Oil and Gas ICR Comment Summary

Comment ID	Comment Summary	EPA Response/Action Taken
	Timing	
-0008, 9, 10, 11 (dup 16), 13 (dup 17), 15, 18, 35, 53	Requested more time (either 30-days or 60-days) to comment on the ICR.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0007, 21, 27, 28, 29, 30, 31, 34, 35, 36, 40, 41, 42, 45, 46, 48, 49, 50, 51, 52, 54, 58, 59, 60 (dup 62), 61, 65, 70	Request for more time to respond to each part of the ICR. Reasons include: • Location and consistency of data across several databases and hard copy records • Data collection and sampling efforts • Inclement weather during field work • Avoid overlap with GHGRP and permit compliance reports • Avoid winter heating season where personnel are already stretched thin • EPA's intent to mail Part 1 will reduce response time • Significant field work and travel time on respondents • Holiday seasons, personnel vacations • Operators have more than 30 facilities • Due to the need to hire contractors to complete this work, need additional time to draft contracts/get contracts in place • Using the same system for both the ICR responses and the GHGRP reporting risks overloading the e-GGRT system and the third-party help desk contracted by EPA. • Industry is generally not familiar with the CARB sampling methodology, a method, as discussed infra, that is not typically used by	While EPA acknowledges commenters' concerns with completing the ICR within the required timeframe, the response deadline will remain at 30 days (Part 1) and 120 days (Part 2) past receipt of the final ICR (see Comment Response Memo).

Comment ID	Comment Summary	EPA Response/Action Taken
	the laboratories relied on for analysis. • Extend deadline to allow sufficient time for the agency to compile a representative sampling pool for gathering and boosting stations. • October 30th is not a business day.	
-0021, 27, 28, 29, 30, 31, 34, 36, 40, 41, 46, 48, 49, 50, 51, 52, 54, 58, 59, 60 (dup 62), 61, 65, 70	Requested Time Frames: -0028, 29, 30, 48, 49, 51, 61 = Allow 180 days to respond to both parts of the ICR. -0070, 46, 52 = Allow 240 days to complete both parts -0050 = Allow 60 days for Part 1. -0036 = Allow 90 days for Part 1. -0040 = Allow 60-120 days for Part 1 -0034 = Extend Part 1 deadline to February 27, 2017. -0021, 41 = Allow 180 days for Part 1 (April 2017). -0036, 40, 50, 59 = Allow 180 days for Part 2 (April 2017). -0021, 27, 31, 34, 54, 58 = Extend Part 2 deadline to June 2017 (8 months). -0041 = Allow 1 year for Part 2.	While EPA acknowledges commenters' concerns with completing the ICR within the required timeframe, the response deadline will remain at 30 days (Part 1) and 120 days (Part 2) past receipt of the final ICR (see Comment Response Memo).
-0028, 36, 48, 59	ICR should be conducted in two separate phases; Finish Part 1 and learn from it to create final Part 2.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0028, 29	EPA/OMB does not have enough time to analyze all of the submitted comments.	EPA has analyzed all submitted comments to the Oil and Gas ICR.
-0028, 29, 30, 48, 51, 59	Deadlines for both Part 1 and Part 2 should be the same, as any analysis of the ICR will incorporate both Part 1 and Part 2 data.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0035	ICR was published on the same day as final OOOOa, which did not allow for full industry engagement on the ICR.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0037, 39, 43,	EPA should work move as quickly as possible to	The response deadline will remain at 30 days (Part 1) and 120

Comment ID	Comment Summary	EPA Response/Action Taken
47, 55, 56	gather data through the ICR.	days (Part 2) past receipt of the final ICR (see Comment Response Memo).
-0036	Clarify whether the surveys will be sent simultaneously.	Part 1 and Part 2 of the ICR will be sent simultaneously.
-0046, 52	EPA should delay the Part 2 ICR surveys at least until after companies report gathering and boosting facilities under the GHGRP in March of 2017. Doing so will provide EPA a more comprehensive list of gathering and boosting companies.	While EPA acknowledges commenters' concerns with completing the ICR within the required timeframe, the response deadline will remain at 30 days (Part 1) and 120 days (Part 2) past receipt of the final ICR (see Comment Response Memo).
-0020, 36	Postpone the ICR until after OOOOa information is received and evaluated.	While EPA acknowledges commenters' concerns with completing the ICR within the required timeframe, the response deadline will remain at 30 days (Part 1) and 120 days (Part 2) past receipt of the final ICR (see Comment Response Memo).
	Burden Estimates	
-0007, 21, 28, 29, 35, 36, 40, 41, 42, 45, 46, 48, 49, 50, 51, 52, 54, 58, 59, 60 (dup 62), 61, 65, 70	ICR will be burdensome / more burdensome than projected Part 1 ICR cost/time estimate is low. Reasons include: • Insufficient time assumption per operator • Underestimated time/cost for EPA to review submitted materials Part 2 ICR cost/time estimate is low. Reasons include: • Calculation error in Total Labor Cost/Activity • Underestimated cost of tank liquid sampling and analysis (at least $2600/sample) • Did not include costs associated with internal database modifications that will be required to comply with the ICR • Did not include costs associated with the increased personnel hours needed to obtain	EPA has revised the burden estimate to reflect all changes to the ICR.

Comment ID	Comment Summary	EPA Response/Action Taken
	the information • Underestimated hours per facility (should be 15-25) • EPA does not consider the planning, travel and other logistical requirements to complete field visits • The analysis fails to consider that technical expertise (e.g., third parties) may be required to execute these activities in many cases. • The definitions and equipment categories 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. • Estimate for reading/understanding instructions is too low • EPA underestimates the prevalence of equipment at T&S segment facilities. • EPA underestimated the time required for equipment leaks (Collection activity 2H), blowdown events (2I), pneumatic counts (3A), and equipment counts (3B). • Two separators and four tanks are an appropriate estimate for the gathering and boosting ("G&B") sector. It is not appropriate to assume that there are the same number of separators and tanks at processing facilities as there are at G&B sites. • EPA is failing to take into account the varying	

Comment ID	Comment Summary	EPA Response/Action Taken
	number of pneumatic devices per site • Less than half of G&B sites will have an AGRU on site. EPA's estimate that half of the processing sites will have AGRUs is reasonable. • EPA's estimate that half of the G&B sites will have a dehydrator unit is an underestimate. • EPA's estimate of one dehydrator per processing site is an underestimate. • EPA does not specify what the makeup is of the four compressors assumed to be at a site. EPA should clarify whether it is four reciprocating compressors, four centrifugal compressors, or a combination of both. GPA Midstream estimates that 10 compressors per processing plant is a more appropriate estimate. • Using the same basis for all industry sectors is inaccurate, as it does not accurately reflect differences among sectors. • One flare and one vapor recovery unit ("VRU") may be an appropriate estimate for the G&B sector, but the same estimate is not appropriate for processing. • Actuation Consumption Rate is not known or readily available. EPA only estimated 0.5 hours of instrument tech time and 0.5 hour of engineer time per actuator in overall burden estimates which significantly underestimates the level of effort required to complete this information and is unrealistic for the effort involved for data collection.	

Comment ID	Comment Summary	EPA Response/Action Taken
	General reasons: • Should be reevaluated to include cost for facilities that are not automated or that do not have remote monitoring • Did not include additional time for data validation • Contractor costs, especially if many operators are trying to hire the same contractors • Did not include additional time for e-GGRT submittal EPA must consider that burden and provide adequate additional time for recipients operating more than 500 facilities to provide the response to the ICR.	
-0029, 40	Cost could be reduced by reducing number of operators being required to submit information. Within EPA's statistical review, EPA data indicated that statistically reliable information could be acquired with 1/7th the number of surveys.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0031	EPA underestimated time and cost required for the field physical counts of all equipment components >5 wt % of any VOC, CH4, CO2 at each facility. Actual time ranged from 20-40 hours/facility. Total cost could range up to $4,500/facility.	EPA has revised the burden estimate to reflect all changes to the ICR.
-0040	Sampling and analysis of feed material was not included in the time and cost estimates in any states except California.	EPA has included sampling and analysis for all states in the burden estimates.
-0050, 49	Modify both cost and time burden for completing the equipment leak survey. LDAR requirements do not currently apply to all operators across all jurisdictions, and many who are subject to LDAR are not collection certain types of the information	EPA is requesting data from previous leak surveys to be provided in Part 2 of the ICR. EPA is not requiring facilities to complete any additional leak surveys.

Comment ID	Comment Summary	EPA Response/Action Taken
	requested. This would require additional costs, such as hiring and training contractors, transportation of OGI equipment to new locations, and compensating employees needed to conduct the surveys.	
-0064, 59	EPA needs to provide information supporting the validity of their assumption of two wells per facility. The assumption of two wells per facility is grossly underestimated, therefore the corresponding burden and costs would also be vastly understated.	EPA based the assumption of 2 wells per facility from the NSPS OOOOa technical support document. We have revised the definition of facility for production facilities, referred to as the "well site facility" to be similar to the well site definition in NSPS OOOOa. The well site facility consists of a well surface site and its centralized production surface site. By aligning the facility definition for production facilities with the well site definition in NSPS OOOOs, we consider the analysis conducted to establish the average of two wells well site to be directly applicable to the impact estimates for this ICR.
	Statistical Sampling Approach	
-0061	Support for a modified GOR approach for Part 2: • Add "Stripper Wells with low production" • Increase margin of error for populations with low variability from 10% (suggested 20% or 30%) • Allowing a voluntary process for operators to correct contact information, therefore reducing the need to arbitrarily increase the number of ICRs mailed above the statistical estimates (see mailing list comment)	EPA has amended the statistical sampling approach to include "Stripper wells, production ≤ 15 BOE/day." See Comment Response Memo for more information. EPA will allow operators to review and correct contact information prior to sending out Part 1 and Part 2 of the ICR. Operators should visit https://oilandgasicr.rti.org/ before October 30, 2016 to make any necessary corrections.
-0038	The population distribution is skewed and better modeled as log-normal rather than Gaussian. A relatively small number of sources contribute a large fraction of the emissions. With a heavy-tailed distribution that is skewed to the right, use of the population median multiplied by the total number of	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	facilities will substantially underestimate total sector emissions.	
-0038	Based on the Proposed ICR, it appears that there will be a single parameter selected from each population subgroup for which a mean value will be computed. ODEQ requests clarification as to which parameter EPA is investigating. If more than one parameter is being investigated, ODEQ is requesting additional clarification of the statistical approach.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0038	Although the arithmetic mean is the appropriate measure for use in scaling emissions to estimate sector-wide emissions (a bottom-up estimate), the skewed nature of the distribution makes it likely that the standard deviation of the mean wellhead facility GHG emissions will be found to exceed the mean emission rate. This property is mentioned in the Supporting Statement where the ratio of the standard deviation to the mean value was assumed to be 3, because “emission values often vary over 4 to 5 orders of magnitude”. Supporting Statement for Public Comment: Information Collection Effort for Oil and Gas Facilities (2016) at 21. Use of standard statistical descriptors like the mean value +/- standard error (with symmetrical error bars) may yield a negative value for the low end of the range. This is impossible, because facility GHG emissions must be zero or positive.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0038	No more than 5% of the total number of detailed surveys should target wells drilled in 2011 or later. A substantial number of emission units (e.g., tanks, pneumatic devices, etc.) located at facilities associated with wells completed after August 23,	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	2011 are subject to New Source Performance Standards. In some state programs, these wells are permitted and have been inventoried in detail as point sources, with the emissions from those facilities well characterized.	
-0038	Samples should be stratified in a two-tier approach: by the age of the wells (primary stratification) and by basin (second level of stratification). Gathering data on formation types would be helpful, but should not be used to stratify the population. Similarly, absolute production data (i.e., not just the GOR ratio) would also be gathered for each response to the detailed survey. EPA should target older wells for which little information is available.	EPA will sample based on the explained GOR approach. See Comment Response Memo for more information.
-0050	General support of stratification of operator population by geographical region for Part 2. The regulatory environment is driven by region, not GOR range.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	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.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0068	Alternative approach: • EPA categorize wells according to three broad factors—well production level, whether a well reports to Subpart W, and the geological basin in which a well is located — and tailor its sampling approach to each category. Suggested approach results in 18 total strata	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	that capture these distinctions. • EPA consider using available emissions and production information to tailor the sampling approach for particular well types within each stratum: - Non-marginal reporters – For this stratum, Subpart W provides information for each operator on average emissions per well. Therefore, we propose that EPA sample proportionally to average well emissions, which means higher emitters are more likely to be selected for the survey. - Non-marginal non-reporters – For higher producing wells that do not report to Subpart W, EPA should sample proportionally to production. - Marginal wells (both reporters and non-reporters) – The characteristics of marginal oil and gas wells may be different. For instance, marginal oil wells may not be connected to gas gathering infrastructure and so can have emissions from casing head gas, tank vapors, and equipment leaks. Also, neither GOR nor production is a good metric to tailor sampling from these sources. For these reasons, we suggest simple random sampling from these strata. • For the remaining industry segments, we do not propose additional stratification, although for certain segments, we recommend that EPA pursue an emissions-based sampling approach in which Subpart W provides	

Comment ID	Comment Summary	EPA Response/Action Taken
	additional data and distinct approaches where the universe of facilities is small or the agency is still in the process of collecting Subpart W information. - For the Natural Gas Processing, Transmission, and Underground Storage strata, we recommend EPA pursue an emissions-based sampling methodology, leveraging facility-level data from Subpart W. - For the Gathering and Boosting and Natural Gas Transmission Pipeline Facility strata, we support EPA retaining its proposed approach, focusing on simple random sampling. - For LNG storage and LNG import/export facilities, due to the small population of facilities, we support EPA's proposal to perform a census—that is, to include all facilities in the sample.	
-0049	EPA should develop a methodology to avoid disproportionately burdening a particular operator with an overwhelming number of requests.	The burden that a company experiences will be proportional to number of facilities that company operates. EPA is requesting a *representative* sampling of facilities, which will not necessarily be spread burden evenly across operators.
-0049	EPA should avoid oversaturating a particular region with requests which could lead to a flawed understanding of industry operations and economics.	EPA will be sure that each basin is sampled proportional to the number of wells in each GOR range for each basin (proportioning method is described in the ICR Supporting Statement).
-0049	Alternative Option: Rather than guessing at what might be representative based on GOR or basin, we recommend that EPA base its selections on the Part I ICR responses. By analyzing that information, EPA will have a much better understanding of how to target Part II requests.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	It strikes us as a missed opportunity for EPA not to leverage the valuable information it is collecting under Part I, and is another reason the Part II data collection should occur after and not simultaneous with Part I.	
-0049	EPA should limit its request to areas designated in attainment or unclassifiable under the current Ozone National Ambient Air Quality Standard. This will facilitate EPA avoiding duplicative or confusing requirements for existing sources in nonattainment areas that are already regulated by states.	EPA is requesting information in both attainment and non-attainment areas to accurately account for all oil and gas operations in the country.
-0046	GPA Midstream requests clarification about whether the final sampling size will be adjusted once a more accurate number of facilities is established.	EPA will continue to employ the same method for determining sample size no matter what the population is. We also note that the number of facilities selected is quite independent of the actual number of facilities in the population when that population is large and it is the large industry segments with very large numbers of facilities where we have the greatest uncertainties in the number of facilities, so the number of samples from these population s is not expected to vary.
-0052, 46	EPA has not properly characterized the facility count for oil and gas industry sources. There is a high probability that EPA has under-counted facilities in the gathering and boosting segment. EPA should delay the ICR process pending EPA's collection of more accurate facility count data through the implementation of new GHGRP provisions applicable to the gathering and boosting sector	While EPA acknowledges commenters' concerns with completing the ICR within the required timeframe, the response deadline will remain at 30 days (Part 1) and 120 days (Part 2) past receipt of the final ICR (see Comment Response Memo).
	Mailing List	
-0049, 61	EPA should establish a voluntary process for operators to identify/correct the preferred contact prior to releasing the ICR.	EPA will allow operators to review and correct contact information prior to sending out Part 1 and Part 2 of the ICR. Operators should visit https://oilandgasicr.rti.org/ before

Comment ID	Comment Summary	EPA Response/Action Taken
		October 30, 2016 to make any necessary corrections.
-0027	Publish preliminary list of target facilities as part of next ICR public comment period.	EPA will allow operators to review and correct contact information prior to sending out Part 1 and Part 2 of the ICR. Operators should visit https://oilandgasicr.rti.org/ before October 30, 2016 to make any necessary corrections.
-0054, 58	EPA should mail or email each ICR letter to the appropriate company e-GRRT Designated Representative for the company that operates the facility targeted by the ICR. This will increase the probability of a high response rate to the ICR letters.	EPA will allow operators to review and correct contact information prior to sending out Part 1 and Part 2 of the ICR. Operators should visit https://oilandgasicr.rti.org/ before October 30, 2016 to make any necessary corrections.
-0054	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 burden that a company experiences will be proportional to number of facilities that company operates. EPA is requesting a *representative* sampling of facilities, which will not necessarily spread burden evenly across operators.
-0054	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.	EPA will consider use of "model facilities" once the ICR data has been received.
-0049	EPA should clarify that any party receiving either part is only required to respond and provide information for wells where it is the operator.	EPA will allow operators to review and correct contact information prior to sending out Part 1 and Part 2 of the ICR. Operators should visit https://oilandgasicr.rti.org/ before October 30, 2016 to make any necessary corrections.
	Part 1 Questionnaire	
	Instructions	
-0061	Update Part 1 instructions to include: • Clarify how/if wellhead only sites are connected to facilities • Scope of the Part 1 ICR should be limited to 2015 calendar year data	EPA has added definitions of "Well surface site" and "Centralized production surface site" to the ICR and removed the definition of "Facility" from Part 1 to provide clarity. EPA is requiring best available data as of November 1, 2016.
-0050, 49	Clarify that EPA is seeking information only on those wells operated by the company so as to eliminate duplicate reporting from both owner and operator.	EPA will allow operators to review and correct contact information prior to sending out Part 1 and Part 2 of the ICR. Operators should visit https://oilandgasicr.rti.org/ before

Comment ID	Comment Summary	EPA Response/Action Taken
		October 30, 2016 to make any necessary corrections.
-0050, 49, -0064	EPA should better define its scope so as to make clear whether it intends to include facilities that are connected but not collocated (and vice versa).	EPA has added definitions of "Well surface site" and "Centralized production surface site" to the ICR and removed the definition of "Facility" from Part 1 to provide clarity.
	Table 1: Parent Company General Information	
-0049	*a. General Facility Information* • Employee counts are not useful to EPA from an emissions perspective. Therefore it is recommended that EPA strike this request from the ICR. • Alternatively, EPA should instead focus on whether the respondent is a small business in order to more easily quantify the impact of the ICR on small businesses. To accomplish this, it is recommended that EPA indicate that the Small Business Administration's definition of a small entity is 1,250 employees excluding contractors and ask respondents to indicate whether they fall under this definition.	EPA has amended Table 1 to request "Average Number of Employees" and has provided a picklist of employee number ranges.
	Table 3: Facility Description	
-0061	Add basin level reporting to Part 1. Include the following: • Basin Identifier • Number of manned onshore well sites in basin • Is electrification from grid power available in basin? • Approx. number of wells that have access to gas infrastructure in basin Move "Is facility manned?" to basin level reporting (see above comment).	EPA has removed "Is the Facility Manned?" and "Does the facility have electricity?" from Part 1 of the ICR.

Comment ID	Comment Summary	EPA Response/Action Taken
	Move "Does the facility have electricity?" to basin level reporting (see above comment).	
-0061	If an operator owned the facility on December 31, 2015 then that operator would report readily available information for Part 1, as records and data are not typically available in a format that allows for a timely response after a purchase of an asset. • Step 3 should be modified to remove reference to 'managed' assets. Only the owner and operator as of December 31, 2015 should be required to report for Part 1 information. This will eliminate confusion for facilities with multiple operators and clarify who is responsible for reporting facilities that have joint owners, which are operated by one of the owners.	EPA is requiring best available data as of November 1, 2016.
-0050	Clarify whether EPA considers temporary generators to be connected to the electrical grid.	EPA has removed "Does the facility have electricity?" from Part 1 of the ICR.
-0050	Clarify what encompasses the electrical grid within the proposed ICR.	EPA has removed "Does the facility have electricity?" from Part 1 of the ICR.
-0049, 48	Recommend instead that EPA make availability of electricity part of its Part 2 request.	EPA has removed "Does the facility have electricity?" from Part 1 of the ICR.
-0049, 48	Recommend that EPA clarify that facilities not connected to the electrical grid but merely using temporary generators not be considered electrified. These generators do not necessarily remain onsite and may not have the capacity to operate instrument air pneumatic systems or other systems.	EPA has removed "Does the facility have electricity?" from Part 1 of the ICR.
-0061	Move "Distance from facility to field office (miles)" to Part 2	EPA has removed "Distance from facility to field office (miles)" from Part 1 of the ICR.
-0021, 61	In requesting the distance that a facility is from to a field office, is this the distance as the crow flies or the	EPA has moved "Distance from facility to field office (miles)" from Part 1 of the ICR to Part 2. Distances should be

Comment ID	Comment Summary	EPA Response/Action Taken
	driving distance?	measured as driving distance.
-0050, 49, 48, 59	Provide explanation on why "distance from facility to field office" is necessary to regulate methane and VOC emissions from O&G industry. • An employee or contractor will not travel to a facility, back to the field office, then on to the next facility, and so on, but will instead visit several facilities while away from the field office on a pre-planned route. Therefore, the distance to the nearest field office doesn't provide EPA with much insight into how field operations are conducted. • Recommend that the distance be the shortest year-round driving distance between a field office and the facility which would allow EPA to gain a better understanding of how easily accessible a facility is on a year-round basis. • EPA should have a pull down set of ranges that can be more simply answered (e.g., 0-10 miles, 10-25 miles, 25-50 miles, etc.).	EPA has moved "Distance from facility to field office (miles)" from Part 1 of the ICR to Part 2. Distances should be measured as driving distance. EPA has also added "How frequently is well site visited by field office personnel?" to Part 2 of the ICR.
-0050	Servicing staff is made up of a roving team of responders. Many times these responders are responding from his/her own house or another location as opposed to responding directly from the field office.	EPA has moved "Distance from facility to field office (miles)" from Part 1 of the ICR to Part 2. Distances should be measured as driving distance. EPA has also added "How frequently is well site visited by field office personnel?" to Part 2 of the ICR.
-0061	Move "Distance from facility to nearest natural gas gathering line (miles)" to Part 2. • The information should only be requested for oil wells with associated gas that are not connected to a gas gathering line.	EPA has moved "Distance from facility to nearest natural gas gathering line (miles)" from Part 1 of the ICR to Part 2. EPA has clarified that this information should only be provided if well sites are not connected to a gathering and boosting or transmission pipeline.
-0021	In requesting the distance that a facility is from the	EPA has moved "Distance from facility to nearest natural gas

Comment ID	Comment Summary	EPA Response/Action Taken
	nearest gas gathering line, is this the distance as the crow flies or the distance of a feasible pipeline route to that gathering line?	gathering line (miles)" from Part 1 of the ICR to Part 2. EPA has clarified that this information should only be provided if well sites are not connected to a gathering and boosting or transmission pipeline. Distances should be measured as driving distance.
-0050, 49, 48, 59	Provide explanation on why "Distance from facility to nearest natural gas gathering line" is necessary to regulate methane and VOC emissions from O&G industry. • All natural gas wells should be exempted from this requirement, as no rational operator would develop a natural gas well without takeaway capacity, and reporting the distance to gas gathering lines is not a worthwhile exercise. • An oil well that is connected to gas gathering should simply be able to satisfy EPA with a yes or no answer. • If an operator has an existing contract with a specific midstream operator to tie in all wells in an area to their pipeline, there may be a closer gathering line that the survey respondent is not going to connect to for contractual or logistical reasons. Reasons could include not having rights-of-way to connect to the closest gas gathering line, or having gas that is not of sufficient quality to connect to the nearest gathering line. • Calculating distance to natural gas gathering lines creates a burden on respondents to locate irrelevant lines that far outweighs the useful benefit of this information. In many instances,	EPA has moved "Distance from facility to nearest natural gas gathering line (miles)" from Part 1 of the ICR to Part 2. EPA has clarified that this information should only be provided if well sites are not connected to a gathering and boosting or transmission pipeline. EPA has also requested reasoning for any lack of connection.

Comment ID	Comment Summary	EPA Response/Action Taken
	operators are contractually obligated to use a particular midstream gas gathering company. Additionally, many marginal oil wells do not produce enough gas to warrant a midstream company to invest in gas gathering lines. • A more appropriate question is whether the facility is connected to a natural gas sales line, rather than distance to the nearest gathering line.	
-0064	From which point of the hundreds of wells, or other associated equipment, would one measure the distance to the nearest gathering line?	Facilities should measure the distance to the nearest natural gas transmission or gathering and boosting pipeline from the centroid of the wells.
-0050, 48	EPA should request information on whether a facility is connected to a natural gas sales line. (*instead of distance to gathering line*).	EPA has amended Part 2 of the ICR to request "Quantity of natural gas leaving the facility (sales) in the 2015 calendar year (thousand standard cubic feet)."
-0048, 49, -50, 59, 61	To reduce burden on operators to collect data that cannot inform a rulemaking and without an identifiable benefit, collecting liquids unloading data should be removed from Part 1. • The mere occurrence of liquids unloading reveals little information of use to EPA, as it does not address the timing, frequency, technique, or other pertinent information about the process. • The data in Part II would prove much more useful than the data in Part I. We encourage EPA to remove liquids unloading from Part I requirements. • Liquids unloading will be highly variable over the life of the well and can change in response to shut-ins and other events. • The regulation of liquids unloading is not	EPA has removed the collection of liquids unloading data from Part 1 of the ICR.

Comment ID	Comment Summary	EPA Response/Action Taken
	suitable for a standard, industry-wide regulation.	
-0021	In requesting whether wells conduct liquids unloading can EPA be more specific as to what they are looking for. Oil wells are continually unloading liquids as a form of production. Only dry gas wells do not unload liquids.	EPA has removed the collection of liquids unloading data from Part 1 of the ICR.
-0061	Is there a flare or thermal combustor present at the facility?' should be removed from the Part 1 ICR. The presence of a flare or thermal combustor is not a useful data parameter in the current format for Part 1 since the form does not identify the emission source that is controlled.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0067	EPA should refine its question in Part 1, Question 3 and replace with the following three questions: • Is there a flare present at the facility? • Is there an internal thermal combustor present at the facility? • Is there a vapor recovery unit present at the facility?	EPA has amended Part 1 of the ICR to include "Is there a flare or thermal combustor present at the surface site?"
-0068	Add the following questions to Table 3: • Latitude and Longitude of facility • If the facility is unmanned, how often does an operator visit the site? (Number of visits per year) • Is this facility connected to a natural gas gathering line? • Does this facility vent associated gas? If so, how much was vented in 2015? • Does this facility flare associated gas? If so, how much was flared in 2015? • Does this facility produce water?	EPA has amended Part 1 of the ICR to include "Latitude of surface site centroid (degrees decimal)" and "Longitude of surface site centroid (degrees decimal)." Part 2 now has a more detailed question regarding whether a facility is manned. EPA has also added "Is there a flare or thermal combustor present at the surface site?" to Part 1 of the ICR.
	Table 3: Equipment Counts	

Comment ID	Comment Summary	EPA Response/Action Taken
-0035	EPA is requesting the number of producing wells for a facility. Many wells are currently shut in due to the economic environment – the operating cost is greater than the revenue produced by the well. Does this count as a producing well? What time period should we consider for a producing well that has been shut in?	EPA has amended Part 1 of the ICR to request "Well Type" for each Well ID at a well surface site.
-0061, 48, -0035, 59, -0049	'Number of Capped or Abandoned Production Wells' should be removed from the ICR. Data for historically abandoned or capped wells may not be readily available, and in some instances, information may not exist. Information on many 'capped or abandoned wells' is unavailable due to divestitures, mergers, and bankruptcies. Furthermore, this information is not readily available on a per facility basis and will require a considerable amount of time to obtain.	Companies should provide best available data when responding to the ICR.
-0049	*h. Number of Separators* • EPA should revise the request to specify whether a separator is two-phase or three-phase.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0068	Add the following to the facility-wide equipment counts: • Number of water tanks <10 bbl/day • Number of water tanks ≥10 bbl/day • API gravity of hydrocarbon liquids going to the tank • Number of pneumatic devices • Number of dehydrators • Number of flares	EPA has amended Part 1 of the ICR to include number of dehydrators.

