

December 1, 2014

Via www.regulations.gov and email

Mr. Jeff Wiese
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

Re: Pipeline Safety: Request for Revision of a Previously Approved Information Collection—National Pipeline Mapping System Program (OMB Control No. 2137-0596), Docket No. PHMSA-2014-0092.

Dear Jeff:

The Interstate Natural Gas Association of America (INGAA), a trade association that advocates regulatory and legislative positions of importance to the interstate natural gas pipeline industry in North America, respectfully submits these comments in response to the Pipeline and Hazardous Materials Safety Administration (PHMSA)'s proposed revision of its National Pipeline Mapping System (the Information Collection Request or ICR).

INGAA understands PHMSA's desire to improve and expand its existing pipeline infrastructure database. However, INGAA urges PHMSA to examine the necessity of certain data requests, review its ability to protect sensitive information from public disclosure, and reevaluate its burden estimate for the Information Collection Request.

INGAA appreciates your consideration of these comments.

Sincerely,

/s/
Terry Boss
Senior Vice President for Environment,
Operations, and Safety
20 F Street, N.W., Suite 450
Washington, DC 20001
(202) 216-5900

¹ "Pipeline Safety: Request for Revision of a Previously Approved Information Collection—National Pipeline Mapping System Program (OMB Control No. 2137-0596)," 79 Fed. Reg. 44246 (July 30, 2014).

BEFORE THE

UNITED STATES DEPARTMENT OF TRANSPORTATION PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION WASHINGTON, D.C.

Pipeline Safety: Request for Revision of a Previously Approved Information Collection—National Pipeline Mapping System Program (OMB Control No. 2137-0596) Docket PHMSA-2014-0092

COMMENTS OF
THE INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA

December 1, 2014

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Executive Summary

INGAA supports PHMSA's desire to improve its National Pipeline Mapping System (NPMS) and make certain information more accessible to first responders and members of the public. However, INGAA has significant concerns with the scope and content of PHMSA's Information Collection Request (ICR).

PHMSA has proposed an extensive revision of the existing NPMS by adding 31 new data requests and modifying the centerline accuracy requirements. INGAA's specific concerns with the ICR are as follows:

- PHMSA requests many pipeline attributes that are unnecessary to achieve PHMSA's stated goals. In the ICR, PHMSA asserts that it needs the requested information to educate emergency responders and bolster its risk ranking methodology for inspections. However, not all of the 31 attributes are helpful for emergency responders or are relevant for a risk-ranking methodology. Further, PHMSA's proposal is not the "least burdensome" approach as required by OMB regulations. Requesting pipeline operators to consolidate existing data into a different format and resubmit it to PHMSA in NPMS or submit data that the agency itself generates is not "the least burdensome approach" for the agency to achieve its goals.
- PHMSA has failed to take into account widely known issues with converting geospatial data. As proposed, the ICR would not yield a useful, valuable database to serve PHMSA's purposes.
- PHMSA has not acknowledged the necessary security protections that would be required to protect the highly sensitive portions of the requested data.
- PHMSA has grossly underestimated the costs of producing the data in the format and at the level of accuracy requested.

Because of these specific concerns, INGAA believes that PHMSA's ICR does not comply with the Paperwork Reduction Act (PRA) and the Office of Management and Budget (OMB)'s regulatory requirements for paperwork burdens. INGAA urges PHMSA to review its ICR with these implications in mind. PHMSA should also consider issuing this proposal as a rulemaking, instead of an isolated information collection request.

Finally, in an effort to accomplish PHMSA's goal of modernizing NPMS but at a pace and cost burden that is sustainable for the regulated community, INGAA puts forward a counterproposal for PHMSA's consideration.

Detailed Comments

I. The proposed information collection does not comply with the requirements of the Paperwork Reduction Act or the corresponding OMB regulations.

PHMSA's ICR does not comply with the PRA or OMB's regulations for paperwork burdens.² Congress passed the PRA in 1980 and amended it in 1995 to reduce the information burden imposed by the federal government.³ The purpose of the PRA was "to have Federal agencies become more responsible and publicly accountable for reducing the burden of Federal paperwork on the public..." PHMSA's ICR runs contrary to that goal by expanding the amount of information collected, rather than minimizing it. The ICR represents an extensive overhaul of the existing information collection and therefore, PHMSA should carefully review the proposed revisions.

