| Alternative (action) | |

| Tab | Comp |
|---|---|
| Row | 76 |
| Column | B |
| Item | Date of last rod packing replacement |
| INGAA Question | |
| Comment (description) | A new rod packing seal may not yet have been replaced; allow n/a and trigger a negation of the cost field. |
| Concerns with availability | |
| Recommendation (action) | Provide n/a option for date of last rod packing replacement and trigger a negation of the cost field. |
| Alternative (action) | |

| Tab | Comp |
|---|---|
| Row | 77-82 |
| Column | D |
| Item | Frequency of rod packing replacement |
| INGAA Question | |
| Comment (description) | Include "other" as an option in the pull down, and a column to specify.<br>For example, the NSPS Subpart OOOOa criteria is 26,000 operating hours or 36 months. |
| Concerns with availability | |
| Recommendation (action) | Include "other" as an option in the pull down, and a column to specify<br>(e.g., Condition Based Maintenance - CBM - may be used). |
| Alternative (action) | |

| Tab | Blowdowns |
|---|---|
| Row | 5-12 |
| Column | B-J |
| Item | Blowdown information |
| INGAA Question | |
| Comment (description) | These fields are included in Subpart W for compressor stations and should be pre-populated by the EPA if the facility is subject to Subpart W reporting. |
| Concerns with availability | |
| Recommendation (action) | Pre-populate cells for Subpart W facilities. |
| Alternative (action) | |

| Tab | Blowdowns |
|---|---|
| Row | 14-22 |
| Column | A-D |
| Item | Hot taps or other practices |
| INGAA Question | Is this applicable to T&S?<br>Is it intended for upstream?<br>Can T&S omit? |
| Comment (description) | If used, these "practices" most likely apply for pipeline and not the compressor stations, etc. Clarification of action is needed. Example operations could include: isolating customers to conduct a maintenance blowdown; taps for new costumers or suppliers. What is covered by this item? |
| Concerns with availability | In many cases, the volume released to atmosphere may not be tracked and thus not readily available. |
| Recommendation (action) | Black out these cells if Compressor station, storage, etc. is selected. Should only be filled in if "Pipeline" facility. |
| Alternative (action) | |

| Tab | Blowdowns |
|---|---|
| Row | 19 |
| Column | A |
| Item | Use pipeline pump down techniques |
| INGAA Question | |
| Comment (description) | Include option of "Recompression with Multiple Lines" as an additional row. This option is different from "Use pipeline pump down techniques." |
| Concerns with availability | |
| Recommendation (action) | If retained, add row "Recompression with Multiple Lines." |
| Alternative (action) | |

| Tab | Blowdowns |
|---|---|
| Row | 20 |
| Column | A |
| Item | Use flexible membrane liners (pipelines) |
| INGAA Question | |
| Comment (description) | Include option of "Mechanical or Composite Sleeve" as an additional row. This option is different from "Membrane Liners." The "unit of measure" is not clear and "miles of pipe" should be replaced with "number of events" for mechanical or composite sleeves. |
| Concerns with availability | |
| Recommendation (action) | If retained, add row "Mechanical or Composite Sleeve." Unit of measure should be number of events/applications rather than miles of pipe. |
| Alternative (action) | |

| Tab | Blowdowns |
|---|---|
| Row | 21 |
| Column | A |
| Item | Inspect/repair leaking (not fully sealed) PRD and blowdown valves |
| INGAA Question | |
| Comment (description) | This is a "leak" question (i.e., valve not sealed) and not a "blowdown" event question. In addition, inspection and repair frequency may differ. |
| Concerns with availability | Data on volume is difficult to determine and not available. |
| Recommendation (action) | Delete question (Leaks are addressed in other form). |
| Alternative (action) | If retained, move this to the equipment leaks form.<br>Differentiate frequency of inspection and frequency of repair. |

| Tab | Blowdowns |
|---|---|
| Row | 22 |
| Column | A |
| Item | Other (specify) |
| INGAA Question | |
| Comment (description) | Need an entry field to specify the type of "other." |
| Concerns with availability | |
| Recommendation (action) | If retained, add row/column for "other" entry. |
| Alternative (action) | |

| Tab | Control Devices |
|---|---|
| Row | 3 |
| Column | A |
| Item | Number of control devices at the facility |
| INGAA Question | |
| Comment (description) | The intro page describes a control device as a flare, incinerator or vapor recovery unit. Control device is not defined on the definitions page. Definition required to answer "number of devices." |
| Concerns with availability | |
| Recommendation (action) | Clarify "or other add-on control devices." |
| Alternative (action) | |

| Tab | Control Devices |
|---|---|
| Row | 5 |
| Column | A |
| Item | **2. General Control Device Information - Complete for each Control Device:** |
| INGAA Question | |
| Comment (description) | Each control device is employed with a piece of equipment as a system. The context or application of a control device is essential to assessing the control device. Include information on the reason for the device installation and the equipment it is tied to. |
| Concerns with availability | |
| Recommendation (action) | **2. General Control Device Information - Complete for each Control Device/Equipment Pairing:** |
| Alternative (action) | |

| Tab | Control Devices |
|---|---|
| Row | 26 |
| Column | C-F |
| Item | **3. Control Device Cost Information - Complete for each Control Device:** |
| INGAA Question | |
| Comment (description) | Costs may not be available in the event of acquired assets. |
| Concerns with availability | Burden to estimate cost information for each control device. Additional time is required to respond to such requests. |
| Recommendation (action) | Allow the use of engineering estimates. |
| Alternative (action) | |

| Tab | Control Devices |
|---|---|
| Row | 28-45 |
| Column | E |
| Item | Annual Operating and Maintenance Cost ($/yr in 2015) |
| INGAA Question | |
| Comment (description) | A gas value is required to calculate the $/yr per the example. |
| Concerns with availability | |
| Recommendation (action) | Define gas value ($). |
| Alternative (action) | |

| **Tab** | **Control Devices** |
|---|---|
| **Row** | 28-45 |
| **Column** | D |
| **Item** | Total Capital Installed Cost |
| **INGAA Question** | |
| **Comment (description)** | For older equipment, this may not be available. Older equipment would also not provide an accurate cost estimate compared to current costs. |
| **Concerns with availability** | For older equipment, this may not be available. |
| **Recommendation (action)** | This question should only apply to certain control devices constructed after a defined date. |
| **Alternative (action)** | |