Comment ID	Comment Summary	EPA Response/Action Taken
	• Number of AGR units • Number of heaters/treaters • Number of headers • Number of metering skids	
	Table 3: Well Identification	
-0061	Add Well Classification parameter to align with the sampling approach selected for Part 2. API recommends the following categories: • Dry Gas • Wet Gas • Coalbed Methane • Associated Gas/Light Oil • Heavy Oil • Stripper	EPA has amended Part 1 of the ICR to request "Well Type" for each Well ID at a well surface site.
	Other/General	
-0021	EPA should be more specific regarding the information requested. Specifically how would EPA handle reporting the following situations? 1. A compressor is located on the well pad of well A. This compressor is a gas lift compressor that provides gas lift to wells B and C. This is a small compressor that is not required to be permitted and receives gas from a gathering line and is not tied to well A in anyway. Wells B &C flow to a central tank battery different from well A. How would this "facility" be reported in the Part 1 information request? 2. A centralized gas lift facility with multiple compressors provides gas lift to potentially 50 wells. These 50 wells flow to 20 different intermediate pads with the initial separation equipment on them and then to 4 different centralized tank batteries. Do these wells need to be listed on the gas lift facility,	EPA has added definitions of "Well surface site" and "Centralized production surface site" to the ICR and removed the definition of "Facility" from Part 1 to provide clarity. 1. Assuming A, B, and C fit the definition of well surface site, then the o/o will have to report information on well surface sites A,B, and C in Part 1. The o/o will also report information on central tank battery and this will be considered a centralized production surface site. The compressor is part of Well Surface Site "A" and would be reported under well surface site A in Part 1. 2. Each of the 20 intermediate pads would likely be considered a well surface site and the o/o will have to fill out Part 1 as well surface sites, and each of the 4 centralized tank batteries would be a centralized production surface site and would be reported as such in Part 1. The centralized gas lift facility would also

Comment ID	Comment Summary	EPA Response/Action Taken
	the intermediate pad, and the individual tank batteries they flow to? How should this "facility" be reported in Part 1 of the information request? 3. In an area where the well head is on one pad, the production equipment (separator and heater treater) are located on an "intermediate pad", and the final separation and storage takes place at a centralized tank battery how should this be reported in the Part 1 information request given that intermediate pads don't have names and are low emission sites that often don't require permits? 4. At a location a compressor is used to boost pressure along a pipeline. The compressor is not attached to any particular well and does not require a permit. How would this facility be reported in Part 1 of the information request? Would we be required to list all the wells that are on that pipeline?	be considered a well surface site and these wells reported as injection wells. 3. All three appear to be independent surface sites. 4. If the compressor is before the point of custody transfer and on a surface site, then it needs to be reported as a surface site, if it is beyond the point of custody transfer, it would likely be considered a gathering and boosting station facility and would not be required to fill out Part 1.
-0064	The Part 1 and Part 2 spreadsheets envisions a maximum of approximately 20 wells at a facility. As established above, a facility can consists of hundreds or thousands of wells. If a facility has more than the 20 wells associated with a facility, will the Part 1 and Part 2 spreadsheets be unprotected?	EPA has amended Part 1 of the ICR to request information from "Well Surface Sites" and "Centralized Production Surface Sites." If additional rows/columns are required, facilities should contact EPA to request a larger/additional spreadsheet.
	Part 1 Definitions	
-0049	"API Well ID" and "US Well ID" are listed twice, despite seemingly being the same thing. We suggest EPA combine these definitions to avoid confusion.	EPA has included only the definition of US Well ID.
-0061	ATMOSPHERIC STORAGE TANK: • Heater treaters often refer to a separate heater designed to break emulsions, and are not always part of a tank system, so this reference should be deleted to avoid confusion.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
-0036, -0050, -0065, -0064	FACILITY: • EPA should adjust the definition of facility to fit the Source Determination Rule. • Or a different definition of facility should be used.	EPA has added definitions of "Well surface site" and "Centralized production surface site" to the ICR and removed the definition of "Facility" from Part 1 to provide clarity.
-0068	FLOWBACK: • The proposed definition of flowback only refers to natural gas wells, but oil wells also undergo flowback and produce flowback fluids. The proposed definition should be expanded to also include oil wells.	EPA has amended the definition of "Flowback" to include oil wells.
-0050	GAS-TO-OIL RATIO: • **Recommendation**: *Gas-to-Oil Ratio – the ratio of the amount of hydrocarbon gas that is generated by the decrease in pressure or increase in temperature to standard conditions to the amount of hydrocarbon liquid that remains after the gas has been liberated.*	EPA has revised the definition of gas-to-oil ratio after considering this and other comments on this definition for Part 2..
-0068	HYDRAULIC FRACTURING: • The current proposed definition includes the phrase "pressurized fluids containing any combination of water, proppant, and any added chemical" (emphasis added), but water is not the only base fluid used in hydraulic fracturing; some operations use gas or a mixture of gas and water as the base fluid. • The current proposed definition specifies that hydraulic fracturing is used to penetrate "tight formations," but does not define this term. Hydraulic fracturing is also used in conventional formations with higher	EPA has amended the definition of "Hydraulic Fracturing" to include all types of fracturing.

Comment ID	Comment Summary	EPA Response/Action Taken
	permeability (for example, to bypass formation damage near the wellbore). • The current proposed definition includes the phrase "subsequently require high rate, extended flowback to expel fracture fluids and solids during completions." The terms "high rate" and "extended" are vague and undefined. Additionally, not all fracturing jobs may require "high rate" or "extended" flowback, particularly lower-volume hydraulic fracturing. • EPA should collect data on all types of fracturing, not only high-volume, high-pressure fracturing which occurs in unconventional reservoirs, and should revise the definition.	
-0061	INJECTION WELL: • Injection wells as utilized in the well site definition in Part 1, Table 3 should be limited to wells that store natural gas or carbon dioxide in depleted natural reservoirs. • **Recommendation:** *Injection Well – Underground Injection Control (UIC) permitted well intended to store natural gas or carbon dioxide in depleted reservoirs. It does not include wells permitted for produced water or O&G waste disposal, injection of fluids (i.e., water, steam or carbon dioxide) for the purpose of Enhanced Oil Recovery (EOR), or to inject crude oil, condensate, or LPG into salt dome for storage purposes.*	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	MANNED FACILITY:	EPA has moved manned facility to Part 2.

Comment ID	Comment Summary	EPA Response/Action Taken
	• EPA should define the minimum expectation for operators to determine if a facility is "manned". • **Recommendation:** *Manned Facility – Any facility that is visited by employees for at least 40 hours per week.*	
-0061	ONSHORE PETROLEUM AND NATURAL GAS PRODUCTION FACILITY: • Since the definition requires the facility to have a well that produces crude oil and/or natural gas, then a more appropriate term for this definition would be "onshore production well facility". • Producing wells may be co-located with other facilities such as a compressor station, central tank battery, or gas processing plant that processes crude oil and natural gas from other locations. The current definition of facility would include this equipment that is not the target of Part 1 surveys. This confusion could be eliminated by including "from wells located on that surface site and" before the phrase "located at the facility" at the end of the current definition.	EPA has deleted the word "facility" from this term and revised its definition to define the production industry segment. We also removed the definition of "facility" from Part 1 and added definitions of "Well site facility," "Well surface site" and "Centralized production surface site" to the ICR to provide clarity for information requested in the Part 1 survey.
-0061	ONSHORE: • EPA should clarify that platforms, production barges, or other operations not accessible by roads are not within the scope of the ICR.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	SEPARATOR: • Separator is a general term that typically means any vessel that separates phases (either gas from liquid or hydrocarbon liquid from	EPA has considered and evaluated this comment. For the purpose of this ICR, we specifically want the term separators to refer to vessels that perform gas-liquids separation. We have generalized this definition to note that the gas may be

Comment ID	Comment Summary	EPA Response/Action Taken
	aqueous liquid) by differences in density. The definition provided is much narrower and is better described by the term "production or inlet separators". • The phrase "whose liquid portion flows directly to an atmospheric storage vessel" should be added at the end of the definition to exclude separators that do not feed liquid directly to an atmospheric storage vessel.	separated "from one or more liquid fluids."
-0036	SEPARATOR: • Should exclude the term "tank" • **Recommendation**: *Separator – a cylindrical or spherical vessel used to separate oil, gas, and water from the total fluid stream produced by a well.*	EPA has adjusted the definition of Separator to mean, "A process vessel specifically designed to separate gaseous fluids from one or more liquid fluids produced from a well or as received via a pipeline. Generally, separators are operated at pressures greater than ambient air pressure."
-0061	STRIPPER WELL: • **Recommendation:** *Stripper well – Any gas or oil well with total production of natural gas and hydrocarbon liquids (i.e., crude and/or condensate) of 15 barrels oil equivalent (boe) per day or lower.*	EPA has adjusted the definition of Stripper well to mean, "A well that produces 15 barrels of oil equivalent (BOE) or less per day on average over a 12-month period."
	WELL SHUT-IN PRESSURE: • **Recommendation**: *Well Shut-In Pressure – The surface force per unit area exerted at the top of the wellbore when the wellhead valve is closed for 12 hours.*	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	WELL-SITE: • The term "injection well" should be removed from the definition of well-site, as gas injection wells are not found at production sites and more commonly are found at natural gas storage facilities.	EPA has added definitions of "Well surface site" and "Centralized production surface site" to the ICR and removed the definition of "Facility" from Part 1 to provide clarity.

Comment ID	Comment Summary	EPA Response/Action Taken
-0048	The definition of "onshore petroleum and natural gas production facility" and "facility" in Part 1 needs to be removed to avoid confusion and inconsistencies in information received. EPA defines several terms that make it confusing for operators to interpret the data requested by facility in Part 1. Specifically, EPA defines "facility", "well site", and "onshore petroleum and natural gas production facility" in Part 1, but these definitions are not consistent and could lead operators to inconsistently report Part 1 data due to the conflicting definitions. We are concerned that these terms will cause confusion over which pieces of equipment are intended to be included, and where the boundary should be drawn for reporting.	EPA has deleted the word "facility" from this term and revised its definition to define the production industry segment. We also removed the definition of "facility" from Part 1 and added definitions of "Well site facility," "Well surface site" and "Centralized production surface site" to the ICR to provide clarity for information requested in the Part 1 survey.
	Part 2 Questionnaire	
	Instructions Tab	
-0031	EPA should provide additional clarification of date period of information requested in the intro tab and each equipment tab. Only blowdowns have been specified as 2015 data.	EPA has amended the ICR to request RY 2015 data, when applicable.
-0049	EPA clarify that only wells and equipment operated by the company are included in the company's response to EPA which will avoid duplicative reporting by both the owner and operator	EPA will allow operators to review and correct contact information prior to sending out Part 1 and Part 2 of the ICR. Operators should visit https://oilandgasicr.rti.org/ before October 30, 2016 to make any necessary corrections.
-0061	If an asset changed ownership after December 31, 2015, then the facility should not be considered within the scope of the ICR survey. Former owners and operators should not be required to provide information about facilities no longer under their control, even if some information is retained after closing. This is consistent with the transition requirements in the GHGRP.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
-0061	EPA should provide more detailed instructions for responding to each data element of the ICR to ensure operators have a clear understanding of the data EPA is requesting on each response tab.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	Shifting information from the Intro tab to the appropriate sheets would facilitate responses.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	The introduction must contain detailed information on how to make the submittal using the e-GGRT system, including user registration for those not already in the system	EPA agrees with this comment and has implemented this suggestion. e-GGRT directions will supplied with the ICR.
-0046	Edit the Questionnaire Introduction/Instruction Sheet for “Tank Separators” as follows: This information should be completed for all atmospheric storage vessels at the facility, including produced water, condensate, or hydrocarbon storage vessels except for tanks used to store glycol (including, but not limited to, ethylene glycol, triethylene glycol and propylene glycol), antifreeze, lube oil, used oil, amine (including diethanolamine and diethylamine), methanol, corrosion inhibitors (including H2S scavenger), solvent, diesel (or generator fuel), and water treatment chemicals and other auxiliary tanks.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0064	EPA should only require Part 2 to be completed for two wells and associated production equipment regardless of the total number of wells within the contiguous property. This would be consistent with the evaluation EPA performed for the ICR. The EPA should default to the operator to select the second well (EPA will provide the API well number for the first) which will be included in the Part 2 response or the EPA should provide guidance on how to select	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	which two wells should be included in the response.	
	Acronyms/Definitions Tab	
-0054	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.	EPA has reviewed all acronyms within Part 2 of the ICR to assure that they are defined in the Acronyms Tab.
-0064	It should not be assumed that terms such as "abandoned well" or "well pad" are consistent across the oil and gas industry or consistently understood by the various entities that regulate oil and gas facilities.	EPA is no longer using the term "well pad" and is using the term "plugged" or "plugged/abandoned" and has added a definition of "Plugged well".
-0049	"Oil Well/Oil Reservoir" and "Gas Well/Gas Reservoir" definitions in their current forms will create confusion and should instead be amended to match state or land agency definitions.	EPA has considered and evaluated the impacts of this comment. We need each respondent to use consistent definitions for these terms consistent with our GOR groupings so we are not revising these definitions.
-0027	EPA should provide clarification/distinction between production well sites and storage wellheads, particularly with respect to the "Well Site" definition and the "Well Sites" tab. Commenter is unsure if "Well Sites" tab in applicable to storage operations.	EPA has added the Injection-Storage Wells Tab to account for storage operations.
-0064	Definitions should be provided for terms such as "manned", "field office", "general office", "well pad", "capped well", "abandoned well", "injection well", "process tank", "gathering line", "major process equipment", "leak", "dump valve", amongst others.	EPA has considered this comment and has included some additional definitions as appropriate.
-0046	The following terms do not have definitions: • Equipment Leaks: "Gas Service," "LNG Service," "Light Crude Service," and "Heavy Crude Service" (40 CFR 60.481a, NSPS Subpart VVa has definitions for "In gas/vapor	EPA has considered this comment and has included some additional definitions as appropriate.

Comment ID	Comment Summary	EPA Response/Action Taken
	service," "In heavy liquid service," and "In light liquid service." 40 CFR 60.5430a, NSPS OOOOa has a definition for "In light liquid service." GPA Midstream is not aware of a definition for "LNG Service") • Tanks Separators: "Floating Roof" (40 CFR 60.111, NSPS Subpart K has a definition for "Floating Roof") • Tanks Separators: "Gasketted, lockdown thief hatch," "Ungasketted, lockdown thief hatch," "Gasketted, spring-loaded thief hatch," "Ungasketted, spring-loaded thief hatch," "Gasketted, dead-weight thief hatch," "Ungasketted, dead-weight thief hatch." GPA Midstream is not aware of where these terms are currently defined. • Tanks Separators: "Continuous Monitor." GPA Midstream in unclear whether this is limited to a monitor that is sending real time information to a control panel and/or data recorder. • Pneumatics: "Chemical injection piston pump," "Chemical injection diaphragm pump," "Liquid Circulation (Kimray) pump." (40 CFR 98.6 defines "Absorbent circulation pump.") • Equipment Leaks: "Optical gas imaging," "EPA Method 21/OVA," "Any visible emissions using OGI" ("OGI" is not defined). (40 CFR 60.18(g)(4) defines "Optical gas imaging instrument." For these comments, GPA Midstream assumes "OVA" means	

Comment ID	Comment Summary	EPA Response/Action Taken
	"Organic Vapor Analyzer", not "Olfactory, Visual, Audible." • Equipment Leaks: "Screening/Infrared laser beam illuminated," "Screening/Acoustic leak detection". GPA Midstream is not aware of where these terms are currently defined (these terms are used in the GHGRP but not defined). • Equipment Leaks: "In-line heater." GPA Midstream is not aware of where this term is currently defined. • Compressors: "Calibrated bagging," "High volume sampler." (40 CFR 98.6 defines "Calibrated bag.") • Compressors: "Liquefied Petroleum Gas (LPG)." GPA Midstream is not aware of where this term is currently defined.	
-0061	ARTIFICIAL LIFT: Although the proposed definition comes from the final NSPS OOOOa, it was not proposed and is not utilized in the regulation. • **Recommendation:** *Artificial lift - A wellbore deliquification technique which utilizes added energy, which includes surface compression, sucker rod pumps, progressive cavity pumps, electric submersible pumps, jet pumps, and gas lift.*	EPA has adjusted the definition of Artificial lift to mean, "A wellbore deliquification technique that adds energy to the fluid column in a wellbore. Artificial-lift systems use a range of operating principles and include surface compression, sucker rod pumps, progressive cavity pumps, electric submersible pumps, jet pumps, and gas lift."
-0061	ASSOCIATED GAS: Currently, EPA's definition of associated gas would include any natural gas from a well that also produces liquid hydrocarbons. This definition can be corrected by deleting the phrase "that also produce hydrocarbon liquids" and replacing it with "at oil wells".	EPA agrees and has adjusted the definition of Associated gas to mean, "The natural gas which originates at oil wells and occurs either in a discrete gaseous phase at the wellhead or is released from the liquid hydrocarbon phase by separation."

Comment ID	Comment Summary	EPA Response/Action Taken
-0061	ATMOSPHERIC STORAGE TANK: This definition from the Part 1 survey should be added to the Part 2 survey definitions.	EPA agrees and has added the definition of Atmospheric storage tank to mean, “A class of storage tanks that store materials at approximately atmospheric pressure. Atmospheric storage tanks may store liquids at ambient temperatures or at elevated temperatures (e.g., "heater treaters").”
-0054, -0046, -0061	BLOWDOWN: • The definition of blowdowns should be consistent with the GHGRP. • Certain blowdown events shouldn’t be considered as blowdowns.	We have revised our definition to make it clear that maintenance releases are considered to be blowdowns. The adjusted definition of Blowdowns is: “The act of releasing gas from a well, process unit, or pipeline to reduce the pressure of the system or to prepare equipment for maintenance or cleaning, such as pigging.”
-0061	CENTRIFUGAL COMPRESSORS: The definition should specifically exclude vapor recovery compressors.	Vapor recovery compressor is a compressor. EPA has added the data field, “Operational Service” to include Transportation, Vapor Recovery, Refrigeration, and Other.
-0064	The definition of “centrifugal compressor” should be limited to units compressing natural gas. In addition, the definition should only apply to compressors which operate using centrifugal action.	We have added other compressor types including wet seal, screw, and scroll compressors to the, “Compressor Type” picklist.
-0046	COMPONENTS (OR EQUIPMENT COMPONENTS): • Since all the component types are listed in the Equipment Leaks sheet of the questionnaire, this definition should either be eliminated or copied from an existing regulation such as NSPS Subpart KKK or OOOO.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	COMPRESSOR STATION: • 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.	The term “Compressor station” is a general term that is used in the various industry segment definitions, so we have retained the general NSPS OOOO definition and we have refined the industry segment definitions to clarify what equipment is included at a facility within each industry segment. From these definitions, it is clear that the presence of

Comment ID	Comment Summary	EPA Response/Action Taken
		compressors at a facility does not make that facility a gathering and boosting or a transmission compression "compressor station" facility.
-0054	COMPRESSOR: • From 40 CFR 98 subpart W, section 98.238: 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.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	CONDENSATE: • Definition is identical to NSPS subpart OOOO. Subpart W definition is preferred.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061, -0054, -0046	CONTINUOUS BLEED PNEUMATIC CONTROLLER: • The definition should be adjusted to match Subpart W.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	CONTROL DEVICE: • **Recommendation**: *Control Device - For the purpose of this ICR, control device is limited to equipment that is utilized to recover or reduce emissions from a hydrocarbon process stream. A control device includes, but is not limited to, traditional candlestick flares,*	EPA has added a general definition for "Control device" and also a definition of "Organic emissions control device" the latter being similar to the suggested definition. We also revised the instructions in the control device tab to be specific to organic emissions control devices.

Comment ID	Comment Summary	EPA Response/Action Taken
	enclosed flares, thermal oxidizers/incinerators, vapor recovery units and carbon adsorption systems. Engine catalysts are not included for this request.	
-0049	The definition of "Crude Oil" includes the term "drip gases." EPA should clarify whether drip gas is a reference to condensate. If so, it should be removed from the crude oil definition, as condensate is defined separately.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	CUSTODY TRANSFER: • The proposed ICR definition is identical to NSPS Subpart OOOO and is acceptable. • NSPS Subpart OOOOa definition is different (refers to oil as well as natural gas).	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	CUSTODY TRANSFER: • This term does not appear to be used in the questionnaire sheet and should be removed.	Custody transfer is used in the new definition of "Gathering and boosting compressor station facility" so EPA has retained this definition.
-0068	DIRECTIONAL WELL: • Remove. See "Horizontal Well."	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	FACILITY: • GHGRP section 98.6 "facility" definition is preferred. • The final ICR should more clearly define "facility" for transmission pipelines, and Subpart W definition is available.	EPA has revised the definition of facility for the purposes of this ICR and have added a number of other definitions such as "Well surface site," "Well Site Facility," and "Centralized production surface site" and "Gathering and boosting compressor station facility" to help clarify the definition of "Facility" for the purposes of responding to Part 2 of this ICR.
-0046, 59	FACILITY: • Definition should match the most recent "Source Determination Rule" for oil and gas facilities release on June 3, 2016.	The revised definition of facility incorporates special definitions for production, gathering and boosting, and transmission pipeline facilities. We consider these special definitions of facility to be more useful for supporting standards development for existing sources. For other industry segments, the definition of facility is consistent with the

Comment ID	Comment Summary	EPA Response/Action Taken
		source determination rule..
-0049	The current definition of "Facility" is unclear and could be a source of confusion for locations that have physically co-located but functionally unrelated equipment, or locations that with functionally related equipment located off-site. For instance, if an operator has a compressor for boosting pipeline pressure and a tank battery on the same location that does not sell to the pipeline, it is unclear if EPA would consider this one or two distinct locations	We have revised the definition of facility, which now incorporates special definitions for production, gathering and boosting, and transmission pipeline facilities to provide clarity. In any event, all equipment (or pollutant-emitting activities) co-located at a single surface site under common control is considered to be one facility, regardless of "functionality."
-0046	FIELD QUALITY NATURAL GAS: • EPA should evaluate this definition to determine whether it will provide the agency the information it seeks, since the term itself does not provide any information about gas composition. • Field gas may be of an acceptable composition and heating value (btu/scf) to be sent from the wellhead to transmission pipelines without any processing. Field quality natural gas can be rich or lean.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049	GAS-TO-OIL RATIO: • It is unclear if "Gas-to-Oil Ratio" (GOR) is the same GOR that an operator would obtain from a flash analysis after a separator. • EPA should clarify this definition to "the ratio of the amount of hydrocarbon gas that is generated by the decrease in pressure or increase in temperature to standard conditions to the amount of hydrocarbon liquid that remains after the gas has been liberated" which more accurately describes the	The definition of Gas-to-oil ratio has been adjusted to mean, "The ratio of the volume of natural gas that is produced or that comes out of solution when crude oil is extracted from a well equilibrated to standard conditions to the volume of hydrocarbon liquids (oil and condensate) produced after the natural gas comes out of solution. This is often calculated by dividing the measured natural gas production by the measured crude oil and condensate production."

Comment ID	Comment Summary	EPA Response/Action Taken
	necessary change in pressure and temperature.	
-0061	GAS-TO-OIL RATIO (GOR) AND GAS LIQUID RATIO (GLR): • The GOR definition proposed for Part 2 is in conflict with the GOR definition in Part 1, the oil and gas industry's understanding of GOR, and application of GOR for use in the Well Site, Table 2 General Well Information.	The definition of Gas-to-oil ratio has been adjusted to mean, "The ratio of the volume of natural gas that is produced or that comes out of solution when crude oil is extracted from a well equilibrated to standard conditions to the volume of hydrocarbon liquids (oil and condensate) produced after the natural gas comes out of solution. This is often calculated by dividing the measured natural gas production by the measured crude oil and condensate production."
-0049	HEATER TREATER: • "Heater Treater" definition should be changed to read "Process Vessel" instead of "Storage Vessel" as heater treaters are not storage vessels.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0064	HEATER TREATER: • In California, a "heater treater" is a vessel that operates well above atmospheric pressure. The example of a "heater treater" is not consistent with the stated definition of "atmospheric storage tank".	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0068	HORIZONTAL WELL: • Revise title to "Directional/ Horizontal well" • **Recommendation**: Directional/ Horizontal well - *Wells where a section of the wellbore intentionally deviates from the vertical, allowing access to oil and gas reserves located at points different from directly beneath the wellhead.*	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0068	HYDRAULIC FRACTURING: • **Recommendation**: Hydraulic fracturing - *The process of directing pressurized fluids containing any combination of water,*	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action. Note, in response to another comment, we did generalize the definition of hydraulic fracturing to all types of formations

Comment ID	Comment Summary	EPA Response/Action Taken
	proppant, and any added chemicals into subsurface geological formations to improve or restore permeability.	(not just tight gas formations).
-0061	INJECTION WELL: • **Recommendation:** *Injection Well – "Underground Injection Control (UIC) permitted well intended to store natural gas or carbon dioxide in depleted reservoirs. It does include wells permitted for produced water or O&G waste disposal, injection of fluids (i.e., water, steam or carbon dioxide) for the purpose of Enhanced Oil Recovery (EOR), or to inject crude oil or LPG into salt dome for storage purposes."*	EPA has added an "Injection-Storage Wells" tab and associated definitions. EPA does not intend to limit injection wells to just natural gas.
-0054	INTERMITTENT BLEED CONTROLLER: • 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. • The additional data is not readily available.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	INTERMITTENT BLEED CONTROLLER: • **Recommendation**: *Intermittent Vent Controller - A pneumatic controller that has a mechanical barrier between the supply gas and the end device. These units do not allow supply gas and a vent port to be open at the same time.*	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	INTERMITTENT VENT CONTROLLER: • **Recommendation:** *Intermittent Vent Controller - A pneumatic controller or solenoid valve that has a mechanical barrier*	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	between the supply gas and the end device. These units do not allow supply gas and a vent port to be open at the same time and do not have a continuous bleed.	
-0054	ISOLATION VALVE: • 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."	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	LIQUIDS UNLOADING: • Artificial lift should be excluded from the definition. No emissions occur from these operations.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	MANNED FACILITY: • **Recommendation:** *Manned Facility – Any facility that is visited by employees for at least 40 hours a week.*	A drop down picklist has been added of how often the site is visited.
-0046	MAXIMUM AVERAGE DAILY THROUGHPUT: • EPA should remove this term and not use this concept in the ICR, because the throughput during the 30-day potential-to-emit evaluation period may be irrelevant to current throughput. • This term and concept were only recently introduced with NSPS OOOO, so for existing tanks, this data will not be available. • The forms generally contain terms like "average flow rate" or "average throughput." These terms are acceptable, with the caveat that EPA should define calendar year 2016 as	EPA appreciates the comment and will implement as suggested and has removed this definition.