As PHMSA is aware, in order to obtain OMB approval of an information collection, an agency must demonstrate that it has "taken every reasonable step" to ensure that the proposed collection:

- (i) is the least burdensome necessary for the proper performance of the agency's functions to comply with the legal requirements and achieve program objectives;
- (ii) is not duplicative of information otherwise accessible to the agency; and
- (iii) has a practical utility.⁵

PHMSA does not meet its burden of satisfying these requirements.

- A. The proposed collection is not necessary to achieve the agency's stated goals.
 - 1. Emergency responders do not need most of the information PHMSA is requesting.

² 5 C.F.R. § 1320.1 et seq. ³ See 44 U.S.C. § 3501 (1995). ⁴ Id.

⁵ 5 C.F.R. § 1320.5(d) (2013).

PHMSA's primary reason for enhancing the NPMS is unsupportable. PHMSA relies heavily on the purported need to educate and prepare emergency responders for pipeline emergencies. Specifically, PHMSA stated that "[m]ore accurate and complete NPMS data will also help emergency responders and government officials create better, more appropriate emergency response plans." PHMSA provides no support for this statement. To the contrary, emergency responders do not rely on the majority of the requested information to respond to a pipeline emergency. For instance, PHMSA requests special permit numbers, wall thickness, and the date of the last in-line inspection. This information does not influence an emergency responder's actions either on or before a pipeline accident. Instead, emergency responders rely on paper or digital maps and direct interaction with pipeline companies.

In further support of this point, in March 2014, Paradigm Alliance, Inc., on behalf of INGAA, surveyed emergency responders across the country seeking input on the preferred method for receiving pipeline facility information. Almost 1,000 emergency responders completed the survey. Interestingly, only 7.4 percent of the 985 respondents listed NPMS as their preferred method to obtain pipeline facility information. Their preferred format is either a digital map or a paper map. In fact, 69 percent of respondents stated that they receive paper maps from their local pipeline operator. In addition, most respondents stated that the most useful information is the contact information for a pipeline company, commodity information for the pipeline(s) in their jurisdiction, and location of the pipeline facility. In terms of accuracy requirements, 68 percent of respondents stated that they do not require a centerline tolerance more accurate than current requirements for planning purposes. Of those that do, the majority stated that 100' was an acceptable accuracy tolerance. Finally, only 1.9 percent or 19 of 985 respondents stated that they use NPMS frequently.

As illustrated by the INGAA survey, emergency responders do not need all of the detailed pipeline facility information PHMSA requests in its ICR. For instance, PHMSA notes that "knowing the type of leak detection system used during an incident will help emergency responders respond appropriately in the event of a release." However, a first responder's actions on the day of an incident would not change if he or she knew the type of leak detection an operator uses. The first responder would still need to contact the pipeline operator. Although knowing how long it could take for a pipeline company representative to arrive on scene may help an emergency responder plan for responding to a pipeline incident, that issue is an entirely different question than what type of leak detection is used at a particular pipeline facility. Moreover, if an emergency responder is involved, the type of leak detection that was used is already moot. Knowledge of leak detection capabilities does not alter an emergency responder's reaction time or response to a pipeline incident.

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⁶ ICR, at 1.

⁷ See Appendix A.

⁸ ICR, at 2.

Many of the requested attributes will not help emergency responders, particularly in an isolated fashion. Knowing only the diameter or perhaps the PIR will not help emergency responders prepare for a pipeline incident. Rather, emergency responders benefit from the discussions and information that is disseminated as part of the pipeline safety public awareness requirements. Permitting access to isolated single attributes does not help an emergency responder prepare for an incident.

An emergency responder needs the commodity type transported, pipeline operator contact information, and general location information. PHMSA's Geographic Information System (GIS) Manager acknowledged this point during the 2013 Gas Pipeline Advisory Committee meeting. She stated that NPMS needs to be expanded in order to "...better identify, regulate, and respond to emergencies for our regulatory assets. And to do that, we need to know where they are and exactly what type of asset it is." Both datasets (centerline location and commodity information) are already part of NPMS and are provided to emergency responders as part of the PHMSA public awareness requirements. PHMSA has failed to demonstrate why expanding information submitted to the NPMS to include 31 separate attributes for each individual pipeline segment will assist emergency responders.