Comment ID	Comment Summary	EPA Response/Action Taken
	the period/averaging period for all data to ensure a consistent reporting basis across operators.	
-0046	NATURAL GAS (NG): • GPA Midstream notes that EPA does not define "pipeline quality" and may want to do so, depending on the application of this definition. • Assumed this term is used to refer to gas that meets transmission and distribution sector quality specifications. The processed gas stream from a gas plant (residue gas) meets these kinds of specifications, and field gas in some areas of the county may also meet these specifications.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	NATURAL GAS LIQUIDS: • This definition is not adequate as it does not refer to the liquid state of these hydrocarbons, it uses an undefined term "extracted," and it uses the term "field quality" which seems to be an unnecessary qualifier for "natural gas."	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	NATURAL GAS TRANSMISSION PIPELINE FACILITY: • 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). • 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	We have defined "Transmission Pipeline Facility" to be: "For the purposes of this ICR, all onshore transmission pipelines within a given state that is under the control of the same person (or persons under common control)."

Comment ID	Comment Summary	EPA Response/Action Taken
	be included in final ICR definitions or in final ICR support documents. • There is an associated definition in Subpart W containing owner or operator but it does not define "facility." • 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. • There is an associated definition in NSPS Subpart OOOO but it does not define "facility."	
-0046	NET HEATING VALUE: • Industry standard practice is to measure/use gross heating value (also known as, Higher Heating Value or "HHV")	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	ONSHORE NATURAL GAS PROCESSING PLANT (FACILITY): • This definition from NSPS, Subpart OOOO (and previously Subpart KKK) has been clarified in Applicability Determinations (AP) to mean "forced extraction", thus eliminating gravity separation of liquids from the interstage coolers on compressor skids.	EPA has adjusted the definition of *Onshore natural gas processing* to mean, "The oil and gas industry segment that is engaged in the extraction of natural gas liquids from field quality natural gas, fractionation of mixed natural gas liquids to natural gas products, or both at an onshore facility. A Joule-Thompson valve, a dew point depression valve, or an isolated or standalone Joule-Thompson skid is not an onshore natural gas processing facility."
-0046	ONSHORE NATURAL GAS PROCESSING PLANT (OR FACILITY): • To avoid any confusion with facilities that have gravity separation of liquids, GPA Midstream suggests that EPA revise the definition as follows, along with the definition of "forced extraction of natural gas liquids"	EPA has adjusted the definition of *Onshore natural gas processing* to mean, "The oil and gas industry segment that is engaged in the extraction of natural gas liquids from field quality natural gas, fractionation of mixed natural gas liquids to natural gas products, or both at an onshore facility. A Joule-Thompson valve, a dew point depression valve, or an isolated or standalone Joule-Thompson skid is not an onshore

Comment ID	Comment Summary	EPA Response/Action Taken
	proposed above.	natural gas processing facility."
-0054	ONSHORE NATURAL GAS TRANSMISSION COMPRESSOR STATION: • There is an associated definition in Subpart W but it does not define "station." • See comments above on clear delineation of transmission facilities.	EPA has adjusted the definition of *Onshore natural gas transmission compression* to mean, "The oil and gas industry segment 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 onshore compressors. Facilities in this industry segment are referred to as Onshore natural gas transmission compressor stations and these facilities may include equipment for liquids separation, and tanks for the storage of water and hydrocarbon liquids; however; the Onshore natural gas transmission compression industry segment does not include facilities that have compressors but that are in the production, gathering and boosting, or processing industry segments."
-0054	ONSHORE PETROLEUM AND NATURAL GAS GATHERING AND BOOSTING FACILITY: • There is an associated definition in Subpart W that is preferred.	EPA has revised this series of definitions to define the industry segment. The adjusted the definition of *Onshore petroleum and natural gas gathering and boosting* to mean, "The oil and gas industry segment that uses onshore gathering pipelines and other equipment 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 , condensate and/or natural gas to a natural gas processing facility, a transmission pipeline or to a natural gas distribution pipeline. See also Gathering and boosting compressor station facility."
-0046	ONSHORE PETROLEUM AND NATURAL GAS GATHERING AND BOOSTING FACILITY: • Mixing definitions for petroleum facilities with natural gas facilities simply does not	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	make sense and does not have reasonable application. • Industry does not think of the "gathering and boosting" industry segment as an industry segment that moves petroleum; rather it is a natural gas business. • Respectfully requests that EPA not propagate this definition from the GHGRP into this ICR process or into any future rulemaking for the gathering and boosting industry segment.	
-0061	PNEUMATIC CONTROLLER: • **Recommendation:** *Pneumatic Controller – An automated pneumatic device that responds to a process variable by altering a gas pressure signal to an end device.*	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0050	PNEUMATIC CONTROLLERS – • **Recommendation**: *Pneumatic Controllers – Any device which generates or is powered by compressed air or natural gas and has the potential to emit natural gas which includes pneumatic controllers.*	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	PNEUMATIC DEVICE: • 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.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
-0046	PNEUMATIC DEVICE: • The phrase, "which generates or" should not be used, as this would seem to include the air/gas compression system in with the users of the pneumatic power. • Concerned that EPA could adopt a very loose or overly broad interpretation of "pneumatic device" to include any equipment that generates natural gas emissions.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	PNEUMATIC DRIVEN, MOTORIZED ACTUATOR: • **Recommendation:** *Pneumatic Driven, Motorized Actuator – A turbine operated actuator, rotary vane actuator, or other pneumatic motor driven actuator driven by natural gas that opens or closes a gate type isolation valve, typically found in the transmission pipeline sector.*	This term is not used in the ICR. EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049	PRESSURE VESSELS: • "Pressure Vessels" should be defined as any vessel that operates under pressure and not atmospheric pressure, rather than the currently stated 30 psig threshold which appears to be an arbitrary distinction that would create confusion.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	RECIPROCATING COMPRESSOR: • Maintain consistency with the definitions of "Compressor" and "Centrifugal compressor" in the proposed ICR and to align with the definition for reciprocating compressor found in the GHGRP, Subpart W • **Recommendation**: *Reciprocating compressor*	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	- A piece of equipment that significantly increases the pressure of a gaseous stream by positive displacement, employing linear movement of the driveshaft.	
-0064	The definition of "reciprocating compressor" should be limited to units compressing natural gas.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	ROTARY VANE 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. • If retained, remove the term "vane" and focus on defining a hydraulic gas actuated generic "Rotary Actuator."	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	SEPARATOR: • Separators are absolutely not tanks. • **Recommendation**: *Separator - A process* ***vessel*** *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.*	We have replace the word "tank" with the word "vessel" in the definition of separator.
-0061	SEPARATOR: • This term and definition is very general and would lead to gathering information on separators that lead to other pressure vessels, thus is not pertinent to emissions. • **Recommendation:** *Separator – A process tank specifically designed to separate gaseous*	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	fluids from liquid fluids produced from a well, received via pipeline, or other streams at a gas processing plant. For the purposes of this ICR, the liquid portion flows directly to an atmospheric storage vessel.	
-0064	The term separator is defined as a "process tank", but there is no definition for "process tank". Further, by including the wording "specifically designed to separate gaseous fluids from liquid fluids" in the definition of "separator", the EPA seems to be limiting this data field to two-phase separators (i.e. separates gases from liquids). Three-phase separators (i.e. separates gases, produced water and crude oil) would be excluded as they are specifically designed to separate crude oil from produced water and any offgassed vapors that can be collected.	We have replace the word "tank" with the word "vessel" in the definition of separator. We have also clarified in the definition that they are used to "separate gaseous fluids from <u>one or more</u> liquid fluids" so as to explicitly include "three-phase" separators.
-0049	"Separator" should clarify whether it includes gunbarrel tanks since their primary purpose is to separate water from oil and not gas from liquids.	For the purposes of this ICR, the term separator is specific to gas-liquid separators. EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	SNAP ACTING CONTROLLER: • 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. • 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	EPA has revised the definition of snap acting controller to be: "A controller that acts as an on/off switch and is either fully open or fully closed. Most snap acting controllers, when functioning properly, do not have a continuous gas bleed and vent gas only when actuating and are, therefore, typically designed as intermittent bleed pneumatic devices." We have also added snap acting continuous bleed device to the list of pneumatic devices for which counts are required.

Comment ID	Comment Summary	EPA Response/Action Taken
	service.	
-0046	SNAP ACTING CONTROLLER: • Classification of intermittent vent controllers into throttling or snap-acting should be removed. • Depending on the operational design, intermittent vent and continuous bleed controller types can be either in on/off service or throttling service.	EPA has revised the definition of snap acting controller to be: "A controller that acts as an on/off switch and is either fully open or fully closed. Most snap acting controllers, when functioning properly, do not have a continuous gas bleed and vent gas only when actuating and are, therefore, typically designed as intermittent bleed pneumatic devices." We have also added snap acting continuous bleed device to the list of pneumatic devices for which counts are required.
-0054	STORAGE TANK OR VESSEL: • 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. • The Subpart W section describes the tanks of interest for reporting flashing emissions, but these sections do not apply to T&S tanks.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	STORAGE TANK OR VESSEL: • The exclusion in the NSPS of "process vessels such as surge control vessels, bottoms receivers or knockout vessels" is not included in this ICR definition. This exclusion must be included, as process vessels are present at existing oil and gas operations but do not have emissions.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	STORAGE TANK OR VESSELS: • The Part 2 definition differs from the Part 1 definition. See above comment.	The definitions for Storage tank or vessel has been made consistent in Part 1 and 2.
-0061	THROTTLING CONTROLLER: • **Recommendation:** *Throttling controller - A controller that can provide a variable signal*	EPA accepts this definition and has added it to the spreadsheet.

Comment ID	Comment Summary	EPA Response/Action Taken
	based on the deviation from the desired set point. A throttling controller is designed to hold an end device in an intermediate position and move it from any position to more or less open without a requirement to go fully open or fully shut every actuation cycle.	
-0054	THROTTLING CONTROLLER: • 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.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	THROTTLING CONTROLLER: • EPA's proposed definition of throttling controller does not correctly define throttling service and can apply to both a throttling controller and an on/off controller that does not fully actuate. EPA's proposed definition of throttling controllers confuses the effort of identifying controllers operating in that service. • **Recommendation**: *Throttling controller - A controller that is designed to hold an end device in an intermediate position and move it from any position to more (or less) open without a requirement to go to fully open or fully shut every actuation cycle.*	EPA wants to collect more detailed information on pneumatic devices. We have revised the definition of throttling controller to conform with the recommended definition provided here and a similar comment.
-0054	TOTAL COMPRESSOR POWER RATING: • New definition. Reciprocating engine and turbine NSPS and NESHAPs include definitions for comparison and consistency.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	Those definitions rely on ISO rated hp for turbines & nameplate hp or site rated hp for reciprocating engines.	
-0046	TOTAL COMPRESSOR POWER RATING: • Definition mixes information about the compressor and the compressor driver (which are nearly always separate and distinct pieces of equipment). • **Recommendation**: *Total compressor driver power rating - The nameplate brake horsepower of the compressor driver.*	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	TURBINE OPERATED ACTUATOR: • 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.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	UNDERGROUND STORAGE VESSEL: • EPA should modify this definition to align with concepts used in SPCC (see 40 C.F.R. § 112.2) and RCRA (see 40 C.F.R. § 280.12). • GPA Midstream cannot offer a specific definition for this term because it is unknown how EPA intends to use it.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0068	VERTICAL WELL: • **Recommendation**: *A well that is intentionally deviated from the vertical, allowing access to oil and gas reserves located directly beneath the wellhead.*	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	VOLATILE ORGANIC COMPOUNDS (VOC):	EPA has considered and evaluated the impacts of this

Comment ID	Comment Summary	EPA Response/Action Taken
	• There is a typo at the end of this definition, "Compounds that have been determined to have negligible photochemical reactivity, such as methane and ethane, are excluded from the define" [sic].	comment and has decided not to pursue any further action.
-0068	WELL DEPTH: • Revise title to "True Vertical Depth"	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	WELL HEAD (OR WELLHEAD): • Distinction between production and storage wellhead desired. This definition should exclude storage wellheads. • Storage wellhead component counts are available in e-GGRT.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	WELL SITE: • Match Part 1 definition.	EPA has changed this to "Well Site Facility" and is now consistent between Part 1 and Part 2.
-0064	The definition of well site includes the term "facilities". A "facility" is defined as contiguous or adjacent properties. Further explanation is needed as to how a well site can incorporate numerous facilities.	EPA has revised the definition of facility for the purposes of this ICR and have added a number of other definitions such as "Well surface site," "Well Site Facility," and "Centralized production surface site" and "Gathering and boosting compressor station facility" to help clarify the definition of "Facility" for the purposes of responding to Part 2 of this ICR.
-0061	WELL TESTING: Match Subpart W definition.	The definition of Well testing has been added to mean "The determination of the production rate of a well or an assessment of reservoir characteristics for regulatory, commercial, or technical purposes. Well testing may or may not require venting of gas at the well surface site."
-0068	WELLBORE LENGTH: • Revise title to "Measured Depth"	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	ZERO BLEED PNEUMATIC CONTROLLER: • New definition that is not complete in the Proposed ICR or other regulations. If this term is retained in the final ICR definitions,	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	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. • Related definition in NSPS Subpart OOOOa provides for pneumatics driven by a gas other than natural gas, with no natural gas emissions.	
-0046	ZERO BLEED PNEUMATIC CONTROLLER: • EPA should delete this term from the ICR. • The definition proposed in the ICR has two conflicting statements and ultimately lead the user to determine the device is an intermittent vent device, which EPA has already established as a sub category. • If the device does not release gas to the atmosphere there is no value in the information reported and could not reliably be used to determine overall impacts. • The term zero bleed pneumatic controller is a marketing term with no discernible meaning.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	ZERO BLEED PNEUMATIC CONTROLLER: • This term should be removed from the definitions.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	Facility Tab	
	Table 1: Parent Company General Information	
-0046	*Sub-Section 1. Parent Company General Information* Recommend that individual responders be allowed to decide the appropriate Legal Name to use for each facility. What is often thought of as one “company” often consists of a large family of affiliated	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	corporations, limited liability corporations, and partnerships.	
-0046	*Sub-Section 1. Parent Company General Information* EPA should define or explain the term "Parent Company" in this request, especially as compared to the GHGRP.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054, 48	Row 3 Column A - Number of Employees: • 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. Remove question. • 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] • EPA could more easily address this question by providing the necessary definition of a small business in the oil and natural gas production industry and have a pull down "yes" or "no" response.	EPA has added the elements of the definition of "Small Business" to the definitions tab and has amended Table 1 to request "Does this company meet the definition of small business?"
-0046	*Sub-Section 1. Parent Company General Information* The number of employees is unnecessary information and can be misleading. Depending on the legal name and entity, this number could vary significantly due to the fact that employees may work under one corporate entity but the site is owned by another.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 4 Column A - Dun and Bradstreet Number: • 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	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	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. Remove question.	
-0046	*Sub-Section 1. Parent Company General Information* Not all corporate entities will have a Dun and Bradstreet number assigned. That option should be factored in.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	*Sub-Section 1. Parent Company General Information* There is no reason for EPA to request the physical address for the parent company. The mailing address should be adequate.	EPA has removed requests for parent company physical address from Table 1.
	Table 2: Facility General Information	
-0054	Row 25 Column B - Facility Type: • 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. • 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. • The Facility Types are modeled after GHGRP Subpart W industry segments. However,	EPA has amended Table 2 "Facility Type" to include "Onshore natural gas transmission compressor station and underground natural gas storage facility." Operators should refer to the Definitions Tab to determine each facility's "Facility Type." EPA has amended "Facility Type" to include "Other" and will allow operators to specify.

Comment ID	Comment Summary	EPA Response/Action Taken
	related definitions from Subpart W are not consistently used for ICR. • 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.	
-0061	'Facility Type': The categories for random sampling were selected by EPA so that the emissions from different sampling populations would be similar, and could be used to estimate the emissions for the entire population. Since EPA cannot be sure that the Surveys sent to specific operators are correctly classified for each industry segment, EPA should expect that some responses will not align with the industry category that was assigned based on the 'ICR ID' used for sample selection. For example, EPA may send a survey to an operator for gas processing, but the facility may actually be a gathering and boosting compressor station.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	'Facility Type Sub-Category': Some facilities have unique operations that will not be representative of other operations of a similar 'Facility Type'. There should be an optional comment field that will allow operators to provide information for these operations, if applicable to the facility.	EPA has amended "Facility Type" to include "Other" and will allow operators to specify.
-0031	If the facility type 'pipeline' is indicated in cell B25, black out non-relevant facility information for pipelines (Section 2, rows 27-34, 48, 49) in the Facility tab spreadsheet.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	Facility Type is currently a dropdown selection that	EPA has considered and evaluated the impacts of this

Comment ID	Comment Summary	EPA Response/Action Taken
	only allows for one option. This should be a multiple choice selection. Some facilities fall into multiple industry segments.	comment and has decided not to pursue any further action.
-0046	"Are greenhouse gas (GHG) emissions from this facility reported under 40 CFR part 98 subpart W?" • Facilities reporting under 40 CFR part 98 Subpart W may vary year to year based on several factors. Change the question to ask if the facility reported emissions during the previous calendar year (i.e. 2015 calendar year).	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 27 Column B - Facility GHGRP ID, if applicable: • Answering "yes" to question in row 26 should activate this field. • 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.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	"Facility GHGRP ID, if applicable" • This field remains blacked out even if "Yes" is selected for "Are greenhouse gas (GHG) emissions from this facility reported under 40 CFR part 98 subpart W."	EPA has amended Table 2 to allow operators to specify a Facility GHGRP ID if applicable.
-0046	"Physical Address" • Add "if assigned" due to the fact that a lot of sites don't have, or are not required to have, physical addresses.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	Manned Sites: The pick list options for 'Is this facility manned while in operation?' should be updated to reflect if the site is consistently manned (24 hours a day, 7 days a week) or manned for a	EPA has amended "Is this facility manned?" to include more timing options.

Comment ID	Comment Summary	EPA Response/Action Taken
	shorter time period such as during weekly daytime hours. This will more accurately reflect different operations across the various industry segments.	
-0027, 54	Classify "Is Facility Manned?" as CBI.	See the Comments Response Memo for answers to CBI questions.
-0046	"Is this facility manned while in operation?" • It is not clear whether a 'manned facility' requires employees to be onsite 24 hours/day, 7 days/week, or some other time frame. Alter the question to ask if operational staff are on-site 24 hours per day. EPA could also include a dropdown with different options (i.e. 24/7 or normal business hours).	EPA has amended "Is this facility manned?" to include more timing options.
-0054, 61, 46	Include more detailed information on electrification	EPA has amended "Does the facility have electricity available?" to include a picklist of options.
-0054, 59, 46	Row 50 Column A - Year the facility first began operations can be difficult to find	EPA has removed "Year the facility first began operations" from the Facility Tab.
-0054	Row 51 Column A - Number of months the facility operated in 2015 • 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. Remove question.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	• 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. • There are many modes (e.g., not operating and depressurized) and interpretations of "operated." • What if a facility operated for only a few hours or days in a calendar month? • 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." Revise header to: Number of months the facility was ready for/capable of operation in 2015. Clarify and define "operated." Clarify and define "month."	
-0046, 49	"Quantity of natural gas received by the facility in the 2015 calendar year (thousand standard cubic feet). For production facilities, this is the quantity extracted from all wells. For storage facilities, this is the quantity place into storage." • GPA Midstream recommends that the word "Estimated" be added beforehand because not	Companies should provide best available data based on existing records when responding to the ICR.

Comment ID	Comment Summary	EPA Response/Action Taken
	all compressor stations have inlet meters. • This is reported in the GHGRP for processing facilities per 98.236(aa)(3)(i) and for storage facilities per 98.236(aa)(5)(i). This is a redundant information request and should be removed from the ICR for processing facilities that report under the GHGRP. • Associated gas that is not sold is most likely directed to a control device from multiple points in the separation process. Operators do not meter gas directed to a control device because it is technically infeasible. • Operators will often use a gas to oil ratio (GOR) value to calculate total gas production. Because GOR values change over time as oil production declines, EPA should not take associated gas production data as absolute and make unjustified assumptions.	
-0046	"Quantity of natural gas leaving the facility (sales) in the 2015 calendar year (thousand standard cubic feet)." • This is reported in the GHGRP for processing facilities per 98.236(aa)(3)(ii) and for storage facilities per 98.236(aa)(5)(ii). This is a redundant information request and should be removed from the ICR for processing facilities and underground storage facilities that report under the GHGRP.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	Gas Volumes: Depending on the industry segment, both the quantity of gas received and leaving facility are not useful parameters for emissions purposes. Only one of these values should be required to	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	establish the relative size of facility.	
-0054	Row 54 Column B - 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. • Not applicable to Transmission and Storage. Black out for T&S.	EPA has amended Table 2 to black out information requested for quantity of hydrocarbon liquids.
-0046	"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." • This is reported in the GHGRP for processing facilities per 98.236(aa)(3)(iii). This is a redundant information request and should be removed from the ICR for processing facilities that report under the GHGRP. • Natural gas gathering and boosting facilities typically do not measure liquids received at a facility; they only measure liquids exiting the facility. Because of this, operators will only be able to report the quantity of liquids leaving the facility as an estimate for the quantity of liquids received by the facility. This data element should be removed from the ICR for all gathering and boosting facilities. At the very least, EPA should add another statement defining the requirement for non-production sites.	Companies should provide best available data based on existing records when responding to the ICR.
-0054	Row 55 Column B - Quantity of all hydrocarbon liquids (crude oil and condensate, including NGLs)	EPA has amended Table 2 to black out information requested for quantity of hydrocarbon liquids for T&S.

Comment ID	Comment Summary	EPA Response/Action Taken
	leaving the facility (sales) in the 2015 calendar year (barrels). • Not applicable to Transmission and Storage. Black out for T&S.	
-0046	"Quantity of all hydrocarbon liquids (crude oil and condensate, including NGLs) leaving the facility (sales) in the 2015 calendar year (barrels)." • This is reported in the GHGRP for processing facilities per 98.236(aa)(3)(iv). This is a redundant information request and should be removed from the ICR for processing facilities that report under the GHGRP.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 56 Column B - Miles of natural gas transmission pipeline • 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. • Black out for T&S.	EPA has amended Table 2 to request "Miles of natural gas transmission pipeline" from Natural Gas Transmission Pipeline facilities and Gathering and Boosting facilities only.
-0046	"Miles of natural gas transmission pipeline." This is reported in the GHGRP for transmission pipeline facilities per (aa)(11)(vi). This is a redundant information request and should be removed from the ICR.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	Other/General	
-0061	Add 'Well Classification' for Onshore Production: In order to appropriately classify data for Onshore production, the GOR categories used for identifying	EPA agrees with the commenter and is implementing this revision.

Comment ID	Comment Summary	EPA Response/Action Taken
	the Part 2 recipients should be included within the Survey for identification.	
/-0031	For natural gas pipelines, limit the 'facility' to one state rather than the entire pipeline length. Performing a field count on all equipment along an entire, multi-state length of pipe would be costly and resource inefficient.	EPA agrees with the commenter and is implementing this revision.
-0068	Add the following questions: • For production facilities, quantity of produced water (thousand bbl/year in the 2015 calendar year). • Quantity of natural gas leaving the facility *by pipeline* (sales) in the 2015 calendar year (thousand standard cubic feet). • Quantity of natural gas utilized at the facility in the 2015 calendar year (thousand standard cubic feet). • Quantity of natural gas leaving the facility (for sales) other than by pipeline (e.g., trucked CNG) in the 2015 calendar year (thousand standard cubic feet). • Quantity of natural gas vented from the facility in the 2015 calendar year (thousand standard cubic feet). • Quantity of natural gas flared from the facility in the 2015 calendar year (thousand standard cubic feet). • If transmission compressor station, pipeline mileage from immediate compressor station upstream • If transmission compressor station, pipeline mileage from immediate compressor station	EPA has amended Table 2 to include "For production facilities, quantity of produced water (thousand bbl/year in the 2015 calendar year)" and "Quantity of natural gas vented from the facility in the 2015 calendar year (thousand standard cubic feet)."

Comment ID	Comment Summary	EPA Response/Action Taken
	downstream • If transmission compressor station, number of isolation valves upstream up to immediate compressor station upstream • If transmission compressor station, number of isolation valves downstream up to immediate compressor station downstream • If gathering and boosting facility, number of wells connected to the station • If gathering and boosting facility, pipeline mileage to the nearest distance downstream to the next GB facility, transmission compressor station, or processing plant	
	Well Site Tab	
	Table 1: Well Site Information	
-0061	Distance from field office should be clarified to specify that the distance requested should be provided in road miles.	EPA has amended Table 1 to request "Driving distance from field office (road miles)."
-0061	Distance to the nearest natural gas transmission or gathering pipeline is not an appropriate data element for inclusion in the ICR. This data element should be limited in scope, as it is not pertinent to all facilities. The information should only be requested for oil wells with associated gas that are not connected to a gas gathering line.	EPA has clarified that this information should only be provided if well sites are not connected to a gathering and boosting or transmission pipeline. EPA has also requested reasoning for any lack of connection.
-0061	'How frequently is well site visited by field office personnel?' should be updated to 'How frequently does the well site receive scheduled, routine visits by field office personnel?'	EPA has amended "How frequently is well site visited by field office personnel?" to allow a picklist of options to choose.
-0061, 49	'Is land owned or leased?' should be removed from the ICR. Land leased/owned status has no relevance to emissions or cost of controls.	EPA has amended "Is land owned or leased?" to allow a picklist of options.

Comment ID	Comment Summary	EPA Response/Action Taken
	• If EPA requires this information, then it must make clear what value this information will provide to justify the time and expense.	
-0061	Regulations listed must be updated. Regulations should be limited to those that may apply to individual wells, since they may not apply uniformly to all wells on location. This list should be updated to 'State / Local Environmental Regulations or Permit'.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049	EPA requests the average age of wells onsite. There is no emissions related benefit to EPA with this value. Therefore, it is recommended that EPA strike the request for this information.	EPA has amended the ProdnWells Tab to request "What is the age (years) of the well at the well site?" on a per Well ID basis.
-0068	Delete "What is the average age of the wells at the well site?" from Table 1 and move to Table 2.	EPA appreciates the comment and will implement as suggested.
-0061	'How are produced waters managed?' should be removed from the well information. If it is stored onsite, relevant data will be provided under storage tanks.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	'Number of wells at the well site' can be determined by the number listed in Table 2. General Well Information. This data element should be removed from Table 1.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0068	Add the following questions to Table 1: • Specify connectivity of wells: gathering pipeline, transmission pipeline, distribution pipeline, end user, not connected • If yes, what is the pipeline pressure? • Reservoir/formation pressure • Who owns the mineral rights; private, federal, or tribal? • Is there a combustion device on or near the	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	site? • If combustion device is on or near site, what type of device is it? (open flare, enclosed flare, thermal combustor, open pit flare, other) • If combustion device is on or near site, is it operational? • If combustion device is near site, what is the distance of the nearest flare? • If combustion device is a flare, does it have a continuous pilot or electronic ignition device? • If the combustion device is a flare, does it have a monitor to ensure a continuous flame? • If the flare has a monitor to ensure continuous flame, describe the device used. • Is the site connected to a grid? • If not, how far is the nearest grid connection (in miles)?	
	Table 2: General Well Information	
-0061, 59	The 'Well Type' and 'Date of last produce for shut-in or abandoned wells' should be removed because the survey should only cover active wells. If EPA continues to collect 'capped or abandoned wells' counts in Part 2, then the instructions should clarify that this count only applies to facilities that had active production at the end of 2015.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061, 49, 48, 59	Downhole configurations can be much more complicated than this data describes and unnecessary to determine emissions. Well bore depth, length, shut-in pressure, casing diameter, and tubing diameter are not sufficient to quantify emissions, may not adequately characterize complex downhole configurations, and should not be requested.	EPA has amended Table 2 to include "Type of Well Bore" to allow for further clarification on downhole configurations.