The National Transportation Safety Board (NTSB) has also recommended that PHMSA enhance the pipeline facility information the agency collects; however, its recommendation was much narrower in scope. ¹¹ The NTSB recommended that emergency responders know the pipe diameter, operating pressure, product transported, and the potential impact radius of each pipe in their jurisdiction. ¹² In August 2013, almost a year prior to the publication of the ICR, PHMSA requested that the NTSB close this recommendation. ¹³ Certainly, requesting closure of a NTSB recommendation signifies that PHMSA believed it had made enough improvements to meet emergency responders' needs.

2. The proposed collection is not the least burdensome approach the agency could take to improve its inspection methodology.

PHMSA has failed to demonstrate that the proposed ICR satisfies the OMB review factors for an information collection. The information that PHMSA proposes to collect is not the least burdensome necessary and is duplicative of information already submitted by pipeline operators. PHMSA's statement that the enhanced data collection is necessary to "strengthen the

⁹ See PHMSA-2013-0156-0016, at 21 (emphasis added).

¹⁰ 49 C.F.R. Part 192, Subpart L (2014).

¹¹ See NTSB Recommendation P-11-8.

¹² In its request for closure, PHMSA listed all of the actions it had taken to enhance pipeline facility information for emergency responders. PHMSA did not express any need to expand NPMS.

¹³http://phmsa.dot.gov/pv_obj_cache/pv_obj_id_DAB70470F126852F756F3AE2CEA7C90100E97100/filename/Report to Congress on NTSB_and_OIG_Recommendations.pdf

effectiveness of [its] risk rankings and evaluations, which are used as a factor in determining pipeline inspection priority and frequency" ¹⁴ does not overcome this deficiency.

Although having the requested data in one database might be more efficient for PHMSA's inspection process, it certainly is not the least burdensome approach to achieve this goal. PHMSA already collects most of the requested data through other information collections such as the annual reporting requirements or its integrated inspection process whereby the agency comprehensively inspects a pipeline's implementation of multiple regulatory programs. PHMSA could enhance its current risk ranking methodology by inputting the information from its existing data sources without imposing new and duplicative information burdens on the regulated community. As described below, the costs to comply with the ICR are significant. PHMSA can easily achieve its goal through other means.

3. Several individual attributes are also unnecessary for the agency to achieve its stated goals.

INGAA is also concerned with PHMSA's reasoning for a handful of attributes it would require under the ICR. There is a notable disconnect between PHMSA's stated need and the type of information requested. For example, PHMSA requests data on the installation method of pipe segments that cross bodies of water greater than 100 feet in width. 15 The response choices are open cut, trenchless technology, and other. The agency's reasoning for requiring this information is that it will "...give pipeline inspectors the ability to verify the depth of cover of pipeline segments under water." However, PHMSA does not explain how an inspector will verify the depth of cover for a pipeline that is under water without conducting a depth of cover survey or using other underwater survey techniques. PHMSA also does not explain how the requested information will further the agency's objectives.

In addition, PHMSA fails to demonstrate how requesting certain information is needed to comply with legal requirements or to achieve program objectives. For example, PHMSA requests average daily throughput for each pipeline segment. PHMSA's reasoning is "so states can better identify shortages and implement contingency plans for potential widespread pipeline service outages to maintain an uninterrupted flow of energy supplies."¹⁷ However, reliability and capacity is subject to the Federal Energy Regulatory Commission (FERC)'s jurisdiction, not PHMSA's. FERC collects throughput information on its Form 2 for gas pipelines and Form 6 for oil pipelines. PHMSA should eliminate this particular data request. It is unnecessary given that it is irrelevant to PHMSA's program objectives, it is already collected (at the system level) by another federal agency, and it is security and commercially sensitive (when collected at the segment level). Collecting this type of information at the segment level could also create

¹⁴ ICR, at 2.

¹⁵ ICR, at 3. ¹⁶ *Id*.

¹⁷ *Id*.

considerable market implications. Finally, this data request is tremendously burdensome. Operators would need to isolate the daily throughput for *each* pipe segment in order to comply with this NPMS proposed requirement.

PHMSA should reconsider the breadth of its NPMS proposal because most of the information sought is unnecessary to achieve its stated goals.