Comment ID	Comment Summary	EPA Response/Action Taken
	• Information like well depth and well bore length may not be straightforward to obtain. Many wells have multilateral designs like tree roots. Others have capillary strings to enable production from multiple zones without comingling the oil, natural gas, and water from each zone. A capillary string well produces to multiple separators connected to their own tank batteries, with multiple facilities receiving fluids from that single well. Some of the requests in this section are only suitable for single well bores, and can pose problems for other configurations. • For older producing wells much of the data requested in this section may be non-existent.	
-0064	Acceptable methods to determine production rates need to be clarified. For California operations, wells undergo scheduled tests to measure the volume of oil, produced water, and gas over a short time period. This data is used to allocate the aggregate volume of oil metered at the sales point back to the individual well. It is likely that in most cases, a well test will not be available over the last 30 days of operation. The EPA should specify how to complete this entry when there are no meters on the individual wells.	Companies should provide metered data where available, otherwise use best available data when responding to the ICR. EPA has expanded "Where is produced gas monitored?" to include an offsite option.
-0061, 68	'Where is gas or oil/condensate monitored?' should be removed.	Companies should provide metered data where available, otherwise use best available data when responding to the ICR. EPA has expanded "Where is produced gas monitored?" to include an offsite option.
-0061	Early production data (i.e., rates, GOR, and gas composition) is often not available for new wells. At	Companies should provide best available data when responding to the ICR.

Comment ID	Comment Summary	EPA Response/Action Taken
	a minimum, an option for 'Not Available' is needed. If it is available, the month/year of the data should be reported.	
-0061	Only the 'Most Recent Measurement of Produced Gas Composition' should be included.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049	EPA should designate a method based on technical feasibility for determining GOR after flowback or change the request to indicate an "estimated" GOR value for periods after the first 30 days of production.	Companies should provide best available data when responding to the ICR.
-0064, 48	The Part 2 "Well Sites" section requires three different GOR and produced gas composition values for each well. Some explanation should be provided to clarify how this value should be determined. It is unlikely that this data will be readily available for each well.	Companies should provide best available data when responding to the ICR.
-0068	The composition of gas typically does not change drastically within a year, therefore asking for current gas composition is unwarranted. Remove the following from Table 2: • Current Produced Gas Composition - CO2 (% by vol) • Current Produced Gas Composition - CH4 (% by vol) • Current Produced Gas Composition - C2H6 (% by vol) • Current Produced Gas Composition - VOC (% by vol) • Current Gas to Oil Ratio	EPA has amended Table 2 to request "Produced Gas Composition in first 30 days production" and "Produced Gas Composition in calendar year 2015 or last year of operation."
-0049	EPA ask first if an extended gas analysis has been performed from a particular well and if so, then an operator can provide that analysis.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049	EPA should remove the request to produce ethane %	EPA has considered and evaluated the impacts of this

Comment ID	Comment Summary	EPA Response/Action Taken
	by volume from the ICR. Ethane is not considered a VOC.	comment and has decided not to pursue any further action.
-0068	Table 2: Remove reference to "Oil" from "Oil Producing Wells Only - API gravity of produced oil." Replace with "liquids".	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	In Table 2. General Well Information, a column should be added, 'Reason for gas venting or flaring'. If an oil well identities that 'Disposition of casing head gas' is vented to atmosphere or vented to flare, then operators should identify a reason for why gas is not sold. The pick list should be limited to the following options: • No permit for pipeline to tie well to system • Insufficient gas quantity/pressure • Poor gas quality/Does not meet specifications • No contract in place • Right-of-way acquisition • Transmission line approval • Transmission line construction • Exploration Well • Pipeline and/or plant capacity constraints • Other, specify	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0068	Add the following questions to Table 2: • Age of the well (years) • Is gas metered on or off of the well site? • Is oil metered on or off of the well site? • *Average* Produced Gas Composition in first 30 days production - CO2 (% by vol) • *Average* Produced Gas Composition in first 30 days production - CH4 (% by vol) • *Average* Produced Gas Composition in first 30 days production - C2H6 (% by vol)	EPA has amended Table 2 to include "Well pressure in first 30 days production (psig)" and has expanded gas compositions.

Comment ID	Comment Summary	EPA Response/Action Taken
	• *Average* Produced Gas Composition in first 30 days production - VOC (% by vol) • Average Produced Gas Composition in first 30 days production – HAP (% by vol) • Average Produced Gas Composition in first 30 days production - Inerts (% by vol) • *Average* Produced Gas Composition in calendar year 2015 or last year of operation - CO2 (% by vol) • Average Produced Gas Composition in calendar year 2015 or last year of operation – H2S (% by vol) • Annual average wellhead pressure during first year of production (psig) • Annual average wellhead pressure in the last year of production (psig) • *Average* Produced Gas Composition in calendar year 2015 or last year of operation - CH4 (% by vol) • *Average* Produced Gas Composition in calendar year 2015 or last year of operation - C2H6 (% by vol) • *Average* Produced Gas Composition in calendar year 2015 or last year of operation - VOC (% by vol) • Average Produced Gas Composition in calendar year 2015 or last year of operation – HAP (% by vol) • Average Produced Gas Composition in calendar year 2015 or last year of operation - Inerts (% by vol) • Average Produced Gas Composition in	

Comment ID	Comment Summary	EPA Response/Action Taken
	calendar year 2015 or last year of operation – H2S (% by vol)	
	Table 3: Well Completion and Workover Information	
-0061, 49, 59	Table 3 will provide limited or redundant information and should be removed from the Part 2 Survey. • The information on well completions for hydraulically fractured and refractured wells is already covered under NSPS OOOOa; therefore, this request for information is redundant. • Workovers are typically intended for maintenance of downhole equipment. There is typically no venting associated with workovers since the well cannot be active for safety purposes during maintenance and the data requested may not be readily available.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049, 48, 59	Well completion data requested could likely be obtained through the appropriate state records.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0050, 49, 48, 59, 61	EPA should remove "date of next workover" from ICR, as it requires operators to predict reservoir conditions, market conditions, availability of equipment, availability of capital, etc. • The 'Date of Last Workover' may not be available if the well was acquired from another operator and 'Anticipated date of next workover' cannot always be anticipated, as workovers are mainly initiated as an as needed maintenance practice.	EPA has removed "Anticipated date of next workover."
-0068	Add the following questions to Table 3: • Average duration of completion (hours) • Number of workovers in last 5 years • Average duration of workover (hours)	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	Table 4: Well Testing, Venting, and Liquids Unloading Information	
-0061, 59, 68	At a minimum, EPA should delete '/venting' from the column title 'Date of last well testing/venting'. This will help eliminate confusion between well capacity testing and 'liquids unloading', which is covered in other columns of Table 4. Well testing does not directly equate to venting.	EPA has removed "/venting" from the title of Table 4.
-0068	Table 4 "Controls used for well testing": • Change question to "Controls used for *last* well testing" • It is unclear what the difference between "Vent to other control" and "Capture for recovery/sales" is, suggest only keeping the latter; also add "Capture and recovery/use at site"	EPA has amended Table 4 to request "Controls used for last well testing."
-0061	Include 'Other' in the pick list for 'Controls used for well testing'. While EPA has included the obvious choices in the pick list for Column E, the variety of operations in the oil and gas industry makes it likely that a different control option exists.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061, 59	The information included in the draft ICR on liquids unloading will not provide EPA with adequate information to estimate methane emissions. Well engineers and operators must have the flexibility to employ the appropriate tools at the appropriate times to manage wellbore liquids. If the information remains in the Part 2 Survey, numerous changes are required: • The current format implies that liquids unloading occurs for every well, which is not the case. • 'Primary technique used for liquids	EPA has amended Table 4 to add "Surfactants and foaming agents" to the picklist for "Primary technique used for gas well liquids unloading?"

Comment ID	Comment Summary	EPA Response/Action Taken
	unloading?' should not include 'Artificial lift' and 'Swabbing well' in the pick list. • The list of 'Primary technique for liquids unloading' should be expanded. Techniques that should be added to the picklist include 'Surfactants and foaming agents', 'Installing wellhead compression', and 'Combination/Other'. • EPA's pick list for 'Controls for venting of liquids unloading' incorrectly characterizes unloading operations. EPA should add 'Attended venting only' as a control option for venting. • The parameters 'Year Installed (for plunger lift, velocity tubing, or other assist method)', 'Total Capital Installed Cost ($)', and 'Annual Operating and Maintenance Costs ($/yr in 2015)' currently require cost data for systems other than controls for manual venting. Furthermore, depending on the age of the system, much of this information will probably not be available or feasible to track down in the time allotted to answer the survey. An option needs to be provided for 'Not available.'	
-0068	Table 4 "Primary technique used for liquids unloading?": • More options need to be added: foaming agents, manual plunger lift, automated (timed) plunger lift, and plunger lift with smart automation	EPA appreciates the comment and will implement as suggested.
-0068	Table 4 " Controls used for well venting for liquids	EPA appreciates the comment and will implement as

Comment ID	Comment Summary	EPA Response/Action Taken
	unloading": • One more option needs to be added: Knock out drum; gas recovered for use on site	suggested.
-0068	Add the following questions to Table 4: • Is the well vented or flared during testing? (vented or flared) • What is the purpose for venting or flaring during testing, as opposed to routing to a sales line or gathering system? • Annual number of tests • Average time taken for unloading (hours) • If uncontrolled, reason for no control in place • If uncontrolled, do personnel always remain on site during venting	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	Other/General	
-0061	EPA should add instructions stating that 'Not Applicable' should be listed if periodic testing is not required or if historical data does not exist for older and acquired wells.	Companies should provide best available data when responding to the ICR.
-0064	The Part 1 and Part 2 spreadsheets envisions a maximum of approximately 20 wells at a facility. As established above, a facility can consists of hundreds or thousands of wells. If a facility has more than the 20 wells associated with a facility, will the Part 1 and Part 2 spreadsheets be unprotected?	EPA has amended Table 2 to allow for 50 wells. If additional rows/columns are required, facilities should contact EPA to request a larger/additional spreadsheet.
-0064	The ICR appears to include several sources that do not contribute to greenhouse gas emissions nor useful in determining potential control strategies. The EPA needs to explain why data is needed on every permanently sealed/abandoned production well. The term "permanently sealed" demonstrates that these wells are not sources of greenhouse gases.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
-0064	Companies inject steam and water to enhance the oil recovery process by maintaining the reservoir. The EPA should exempt water and steam injection wells from reporting as there are no methane emissions in these streams.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Should EPA choose to add storage well requirements to the "Well Sites" worksheet, then stakeholders should be allowed an additional opportunity to comment.	EPA has added the Injection-Storage Wells Tab to account for storage operations.
	Tanks Separators Tab	
	Table 1: Facility Information	
-0061, 54	The 'Number of Separators at the Facility' should be removed from Table 1 Facility Information for Tanks and Separators.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	Both the 'Number of Atmospheric Storage Tanks <10 bbl/day at the facility' and 'Number of Atmospheric Storage Tanks ≥10 bbl/day' should be removed. Average hydrocarbon throughput or water throughput are already included in Table 2. General Tank / Separator Information, so these data parameters are redundant.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	*Sub-Section 1. Facility Information* • For number of atmospheric storage tanks with throughput greater than 10bbl/day, EPA should clarify the requirement. 40 CFR part 98 Subpart W is based on 10 bbl/day through a separator, and it is not clear if EPA's intention is that this should be the same requirement. In any case, this is a repeat of information collected in Sub-Section 2. One of the two requests should be deleted as superfluous.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	• Define 'water' throughput. It is unclear if produced water falls under "hydrocarbon" or "water" throughput category.	
	Table 2: General Tank/Separator Information	
-0046	Revise "Tank/Separator ID" to read "Tank ID." Also, the cell appears to be set to 'number' in Excel and should be set to 'text.' This will avoid issues with leading/trailing zeros.	EPA appreciates the comment and will implement as suggested.
-0054	Row 7 Column A - 2. General Tank / Separator Information - Complete for each Tank / Separator: • If separators are included, Table 2 should only apply to ≥ 10 bbl/day. • Black out for T&S. Include a trigger in the row for Separators ≥ 10 bbl/day to provide information in Table 2.	EPA has reduced the scope of sampling for separators with liquids output below 10 bbl/day. However, for transmission and storage facilities that do not have separators that have 10 bbl/day liquids, EPA is requesting that parent companies sample one separator.
-0061	The scope of Table 2. General Tank / Separator Information should be limited to atmospheric storage tanks. These suggested changes to Table 2. General Tank / Separator Information limit the scope to collect information on crude oil, condensate or produced water atmospheric storage tanks only, where the bulk of gas emissions occur: • Pressurized separators should be removed by modifying the heading for the first column to 'Atmospheric tank/separator IDs'. Pressurized separators have no atmospheric emissions except for fugitives, so the data has no practical use in this survey. • 'Vessel types' should be limited to fixed roof atmospheric storage vessels or floating roof atmospheric storage vessels. • Is there continuous monitor for Vessel	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	Operating Pressure' should be eliminated from Table 2 General Tank / Separator Information. Only atmospheric storage vessels should be considered within scope of the ICR.	
-0061	Multiple tank IDs should be entered into a single row, when a single feed stream is stored in multiple tanks.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	• For the column "Vessel Type," one of the drop down selections is "Heater/treater." However, the defined term is "Heater treater." One of these should be changed to align with the other.	"Heater/treater" has been corrected to "heater treater".
	• "Vessel Type" options are confusing. For example, a heater treater is a gas-liquid separator with heat, but "heater treater" and "gas-liquid separator" are both options. EPA should eliminate one of these options.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	• EPA lists two options for "ambient storage tank." This term is not defined and is confusing. All storage tanks are ambient tanks, as tanks are not heated, and pressurized tanks are excluded from this portion of the survey. These two categories should be deleted as they have no relevance, and they are redundant of other categories (i.e. Condensate storage tank and fixed roof storage tank).	Ambient storage tanks have been corrected to say "atmospheric tanks."
-0061	The regulatory column header should specify that the list of regulations apply to the tank only and New Source Review Permits should be added as a separate option for selection.	The regulations that apply have been adjusted.
-0054	Row 8-58 Column C - List current environmental	EPA has considered and evaluated the impacts of this

Comment ID	Comment Summary	EPA Response/Action Taken
	regulations to which the well site must comply. Select all that apply. • This should be consolidated in the facility tab and answered once for the facility. • Move to Facility tab. Change "well site" within column title to "facility" or appropriate term. Include 40 CFR 98 in the list of regulations.	comment and has decided not to pursue any further action.
-0046	*Sub-Section 2. General Tank/Separator Information – Complete for each Tank/Separator* "List current environmental regulations to which the well site must comply" • EPA should include an "Other" category.	"Other" has been added to the spreadsheet.
-0061, 54	'Vessel height (ft)' and 'Vessel Diameter (ft)'should be removed..	Vessel height and vessel diameter have been removed and vessel capacity has been added.
-0054	Row 8 Column F and G - Average vessel hydrocarbon (F) or water (G) throughput (bbl/day) • For all or most facilities, hydrocarbon throughput is only available for the atmospheric storage tanks not for each separator vessel/filter separator. • Black out for T&S. If included, establish a hydrocarbon threshold. Throughput volume available for T&S would include hydrocarbons and water (if any).	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	The information on 'Continuous Monitoring' is not related to emissions and should be removed in its entirety. Typically, there is no measurement occurring to or from a storage vessel at production facilities.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	"Is there a continuous monitor for the following:"	EPA has considered and evaluated the impacts of this

Comment ID	Comment Summary	EPA Response/Action Taken
	• Cells K7, L7, and M7 should be merged with cell H7:J7 to clarify that H8 through M8 are all under the section "Is there a continuous gas monitor for the following." • "Is there a continuous monitor for the following: Gaseous flow rate to the vessel?" It would be extremely unlikely to have a gaseous flow meter to liquid storage tanks. • "Is there a continuous monitor for the following: Liquid feed flow rate to the vessel?" Continuous monitors like these are very rare, but to the extent they exist, GPA Midstream does not see how this information will be helpful for rulemaking. • "Is there a continuous monitor for the following: Liquid flow rate from the vessel" – there should be a note saying that if vessel type is a tank, then this question is not applicable, because liquids removed from the tank during intermittent liquids unloading would not count as continuously monitored.	comment and has decided not to pursue any further action.
-0068	Add "Total days of operation" to Table 2.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	Table 3: Feed Material Characteristics	
-0061	'Type of feed material' should be restricted to atmospheric storage tanks accumulating crude oil, condensate, intermediate hydrocarbon liquids, or produced water only.	EPA appreciates the comment but we desire to collect information on separators in this section to better understand flashing measurements in Table 4. We have limited the dropdown options to eliminate storage tanks that are not included in the ICR (amine, glycol or fuel storage tanks).
-0046	*Sub-Section 3. Feed Material Characteristics – Complete for each Tank/Separator* "Tank/Separator ID"	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	• Revise to "Tank ID"	
-0061	Column A is auto-filled from Table 2; therefore, EPA should delete '/separator ID' in the heading to match the Table 2 heading.	EPA instead revised Table 2 heading to be "Tank/Separator ID" so the column headings match between tables.
-0054	Row 77-86 Column A-B - Separator ID/Tank ID • 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. • Remove question. If applicable to T&S, correct pull down links for IDs.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 61 Column B - Type of feed material • 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. • Black out for T&S. 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.	Other (specify) is included.
-0061	'Reid vapor pressure of feed material (psig)' is not useful for unstabilized hydrocarbon streams and should be removed from Table 3. Feed Material Characteristics.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	EPA should clarify that the desired temperature and pressure should be at the separator. Separator temperature and pressure at the time any pressurized sample is taken is critical for running a process simulation to calculate flash emissions.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	*Sub-Section 3. Feed Material Characteristics* –	EPA appreciates the comment and will implement as

Comment ID	Comment Summary	EPA Response/Action Taken
	Complete for each Tank/Separator "Pressure of feed material (psig) and Temperature of feed material (°F)" • EPA should clarify if the "Pressure of Feed Material" and "Temperature of Feed Material" is an average.	suggested.
-0061	Specific gravity of the pressurized sample per 'Specific Gravity of feed material (relative to water at 4 C)' has no practical meaning and should be removed from Table 3. Feed Material Characteristics.	EPA appreciates the comment and will implement as suggested.
-0061	The average temperature and pressure are assumed to be of the atmospheric storage tank. This should be clarified and the atmospheric storage tank pressure should be in inches of water column.	EPA appreciates the comment and will implement as suggested.
-0046	*Sub-Section 3. Feed Material Characteristics – Complete for each Tank/Separator* "Average temperature of liquids in vessel (°F)" • This can be assumed to be ambient temperature and can be ascertained using meteorological data.	EPA appreciates the comment and will implement as suggested.
-0046	*Sub-Section 3. Feed Material Characteristics – Complete for each Tank/Separator* "Average operating pressure of vessel (psi)" • EPA needs to specify either "psia" or "psig". GPA Midstream suggests "psig" to be consistent with other data items. • If EPA makes the decision to limit this data collection form to tanks only, this should be eliminated as EPA not collecting information from pressurized storage tanks.	EPA appreciates the comment and will implement as suggested.
	Table 4: Feed Material Composition	
-0046	*Sub-Section 4. Feed Material Composition*	EPA appreciates the comment and will implement as

Comment ID	Comment Summary	EPA Response/Action Taken
	• The fields "Separator ID from which sample is collected" and "Tank ID(s) for which this material is used as feed" contain dropdown selection options, but these fields should be open text entry.	suggested.
-0046	In midstream gathering operations, not all separators feed directly to storage tanks, so this table could result in correct or misleading information.	EPA appreciates the comment and will implement as suggested.
-0061	EPA should change the table name of Table 4. Feed Material Composition to Table 4. Feed Material Flash Gas Properties to be consistent with the data they are interested in collecting. Unless the operator is familiar with the CARB Method, the current title (Feed Material Composition) will lead to reporting of the composition of the pressurized liquid instead of the flash gas properties.	EPA appreciates the comment and will implement as suggested.
-0061	The current instructions for Table 4. Feed Material Composition does not provide the flexibility needed to determine flash emissions for the variety of domestic oil and gas operations that exist nationwide. • **Recommendation**: *"Complete the following table with flash gas emission data for each feed material sent to an atmospheric tank using pressurized sample collection from each separator and flash emission analysis (either laboratory measurement or process simulation). The California Environmental Protection Agency Air Resources Board's Test Procedure for Determining Annual Flash Emission Rate of Methane from Crude Oil, Condensate, and Produced Water1 (CARB Method) or other peer reviewed, consensus*	EPA has reduced the scope of sampling for separators with liquids output below 10 bbl/day.

Comment ID	Comment Summary	EPA Response/Action Taken
	method is acceptable. If you have performed testing of the feed material composition within the last 5 years, complete the following table based on the test results in-hand. The results of a representative sample may be reported for a feed material if the separator pressures are within 50 psig or 10%, whichever is greater, and the operator has knowledge supporting the similarity of the feed materials. If you have not performed testing of the feed material composition or have a representative feed material analysis, you must sample and analyze the pressurized separator fluid (storage vessel feed material) and report the results of the test in the following table."	
-0061	Samples should only be required from separators that directly feed atmospheric storage vessels and that have a significant pressure drop between the separator and storage vessel. • The CARB method is only applicable to the first separator that dumps into an atmospheric tank. Table 4 instructions should be amended as revised below to eliminate atmospheric storage tank feed samples that do not have a significant pressure drop from separator pressure. • Tank feed streams with very low pressure separators should be exempt from sampling requirements. Many operators have installed two stage separation, with the separator feeding the atmospheric storage tank having very low operating pressure (i.e., <15 psig)	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	and the vapors from that separator recovered to sales gas.	
-0061	Eliminate 'Separator ID' from the column heading of Table 4. Feed Material Composition. As discussed above, separator information should not be collected. Thus, the separator ID has no utility.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	Add a 'Flash Emission Determination Method' column to Table 4. Feed Material Composition. The pick list options should be: • The CARB Method • Other Peer reviewed, consensus method • Pressurized liquid compositions and process simulation • Combined natural gas and crude oil/condensate production volume and composition data, using process simulation • Representative sample • Direct measurement (See Table 6 Direct Emissions Measurements for results)	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	Label the compositions in addition to the individual components in Table 4. Feed Material Composition.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	The VOC column should be eliminated from Table 4. Feed Material Composition.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	The GLR column should be labeled 'Gas Liquid Ratio of Flashed Pressurized Sample' in Table 4. Feed Material Composition.	EPA appreciates the comment and will implement as suggested.
-0066	EPA should also collect composition information via direct analysis of the feed material in the liquid phase that is stored, processed or passed through tanks and separators for all HAPs, including VOCs and SVOCs.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	CARB Method/Feed Composition Sampling Method	

Comment ID	Comment Summary	EPA Response/Action Taken
-0061, 49, -54, 48	The Draft CARB Method is an appropriate method of determining flash emissions in heavy oil service, but it is not applicable in all situations and concerns still exist. • The draft CARB Method is not expected to be finalized until 2017 and has not had adequate peer review to be valid for a broad range of separator pressures and feed compositions. • It has been applied primarily for produced heavy oil sampled at low pressure separators. • Determining whether the pressurized sample was representative is not possible from the flash analysis alone. • Only four laboratories have been located that are familiar with the CARB Method, and only three laboratories in California currently perform the CARB Method. Specifying the use of only this method will limit the amount of data that can be collected in the very short time frame proposed. • Discussion with laboratory representatives have identified that the CARB Method is not appropriate for areas such as the Uintah Basin and the Denver-Julesburg Basin. • There may be issues associated with analytical lab support because the CARB method is not broadly practiced. • This method is undergoing review and comment during an ongoing rulemaking. • The CARB method is not well-established nationally nor has it been validated. • Many analytical labs are not familiar with this	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action. See the Comments Response Memo for more information.

Comment ID	Comment Summary	EPA Response/Action Taken
	method.	
-0061	Obtaining a representative sample for the CARB Method is often difficult, as indicated by using process simulation based on the composition of the pressurized liquid sample as a check.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action. See the Comments Response Memo for more information.
-0054, 49, 61	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. EPA should extend the response time to at least 180 days to respond to both parts of the ICR.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action. See the Comments Response Memo for more information.
-0027, 50, 58, 49, 59	High cost of performing CARB tests. • Install ports = $5,000/separator • Sample cost = $3,700 – $8,700/sample	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	EPA should reduce the scope of sampling due to the significant cost of gathering these data. The pressurized liquid sampling should be limited to sufficient number of facilities that would provide a representative composition analysis for a particular basin.	EPA has reduced the scope of sampling for separators with liquids output below 10 bbl/day.
-0061, 54, 48	EPA should allow any peer reviewed, consensus method. Laboratory methods should not be limited to those referenced by the CARB Method.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action. See the Comments Response Memo for more information.
-0050, 49, 46	EPA should allow industry to calculate storage tank flash gas by using Gas Processors Association 2186M methodology, or any other methodology advanced by the GPA, as these methods are standard within the industry. • EPA should allow respondents to calculate storage tank flash gas analysis using the Gas	EPA is limiting flexibility of the extended analysis. The acceptable GPA methods are listed in CARB. See the Comments Response Memo for more information.

Comment ID	Comment Summary	EPA Response/Action Taken
	Processors Association (GPA) 2103M, GPA 2186-M, or GPA 2286-M methodologies.	
-0061	Operators should be allowed to use the results of process simulations for gas composition, GLR and MW.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action. See the Comments Response Memo for more information.
-0061	EPA should allow operators to use an alternate approach in lieu of pressurized samples for hydrocarbon liquids. Some existing systems cannot obtain a representative, pressurized sample with existing equipment (i.e., very high pressures [>600 psig] and/or inadequate ports to access liquid). Operators should be allowed to use alternative approaches to pressurized samples when completing Table 4. Feed Material Composition for produced water tanks. Produced water tanks have very low emissions of methane due to the low solubility of methane in water. As such, the pressurized liquid sampling and flash gas analytical methods (i.e., draft CARB Method and peer-reviewed consensus methods) are not designed to address pressurized produced water samples.	EPA has reduced the scope of sampling for separators with liquids output below 10 bbl/day. However, for transmission and storage facilities that do not have separators that have 10 bbl/day liquids output need to complete the separator sampling for one of their separators on site. See the Comments Response Memo for more information.
-0061	Atmospheric storage vessels that have similar feed material compositions and separator pressures as other atmospheric storage vessels should be able to reference similar feed stream results within the same field as being representative. • EPA should allow a single sample to represent the feed material to multiple tanks, as long as the separator pressures are within 50 psig or 10%, whichever is greater, of each other and operators have knowledge supporting that the feed materials are similar.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action. See the Comments Response Memo for more information.