B. The proposed collection requests information that is already accessible to the agency.

PHMSA's ICR does not satisfy OMB criteria because it seeks data that is duplicative of information already accessible to the agency. PHMSA already has access to almost every one of the 31 proposed attributes identified in the ICR. Specifically, PHMSA collects similar information through its annual reporting requirements. For example, operators already submit the year of construction or installation (in a range) to PHMSA in the annual report. The agency also obtains pipeline specific information through its integrated inspection program. In the ICR, PHMSA failed to confirm whether it would replace the annual reporting requirements with an enhanced NPMS. This lack of clarity leaves open the question whether operators will have to accommodate multiple data requests seeking the same information. Asking operators to resubmit the information in a different format may be more efficient for PHMSA but creates a significant burden on the regulated community.

Further, OMB's paperwork burden regulations prohibit duplicative collections that serve only to minimize agency costs and efforts. "The agency shall also seek to minimize the cost to itself of collecting, processing, and using the information, but shall not do so by means of shifting disproportionate costs or burdens onto the public." Although PHMSA has statutory authority to collect additional geospatial information, the data requested must be deemed necessary by the Secretary. PHMSA has failed to demonstrate that the requested information meets this standard.

The ICR also is duplicative of existing information collection requirements under PHMSA's public awareness regulations. ²¹ Under 49 C.F.R. §§ 192.605 and 192.615, pipeline facility operators must include provisions for coordinating with appropriate fire, law enforcement, emergency management, and other public safety officials in their emergency plans. Operators must also develop and implement a written public education program pursuant to § 192.616. PHMSA requires pipeline operators to establish a liaison with emergency responders in each locality that their pipelines traverse. Operators must submit maps of their systems and hold

¹⁸ Operators submit a range of installation years in the annual report. PHMSA is requesting the actual year of installation in its revisions to NPMS.

¹⁹ 5 C.F.R. § 1320.5(d)(iii).

²⁰ See Section 11 of the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011.

²¹ See 49 C.F.R. Part 192, Subpart L.

ongoing discussions with the first responders. In the ICR, PHMSA fails to acknowledge these existing requirements and does not mention the effect the proposed expansion of NPMS would have on these requirements.

Finally, PHMSA requests information that the agency itself generates. In the ICR, PHMSA requests that operators identify each segment that is currently operating under an active special permit, determine whether the segment has a different MAOP than otherwise allowed under the regulations, and resubmit the special permit number. PHMSA's reasoning is that "[t]his allows PHMSA to more easily locate these pipe segments and could help emergency responders respond adequately in the event of an emergency." ²² This request is a textbook example of what the PRA was designed to prevent. PHMSA is the issuer of special permits and therefore already has all of the requested information including the permit number, approved changes to MAOP, and latitude and longitude of each special permit segment and inspection area. Requesting operators to resubmit it in GIS format is duplicative and unnecessary.

C. PHMSA has not considered the known technology issues and therefore the ICR lacks a "practical utility" as required under OMB regulations.

Under the PRA and OMB regulations, PHMSA must demonstrate the capability to process the collected information in a timely and useful manner.²³ Practical utility is defined as "the actual, not merely the theoretical or potential, usefulness of information to or for an agency, taking into account its accuracy, validity, adequacy, and reliability, and the agency's ability to process the information it collects in a useful and timely fashion."²⁴ PHMSA has failed to take into account the known accuracy issues that occur when converting data from a company's GIS system and associated coordinated reference system to the agency's system. The coordinate transformation may introduce errors of 5 feet to 40 feet and will lead to deteriorated data beyond the requested level of positional accuracy.

The problem often stems from issues with base mapping. Base map imagery is required to provide accurate geography to position all feature data relative to its true location. Base map imagery is available in a variety of sensor-platforms, spectral bands, viewing-angles, resolutions, accuracies, and pricing. Base maps, therefore, are highly variable. Conversion of data from one base map to another can result in errors and inconsistencies. The information collection may be useless if the information is inaccurate or incomprehensible after it is downloaded. PHMSA should modify the ICR to eliminate collecting extensive data, particularly linear accuracy tolerances, until advances in technology eliminate this "lost in translation" issue.

²² ICR. at 3.

²³ See 44 U.S.C. § 3502(11) (1995).

²⁴ 5 C.F.R. § 1320.3(1).