Comment ID	Comment Summary	EPA Response/Action Taken
	• The ability to report results of representative analyses would be invaluable to the operator and the Agency in the instance that a sample shows indications that it is not representative during either laboratory analysis or process simulation quality checks (see below for further information). Reporting representative sample results from another location would be more accurate than reporting sample results that are suspect. • EPA should clarify that sites are not required to install a temporary separator for the sole purpose of collecting a pressurized liquid sample.	
-0054	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 has reduced the scope of sampling for separators with liquids output below 10 bbl/day. However, for transmission and storage facilities that do not have separators that have 10 bbl/day liquids output need to complete the separator sampling for any one of their separators on site. See the Comments Response Memo for more information.
-0027	EPA should only require sampling and analysis at the final separator leading into a tank, which should be representative for all separators before it.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action. See the Comments Response Memo for more information.
-0027, 58	ICR should only require sampling from a subset of separators at 25% of the facilities targeted. (Attachment 2F question 4 regarding Feed Material Composition)	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action. See the Comments Response Memo for more information.
-0050	Remove collection of pressurized samples of liquid streams to perform flash analysis request completely from ICR.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action. See the Comments Response Memo for more information.
-0050	EPA should allow operators to provide a representative sample from a nearby well in the case	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	of inability to sample at a given well (i.e. well is shut in and awaiting workover, maintenance issues, low liquid production volumes, etc.).	See the Comments Response Memo for more information.
-0058	Eliminate the requirement to sample tanks located downstream of initial separators associated with natural gas production.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action. See the Comments Response Memo for more information.
-0058	Eliminate the requirement to sample tanks that are not already equipped to be sampled.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action. See the Comments Response Memo for more information.
-0066	The analysis of the flash gas should be expanded to include all VOCs.	The extended analysis is already required.
-0054	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.	EPA agrees that if the CARB method was completed within the last 12 months, then those results may be submitted.
-0049	Based on industry experience, many upstream samples tested with this CARB test will come back with 0 or null results due to inadequate pressure. In order to address this issue, the CARB testing methodology is currently being updated but will not be available by the time respondents begin work on the ICR.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049	CARB sampling poses logistical challenges, as shipments are classified as hazardous material and require sample containers to be filled to 90% of capacity when many of these containers are designed to be filled to 80% capacity.	With the new version of the CARB method, 80% capacity is allowed.
	Table 5: Leakage, Controls and Inspection	
-0046	*Sub-Section 5. Leakage, Controls and Inspection* –	EPA has added Control Device ID.

Comment ID	Comment Summary	EPA Response/Action Taken
	Complete for each Tank/Separator "Disposition of natural gas (or other off-gas)" • EPA is collecting this information with the intent to determine if/how to control tanks, and yet the information requested about current controls is extremely limited and broad. The options here should be similar to Picklist Number 53 with additional options: 1. Unassisted candlestick flare 2. Air-assisted candlestick flare 3. Steam-assisted candlestick flare 4. Enclosed flare/combustor 5. Thermal oxidizer/incinerator 6. Fuel / firebox 7. Recovered to facility inlet/process - Include place to indicate vapor recovery downtime/maintenance percentage 8. Captured for sales 9. Other control (specific) - Include a place to write in the other control device/process • EPA does not ask about the primary driver for installation of tank controls. This is a major oversight, when the purpose of this ICR is to collect information to determine if and how certain emission points should be controlled.	
-0046	*Sub-Section 5. Leakage, Controls and Inspection – Complete for each Tank/Separator* "Thief hatch inspection frequency" • EPA should explain whether simple visual checks are considered an inspection, or whether the term is referring to a full inspection of gasket conditions, operation, etc.	EPA appreciates the comment and will implement as suggested.

Comment ID	Comment Summary	EPA Response/Action Taken
-0061	'Pressure release setting for thief hatch or other pressure relief device, as applicable (psig)' in Table 5. • Leakage, Controls, and Inspection should be removed from the table. The pressure relief setting of the thief hatch or relief valve is typically higher than the operating pressure provided in Table 3. Feed Material Characteristics for 'Average operating pressure of vessel (psig)'. Since the operating pressure is already provided, the pressure release setting is not needed and has no utility in quantifying emissions.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	*Sub-Section 5. Leakage, Controls and Inspection – Complete for each Tank/Separator* "Pressure release setting for thief hatch or other pressure relief device, as applicable (psig)" • A tank may have multiple pressure relief devices including a thief hatch and each device may have different pressure relief set points. EPA does not request information on the types of pressure relief devices, and EPA does not request information on the disposition of emissions from pressure relief devices. EPA appears to be concerned about emissions from overpressure events (stuck dump valves), however, the EPA also does not ask about inspection of pressure of relief devices after an overpressure event.	EPA has separated to ask thief hatch and PRD separately.
-0046, 54	*Sub-Section 5. Leakage, Controls and Inspection – Complete for each Tank/Separator* "Hours dump valve stuck in 2015"	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	• This data is not tracked and is not available for many facilities. • If EPA decides to require this information, a "Not Available" option should be allowed.	
-0067	EPA should amend Table 5 2F by adding the following instructions and questions: • Choose one of the following options regarding the disposition of natural gas (or other off gas) from storage tanks: a. A vapor recovery unit, b. An internal thermal combustor, c. A flare, d. Venting to the atmosphere (i.e., without combustion or recovery), e. Other (please describe).	EPA has added Control Device ID.
-0067	Add the following questions to Table 5 2F: 1. What is the pressure of the liquid in the final vessel before it reaches the storage tank? 2. What is the diameter of the piping that conveys material from the separator(s) to the storage tank(s)? 3. What is the diameter of the piping that conveys material from the storage tank(s) to a control device? 4. Is the piping sized sufficiently to prevent back pressure during peak flow emissions? (Back pressure may cause gases to flow out relief valves or the thief hatch to the atmosphere) 5. What measures have been taken to ensure that dump valves do not stick open leaving natural gas or other off gases to overwhelm the emission control devices? 6. Please select any of the following options regarding maintenance plans for relief valves on	EPA has added some of these questions, some are already being asked, and the rest the EPA has considered and evaluated the impacts of this comments and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	storage vessels equipped with emission control equipment. 7. What is the set point for each pressure relief valve? 8. What is the set point for each thief hatch? 9. Please identify the gasket material for each thief hatch? Please describe any criteria considered in selecting the gasket material. 10. Is there a procedure in place that ensures that thief hatches are closed after unloading liquids or gauging occurs? If yes, please provide a description of the procedure. 11. What kinds of alarms exist to let operators know that the thief hatch is open? 12. Please provide the name of the manufacturer and the installed cost of the alarming device. 13. How many times was the alarm triggered in 2015? 14. If the alarm was installed after January 1, 2015, please provide the installation date and number of times the alarm was triggered since installation.	
-0068	Add the following questions to Table 5: • Number of times pressure relief valves are tested per year for their proper pressure release settings • Hours of improper release via PRV or thief hatch (due to failure to reseat, failure to close thief hatch, misaligned gasket, etc.) in 2015 • Number of instances of improper release via PRV or thief hatch (due to failure to reseat, failure to close thief hatch, misaligned gasket, etc.) the 2015 calendar year (count) • Number of instances of stuck dump valves in	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action. EPA is asking for the number of releases via PRV or thief hatch. Questions on dump valves similar to thief hatches and PRDs have been added.

Comment ID	Comment Summary	EPA Response/Action Taken
	the 2015 calendar year (count) • Type of control measure in place; vapor recovery compressor, eVRU, ejector, enclosed combustor, open flare, other? • If other, list the type of other control • If vapor recovery compressor, list the type of compressor; reciprocating, centrifugal, scroll, screw, vane, other? • Capacity of recovery/ control option (Mscf/day) • Maximum liquid production per day at the well site in the 2015 calendar year • Minimum liquid production per day at the well site in the 2015 calendar year • Operating hours of recovery/ control option (Mscf/day) • Does the tank use blanket gas? • If blanket gas is used, what type?	Types of control measures in place are in compressor and controls tab.
	Table 6: Direct Emission Measurements	
-0046	EPA should expand the instructions or add a column (measurement date/year) to address tanks that were measured multiple times over the last 5 years.	EPA appreciates the comment and will implement as suggested.
-0046	*Sub-Section 6. Direct Emission Measurements – Complete for each Tank/Separator, as applicable, for which emissions measurements data are available* "Source Description" • EPA should clarify the expected response for this request.	Source description means where emissions are being measured.
-0068	Add the following to Table 6: • Flashing, working, and standing emissions • Dump valve emissions • Flashing, working, and standing emissions	Table 6 has been unconnected. Multiple tests per tank are allowed now. Date of measurement and speciation has also been added.

Comment ID	Comment Summary	EPA Response/Action Taken
	measurement equipment • Dump valve emissions measurement equipment • Date of measurement (month and year)	
	Other/General	
-0061	Operators should be exempted from completing Table 4. Feed Material Composition if Table 6. Direct Emission Measurement is completed.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	Operators should be exempted from completing Table 4. Feed Material Composition if pressurized liquid sample and analysis was done within the past 5 years, consistent with the direct measurement allowance.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0031	Explicitly list as exempt from the ICR survey tanks that store the following materials: unused triethylene glycol, lube oil, used lube oil, wastewater with negligible hydrocarbon content (e.g. floor cleanup wastewater), odorant, and diesel and gasoline for facility use. Also, exempt tanks with capacity <500 gallons from the ICR. These tanks have negligible GHG and VOC emissions.	EPA has reduced the scope of sampling for separators with liquids output below 10 bbl/day. However, for transmission and storage facilities that do not have separators that have 10 bbl/day liquids output need to complete the separator sampling for any one of their separators on site.
-0058	EPA needs to clarify what types of facilities would be expected to respond to Tanks/Separators Sheet worksheet 2F (appears to call for information about tanks and separators at production well sites only). This worksheet should be limited to upstream tanks in production operations. In transmission and storage facilities downstream of gas processing, natural gas is pipeline quality, the potential emissions from tanks with separators are insignificant, and sampling is not warranted. (worksheet 2F ("Tanks Separators") question 4 (rows 73 – 75))	Tanks sheet is applicable to all sites with storage tanks. EPA has reduced the scope of sampling for separators with liquids output below 10 bbl/day. Transmission and storage facilities that do not have separators that have 10 bbl/day liquids output need to complete the separator sampling for any one of their separators on site.

Comment ID	Comment Summary	EPA Response/Action Taken
-0066	EPA should collect specific information on the disposition of all liquids (injected and recovered) and/or wastewater and the volume sent to open-air impoundments, percolation pits, and surface discharged.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0064, 46	The facilities extending over large contiguous properties will have more than 10 tanks/separators. The number of tanks/separators will likely exceed 100. Will these sections be unprotected for additional entries?	More rows have been provided.
-0054	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.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	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. Black out for T&S. 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.	EPA has adjusted the spreadsheets as appropriate.
-0054	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	EPA has reduced the scope of sampling for separators with liquids output below 10 bbl/day. Transmission and storage facilities that do not have separators that have 10 bbl/day liquids output need to complete the separator sampling for any

Comment ID	Comment Summary	EPA Response/Action Taken
	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.	one of their separators on site.
-0054	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.	EPA has reduced the scope of sampling for separators with liquids output below 10 bbl/day.Transmission and storage facilities that do not have separators that have 10 bbl/day liquids output need to complete the separator sampling for any one of their separators on site
-0046	Request only information regarding those tanks and vessels meeting the current description found on the definitions tab.	EPA has reduced the scope of sampling for separators with liquids output below 10 bbl/day. Transmission and storage facilities that do not have separators that have 10 bbl/day liquids output need to complete the separator sampling for any one of their separators on site
-0046	In midstream, separators are always flow through process vessels where the overhead gas is contained within the process. Midstream operators are focused on moving the customer's gas to market. GPA Midstream member companies would never have a separator designed to route gas to the atmosphere or to a control device. Gathering and boosting facilities typically have a facility inlet separator (or two) (also called the inlet receiver or slug catcher) which receives all the gas the facility will process. Any liquids that accumulate in the vessel are sent to a tank or a stabilizer unit. The gas continues through the process, which almost always includes compression.	EPA appreciates the comment.
-0046	During compression of the gas, some liquids may "drop out" of the gas stream as the pressure is increased. This being the case, compressors have interstage separator (also called knock out pots) that	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	receive the compressed gas/liquid mixture and drop out any liquid after each stage of compression (compressors can have one stage or multiple stages). The small amounts of liquids that accumulate in these vessels are either sent to a tank, stabilizer unit, or back to the inlet receiver.	
-0046	Some midstream facilities have stabilizer units (also called stabilization units) which receive liquids from the inlet separator and drive off flash gas either through pressure drop and/or heat. The stabilized liquids are then sent to tanks. The gases are either captured for sale or combusted. At these facilities, the stabilizer liquid composition, temperature, and pressure have little bearing over the tank liquid composition, temperature, and pressure. As such, EPA should clarify that liquid samples should be taken at the location that best represents the liquids received by the tank.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	In production, separators that do have emissions (typically the low pressure separators, which are sometimes heated and would therefore also be defined as heater treaters) are controlled differently than tanks, and they need to be evaluated separately in this ICR. The primary difference is that the gas volume emitted from the production low pressure separator is much higher than flashing/working/breathing losses from tanks. Thus, different control technologies would need to be applied. For example, an enclosed vapor combustor might be adequate control for a tank, but multiple enclosed vapor combustors may be required to handle the volumes from a low pressure separator. Likewise,	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	recovery might be a good option for low pressure separators due to large gas volumes, but recovery might not work for tanks because the volumes might be too low to keep a vapor recovery unit running efficiently. Thus, even in the production segment where separators can be emission sources, the profile of their emissions and their controls are very different than tanks; therefore, it does not make sense for EPA to treat separators and tanks in the exact same manner in the survey.	
-0046	Tank color is not being requested, but this may be a necessary data point to understand tank temperature fluctuations which lead to breathing losses (EPA asks for average operating temperature, which does not assess these fluctuations). Alternatively, EPA should clarify that only flashing losses are being assessed.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0048	The "Tanks Separators" worksheet titles is a confusing term not used in the oil and natural gas industry. EPA should clarify if this is referring to Separation Equipment.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	Pneumatics Tab	
	Table 1: Facility Information	
-0046	• Provide a dropdown or check box to communicate that the facility is on supplied/instrument air. • Instrument air driven devices should be exempted from the ICR altogether rather than a dropdown for the whole facility.	Companies should provide best available data when responding to the ICR.
	Table 2: Pneumatic Controllers/Devices/Pumps Inventory	
-0054	Row 6-15 Column A - Type of Pneumatic Device • Provide definitions and ensure definitions are consistent with Subparts W and OOOOa.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	• Clarify: service type is mixed with bleed type. • Carry revised definitions through entire pneumatic tab, tables and pull downs.	
-0054	Row 6-15 Column B - Number of Natural-Gas Driven Devices • There are safety concerns with requiring field counting and data gathering because it is difficult to access some pneumatic actuators to locate the nameplate. • Allow sufficient time to collect data, which would provide the ability to address potential safety hazards. Or allow use of a surrogate count of the number of pneumatic devices per compressor or tank.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	Classification of intermittent vent controllers into throttling or snap-acting should be removed from Table 2. Pneumatic Controllers/Devices/Pumps A.Inventory.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 6-15 Column C - Number of Air-Driven Devices • 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. • Remove question. If field is retained, recommend alternative question: Is there an air system available for pneumatics at the facility? [Y/N]	EPA has added a separate column for air driven devices.
-0061, 31, 64	Remove information collection of air driven	EPA has considered and evaluated the impacts of this

Comment ID	Comment Summary	EPA Response/Action Taken
	pneumatics counts from Table 2. Pneumatic Controllers/Devices/Pumps Inventory.	comment and has decided not to pursue any further action.
-0061	Remove rotary vane and turbine actuators from Table 2. Pneumatic Controllers/Devices/Pumps Inventory.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	Remove information on Kimray pumps from Table 2. Pneumatic Controllers/Devices/Pumps Inventory.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	Add 2015 operating hours for liquid circulation pneumatic pumps.	EPA appreciates the comment and has implemented as suggested.
-0068	***SEE CLEAN AIR TASK FORCE COMMENT Add the following questions to Table 2 **FOR EACH PNEUMATIC CONTROLLER/ACTUATOR:** • Device No. • Vented Controller (Gas-driven pneumatic) (Continuous Bleed or Three-way Valve) • Vented Actuator (Gas-driven pneumatic) (Snap Acting or Throttling) • Instrument Air PD • Electric controllers • Year of installation • Supply Line Pressure (psig) • Equipment Associated with? • Function (level control, temp control, etc.) • Measured Emissions Rate (scfh, whole gas) • Manufacturer Make and Model Number • If measured emissions rate not available, estimated emissions rate, if available (scfh) • In the determination of the operator, is this a high bleed, low bleed, intermittent bleed device?	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0068	***SEE CLEAN AIR TASK FORCE COMMENT Add the following questions to Table 2: • Electricity driven actuators – Number of	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	Electricity-Driven Devices • What type(s) of electricity-drive actuator(s) (e.g., electronic; instrument air; solar powered; VRU; etc.)? • How is electricity generated (e.g., connected to the grid; solar panels; on-site generation)? • Chemical/liquid injection/circulation piston pumps - Number routed to process • Chemical/liquid injection/circulation diaphragm pumps - Number routed to process • Chemical/liquid injection/circulation piston pumps - Number routed to control • Chemical/liquid injection/circulation diaphragm pumps - Number routed to control • Electric pumps – Number of Electricity-Driven Devices	
-0068	***SEE CLEAN AIR TASK FORCE COMMENT Remove the following questions from Table 2: • Snap acting, intermittent bleed controllers - Number of Air-Driven Devices • Throttling low continuous bleed controllers - Number of Air-Driven Devices • Throttling high continuous bleed controllers - Number of Air-Driven Devices • Throttling intermittent bleed controllers - Number of Air-Driven Devices • Throttling no-bleed controllers (discharge to downstream gas line) - Number of Air-Driven Devices	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0068	Replace Table 2 references to “Chemical injection” pumps with "Chemical/*liquid* injection/*circulation*” pumps. Stating liquid covers all types of pumps	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
-0068	Kimray pumps are only used for glycol circulation. Replace Table 2 references to “Liquid” Kimray pumps with “Glycol Assist” Kimray pumps.	EPA appreciates the comment and has implemented as suggested.
-0068	Kimray pumps cannot be air driven. Remove question “Liquid Glycol Circulation (Kimray) pumps - Number of Air-Driven Devices.”	EPA has requested information on “liquid circulation (Kimray) pumps.”
	Table 3: General Pneumatic Controllers/Devices/Pumps Information	
-0061	Revise pick list selections for ‘How does the facility determine if a device is intermittent or continuous bleed?’ to the following: • Manufacturers’ data sheet based calculation, • Instrumentation design knowledge, or • Model number and supply pressure.	The picklist options have been added.
-0054	Row 18 Column A-B - How does the facility determine if a device is intermittent or continuous bleed? • 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). • Remove question. If field is retained, add options such as “manufacturer specification” to current pull-down menu.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	Revise pick list selections for ‘How does the facility determine if a continuous bleed device is high or low?’ in Table 3. General Pneumatic Controllers/Devices/Pumps. The Pick list options should be changed to: • Manufacturer information based calculation, • Model number and supply pressure, • Measured gas supply rate • Measured gas vent rate, or	Picklist options have been updated.

Comment ID	Comment Summary	EPA Response/Action Taken
	• Other design considerations.	
-0054	Row 19 Column B - How does the facility determine if a continuous bleed device is high or low bleed? • 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." • This is a not a significant source for T&S. Allow selection of higher bleed if bleed rate cannot be easily discerned.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 20 Column B - What work practices does the facility employ to identify malfunctioning controllers (e.g., intermittent devices continuously venting)? • Incomplete pull down, include "audio" with visual in pull down menu. Include routine audio/visual inspections of controllers.	Audio/visual has been added to the picklist.
-0046	*Sub-Section 3. General Pneumatic Controllers/Devices/Pumps Information* • The question, "What work practices does the facility employ to identify malfunctioning controllers (e.g., intermittent devices continuously venting)?" should allow for multiple selections (versus a single drop-down selection).	Picklist options and other has been added.
-0054	Row 21 Column A - How many controllers were found malfunctioning in the past year? • 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	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	malfunctioning controllers is not determinable for the past year. • Remove question.	
-0054	Row 22 Column A - What is the natural gas supply pressure for the pneumatic devices (psig)? • 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. • Remove question	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	Add parameter 'List current environmental regulations to which the pneumatic controllers must comply. Select all that apply.' to Table 3. General Pneumatic Controllers/Devices/Pumps. The picklist options should be limited to: • None, • State Regulation or Permit • NSPS OOOO/OOOOa, and • Both State Regulation/Permit and NSPS OOOO/OOOOa.	EPA appreciates the comment and has implemented as suggested.
-0061	Add 'Does facility use practices to minimize natural gas emissions from pneumatic devices or pumps?' to Table 3. General Pneumatic Controllers/Devices/Pumps. Pick list options should be limited to the following: • Pumps connected to closed vent system (CVS), • Pumps routed to control device, • Air supplied to controllers, • Solar/electric valves, or • Other, specify.	EPA appreciates the comment and has implemented as suggested.
-0061	Remove 'What is the natural gas supply pressure for	EPA has considered and evaluated the impacts of this

Comment ID	Comment Summary	EPA Response/Action Taken
	the pneumatic devices (psig)?' from Table 3. General Pneumatic Controllers/Devices/Pumps.	comment and has decided not to pursue any further action.
	Table 4: Isolation Valve Actuations in 2015	
-0061	Revise heading from 'Isolation valve actuation' to 'Pneumatic driven, motorized actuators' in Table 4. Isolation Valve Actuations in 2015.	Table 4 has been adjusted to, "Pneumatically driven isolation valve actuations."
-0054	Row 28-36 Column B - Isolation Valve Actuator Type • The pull down options are inconsistent with options in row 11 and 12. Add "other" row to rows 11 and 12 to be consistent with the pull down options.	EPA appreciates the comment and has implemented as suggested.
-0054	Row 27 Column C - Actuator Size (include description, if "other" selected for type) • 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. • Remove question. 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.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	What does the EPA means by "actuator size" and how to appropriately count the cumulative number of actuations? What is this based upon? Engineering estimates?	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 27 Column D - Cummulative [sic] Number of Actuation Cycles in 2015 (or most recent operating year). • The information on actuations is not available	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	and is indeterminate. Gathering surrogate information on Operations (unit Blowdowns) would not be accurate and would be very labor intensive. • Remove question. If this field is retained, correct typo “cumulative.” If this item is retained, EPA should allow the use of engineering estimates.	
-0061, 31	Records are not typically kept on isolation valve actuation and will typically be an operator’s best estimate. The parameter in Table 4. Isolation Valve Actuations in 2015 should be amended to explicitly state estimation is appropriate for clarity on required level of accuracy: ‘Estimated Number of Actuation Cycles in 2015’.	Companies should provide best available data when responding to the ICR.
-0054	Row 27 Column E - Estimated Device Consumption Rate (scf/actuation) • 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. • Remove question. If retained, EPA should allow the use of engineering estimates or default to a conservative consumption rate of > 6 scf/hr.	Companies should provide best available data when responding to the ICR.
	Table 5: Direct Measurements	
-0046	“Source Description” • The instructions are contradictory with the table options. They ask the respondent to complete an entry for each	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	controller/device/pump that was measured in the last 5 years, yet columns D and E are in regards to multiple devices.	
-0054	Row 41-49 Column B - Pneumatic Device Type • The pull down options are inconsistent with options in row 28. Add "other" to the pull down options to be consistent with row 28.	EPA appreciates the comment and has implemented as suggested.
-0068	Add the following questions to Table 5: • Measurement Method *(high-flow sampler, bagging, temporary flow meter installation, other)* • Duration of measurement • Number of actuations during measurement	EPA has added measurement method, however for duration of measurement and number of actuations during measurement EPA has considered and evaluated the impacts of this comments and has decided not to pursue any further action.
	Other/General	
-0061, 48	The information collected on Intermittent Vent Controllers could not reliably be used to determine vented emissions due to the variability of the exhaust rate caused by the unique site operations. • Emissions are highly dependent on operational conditions. • It would be inappropriate for EPA to use the Part 2 request to draw industry-wide conclusions about hundreds of thousands of pneumatic controllers. • Intermittent devices are purpose-built for individual facilities, and it is inappropriate to assume that actuation rates on one facility's controllers are representative of industry operations. • Variability is further compounded by the fact that pneumatic controllers will often actuate at different rates seasonally.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
-0031, 46	If the intent of the proposed data is to determine if instrument air is available, ask a 'yes/no' question, e.g. whether any air-driven devices are in use at the facility. EPA should clarify how sources should respond if company records are not available. If the answer is yes and a number of devices are provided for gas-driven pneumatics, then the question would be answered without an unnecessary count of air-driven devices.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049	EPA should simplify the request for instrument air pneumatic, electronic, and mechanical controllers. If facilities are able to use instrument air, they will generally do so for all controllers. Therefore it is unnecessary to gather additional information on actuation rates, snap acting versus throttling controllers, etc. for these devices.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0031	Provide limits for companies, such that they are only required to perform a count of equipment components and pneumatic devices for half of their surveyed facilities or a maximum of 5 facilities	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0031	For facilities that are designed with identical equipment, allow the use of one physical count for each similar facility rather than requiring separate physical counts.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0050	Clarify if EPA is only seeking information relating to pneumatic controllers and does not need information related to pneumatic valves or actuators that do not have the potential to emit.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0050	Limit requested data to pneumatic controllers (not pneumatic pumps) as this is the only aspect of a pneumatic device that actually emits natural gas.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0058, 54	EPA should clarify that the pneumatic device	EPA has considered and evaluated the impacts of this

Comment ID	Comment Summary	EPA Response/Action Taken
	worksheet does not need to be completed for transmission pipelines.	comment and has decided not to pursue any further action.
-0054	The ICR introduces new terms and device categories ("snap acting" intermittent controllers and "throttling" low continuous bleed, throttling intermittent bleed, and throttling high continuous bleed controller 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. Black out for T&S.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049, 48	The survey should collect pneumatic controller data on high-bleed, low-bleed, and intermittent-bleed devices only. The request for rotary vane isolation valve actuators, snap-acting vs. throttling intermittent-bleed controllers, and turbine operated isolation valve operators would not meaningfully improve the quality of data collected and is not commensurate with the substantial burden on respondents.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	The Intro worksheet instructions for pneumatics states, "You must complete the pneumatic device counts in Section 2 of this form based on actual counts at the facility if natural gas-driven pneumatic devices are used." EPA Supporting Statement at 33. This statement would imply (correctly) that pneumatic devices operating on supplied air systems are not required to be counted. However, on the pneumatics tab in section 2, a count is required for all air-driven devices. EPA Supporting Statement at 52.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
-0049	EPA should add a section to the Part II pneumatics section to allow operators the ability to designate whether a pump, valve or controller is controlled by a control device. To be consistent with industry best practices, operators often vent these pneumatics to a control device or re-capture the gas.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049	General support for section 3 information collection on work practices and malfunctions, as it will provide EPA with useful context for evaluating work practice standards to ensure the controllers are operating as designed.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	AGRU Tab	
	Table 2: General AGRU Information	
-0061	The 'AGRU Type' selections in Table 2 should be modified to include commonly used amine absorbers.	EPA appreciates the comment and has implemented as suggested.
-0061	The regulations listed should be limited to those applicable to AGRUs in Table 2.	EPA appreciates the comment and has implemented as suggested.
-0061	'Relative selectivity of H2S over CH4 (Mass ratio)' and 'Relative selectivity of CO2 over CH4 (Mass ratio)' should be removed from Table 2. General AGRU Information. The "relative selectivity ratio" is not a valid predictor of methane in the off-gas stream, since the amine is not saturated with all three gases.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	EPA should only require operators to provide either 'Average volumetric flow rate of feed natural gas (scfm)' or 'Average volumetric flow rate of treated natural gas (scfm),' in Table 2. General AGRU Information, but not both. Volumetric flowrate is typically available only for either feed or treated gas, not both. 'Type Natural Gas Volume Provided' should also be added to specify correct application of the volumetric flowrate per the above recommended	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	change; with pick list options of ‘feed gas’ or ‘treated gas’.	
-0061	The disposition of off-gas must be treated the same for H2S and CO2. These columns in Table 2 should be combined.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	‘Contactor Tower Pressure (psig)’ and ‘Circulation Rate of Solution (gallon/minute)’ should be added to Table 2. General AGRU Information. The contactor tower pressure and temperature, the type of amine used, and the circulation rate define the rate (pounds/hr) that methane is absorbed into the amine.	EPA appreciates the comment and has implemented as suggested.
-0061	Add operating hours in 2015 to Table 2.	EPA appreciates the comment and has implemented as suggested.
	Other/General	
-0061	EPA should request the methane mass rate in the off-gas from the most recent process simulation. Natural gas flowrate and compositions of methane, CO2 and H2S are not pertinent to the calculation of methane emissions. Type of amine, amine circulation rate, contact tower pressure and temperature are the primary factors determining methane in AGRU off-gas.	Facilities can take process simulations, but we still believe this information is pertinent.
-0046	Are there limitations on what is considered a direct emissions measurement? Some AGRUs have a volumetric flow meter on the acid gas vent and/or may also have an online gas chromatograph on the acid gas. EPA should clarify as to whether EPA would consider data from these to be a “Direct Emissions Measurement.”	Yes, and the emissions would be whole gas flow rate.
-0046	EPA should allow respondents the option to upload an AMINECalc model in lieu of providing information on the AGRU tab. This will provide EPA	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	the composition, equipment configuration, and emissions information it needs in a readily-usable format.	
	Dehyd Tab	
	Table 1: Facility Information	
	Table 2: General Dehydrator Information	
-0046	*Sub-Section 2. General Dehydrator Information – Complete for each Dehydrator* "Dehydrator Type" • Add "ethylene glycol" in the dropdown list for "Dehydrator Type".	EPA appreciates the comment and has implemented as suggested.
-0054	Row 8-43 Column D - List current environmental regulations to which the well site must comply. Select all that apply. • Move to Facility tab. Change "well site" to applicable term. Include 40 CFR 98 in list.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061, 46	Volumetric flowrate is typically available only for either feed or treated gas, not both. Only one parameter should be required in the survey.	EPA appreciates the comment and has implemented as suggested.
-0054	Row 8-43 Column E-L - Feed Gas and Treated Gas column headers • For information on feed and treated gas, EPA should allow the use of GLYCalc runs instead.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	"H2O concentration in feed gas (% by vol)" • GPA Midstream recommends that this match GlyC GlyCalc, which includes two options: "Gas is saturated" or "Gas is subsaturated." If the latter option is selected, the use can input the water content in units of 'lb H2O/MMSCF' rather than '% by vol' as requested in the ICR spreadsheet.	EPA has revised the units of H2O concentration in feed gas.

Comment ID	Comment Summary	EPA Response/Action Taken
-0061	Composition in and out of the unit should not be collected. Trying to calculate mass rates of methane and CO2 by measurement and mass balance is impractical due to low solubility and measurement error.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	EPA should request 'Contactor tower pressure', 'Glycol circulation rate', 'Circulation pump type', 'Runtime hours', and 'Stripper gas consumption rate', and 'Stripper gas methane composition'. Contactor tower pressure and glycol circulation rate are primary factors in calculating methane emissions from dehydrators.	EPA appreciates the comment and has implemented as suggested.
-0068	Add the following questions to Table 2: • Temperature of feed gas stream (°F) • Pressure of feed gas stream (psig) • Is the gas saturated or subsaturated? • Hours of operation in the 2015 calendar year	EPA appreciates the comment and has implemented as suggested.
	Table 3: Glycol Dehydrator Information	
-0054, 46	Row 47 Column C - If yes, provide methane recovery efficiency (percent) • For information on natural gas recovery efficiency, EPA should allow the use of GLYCalc runs instead. • Change "methane" to "natural gas"	EPA appreciates the comment and has implemented as suggested.
-0046	*Sub-Section 3. Glycol Dehydrator Information - Complete for each Glycol Dehydrator* "Disposition of reboiler/regenerator exhaust" • EPA is inappropriately combining two emission points (reboiler exhaust and the regenerator still vent); these should be separated. • For the regenerator still vent, EPA needs to	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	account for multiple controls (condenser to combustion), which is a very common configuration. EPA should also take the opportunity to request more granular information about how the regenerator still vent gas is controlled (i.e., type of flare, thermal oxidizer, vapor combustor, etc), versus the generic "flare or thermal oxidizer).	
-0061	Average fuel gas rate should not be requested. Methane emissions from regenerator still reboilers are insignificant because methane is combusted to CO2 and these reboilers have low heat requirements.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054, 46	Row 47 Column H - Glycol reboiler/regenerator fuel gas consumption rate (scfm) • The most readily available units for the fuel gas consumption rate are in MMBtu/hr. Operators should be able to select preferred engineering units. If only one option is allowed, use MMBtu/hr rather than scfm.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	The 'Source of fuel' is not tied to emissions and should be removed. If the 'Source of fuel' parameter is not removed, 'indirect heat' should be added as an option to cover gas processing plants that utilize steam in the regenerator still reboiler.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 48 Column K - Emission reduction work practices used • Sometimes multiple work practices are used on a single glycol dehydrator. Allow for "multiple" work practices in pull down options.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	*Sub-Section 3. Glycol Dehydrator Information - Complete for each Glycol Dehydrator*	EPA has revised the Glycol dehydrator information tab to include information on:

Comment ID	Comment Summary	EPA Response/Action Taken
	"Emission reduction work practices used" • 'Reboiler condenser gas' is very unclear and could be mistaken for multiple streams within a dehydrator unit. • These columns should be removed from the spreadsheet due to the ambiguity and based on the fact that other columns address the configuration of the dehydrator including emission control devices. • EPA is not requesting sufficiently granular information about NESHAP HH/HHH that would truly inform EPA about the emission sources and their current control requirements. EPA should add the following: • Is the dehydrator at an area source or major source? • Is the dehydrator a large glycol dehy, existing small glycol dehy, or new small glycol dehydrator? • For area source TEG dehydrators, does the dehydrator meet with <3 mmscfd throughput exemption, the < 1 ton per year (tpy) actual emissions exemption, neither or both? • For non-exempt area source TEG dehydrators, is the dehydrator located within a UA plus offset and UC boundary14? • For major sources, large dehydrators, are dehydrators complying with the 95% HAP reduction requirement or the 1 tpy benzene emission requirement? • For major source small dehydrators, what is the BTEX emission limit?	• Area Source/Major Source status of facilities • "actual annual average nat gas flow rate • date of construction/reconstruction" • Exemption criteria • Circulation rate of solution" which is the same as glycol circulation rate.

Comment ID	Comment Summary	EPA Response/Action Taken
	• EPA does not request the glycol circulation rate, which is an operating data point that directly relates to emissions. • EPA does not ask if the glycol pump is electric or natural-gas driven pneumatic, which also impacts dehydrator emissions (pneumatic pump emissions are part of dehydrator process and emitted from the regenerator still vent) • If EPA pursues information about desiccant dehydrators, EPA needs to ask about vessel opening frequency (once/year, once/two years, once/three years) and emissions during opening.	
-0068	***SEE CLEAN AIR TASK FORCE COMMENT Add the following questions to Table 3: • If yes, flash tank pressure • If yes, flash tank temperature • If yes, is flash gas captured? • Number of absorber stages • Lean glycol water content • Lean glycol recirculation ratio • Is stripper gas used in the regenerator? • If yes, the flow rate of stripper gas (scf/min) • If yes, the methane volume percent in stripper gas (0% if nitrogen) • Is there a condenser on the regenerator/reboiler? • If reboiler/regenerator/condenser exhaust is controlled, type of control (vapor recovery to sales, vapor recovery for use on site, to flare)	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0068	Remove “Disposition of reboiler/regenerator	EPA has considered and evaluated the impacts of this

Comment ID	Comment Summary	EPA Response/Action Taken
	exhaust" from Table 3.	comment and has decided not to pursue any further action.
	Table 4: Direct Emissions Measurements	
-0054	Row 57-63 Column C-F - 4. Direct Emissions Measurements - Complete for each dehydrator for which emissions measurement data are available. • Allow the use of GLYCalc runs. Direct stack measurements are rarely completed since software tool is available and cited in related regulations.	EPA appreciates the comment and has implemented as suggested.
-0068	Add "Measurement equipment used (temporary meter, hi flow sampler, calibrated bag)" to Table 4.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	Other/General	
-0046, 61	EPA should allow respondents the option to upload a GLYCalc, Version 3.0 or higher file in lieu of providing information on the Dehydrator Units Tab. Many responders already must prepare a GLYCalc run to comply with NESHAP requirements under Subpart HH, permit requirements, and/or emission inventory reporting. In addition, the GLYCalc runs will provide EPA the composition, equipment configuration, and emissions information it needs in a readily-usable format.	GRI-GLYCalc or other modeling software runs can be used, but must be inserted into database.
-0061	Separate control devices are typically required for dehydration units. EPA has not included the cost to control dehydration units.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046, 61	EPA should remove desiccant dehydrators from the ICR as they are an extremely small source of emissions (as GHGRP data shows). Or, at the very least, EPA should limit the ICR to desiccant dehydrators that directly emit their regeneration gas to atmosphere. EPA should also ask, for each glycol dehydrator, if the unit is treating process gas or	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	desiccant dehydrator regeneration gas.	
-0066	Characterization of emissions from glycol dehydrators should include an expansion of the composition analysis of feed and treated gas to include data on individual HAPs and other VOCs, as opposed to just relying on estimation of total VOCs.	EPA appreciates the comment and has implemented as suggested.
-0046	Glycol dehydrators that route all emissions back to the process should also be excluded from this ICR as they are not an emissions source.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	Eq Leaks Tab	
	Table 1: Facility Information	
-0046	EPA should change "well site" to "facility" in rows 3-7.	EPA appreciates the comment and has implemented as suggested.
-0054	Row 3-7 Column B – List current environmental regulations to which the well site must comply. Select all that apply. • Move to Facility tab. Change "well site" to applicable term. Include 40 CFR 98 in pick list.	EPA has corrected "well site" references and added 40 CFR 98 to the regulatory picklist. Regulations remain in the EqLeak Tab.
-0054	Row 8 Column A - Does the facility conduct routine inspections to identify leaking equipment components? • The question as stated will not lead to a clear and concise answer. To clarify, suggest differentiating frequent "walk through" from regulatory driven surveys and eliminate "routine" as this is subject to interpretation. • Insert question: Does the facility conduct regular audio-visual-olfactory (AVO) inspections for leaks? [Y/N] • Restate original question: Does the facility conduct "other" inspections using	EPA has clarified that "routine inspections" are "regulatory driven inspections." EPA has also added the question "Does the facility conduct regular audio-visual-olfactory (AVO) inspections for leaks? [Y/N]."

Comment ID	Comment Summary	EPA Response/Action Taken
	instrumentation/regulatory methods to identify leaking equipment? If YES, complete Table 2.	
-0046	EPA should divide the question "Does the facility conduct routine inspections to identify leaking equipment components" into at least two parts (or otherwise redraft the section) because, as drafted, this section allows only one frequency and monitoring method. In reality, a company may perform camera inspections, M21 inspections, and AVO inspections each on different frequencies.	EPA has amended the Section 1 to allow for multiple monitoring methods.
-0054	Row 11 Column B - Monitoring method used. • 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. Define OVA (organic vapor analyzer) in acronyms to differentiate from AVO (audiovisual-olfactory) or spell out. • There are occasions when multiple methods are used. Add "multiple" to pull down.	EPA has added a definition of "OVA" and "AVO" to the Acronym List. EPA has amended the Section 1 to allow for multiple monitoring methods.
-0046	EPA should add Audible, Visual, Olfactory ("AVO") to the monitoring method options list.	EPA has added the question "Does the facility conduct regular audio-visual-olfactory (AVO) inspections for leaks? [Y/N]."
-0058	Pick list 38 (monitoring method) should allow an operator to pick more than one method, as sometimes more than one method can be used to detect and/or measure methane emissions.	EPA has amended the Section 1 to allow for multiple monitoring methods.
-0058	Hi-Flow equipment should be added to pick list 38 (monitoring method), as this is sometimes used to measure flow rate of a detected leak. EPA should also retain the option to pick "other" and allow the operator to specify another method.	EPA has added "Hi-Flow Sampler" and "Other (Specify)" to the monitoring method picklist.

Comment ID	Comment Summary	EPA Response/Action Taken
-0049	Under the monitoring method selections, one choice is “Method 21/OVA”. This seems to imply these methodologies are equivalent, which is simply not the case. Suggest separating these into two different selections. At some locations operators may perform OVA inspections and not perform Method 21 inspections.	EPA has edited “Method 21/OVA” to “Method 21.”
-0054	Row 12 Column A - If Other method, specify. • Add “If other/multiple method(s), specify.”	EPA has added “Other (Specify)” to the monitoring method picklist.
-0068	***SEE CLEAN AIR TASK FORCE COMMENTS Add the following questions to Table 1: • Was the inspection performed comprehensive for all components across the facility? • If not, what percentage of components were surveyed? • What is the frequency of inspections per year? • What is the monitoring method used for the leak survey?	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0068	***SEE CLEAN AIR TASK FORCE COMMENTS Remove the following questions from Table 1: • If yes, provide the following information by component type: Gas or Light Liquid Valves - Frequency of inspections. • If yes, provide the following information by component type: Gas or Light Liquid Connectors - Frequency of inspections. • If yes, provide the following information by component type: Gas or Light Liquid Pressure-relief Valves - Frequency of inspections. • If yes, provide the following information by component type: Pumps - Frequency of	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	inspections. • If yes, provide the following information by component type: Other components in gas or light liquid service - Frequency of inspections. • If yes, provide the following information by component type: Heavy liquid components - Frequency of inspections. • If yes, provide the following information by component type: Gas or Light Liquid Valves - Monitoring method used. • If yes, provide the following information by component type: Gas or Light Liquid Connectors - Monitoring method used. • If yes, provide the following information by component type: Gas or Light Liquid Pressure-relief Valves - Monitoring method used. • If yes, provide the following information by component type: Pumps - Monitoring method used. • If yes, provide the following information by component type: Other components in gas or light liquid service - Monitoring method used. • If yes, provide the following information by component type: Heavy liquid components - Monitoring method used.	
	Table 2: Equipment Leak Inventory Information	
-0046	Eliminate distinction of component counts by “Gas Service,” “LNG Service,” “Light Crude Service” and “Heavy Crude Service.” This type of distinction is not made in OOOOa for new well sites and	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	compressor stations as it isn't appropriate for the natural gas industry. GPA Midstream questions the practical utility of EPA collecting information for components at gas plants that are already subject to NSPS.	
-0046	To get insight on the appropriate frequency of monitoring, EPA should ask about the total number of components found leaking during the first monitoring survey (if within the last 3 years).	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 16-45 Column A - Service / Component Type • These do not match with Subpart W component types. There are differences in the component types listed depending on the service. • Consistent definitions and nomenclature with Subpart W and NSPS Subpart OOOOa. If retained, there is a significant burden to gather information using new categories.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 16-45 Column B - Total Number of Components contacting a process fluid that contains 5 percent by weight of any of the following pollutants: VOC, CH4, CO2 • Subpart W and NSPS Subpart OOOOa at compressor stations do not require this information. This is not applicable for T&S. • 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.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	Change the language in cells B15 and C15 to read "Total Number of Components contacting a process fluid or gas that contains at least 5 percent by weight	EPA appreciates the comment and will implement as suggested.

Comment ID	Comment Summary	EPA Response/Action Taken
	of any of the following pollutants: VOC, CH4, CO2" and "For natural gas processing plants only: Total Number of Components contacting a process fluid or gas that is at least 10 percent VOC by weight," respectively.	
-0054	Row 16-45 Column D - Total Number of Components Monitored for Leaks During Most Recent Monitoring Survey • Subpart W and NSPS Subpart OOOOa at compressor stations do not require this information. This is not applicable for T&S. • 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...." • Remove question. 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. 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.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 16-45 Column F - Definition of Leak used for Monitoring Components • There may be other leak definitions. In addition, GHGRP exempts tubing < ½ inch in	EPA has added "Other (Specify)" to the Definition of Leak Used for Monitoring Components list.

Comment ID	Comment Summary	EPA Response/Action Taken
	diameter. Consistency with existing regulations is warranted. • Add "other" to pull down options. Add a column to specify. Include exemption for small diameter tubing consistent with Subpart W.	
-0031	Provide an exemption for equipment component counts for tubing lines <1/2" diameter	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	EPA should either make the leak definition a multiple choice list, or EPA should change cell F15 to "Lowest definition of leak using for Monitoring Components".	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0058	The pick list options for "leak definition" (pick list number 39) are currently limited to parts per million volume (ppmv) levels from 500 ppmv up to 10,000 ppmv, plus "any visible emissions using OGI." An option should be added allowing a facility operator to pick 12,500 ppmv if they used a methane detector set to alarm (for safety purposes) at 25% of the lower explosive limit (LEL), which is equivalent to 12,500 ppmv. In case an operator has data based on Hi-Flow measurements, AGA suggests adding a pick list option for cubic feet per second or minute (i.e. a flow rate measured with a Hi-Flow device).	EPA has added "Other (Specify)" to the Definition of Leak Used for Monitoring Components list.
-0068	***SEE CLEAN AIR TASK FORCE COMMENTS Add the following to Table 2 **FOR EACH NATURAL GAS STREAM**: Respondents need to fill the tables below only for streams that contain 5 percent or greater by weight of any of the following pollutants individually or cumulatively: VOC, CH4, CO2. • Methane (vol%)	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	• CO2 (vol%) • HAPs (vol%) • VOCs (vol%) • Inerts (vol%)	
-0068	***SEE CLEAN AIR TASK FORCE COMMENTS Clean Air Task Force proposed new Tables for component counts (**see Attachment 2J in CATF Comments**). Proposed breaking out component counts by sector (Production, Processing, etc.) and collecting the following counts for typical equipment types (compressor, tank, meter, dehy, regulator, etc.): • Valve • Isolation Valve • Blowdown Valve • Dump Valve • Flanged Connector • Screwed Connector • Pressure Relief Valve • Open Ended line • Non compressor seal • Surface crack/hole • Other The component count table format should be repeated to collect information on number of components monitored during the last survey and again for the number of components found leaking during the last survey. Remove/Replace all questions in Table 2.	EPA appreciates the comment we have added equipment component counts by major equipment types, except that we did not distinguish between different types of valves.
	Table 4: Direct Emissions Measurements	
-0046	EPA should install a cap on how far back operators need to collect direct emissions data. The title of	EPA has amended the Table 4 to request most recent direct emissions measurement data per source.

Comment ID	Comment Summary	EPA Response/Action Taken
	Table 4 needs to be clarified with the time period.	
-0054	Row 61 Column A - 4. Direct Emissions Measurements - Complete for each component or equipment type, as applicable, for which emissions measurement data are available. • 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. • 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	EPA has requested leak emissions testing data for all sectors.
-0061	Direct emissions measurements should only include methods that quantify emissions. For Method 21 operations, a direct measurement is not obtained as there is no flow rate information.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	"Measurement Method" • EPA clarify what is meant by these "Screening/…" selection options with respect to equipment leaks. Does EPA intend for operators to report "Screening/…" with a "Measured Emissions Rate" of 0 scf/hr for any components that were screened and did not have emissions?	EPA has amended Table 4 to remove all "Screening/…" options from the Measurement Method picklist.
-0046	"Measurement Cost" • Direct quantitative measurements are unusual for leaking components, and EPA should not	EPA will include the ability to upload additional data (process simulations, supplemental data, etc.) in e-GGRT.

Comment ID	Comment Summary	EPA Response/Action Taken
	anticipate receiving a substantial amount of data here. These measurements are likely only conducted for special studies. • EPA should allow (but not require) respondents to submit leak detection program cost information. EPA should add a Sub-Section 5 for leak detection program information, which should request "Annual leak detection program cost", "Inspection type (dropdown option of In House or Third Party), "Equipment Ownership" (dropdown options of In House, Third Party or Rented). EPA should specify in the workbook or in a supplemental instruction that "Annual leak detection program cost" should include all equipment, transportation, recordkeeping software, inspection, component inventory maintenance, and repair costs.	
-0068	***SEE CLEAN AIR TASK FORCE COMMENTS Add the following questions to Table 4: • Month and Year of last survey performed • Frequency of surveys per year in the last three years • Survey equipment used • Emissions from Valves (scf CH4/hr) • Emissions from Isolation Valves (scf CH4/hr) • Emissions from Blowdown valves (scf CH4/hr) • Emissions from Dump Valves (scf CH4/hr) • Emissions from Flanged Connectors (scf CH4/hr) • Emissions from Screwed Connectors (scf	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	CH4/hr) • Emissions from Pressure Relief Valves (scf CH4/hr) • Emissions from Open Ended Lines (scf CH4/hr) • Emissions from Non compressor seals (scf CH4/hr) • Emissions from Surface crack/hole (scf CH4/hr) • Emissions from Other components (scf CH4/hr) • Was the measurement performed by the operator or a contractor? • *If contractor, total leak survey and* Measurement cost ($) • Total time needed for survey and measurement (hours) • Approximate average time between survey and repair of leak (days) • Approximate average cost to repair leaks ($) • Number of leaks repaired	
-0068	***SEE CLEAN AIR TASK FORCE COMMENTS Remove the following questions from Table 4: This information is already captured in the revised tables provided by Clean Air Task Force. • Service type • Equipment type • Component type • Measured Emissions Rate (scf/hr)	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	Other/General	
-0061, 59	The addition of providing prior leak data should be a voluntary option if data is available. Providing data	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	for only the most recent survey will not allow the agency to evaluate the declining rate of leaks over time.	
-0061	The proposed response time does not adequately allow for collection of data included in the draft ICR.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0027	Should use the same Service/Component Type categories as Subpart W.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0058, 54	EPA should clarify that the equipment leak worksheet does not need to be completed for transmission pipelines.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0066	Expand compositional analysis of produced gas to include data on individual VOC and SVOC fractions.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0064	There is no guidance on how to complete the component counts or leak data. Does the count stop at the well location or continue through the central processing facilities? For a facility consisting of hundreds of wells, the component counts will take a substantial number of hours to complete.	Component counts should be completed for the facility based on the "facility" definition provided in the Definitions Tab.
-0049	Asking for LDAR to be done on existing sources simultaneously is extremely burdensome and counterproductive to coming into compliance with OOOOa. Strongly recommend that EPA delay this portion of the ICR until after June 3rd.	EPA has considered and evaluated the impacts of this comments and has decided not to pursue any further action.
	Comp Tab	
	Table 1: Facility Information	
-0046	EPA should add more rows in order to allow operators to appropriately respond.	EPA has added several rows to allow responders to account for all compressors.
	Table 2: General Compressor Information	
-0061	EPA should remove 'Engine Type', 'Fuel Type', and 'Emission Tier' since these parameters relate to engine combustion emissions, not compressor emissions. These three data elements alone are	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	insufficient to determine engine methane emissions with any accuracy (i.e., within an order of magnitude).	
-0054	Row 9-48 Column D - List current environmental regulations to which the well site must comply. Select all that apply. • Move to Facility tab. Change "well site" to applicable term. Include 40 CFR 98 in the pick list.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 7 Column F - Engine Type • This column describes the "Driver" not the engine. Change from "Engine Type" to "Driver Type"	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 9-48 Column F - Engine Type • A turbine is a commonly used Driver Type. Include Turbine as an option in the pull down list.	EPA has added "Turbine" to the Engine Type list.
-0046	*Sub-Section 2. General Compressor Information – Complete for each Compressor* "Engine Type" • "Electric" is not an engine type. Electric is a type of driver, or motor, for a compressor. EPA should change the column heading to "driver type." • EPA should add "turbine" to the driver type drop-down menu. • EPA should exclude Columns E (Power output compressor driver (hp)), F (Engine Type) and G (Fuel Type) as each column pertains to drivers and not compressors.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action. EPA has added "Turbine" to the Engine Type list.
-0054	Row 9-48 Column G - Fuel Type • Since Column F includes Electric Drive, this	EPA has added "Electricity" as a fuel type.

Comment ID	Comment Summary	EPA Response/Action Taken
	column should allow electricity as a "fuel." Include Electricity as an option in the pull down list.	
-0046	*Sub-Section 2. General Compressor Information – Complete for each Compressor* "Fuel Type" • This should be deleted from the form all together, fuel type does not impact the methane emissions from a compressor.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 9-48 Column H - Emissions Tier • 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. • Clarify; eliminate requirement for natural gas-fired engines (and other engines using fuel other than diesel).	EPA has clarified that "Emission Tier" is found from 40 CFR 98 Subpart C reporting data for each engine.
-0046	*Sub-Section 2. General Compressor Information – Complete for each Compressor* "Emissions Tier" • Is column H is asking for the site-wide emissions tier or engine emission tier? If engine tier, this would refer to diesel engines (compression ignition) and not natural gas driven engines. If this column was only intended to apply to compression ignition engines only, the column should be blacked out when anything other than compression ignition is selected as the engine type.	EPA has clarified that "Emission Tier" is found from 40 CFR 98 Subpart C reporting data for each engine. EPA has corrected Table 2 to black out "Emission Tier" for spark ignition engines.
-0054	Row 9-48 Column M - Were direct emissions	EPA has considered and evaluated the impacts of this

Comment ID	Comment Summary	EPA Response/Action Taken
	measurements made for compliance with the GHGRP in 40 CFR part 98, Subpart W? • 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. • 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.	comment and has decided not to pursue any further action.
-0046	*Sub-Section 2. General Compressor Information – Complete for each Compressor* "Were direct emissions measurements made for compliance with the GHGRP in 40 CFR part 98, subpart W? If no, please provide the total time the compressor was in standby-pressurized mode in RY2015." • Specify that the time frame of the direct emissions measurements question is 2015. • The availability of run time in standby pressurized and depressurized modes at sites not subject to 40 CFR Part 98 Subpart W in reporting year 2015 will most likely not be available as it is not required to be tracked and does not provide beneficial data to operators for optimization or maintenance.	EPA has specified the reporting year for each column. Companies should provide best available data when responding to the ICR.
-0054	Row 9-48 Column O - If no, please provide the total time the compressor was in operating-mode in RY 2015. (hours) • Columns O-Q can be simple requests for operating time in mode. However, if this is not a Subpart W applicable facility, then this	Companies should provide best available data when responding to the ICR.

Comment ID	Comment Summary	EPA Response/Action Taken
	information is not readily available and there will be a high cost associated with gathering this information. • 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 prepopulate with Subpart W data. • If retained, allow engineering estimate for facilities that do not report under Subpart W.	
-0054	Row 9-48 Column P - If no, please provide the total time the compressor was in standby-pressurized-mode in RY 2015 (hours) • 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. • 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. • If retained, allow engineering estimate for facilities that do not report under Subpart W.	Companies should provide best available data when responding to the ICR.
-0054	Row 9-48 Column Q - If no, please provide the total time the compressor was in not-operating-depressurized mode in RY 2015 (hours) • 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	Companies should provide best available data when responding to the ICR.

Comment ID	Comment Summary	EPA Response/Action Taken
	high cost associated with gathering this information. • 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. • If retained, allow engineering estimate for facilities that do not report under Subpart W.	
-0068	Remove the following questions from Table 2: • Number of reciprocating compressors at the facility • Number of centrifugal compressors at the facility • If yes, identify the compressor sources controlled/recovered. • If yes, what types of controls?	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0068	Add "Are the starter motors electric or gas driven?" to Table 2.	EPA appreciates the comment and will implement as suggested.
	Table 3: Direct Emissions Measurements	
-0054	Row 51 • 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.) Add column for this data element.	EPA has amended Table 3 to include "Point of Measurement."
-0054	Row 51 Column G/H - Emission Rate (scf/hr) • Units are noted in row 52, and should not be in row 51.	EPA appreciates the comment and will implement as suggested.
-0068	Add the following questions to Table 3: • Point of Measurement • Volume % CO2 in emissions stream, if available	EPA has amended Table 3 to include "Point of Measurement."