Finally, PHMSA does not demonstrate the practical utility of requiring data on abandoned pipelines to "...ensure that they are maintained in the proper manner in accordance with pipeline safety regulations." Under PHMSA's regulations and a recent interpretation, abandoned pipelines are not *maintained* because the operator has made the determination that the line will not be returned to service. Rather, the abandoned pipe would have been purged and capped in accordance with 49 C.F.R. § 192.727. If a pipeline is truly abandoned, it should <u>not</u> be a "critical integrity management issue" as PHMSA suggests.

D. PHMSA's estimated burden is inaccurate and unsupportable.

1. PHMSA should evaluate all of the factors included in OMB's definition of burden.

PHMSA's burden estimate of 420,516 hours for 1,211 respondents is inaccurate. OMB defines burden as "...the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency, including:

- i. reviewing instructions;
- ii. developing, acquiring, installing, and utilizing technology and systems for the purpose of collecting, validating, and verifying information;
- iii. developing, acquiring, installing, and utilizing technology and systems for the purpose of processing and maintaining information;
- iv. developing, acquiring, installing, and utilizing technology and systems for the purpose of disclosing and providing information."²⁶

PHMSA's burden estimate fails to recognize all of these factors. First, and most importantly, some of the requested information is not readily available in geospatial format. Operators know the various attributes for each pipe segment but all of the information is not currently in a geospatial format. Some of it is contained in paper records and operators would have to devote significant resources to convert that information. It is a tedious process to change stationing and maintain a connection to physical records. INGAA conducted a survey of its members to identify how many companies have the requested information readily available in the format required. None of the 17 companies that responded had <u>all</u> of the information in the format requested by PHMSA incorporated into their GIS today. For the pipelines located in HCAs, the responding companies reported an availability range of 0 to 27% for each newly requested attribute (PHMSA linear accuracy and format). For non-HCAs, the range was 0 to 21%.

PHMSA's burden estimate fails to account for having to run tools and assimilate historical data into an operator's GIS system. For instance, hydrotest information and MAOP information

²⁶ 5 CFR 1320.3(b)

²⁵ *Id.* at 2.

²⁷ See copy of INGAA survey at Appendix B.

come from different data sources. In some cases, such as coating, an operator would have to validate the data in the field.

PHMSA also fails to consider that operators will have to upgrade or acquire a new GIS to accommodate all of the additional data fields. Pipeline operators' GIS systems were built to incorporate a limited amount of information. PHMSA seems to assume that operators will be able to use their existing systems to accommodate 31 new data requests and incorporate linear accuracy requirements. This assumption is incorrect.

Third, because many facilities are buried under ground, achieving the proposed spatial accuracy of the centerline and proposed linear accuracy of the pipeline attributes will require significant validation in the field or the acquisition of new technology, such as the "as-built pig" that is in development. However, this technology is not widely available, can be costly, and is only applicable to pipelines that can be pigged. PHMSA's estimate does not consider the burden that will be imposed on operators with respect to these activities. PHMSA should adjust the scope and schedule of its ICR based on the availability of this technology.

Fourth, PHMSA fails to account for the fact that some operators may have to reconfigure their GIS to isolate each change in wall thickness, change in coating, etc. along each segment of pipeline. Previously, PHMSA only requested spatial location. If operators now have to confirm linear accuracy to demonstrate the exact point where the change in attribute occurs, then operators may have to create additional pipeline segments in their GIS system to capture these changes. For each change in an attribute, a new segment would be needed. For the linear accuracy requirements, an operator will have to revalidate that the data is within +/-5 or 50 feet. Most of this will require field work through surveying and probing the line, digging up the pipe or doing core sampling. Only a limited number of vendors are available to conduct this type of work, which means that many operators could experience delays as they coordinate with a particular vendor's availability. INGAA's estimated costs could also increase dramatically on account of these delays.

Finally, the estimated burden associated with complying with the ICR should also include the training and resources that will be needed to maintain the information.

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²⁸ PHMSA's ICR was not clear whether the agency intends to impose +/- 5 feet and 50 feet accuracy requirements on all linear attributes in addition to the centerline positional accuracy requirements. INGAA is assuming that PHMSA is also proposing linear accuracy requirements for each pipeline attribute given that PHMSA stated that "unless otherwise marked, all attributes will be linked to the geospatial pipeline file as attributes at the pipe segment level." ICR, at 2.