Comment ID	Comment Summary	EPA Response/Action Taken
	• Volume % VOC in emissions stream, if available Split table by Point of Measurement (Blowdown Vent Stack(s) and Seal Vent Stack(s))	
	Table 4: Centrifugal Compressor Specific Information	
-0046	EPA should not assume that existing wet seal compressors can be converted to dry seal compressors, and should therefore collect information about whether it is technically feasible. As an optional reporting option, respondents should be allowed to provide a cost estimate for doing the conversion	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 67 Column D - If wet seals were replaced with dry seals on or after 1/1/2010, provide the cost. ($) • Cost definition required. For example, does the cost include both equipment and labor?	EPA has amended this table to clarify the need for total cost (both equipment and labor).
-0068	Add the following questions to Table 4: • Compressor suction pressure (psig) • Compressor discharge pressure (psig) • How many vents are connected to the seal oil separator(s)? • How many vents are connected to the seal oil sump/ tank? • Is seal oil separator vent(s) open to atmosphere or routed to suction or captured for other use? • If captured for other use, state where the gas is routed • Is seal oil tank vent(s) open to atmosphere or flared or captured for other use? • If captured for other use, state where the gas	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	is routed • Seal oil circulation rate • Seal oil pressure	
	Table 5: Reciprocating Compressor Specific Information	
-0046	The form should ask about rod replacement (versus rod packing replacement), programs to monitor and manage compressor emissions, and whether low emissions packing technology is used.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	Unclear if owner/operators should leave the 'Date of last rod packing replacement' field blank for new compression	EPA has amended this table to clarify that "N/A" should be selected if rod packing has not been replaced, which will negate the cost field. EPA has also amended this table to request "Hours Since Last Rod Packing Replacement." EPA has amended Table 2 to request "Date of Installation" for each compressor.
-0054	Row 76 Column B - Date of last rod packing replacement • A new rod packing seal may not yet have been replaced; allow n/a and trigger a negation of the cost field.	EPA has amended this table to clarify that "N/A" should be selected if rod packing has not been replaced, which will negate the cost field.
-0054	Row 76 Column C - Cost of last rod packing replacement ($) • Cost definition required. For example, Equipment and Labor. • A new rod packing seal may not yet have been replaced; therefore, include "or installation" to this header. • "Cost of last rod packing replacement or installation ($)." Clearly indicate that respondents may provide an engineering estimate.	EPA has amended this table to clarify the need for total cost (both equipment and labor). EPA has amended this table to clarify that "N/A" should be selected if rod packing has not been replaced, which will negate the cost field. Companies should provide best available data when responding to the ICR.
-0061, 59	In Table 5. Reciprocating Compressor Specific	EPA has amended this table to allow for more options in the

Comment ID	Comment Summary	EPA Response/Action Taken
	Information, under 'Frequency of rod packing replacement', update the pick list to the following options: • Never • Semi-Annually • Annual • Bi-Annual • Less Frequent than Bi-Annual • Based on operating hours (company maintenance procedure), • Based on leakage indicator (company maintenance procedure), and • Per compliance with applicable regulations.	"Frequency of rod packing replacement" picklist.
0046	The 'Frequency of rod packing replacement' drop down should include more options or include an "other", as the current options are very limiting. For instance, many replacements are based on run hours, or other factors, such as when high rod packing vent rates are observed.	EPA has amended this table to allow for more options in the "Frequency of rod packing replacement" picklist.
-0054	Row 77-82 Column D - Frequency of rod packing replacement • Include "other" as an option in the pull down, and a column to specify. For example, the NSPS Subpart OOOOa criteria is 26,000 operating hours or 36 months.	EPA has amended this table to allow for more options in the "Frequency of rod packing replacement" picklist.
-0061	EPA should add a new column to Table 5. Reciprocating Compressor Specific Information for 'Approximate operating hours between replacements.' Compressors may not run full-time and this will allow an operator to optionally specify replacing packing based on operating hours, either per company policy or per applicable regulations.	EPA has amended this table to request "Hours Since Last Rod Packing Replacement."

Comment ID	Comment Summary	EPA Response/Action Taken
-0068	Add the following questions to Table 5: • Is rod packing replacement based on a fixed schedule or emissions rate? • If based on emissions rate, emissions threshold to trigger replacement (scf-CH4/hr) • If based on emissions rate, frequency of measurement (months) • If based on emissions rate, frequency of measurement (hours of operation) • Frequency of rod packing replacement *(months)* • Frequency of rod packing replacement (hours of operation) • Number of compressor stages • Suction pressure of stage 1 (psig) • Discharge pressure of stage 1 (psig) • Suction pressure of stage 2 (psig) • Discharge pressure of stage 2 (psig) • Suction pressure of stage 3 (psig) • Discharge pressure of stage 3 (psig) • Suction pressure of stage 4 (psig) • Discharge pressure of stage 4 (psig) • Rod packing material type • Number of cups in the rod packing • Number of rings in each cup • Is the rod packing vent gas captured? • If captured, state where the gas is routed (sales, for use on site, flared, other)	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	Other/General	
-0066	EPA should specifically request submission of any HAP emissions testing data submitted by the responder to another agency as a requirement of state	EPA has amended the ICR to request information on additional air toxics, when applicable.

Comment ID	Comment Summary	EPA Response/Action Taken
	or local permits, or as a result of a compliance or enforcement action.	
-0066	EPA must ensure that any HAP emission estimates utilizing data collected as part of the ICR are based on the most up-to-date emission factors that include all the relevant HAPs beyond BTEX.	EPA appreciates the comment and will be using the most current emission factors.
-0046	EPA should exclude vapor recovery compressors from this ICR. Vapor recovery compressors similarly operate at low pressures and/or low volumes. EPA must at least add a column to Sub-Section 2 for "Operational Service" with selection options of "Process Gas, Vapor Recovery, Refrigeration, Other".	Vapor Recovery compressors should be included in Compressor service. Add Operational Service Column.
-0046	EPA should provide a compressor driver horsepower threshold, below which, the compressor would not have to be included in the ICR.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	Blowdown Tab	
	Table 1: Facility Information	
-0027	Add category "Blowdowns associated with the storage field (outside the compressor station)" to avoid confusion or lack of information from storage operations. Make this consistent with Subpart W to avoid undue burden.	EPA appreciates the comment and will implement as suggested.
-0054	Row 5-12 Column B-J - Blowdown information • These fields are included in Subpart W for compressor stations and should be prepopulated by the EPA if the facility is subject to Subpart W reporting.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	"Cumulative volume of natural gas blown down (scf)" • Request 'pre-control' be added beforehand for clarity.	EPA appreciates the comment and will implement as suggested.

Comment ID	Comment Summary	EPA Response/Action Taken
-0046	The category “Recovered for sale” is confusing. A common practice is for the majority of gas in a compressor to be routed back into the process (usually to the facility inlet), and then the small amount of gas remaining in the compressor is blown down. This would not necessarily be considered “recovered for sale.” EPA should simply title this category “Recovered.”	For the purposes of this ICR, “recovered for sale” means that the gas is routed back into the process.
-0054	Row 14-22 Column A-D - Hot taps or other practices • 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? • Black out these cells if Compressor station, storage, etc. is selected. Should only be filled in if “Pipeline” facility.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 19 Column A - Use pipeline pump down techniques • Include option of “Recompression with Multiple Lines” as an additional row. This option is different from “Use pipeline pump down techniques.”	EPA appreciates the comment and will implement as suggested.
-0054	Row 20 Column A - Use flexible membrane liners (pipelines) • 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”	EPA appreciates the comment and will implement as suggested.

Comment ID	Comment Summary	EPA Response/Action Taken
	for mechanical or composite sleeves.	
-0054	Row 21 Column A - Inspect/repair leaking (not fully sealed) PRD and blowdown valves • This is a "leak" question (i.e., valve not sealed) and not a "blowdown" event question. In addition, inspection and repair frequency may differ. • Delete question (Leaks are addressed in other form). If retained, move this to the equipment leaks form. Differentiate frequency of inspection and frequency of repair.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	"Inspect/repair leaking (not fully sealed) PRD and blowdown valves" • The spreadsheet requests 'Frequency.' EPA should clarify is whether this is the frequency of inspection, repair, or both.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Row 22 Column A - Other (specify) • Need an entry field to specify the type of "other."	EPA appreciates the comment and will implement as suggested.
-0068	Add the following questions to Table 1: • If yes, provide the operator pressure of the equipment: Facility piping (except gathering or transmission pipelines). • If other method used, specify method. • If yes, provide the operator pressure of the equipment: Gathering or Transmission Pipeline venting. • If other method used, specify method. • If yes, provide the operator pressure of the equipment: Compressors. • If other method used, specify method. • If yes, provide the operator pressure of the	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	equipment: Scrubbers/strainers. • If other method used, specify method. • If yes, provide the operator pressure of the equipment: Pig launchers and receivers. • If other method used, specify method. • If yes, provide the operator pressure of the equipment: Emergency shutdowns (regardless of equipment). • If other method used, specify method. • If yes, provide the operator pressure of the equipment: Other equipment not specified. • If other method used, specify method. • Cost of hot taps per event ($) • Cost of pipeline pump down per event ($) • Cost of flexible membrane liners (pipelines) per event ($) • Cost of inspection/repair of leaking (not fully sealed) PRD and blowdown valves per event ($) • Cost of other (specify) per event ($)	
	Other/General	
-0061	EPA should explicitly allow for engineering estimates to be applied for sources collecting blowdown data (i.e. Subpart W) and should not require estimates for those facilities that have not collected data.	Companies should provide best available data when responding to the ICR.
-0046	Many facilities are not currently required to track blowdowns and otherwise, have no reason to do so. Facilities newly subject to Subpart W will be reporting blowdowns for the first time in 2017, and can use BAMM for 2016 blowdown calculation inputs. Thus, EPA should add a note that best	Companies should provide best available data when responding to the ICR.

Comment ID	Comment Summary	EPA Response/Action Taken
	available/engineering estimates are allowed for all items on this tab where data is not actually tracked.	
-0048	While most operators will likely certify that blowdowns occurred at some time during 2015, that may be the only information known. We are unaware of any state or federal regulations requiring oil and natural gas operators to keep records of blowdown events or cumulative volumes for oil wells.	Companies should provide best available data when responding to the ICR.
-0061, 46	The definition of blowdowns should exclude de minimis reporting consistent with B.40 CFR Part 98, Subpart W. The ICR should follow the GHGRP and exclude all blowdowns of equipment that is less than 50 actual cubic feet.	Companies should provide best available data when responding to the ICR.
-0061	Blowdown events routed to atmosphere or a flare should be the only events for which EPA is requesting data. Equipment depressurization events that are not released to atmosphere or routed to a flare do not provide meaningful information for evaluating emission impacts and should not be included within scope of the ICR.	EPA has amended the definition of "Blowdown" to clarify that equipment depressurization events that are not released to atmosphere or routed to a control device are not to be included in the ICR.
-0061	For pipeline blowdowns, it is unclear which pipelines or sections of pipelines would be required to be reported for a facility. Pipelines can span great distances and connect gathering and boosting to gas processing. To parse out the pipeline blowdowns for a specific facility would not be a straightforward data collection.	EPA has amended Table 2 to request blowdown information from all Transmission Pipeline Facilities and Gathering and Boosting Facilities per the definitions provided in the ICR.
-0058	Blowdown reporting should apply only to "Natural Gas Transmission Pipeline Facilities."	EPA has amended Table 2 to request blowdown information from all Transmission Pipeline Facilities and Gathering and Boosting Facilities per the definitions provided in the ICR.
-0046	Blowdowns are only routed to atmosphere, flare, or	EPA has considered and evaluated the impacts of this

Comment ID	Comment Summary	EPA Response/Action Taken
	back to the process. GPA Midstream is not aware of blowdowns being routed to a thermal oxidizer, incinerator, or used as fuel.	comment and has decided not to pursue any further action.
-0049	EPA should ask whether operators keep records of blowdown events for the various equipment types. If the answer is "yes," then the additionally requested information should switch from black to a cleared cell where the information can be provided.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	Only Blowdown reporting should be required for Transmission Pipeline Facilities in the Part 2 survey as the 2015 amendments to the GHGRP focus on pipeline blowdown emissions only.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	ControlDevice Tab	
	Table 1: Facility Information	
-0054	Row 3 Column A - Number of control devices at the facility • 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." Clarify "or other add-on control devices."	EPA has amended the Definitions Tab to include "Control Device."
	Table 2: General Control Device Information	
-0054	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.	EPA has amended each tab in the ICR to allow equipment to be linked to a control device listed in the ControlDevice Tab.
-0054	Change Heading to "2. General Control Device Information - Complete for each Control Device/Equipment Pairing:"	EPA has amended each tab in the ICR to allow equipment to be linked to a control device listed in the ControlDevice Tab.
-0061	EPA should use waste gas in lieu of natural gas when	EPA has considered and evaluated the impacts of this

Comment ID	Comment Summary	EPA Response/Action Taken
	referring to the control device feed gas in Table 2. General Control Device Information.	comment and has decided not to pursue any further action.
-0061	EPA should delete 'Release height' and 'Stack diameter' from Table 2. General Control Device Information. This data is only a small fraction of the information needed to accurately determine ground level concentrations.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049	Tab includes request for "Typical NG Flow to Device." EPA should define what "typical" means. Recommend revising this request to average flow rate over the last 30 days.	EPA has amended Table 2 to remove "Typical NG Flow to Device."
-0061	EPA should remove 'Fraction of time control device is operated (lit) while NG flow is present' from Table 2. General Control Device Information. It is unclear what "fraction of time" is being requested.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061	For thermal control devices, EPA needs to add the pilot and purge gas flow rate as a data element in Table 2. General Control Device Information. Since the pilot and purge, if utilized, is natural gas (methane) and results in more waste of natural gas (methane) and creation of CO2 and NOX emissions, the pilot and purge flow rate will be needed to evaluate whether there is a benefit associated with the thermal control, or more harm caused.	EPA has amended Table 2 to request pilot and purge gas flow rate.
-0061	EPA should include a new column in Table 2. General Control Device Information identifying the source of waste gas fed to the flare. Flares must be designed for the waste gas being burned and not all waste gas sources are compatible with an existing flare.	EPA has amended each tab in the ICR to allow equipment to be linked to a control device listed in the ControlDevice Tab.
-0061	EPA should request an 'Estimated Volume of Waste gas fed to the control device in 2015' instead of the	EPA has amended Table 2 to request "Estimated Cumulative Volume Of Waste Gas fed to Device in 2016 (including purge

Comment ID	Comment Summary	EPA Response/Action Taken
	'Typical NG Flow to Device (scf/hr)' in Table 2. General Control Device Information. Waste gas fed to control devices is not typically measured. The flow is typically inconsistent and turbulent making measurement difficult, if not impossible. It is also not clear whether EPA wants the waste gas, the pilot and purge gas or all gas in this question. In combination with the "fraction of time" column, it is unclear what period of time the flowrate should be given. The volume of waste gas changes from year to year, primarily in proportion to liquid production volumes (this assumes tank vapors are the primary feed source).	gas) (scf)."
-0061	EPA should ask for 'Maximum heat input capacity to the control device (MMBtu/hr)' as an alternative to 'Maximum flow capacity for device' in Table 2. General Control Device Information since control devices are typically limited not by the flow but by the heat input they can handle which is dependent upon the flow and heating value of the waste gas. If the 'Maximum flow capacity for device' is not available, the 'Maximum heat input capacity to device' can be provided.	EPA has amended Table 2 to additionally request "Maximum Heat Input Capacity to the Control Device (MMBtu/hr)."
-0068	Add the following questions to Table 2: • Typical NG Flow to Device, *including pilot gas in flares (scf/hr)* • If control device is a combustion devices, what type of device is it? (open flare, enclosed flare, thermal combustor, open pit flare, other) • If combustion device is a flare, does it have a continuous pilot or electronic ignition device?	EPA has amended Table 2 to request "Purge Gas Flow Rate" and "Pilot Gas Flow Rate." EPA has requested "Type of Ignition Source" for thermal devices. EPA has requested information on continuous monitoring of control device parameters.

Comment ID	Comment Summary	EPA Response/Action Taken
	• If control device is a combustion devices, does it have a monitor to ensure a continuous flame? • Do operators collect continuous data on flow volumes to the flare? • Does the control device have monitoring to indicate when the device malfunctions or shuts down? • If the control device has a monitor to ensure continuous operation/ flame, describe the device used.	
	Table 3: Control Device Cost Information	
-0054	Costs may not be available in the event of acquired assets. Allow the use of engineering estimates.	Companies should provide best available data when responding to the ICR.
-0061	In Table 3. General Control Device Cost Information, EPA should clarify that total installed capital expenditure includes labor costs, engineering costs, or costs associated with necessary pad expansions. The year the control device was installed, the purchase cost of the equipment, and the total capital cost of the control device is not always available. The option should be given to state this information is not available.	Companies should provide best available data when responding to the ICR.
-0054	Row 28-45 Column D - Total Capital Installed Cost • For older equipment, this may not be available. Older equipment would also not provide an accurate cost estimate compared to current costs. • This question should only apply to certain control devices constructed after a defined date.	Companies should provide best available data when responding to the ICR.
-0054	Row 28-45 Column E - Annual Operating and	Companies should provide best available data when

Comment ID	Comment Summary	EPA Response/Action Taken
	Maintenance Cost ($/yr in 2015) • A gas value is required to calculate the $/yr per the example. Define gas value ($).	responding to the ICR.
-0068	Add "Administrative cost to size and source the control device ($)" to Table 3.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	Other/General	
-0050, 49	Modify to focus on current control device costs as opposed to both current and historical.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0067	EPA should amend Part 2M (Control Device Tab) to include the additional following question: • If an internal thermal combustor/thermal oxidizer or flare is used, what methods are used to check the status of the pilot, keep the pilot burning, and/or reignite the pilot if it goes out? (mark all that apply) Monitoring Options: a. Thermocouple b. Flame Ionization Detector c. Periodic checks with an IR Camera d. Alarm that notifies when no flame in the pilot is present e. Duplicate/redundant pilots f. Liquid knockout scrubber to prevent quenching of the pilot flame g. Flare/Combustor is designed to reignite automatically h. Other (please describe):	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	The intro tab instructions state to "complete this sheet only if flares, combustors, vapor recovery units, or other 'add-on' control devices are used at the facility." EPA Supporting Statement at 34. This instruction and the "control device type" drop-down menu on the equipment tab for control devices seem	EPA has amended the Definitions Tab to include "Control Device."

Comment ID	Comment Summary	EPA Response/Action Taken
	to assume that only control devices that control a hydrocarbon stream should be listed.	
-0046	EPA does not collect any information on the primary driver for installation of controls, which will be important when EPA determines whether and where controls should be required on existing equipment.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	The form does not accurately account for acid gas flares, which may have assist gas because the form does not distinguish between waste gas and the total combusted gas (which includes waste gas and assist gas).	EPA has amended the ICR to include a definition for "Waste Gas."
-0046	Several of the columns use the term "NG stream," but more clarity is required. It is not clear, for example, whether an acid gas stream be reported in these columns. If so, EPA should clarify this, as respondents might not consider the acid gas stream to be an "NG stream."	EPA has amended the ControlDevice Tab to specify "waste gas" rather than NG.
-0046	EPA should ask whether there is a waste gas meter or continuous parameter monitoring, and if so, what types of parameters are monitored. Those would be essential facts to understanding whether further control would be required.	EPA appreciates the comment and will implement as suggested.
-0049	EPA should seek installation cost estimates to better understand the full cost of new emission control requirements.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049	Cost data cannot always be extrapolated from one basin to another. Costs for installation of the same control device may be significantly more in remote areas than in basins closer to metropolitan areas due to differences in the availability, or lack of availability, of manpower and equipment, and additional transportation or travel charges.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
-0049	EPA should also be aware that economic impacts are often considered on a well-by-well basis.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049	Asset sales and trades will complicate the collection of control device cost data. Without proper context around whether a control device was added as a retrofit, repurposed from another facility, or part of new construction, and the approximate date of installation, it is difficult to make any useful conclusions about control cost data.	EPA has amended Table 3 to request "Was Control Device Installation Part of New Construction?"
-0049	Tab contains a request for the, "Fraction of time control device is operated while NG flow is present," which is an inappropriate request as operators are not required to continuously monitor the flow of natural gas to a control device in all areas. EPA should revise the request to "Fraction of time control device is operated and the well is producing."	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	Part 2 – General/Other/Missing Sources	
-0061	EPA should allow for an operator to voluntarily report additional information.	EPA will include the ability upload additional data (process simulations, supplemental data, etc.) in e-GGRT.
-0050, 49, 48	Modify "Applicable Environmental Regulations" to clarify that EPA is requesting applicable state rules which apply only to air regulations. EPA should also include an option to write in other applicable requirements such as Tribal Federal Implementation Plan (FIP) regulations or requirements from a federal Consent Decree. It is inappropriate for EPA to use this effort to gather information on, for example, noise ordinances, road traffic requirements, or stormwater permitting.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	The current format includes "applicable regulations" checklists in most of the individual source-specific forms. This inquiry is redundant, and instead should	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	include a single checklist in the "Facilities" worksheet. This simplifies the request, eliminates redundancies, and provides a single point of reference regarding facility regulatory applicability.	
-0054	EPA should develop descriptions for many of the data fields/survey questions to improve clarity, provide context, etc.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0022	Where emissions data are collected, should also collect information on the test methods used.	EPA appreciates the comment and will implement as suggested.
	Other/General	
	CBI Protection	
-0036, 41, 70, 65, 46, 49, 52, 59	EPA should allow operators to request CBI protection for any/all aspects of the ICR (Part 1 and Part 2). • The nature of the collection of all of this data in one location and the fact that not all business competitors in this industry segment will be required to provide this information creates a unique situation that EPA can and should address for this ICR. • Any information that can be gained about available capacity in a gas processing plant or a pipeline, or about the quality of gas treated or transported, could place competitors at an advantage or a corresponding disadvantage when negotiating contracts. • EPA should appreciate the competitive nature of the natural gas industry and maintain confidentiality of company- and facility-identifying information in this ICR process. • EPA's actions in effect could create winners (companies who will enjoy access to a	See "Summary of Comments and Responses" memo for responses to all CBI-related comments.

Comment ID	Comment Summary	EPA Response/Action Taken
	comprehensive data set on competitors while revealing no information themselves) and losers (companies required to disclose data). • Company- and facility-identification data, which we urge EPA to keep confidential, does not constitute emission data. Congress excluded "emission data" from confidentiality protection under Clean Air Act Section 114(c) but did not define the term. • In their current state, the proposed ICR and EPA's attendant "not-CBI" designations could have the unintended consequence of presenting serious national security concerns because the ICR would require companies to provide substantial amounts of information - wrapped up in a single package easily accessible to members of the public and including specific information on the name, address, and geographic coordinates of the facility to which the data pertains - regarding facilities that are part of the critical infrastructure of the United States as designated by the Department of Homeland Security ("DHS"). • The data that EPA is currently proposing to leave as unprotected information is the same sort of information that competitors are generally prohibited from sharing under the Sherman Act.	
-0058	Company data subject to non-disclosure agreement in academic studies should be protected as Confidential Business Information (CBI).	See “Summary of Comments and Responses” memo for responses to all CBI-related comments.

Comment ID	Comment Summary	EPA Response/Action Taken
-0052	Specific CBI data concerns: 1. General Category: Facility; Data Element; Number of months the facility operated in 2015: • The number of months the facility operated in a given year, i.e. uptime / downtime, is a data element that could bear on the reliability of the pipeline or midstream operator - or it could be unfairly portrayed by a competitor as an indicator of reliability. 2. General Category: Tanks Separators: Data Element: Reid vapor pressure of feed material (psig): • Public disclosure of data regarding the quality or other specific aspects of the product could lead a company to target the better quality gas sources on a competitor's system for acquisition, leaving that competitor to deal with greater quantities of off-specification gas and higher transaction costs. 3. General Category: Tanks Separators: Data Elements; Specific gravity of feed material (relative to water at 4° C); Gas Liquid Ratio (scf/bbl): • The public disclosure of data regarding overall product quality could work to the disadvantage of the disclosing company because it would allow companies to target the better quality gas sources on competitors'	See "Summary of Comments and Responses" memo for responses to all CBI-related comments.

Comment ID	Comment Summary	EPA Response/Action Taken
	systems for acquisition, once again leaving the competitor to deal with greater quantities of off-specification gas and higher transaction costs. 4. General Category: AGRU\a Elements: H2S concentration in feed gas (% by volh CO2 concentration in feed gas (% by vol): H2S concentration in treated gas (% by vol): CO2 concentration in treatedsas (% by vol): • Same as points 2 and 3 above. 5. 5. General Category; Dehvd: Data Elements; H2O concentration in feed sas (% by volh CO2 concentration in feed sas (% by vol); CH4 concentration in feed sas (% by vol); H2O concentration in treated sas (% by vol): CO2 concentration in treated sas (% by vol): CH4 concentration in treated sas (% by vol): • Same as points 2 and 3 above. 6. General Category: Corny; Data Elements: If no, please provide the total time the compressor was in operating-mode in RY2015. (hours); If no, please provide the total time the compressor was in standby-pressurized-mode in RY2015. (hours); If no, please provide the total time the compressor was in not-operating-depressurized-mode in RY2015. (hours): • Data elements that relate to runtime or downtime provide a glimpse into the facility's reliability, or they can be mischaracterized as demonstrating lack of reliability when in actuality	

Comment ID	Comment Summary	EPA Response/Action Taken
	any downtime was caused by other factors not bearing upon reliability. 7. General Category: Control Device; Data Element: Net Heating Value of NG Stream (btu/scf): • Same as points 2 and 3 above. 8. General Category: Control Device; Data Elements: Purchased Equipment Costs ($}; Total Capital Installed ($h Annual Operating and Maintenance Cost ($/yr in 2015: • Companies strive to keep cost data private because companies in a competitive industry do not want the competition to gain a glimpse into their cost structure. Cost data can be used in negotiations with potential customers, who can argue that a facility with lower costs should provide services at a lower price. Competitors seeking a company's business can paint the same picture to potential customers in order to take business away. Public disclosure of cost data would be used against the disclosing company by customers and competitors.	
-0070	To the extent that some of the material submitted pursuant to the ICR may contain trade secrets, geological and geophysical data on wells, or information that is otherwise confidential or privileged, and therefore exempt from public disclosure under FOIA, EPA should clearly establish	See "Summary of Comments and Responses" memo for responses to all CBI-related comments.

Comment ID	Comment Summary	EPA Response/Action Taken
	procedures in the ICR on how to submit these materials.	
-0070	EPA should make further accommodation for companies and facilities whose ICR-responsive data may be the subject of discovery in relation to pending civil litigation or unrelated enforcement action. This is because some of this data may not easily fit into any of the FOIA exemptions that would withhold its disclosure to the public. In some cases, the data itself may be actual subject of the litigation and the issue of its accuracy or completeness may not be resolved until the litigation itself is resolved.	See "Summary of Comments and Responses" memo for responses to all CBI-related comments.
-0046, 52	GPA Midstream requests full CIPSEA protection for the information requested by the ICR. At a minimum, EPA must take the "CIPSEA Pledge" to protect the identity of the company and facility responding to the ICR. For Data That Are Not Protected From Disclosure Under CIPSEA, the Scope of Data Elements Protected as Confidential Business Information Should be Expanded.	See "Summary of Comments and Responses" memo for responses to all CBI-related comments.
-0052	Either the entirety of the identity of the responding company and the facility that is the subject of the ICR should be protected so that no connection can be made between the data and the company or facility at issue, or if such company or facility identifier information is not protected from disclosure as CBI, then EPA should expand additional data elements as CBI to provide additional protections to the responding company's competitive position.	See "Summary of Comments and Responses" memo for responses to all CBI-related comments.
-0052	EPA should take a fresh look at CBI issues as they are presented within the particular context of the ICR, rather than simply rely upon the conclusions reached	See "Summary of Comments and Responses" memo for responses to all CBI-related comments.

Comment ID	Comment Summary	EPA Response/Action Taken
	in connection with the GHGRP. The GHGRP is conducted on an industry-wide basis, which is not the case for the ICR questionnaires. Also, information collected under Subpart W is on an aggregate basis.	
	e-GGRT	
-0061, 27, 42, 54, 46	Commenters expressed general concern about using the e-GGRT system for responding to the ICR. • EPA should perform full scale testing of the submittal process to ensure the system is working adequately • Ensure that e-GGRT can support the number of users that will be using e-GGRT at around the same timeframe as GHG reporting under the GHGRP. • Allow other options for ICR submittals instead or in addition to the use of e-GGRT • EPA must provide a "sandbox testing" time of at least 60 days for e-GGRT. Data collection interpretations may be made during the programming of e-GGRT which conflict with EPA's written requirement or are otherwise incorrect. The public will need an opportunity to review e-GGRT to ensure it aligns exactly with the final Excel data collection templates for the ICR.	EPA has conducted full scale testing of the submittal process to ensure that the e-GGRT system is working as it should.
-0031	EPA should establish a help desk email/line that will respond timely to questions and report submittal problems.	EPA will establish a help desk email/line for respondents of the ICR.
-0046	Simplify e-GGRT Reporting Requirements. EPA should review the facility registration process to see how it can be streamlined before asking industry to register thousands of facilities.	EPA has optimized the e-GGRT system to ease the registration process for facilities.

Comment ID	Comment Summary	EPA Response/Action Taken
	Legal	
-0068	EPA has ample authority under Section 114 of the CAA to issue a broad and detailed ICR.	See "Summary of Comments and Responses" memo for responses to all legal-related comments.
-0020, 36, 41, 63, 46, 49, 52	Commenters suggested that EPA should not proceed with the ICR. • It does not provide the agency with information of practical utility and does not support EPA's function. • Additional costs of retrofitting pursuant to a new rule reduce the amount of money operators have to drill new wells which deprives States of additional revenue. • EPA should engage production companies to develop a new survey which captures the emission data EPA is seeking and does not overburden respondents. • EPA is not authorized under the CAA to promulgate national standards of performance for existing oil and gas emission sources because these existing sources are in categories that are currently regulated under Section 112 of the CAA. The EPA does not have the authority to proceed with an ICR that will impose added burden on a segment of the industry that is already regulated. The promulgation of this ICR is neither in the spirit of nor in legal step with the CAA. • There is no need for a separate and unique regulatory process beyond that already established through the state and local governments under the authority of the CAA. • Methane does not appear to be, and should	See "Summary of Comments and Responses" memo for responses to all legal-related comments.

Comment ID	Comment Summary	EPA Response/Action Taken
	not be considered, a factor in the global climate change problem as a greenhouse gas (GHG). Therefore, it is not in the best interests of the American economy or the American people to create a special rule to control a gas that has not been considered a priority pollutant in the past and has just recently become an issue as a GHG. • EPA is not authorized to regulate methane emissions from existing oil and natural gas facilities under Section 111(d). • EPA is not authorized to regulate existing oil and natural gas facilities under Section 111(d), because the oil and gas sector is already a regulated "source category" under Section 112 through regulations promulgated at 40 CFR Part 63, Subpart HH (regulating oil and natural gas production facilities) and Subpart HHH (regulating natural gas transmission and storage facilities). • EPA has neglected to do a proper endangerment finding on methane in general and from the oil and natural gas industry. A full, honest endangerment finding would likely reveal that the small amount of methane emissions from the wellhead is more than offset by the significant greenhouse gas reductions delivered by natural gas at the consumer side and especially in the power sector. • At a minimum, EPA should delay issuance of the ICR, and the Section 111 (d) rulemaking	

Comment ID	Comment Summary	EPA Response/Action Taken
	process, until the Supreme Court has ruled on the Section 112 Exclusion issue. • A valid Section 111(b) NSPS for methane emissions must be in place before EPA may promulgate an ESPS for methane emissions under Section 111(d), but a valid 111(b) NSPS does not exist in this case. • EPA failed to make the requisite finding to expand the oil and gas source category. EPA failed to make the requisite endangerment and cause-or-contribute findings for the single GHG, methane, as emitted by stationary oil and gas sources.	
-0060 (dup 62), 41, 51, 46, 59	Numerous data requests in the ICR are problematic from a legal aspect per the requirements in the Paperwork Reduction Act, including: • Limited or no practical utility; • Duplicative to other agency or state data requests; • And/or would place an undue cost and administrative burden. This was not accounted for in EPA's estimates on respondents in violation of the Paperwork Reduction Act.	See "Summary of Comments and Responses" memo for responses to all legal-related comments.
-0046	EPA should make additional changes to the ICR to ensure the practical utility of the information requested as required by the Paperwork Reduction Act. • Acid gas removal units ("AGRUs") are included in the ICR, however they are not a significant source of methane or VOC emissions and have been subject to an NSPS	See "Summary of Comments and Responses" memo for responses to all legal-related comments.

Comment ID	Comment Summary	EPA Response/Action Taken
	since January 20, 1984 under Subpart LLL. GPA Midstream questions the practical utility of having industry spend time and capital to collect this information when the source has been recently evaluated for emissions under NSPS Subpart OOOOa and when there will be very few existing AGRUs. • Dehydration units are not included in NSPS Subpart OOOOa; existing dehydration units are already regulated directly under NESHAP Subpart HH/HHH. GPA Midstream questions the utility of industry spending time and capital providing this information to EPA. • Control devices on gathering and processing facilities are commonly used to control streams from multiple emission sources, however the control device tab does not connect the control device with the specific sources they are controlling. • The proposed deadline for responding to Part 2 of the ICR will lead to EPA receiving outdated information.	
-0029, 40, 41, 51, 59	Several requested items do not apply to the stated mission of the ICR. Delete the following sections that do not apply to the stated mission of the ICR: • Attachment 2G Part 1 • Attachment 2H • Attachment 2I Parts 2 and 4 • Attachment 2J Part 2 • All references to: produced water management, ownership of land, well depth and length, shut in pressure, casing or tubing	See "Summary of Comments and Responses" memo for responses to all legal-related comments.

Comment ID	Comment Summary	EPA Response/Action Taken
	diameter, and Reid Vapor Pressure of feed material. • Only 15 of 580 requested items are applicable in Attachment 2D	
-0037, 39, 43, 68	Consistent with section 114 of the Clean Air Act, EPA should make data broadly publicly available.	See "Summary of Comments and Responses" memo for responses to all legal-related comments.
-0034	EPA should design the ICR to be policy-neutral. The current ICR appears to be narrowly crafted to provide answers to a pre-determined outcome of regulating existing sources under §111(d) that mirrors the recently finalized NSPS OOOOa regulations. EPA must be open to all policy tools available to reduce methane emissions (i.e. Gas STAR, Methane Challenge, etc).	See "Summary of Comments and Responses" memo for responses to all legal-related comments.
-0040, 48	The following information is outside of EPA's regulatory authority under CAA and should be eliminated: • Management of water • Land ownership • Well depth • Well length • Shut-in pressure • Casing diameter • Tubing diameter • Reid Vapor pressure of feed materials	See "Summary of Comments and Responses" memo for responses to all legal-related comments.
-0070	EPA should assure that information submitted pursuant to the ICR will be used only for standard setting or rulemaking by the Agency pursuant to Section lll(d) of the Clean Air Act ("CAA").	See "Summary of Comments and Responses" memo for responses to all legal-related comments.
-0046	EPA is not authorized to issue emission guidelines for methane from existing oil and natural gas facilities under 111(d), because before EPA may	See "Summary of Comments and Responses" memo for responses to all legal-related comments.

Comment ID	Comment Summary	EPA Response/Action Taken
	issue guidelines to the States under Section 111(d) for existing oil and natural gas facilities, the agency first must properly issue new source performance standards for the oil and natural gas source category under Section 111(b).	
-0046	The language of Section 111 makes plain that it is the States that are authorized to establish standards of performance under Section 111(d).	See "Summary of Comments and Responses" memo for responses to all legal-related comments.
-0046	If EPA proceeds to propose a final ICR, EPA should be clear in expressing that the ICR would not be used to develop standards of performance under 111(d) that are more stringent than final standards of performance for new sources under Section 111(b).	See "Summary of Comments and Responses" memo for responses to all legal-related comments.
-0048	Under Section 111, EPA has the authority to create and use subcategorization to focus regulations that are suited to appropriate elements of the industry. EPA needs to utilize this authority in the context of existing source regulation under Section 111(d) because of the significant diversity of the American oil and natural gas production industry.	See "Summary of Comments and Responses" memo for responses to all legal-related comments.
	General Support/Clarification	
-0033, 19, 24, 25, 32, 37, 39, 43, 47, 55, 56, 69	Commenters provided general support for EPA's methane efforts/ICR.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0060 (dup 62), 61	Commenters requested general clarification of instructions for Part 1 and Part 2.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0060 (dup 62)	General request for clarification and further detail in Part 1 and Part 2 definitions	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0045	Commenter expressed general concern about the impact of regulations on U.S. industry.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
	Edits/Deletes/Additions	

Comment ID	Comment Summary	EPA Response/Action Taken
-0027, 28, 36, 38, 41, 50, 51, 58, 54, 49, 48	EPA should integrate information already available through other reporting programs (ex. GHGRP, state and federal air permits, etc.) and use the ICR to collect supplemental information. In some cases, existing data should be sufficient. EPA indicates that data available from the GHGRP, including 40 CFR Part 98 Subpart W data, will not be duplicated in ICR Supporting Statement.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061, 49	Many of the terms defined are different between Part 1 and Part 2. Differences in definitions should be minimized and if they are different; the definitions should be compatible and the differences explained with any boundaries defined amongst industry segments.	EPA has reviewed Part 1 and Part 2 definitions to ensure continuity of definitions throughout the ICR.
-0058, 54	Definitions should be consistent with Methane NSPS and GHGRP. Because GHGRP information will be a key resource in completing the ICR, 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.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0020	Remove Part 2 of the ICR, or, if not, select a representative sample of marginal well operators to be included in the distribution of the survey	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0028, 51, 48	EPA needs to obtain information that reflects varying emissions throughout the year.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0020	Request cost data for emission reduction technologies and retrofits	EPA has requested cost data from emission reduction technologies and retrofits in the ControlDevice Tab in Part 2 of the ICR.
-0020	Request only information which is contained within an operator’s current records	Companies should provide best available data when responding to the ICR.

Comment ID	Comment Summary	EPA Response/Action Taken
-0037, 39, 43, 56	EPA should gather data on more sources (i.e. sources that do not already have existing standards). EPA should add the following sources: • Leaks from all aboveground facilities, including "city gates" and other facilities in the distribution segment of the natural gas industry. • Pneumatic controllers and pumps of all types, including intermittent-bleed controllers, "low-bleed" pneumatic controllers, and gas-assist glycol dehydrator pumps. • Tanks of all types, including tanks that store oil, condensate, or produced water, at all sites and including tanks that have lower expected emissions. • Reciprocating compressors at all sites, including well pads. • Centrifugal compressors at all sites, including well pads. • Offshore oil and gas production platforms. • Liquids unloading operations from vertical and horizontal wells. • Blowdown events from wells or other equipment. • Venting and flaring of associated gas from oil wells. • Open impoundments for handling produced water, and disposal facilities for produced water utilizing evaporation and/or percolation. • Compressor engine exhaust, where methane is likely present from incomplete combustion of fuel gas.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	• Acid gas removal units and dehydrators throughout the sector.	
-0034	Add the following questions: 1) What are the total voluntary reductions achieved by companies through EPA Gas STAR, EPA Methane Challenge and other voluntary programs? What voluntary reductions have been achieved by companies since 2012? 2) What fraction of a company's assets are included in the EPA Greenhouse Gas Reporting Program (GHGRP)? 3) Does the company have a corporate or asset level methane monitoring program? What is the monitoring frequency of such programs? 4) Considering advances in methane emissions monitoring, including continuous emissions monitoring, has the company applied any advanced monitoring technologies (beyond approved methods in NSPS OOOOs)? 5) Has the company developed corporate-wide or large-scale directed inspection and maintenance (DI&M) or predictive analytical that can aid in identification and minimization of methane emissions?	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0036	All information requests within the ICR which are has plant or transmission based be removed from those surveys that are intended to be submitted to production companies. Examples include: • Feed Material Composition – Paragraph 4 of Attachment 2F • Paragraph 5 of Attachment 2F – Number of hours a dump valve was "stuck" in 2015.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
-0036	Add request for installation cost estimates to better understand the full cost of new emission control requirements within the ICR.	EPA has requested cost data from emission reduction technologies and retrofits in the ControlDevice Tab in Part 2 of the ICR.
-0044, 54	EPA should adopt OOOOa/OOOO/Subpart W applicability language for the final ICR. The survey adds unnecessary complexity by failing to use definitions, equipment categories, etc., that are already available or established in other regulations.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0031, 42, 54, 46	EPA should clarify how sources should respond to questions if company records are not available (Should cells be left blank or should "not available" be entered? Will there be spaces for comments allowed?). 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. Tabs that require a "not available" or "not applicable" response option are the following: • Control Device Equipment tab where the respondent is asked to provide the year a control device is installed, purchased equipment costs and total capital installed cost. Depending on the age of the facility, the owner or operator will not have this information. This will be especially true if the facility has been a part of any divestiture or acquisition, as is common in the oil and gas industry. • Facility Tab, Sub-Sections 1 and 2, "Contact Phone 2" and "Contact Email 2" should be allowed be left blank.	Companies should provide best available data when responding to the ICR.

Comment ID	Comment Summary	EPA Response/Action Taken
	• Tanks Separator Tab, Sub-Section 5, Hours dump valve stuck in 2015? Gathering and boosting facilities were not required to track this in 2015 and the data will not be available for many facilities. • Pneumatics Tab, Sub-Section 3, How many controllers were found malfunctioning in the past year? Gathering and boosting facilities were not required to track this information and therefore may not have the requested data available for many facilities. • Equipment Leaks Tab, Sub-Sections 2, Total number of components monitored for Leaks during the most recent monitoring survey? There are state programs that require IR camera monitoring, but do not require the facility to keep an actual component count. • Equipment Leak Tab, Sub-Section 4, Measurement Cost. Gathering and boosting facilities were not required to track this information and therefore may not have the requested data available for many facilities. • Control Device Tab, Sub-Section 3, Natural Gas Consumption Rate." Sub-Section 2, "Release height (ft)" and "Stack diameter (ft)"; these are Not Applicable for Vapor Recovery Units. • Blowdowns Tab, Source-specific information sheet for equipment/pipeline blowdowns. Complete form based on available information for 2015. If your facility is first required to track this information in 2016, you	

Comment ID	Comment Summary	EPA Response/Action Taken
	may estimate 2015 blowdown events/emissions as twice the events/emissions determined in January through June 2016. EPA does not consider that the facility may not be required to track blowdowns or may be using BAMM for January – June 2016.	
-0058	Eliminate component counts from ICR.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0067	EPA should amend the verification statement with the following text: I certify that I have read and understand the best practices associated with developing an inventory as described in EPA's ICR and that the statements and information are to the best of my knowledge and belief true, accurate, and complete.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0066	EPA should request findings from inspection reports or other routine maintenance programs, documenting leaks, direct venting of tanks, open thief hatches or valves, and other events linked to emission events.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0066	EPA should request process diagrams of equipment trains, particularly describing the routing of multiple sources to individual control units to evaluate the potential for flow volume to exceed the capacity of control equipment.	EPA will include the ability upload additional data (process simulations, supplemental data, etc.) in e-GGRT.
-0066	EPA should request the compliance status for each compressor station with applicable environmental permits, including state and local, for the past 5 years and a description of the nature of any violations, if relevant to emissions.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	The survey should clearly indicate the applicable year	EPA has indicated that companies should provide 2016 data

Comment ID	Comment Summary	EPA Response/Action Taken
	upon which the response should be based.	(when applicable).
-0049, 59	"Storage Tank" and "Vessel" are used interchangeably, which could create confusion. Suggest instead using "Tank" for storage equipment (e.g., storage tank) and "Vessel" reserved for process equipment (e.g., separator).	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0054	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.	EPA has added more rows to the ICR to allow for all necessary data to be reported.
-0046	Several of the equipment tabs have a section where the respondent is required to check applicable regulations. • For each tab with this section the column header uses the words "well site." That should be changed to "facility" to avoid confusion. • Each tab with this section also lists 43 CFR Part 3100 Subpart 3179 which is the proposed methane rule for the Bureau of Land Management. Since this rule is proposed and not yet effective, it should be removed from the list. • A check box should be added for "enforceable permit limits," which would be used by facilities that have enforceable limits or monitoring/recordkeeping requirements under synthetic minor permits. • On the Dehydrator Unit Equipment tab, 40 CFR Part 60 Subpart OOOO and OOOOa are	EPA appreciates the comment and will implement as suggested.

Comment ID	Comment Summary	EPA Response/Action Taken
	listed as regulations that could apply. Neither regulation has requirements for dehydrator units and should be removed. • On the Acid Gas Removal Unit Equipment tab, 40 CFR Part 60 Subpart KKK is listed under regulations that could apply. This should be changed to 40 CFR Part 60 Subpart LLL which is the rule for sweetening units. • On the Tanks Separators Equipment tab, 40 CFR Part 60 Subpart Kb should be added to the list. • On the Compressor Equipment tab, 40 CFR Part 60 Subpart KKK should be added to the list.	
	Marginal Wells/Production/Low Emitting Facilities	
-0061, 49	Adding controls to reduce or eliminate methane emissions from existing oil and gas production operations is not a "one-size-fits-all" proposition. EPA must consider many direct and indirect factors before developing an accurate cost estimate for installing and operating methane controls.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0028, 35, 51, 57, 48, 49	EPA must understand the economic impact of additional regulations on marginal wells. EPA must assess the implications of regulations on the remaining useful life of marginal wells.	EPA has requested Production Well Point Costs in Table 1B of the ProdnWell Tab.
-0028, 41, 50, 51, 48	O&G production starts at an initial production rate and then begins to decline as the resource is extracted from its reservoir. EPA needs to have a thorough understanding of this in order to provide a structure to assure that American O&G resources are developed and maintained. The ICR should provide the information needed to create this level of	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	understanding.	
-0057	EPA should revisit the small producer exemption in any further methane rulemaking.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0034	The EPA should exclude low-emitting facilities from the ICR, considering the fact that peer-reviewed science supports the relation of methane emissions to throughput.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0034	EPA should employ the de minimis exception to any of the affected sites/facilities with a potential to emit less than the values derived from the potential uncontrolled rates from the Technical Support Document (TSD)	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0057	Failure to understand this pricing structure and the market challenges facing small producers by EPA will have a devastating impact on producer's ability to stay in business. EPA fails to understand that most marginal well producers get prices significantly below the posted WTI price. Most marginal operators sales are based off a lower, regional market price, and the products are discounted below the regional price. Often contracts are for as much as $6-10 per barrel below the regional price.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0058	EPA should reduce reporting for low-emitting Liquefied Natural Gas (LNG) facilities. More than 95% of existing LNG peak shaving storage facilities will be excluded from the source category subject to the NSPS, because they are inside the LDC custody transfer station, and this type of facility (when new or modified) is excluded from the source category subject to the 111(b) NSPS. Due to their inherent operations as well as stringent requirements under	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	federal pipeline safety regulations, greenhouse gas emissions from both LNG peak shaving storage facilities and LNG import/export terminals are already extremely low	
	Other Comments	
-0061, 42, 46, 49, 48	Limit ICR to facilities that are not subject to NSPS OOOO or OOOOa, or other NSPSs (facilities built after September 18, 2015).	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0061, 59	EPA should publish the emission calculation methodologies intended to be used and allow the public time to provide comments on the appropriateness and accuracy of the proposed calculations. • The data collected in the proposed ICR appears to imply an emission calculation method that is not appropriate for the emission source and pollutant for which it is proposed • Subpart W emission factors would not be satisfactory for regulatory purposes and urges EPA to define the set of emission calculations it intends on utilizing before surveys are distributed • EPA should not utilize the Direct Emissions Measurement Data collected with the ICR to estimate emissions, unless they have sufficient data to assure that it is accurate and representative • Considering the primary variables that impact the emissions from each type of equipment will enable the model plant approach to establish more cost effective boundaries	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
-0061, 60	EPA should clarify that each owner/operator is only responsible to report for their equipment that is owned and operated at each location as of December 31, 2015.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0023	NC WARN's filed complaint with the EPA (www.ncwarn.org/wp-content/uploads/EPA-OIG_NCWARN_Complaint_6-8-16.pdf) calls into question several of the studies relied upon by EPA in its assessment of methane leaking and venting from natural gas production/distribution.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0029, 48, 59	Recommended that EPA reach out to the EPA's enforcement group currently working on CAA Section 114 requests to get an accurate understanding of the magnitude of the ICR/amount of time that will be required.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0037, 39, 43	Commenters urge EPA to continue to assess effective policy-design approaches to minimize emissions from existing sources relying on the significant information already available and that the administration used to develop previous New Source Pollution Standards, the BLM rule, and the control techniques guidelines for oil and gas sources in ozone-constrained areas.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0039	EPA should pay specific attention to data collection relevant for evaluating the impact of oil and gas operations in communities already overburdened with pollution. EPA should implement all elements of its "Guidance on Considering Environmental Justice During the Development of a Regulatory Action."	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0034	EPA should carefully evaluate emission control experiences and cost-estimates to account for regional variations. Any cost data received by the	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	operators must be analyzed carefully and we highly recommend any average cost-estimates must be evaluated on a regional basis and must be weighted or normalized in an appropriate manner.	
-0034	ONE Future had commissioned ICF International (ICF) to conduct an analysis of the marginal abatement cost (MAC) of various methane emission abatement technologies and work practices for the natural gas industry. The study was released in June 2016 and can be found at http://www.onefuture.us/wp-content/uploads/2016/06/ONE-Future-MAC-Final-6-1.pdf. This analysis represents the most updated average cost estimates for various emission control technologies and work-practices.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0040	Reduce the scope of the proposed ICR by performing it in three parts as follows: a. ICR 1 should consist of Attachment lA name, address, contact, number of facilities, and number of producing wells, and should be sent to all 22,500 operators. No less than 60-120 days should be allowed for operators to complete and return the survey. b. ICR 2 should consist of Attachment lA parts 1-3 and should be sent to a statistically representative number of operators based upon an evaluation of ICR 1. No less than 180 days should be allowed for operators to complete and return the survey. c. ICR 3 should consist of Attachment 20; Attachment 2E parts 3 and 4; Attachment 2F parts 1, 2, 3, 5, and 6; Attachment 2G, Attachment 21, Attachment 2J, Attachment 2K, Attachment 2L, and	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	Attachment 2M and should be sent to a statistically representative number of operators based upon an evaluation of ICR 2. No less than 180 days should be allowed for operators to complete and return the survey.	
-0041, 51	States should be allowed to decide what additional emission control measures should be required, if any.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0041, 50, 51	The draft ICR and potential future regulation at existing sources are unlikely to result in any reduction in emissions to the atmosphere because the potential emissions at these sources are in decline or nonexistent. Cost of implementation outweighs the emission benefits.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0047	EPA should collect information on operations known to contribute to emissions such as, but not limited to, inadequately-sized control equipment and direct venting of tanks through open thief hatches.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0047, 69	EPA should collect both methane and additional air toxics data together in the ICR. It would be more efficient and timely to seek this information now to inform regulatory action, and to do so promptly and expeditiously, rather than delaying air toxics data collection and the protections for public health that such data will enable.	EPA has amended the ICR to request information on additional air toxics, when applicable.
-0067	Require all industry respondents to develop and submit a Quality Assurance Plan that incorporates certain best practices with their ICR responses. EPA must require operators to use best practices to conduct counts of process and pollution control equipment in response to Part 1 and 2 EPA's ICR. Recommended Best Practices: • Designate a lead individual who is responsible	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.

Comment ID	Comment Summary	EPA Response/Action Taken
	for completing the ICR on behalf of the company and who is accountable for the accuracy of the responses. • Designate key personnel, other than the lead individual, who will gather the requested information. These individuals should have knowledge of the processes, the equipment and their respective locations. • Develop a written plan that describes where the counting will take place, for example: at the production sites, at field offices, and/or at central locations that have access to detailed records. Also specify when the counting should start and when it needs to be completed. Finally, indicate how the counting will be done (e.g., by review of company equipment lists, piping and instrumentation diagrams (P&IDs), original purchase orders or equipment design documents, field counts, etc.). • Where actual field counts are not performed, review the accuracy of responses using one or more of the following company records: Company asset lists; Original and/or modified construction specification documents; Purchase orders for equipment or other purchasing documentation; Equipment lists maintained for leak detection and repair programs or maintenance/turn-around planning. • Review the most up-to-date P&IDs. This review is an addition to the review of other	

Comment ID	Comment Summary	EPA Response/Action Taken
	company records described above and any field counts performed by the operator. • Perform field counts at a representative sample of facilities to identify any equipment that may have been missed or decommissioned and to identify any systemic problems with counts derived through other methods.	
-0064	The EPA should divulge the number of facilities that exist within a basin for each operator and how that number was derived. The number of facilities by operator should be then divided by industry segment. That data should be distributed for public review and comment.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046, 52	EPA Should Rescind Part 98, Subpart W. In light of its inadequacy in achieving its original purpose, GPA Midstream recommends EPA amend its request to OMB to renew the GHGRP to remove Subpart W. (EPA ICR No. 2300.17, OMB Control No. 2060-0629). In the alternative, EPA should at least revise this ICR to conform with the scope of data previously collected through the GHGRP. If a facility has already submitted data through the GHGRP for 2015 (processing plants under Subpart W), EPA should not be requiring additional data collection beyond the already burdensome and expansive GHGRP.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0046	EPA should include a separate document either with the ICR, or in the docket, that explains the expected scope of the response for the questionnaire.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049	EPA should include data requests that help it determine not just the emissions from a particular source, but also the cost of controls.	EPA has requested cost data from emission reduction technologies and retrofits in the ControlDevice Tab in Part 2 of the ICR.

Comment ID	Comment Summary	EPA Response/Action Taken
-0049	Using the information gathered through the ICR and the Emerging Technology Request for Information, EPA could develop engineering scenarios and further outline its proposed control methods, while giving industry and other stakeholders the opportunity to evaluate the technical feasibility of EPA's approach.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0049	Operators who have received Clean Air Act Section 114 requests for information on facility operations and emissions data in North Dakota and elsewhere should be exempted from Part II of the ICR.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.
-0026	It appears that EPA policy is being shaped by research organized by the Environmental Defense Fund (EDF Fact Sheet, undated) as well as by data from the EPA Subpart W Greenhouse Gas Mandatory Reporting Rule (MRR). However, both of these programs may have under reported methane emissions due to critical and well documented measurement problems.	EPA has considered and evaluated the impacts of this comment and has decided not to pursue any further action.