A company with an average GIS system would need to conduct, at a minimum, the following tasks to comply with PHMSA's ICR:

- 1. Perform a field centerline survey of the pipeline using either a survey crew for non-piggable lines or an in-line inspection tool with Inertial Measurement Unit (IMU) for lines which are piggable.
- 2. Use existing GIS data for all features along the pipeline to achieve 50 foot accuracy.
- 3. Develop a Pipeline Feature List (PFL). A PFL is a research project that gathers the original documentation for all factors involved in a MAOP calculation and includes a correlation of the identified pipe features with in-line inspection data and highly accurate aerial imagery. A PFL typically lists the various features (tees, taps, valve, pipe, etc.) on the pipeline and fills in the various applicable MAOP factors from the documentation. Discrepancies are resolved based on data source accuracy. This is usually performed on a foot by foot basis along the pipeline and covers every feature. This provides the basis for achieving a higher degree of accuracy, which may be less than five feet, but can depend on source material quality.
- 4. Purchase highly accurate aerial imagery to use as the base map for the overlay of all data.
- 5. Prepare the pipeline for ILI tool run with IMU.
- 6. Run the ILI tool with IMU.
- 7. Perform data integration of ILI data with existing GIS data.
- 8. Purchase and maintain Data Transformation Software.
- 9. Train staff in the use of the Data Transformation Software.
- 10. Develop export routines to perform data remodeling and schema mapping to get in-house GIS data schema into the format requested by PHMSA.
- 11. Perform annual data exports to submit in-house GIS datasets into the NPMS schema.

PHMSA's burden estimate fails to account for these costs and consequently, has substantially underestimated the burden of complying with the ICR.

2. PHMSA has underestimated the total hours and costs for compliance with the ICR.

PHMSA has substantially underestimated the number of hours and costs that operators will incur to comply with the ICR. The cost burden estimated by PHMSA breaks down to approximately 14 days of man-hours for each respondent. Typically, burden estimates are calculated on a per mile basis. As an example, on November 7, 2013, PHMSA submitted its justification for the renewal of the current information collection that supports NPMS.²⁹ PHMSA's burden estimate for this renewal (without any new requirements) was 16,312 hours for 894 respondents. Using 2004 Department of Labor statistical information, PHMSA estimated the 2013 renewal to take

²⁹ See Supporting Statement at http://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=201309-2137-001.

approximately two minutes per mile and cost \$1,056,202. This estimate was based on 420,117 miles. Just one year later, PHMSA has proposed a complete overhaul of the NPMS and in comparison estimates the burden hours at 420,516 hours. This total breaks down to 60 minutes per mile to reconfigure existing GIS systems, potentially develop new GIS systems, train employees, review pipeline records, input the historical information into the GIS system, and conduct field work potentially digging up portions of the pipe to confirm accuracy tolerances. Using PHMSA's 2013 figure for NPMS pipeline mileage of 420,117 and updated 2013 Department of Labor information, PHMSA's total cost estimate is approximately \$37,564,694.28.

Although \$37 million is certainly a costly initiative, this total significantly underestimates the true costs of PHMSA's proposal. INGAA has computed its own burden estimate and the anticipated cost of the ICR for only INGAA member companies (approximately 180,000 miles out of 290,000 reported gas transmission miles) could exceed \$820 million.³² This is a stark comparison to the PHMSA's burden estimate.

INGAA divided its cost estimate into four major categories.³³

| 1. | Pipelines that are non- piggable (+/- 50 feet) | \$4,510 per mile |
|----|--|---------------------------------------|
| 2. | Pipelines that are piggable and currently have centerline accuracy better than five feet | \$9,580 per mile |
| 3. | Pipelines that are piggable but need improved centerline accuracy | \$11,580 per mile |
| 4. | Pipelines that can be made piggable. | Included in the costs of non-piggable |

These are resources that would be diverted away from other activities that would improve safety.

³³ See Appendix C.

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³⁰ http://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=201309-2137-001

³¹ INGAA used the 2013 Department of Labor median hourly wage of an engineering manager (NAICS 486000) and added 35 percent similar to PHMSA's 2013 calculation. The 2013 median hourly wage of an engineering manager (for NAICS 486000-pipeline transportation) is estimated to be \$66.17. In following PHMSA's 2013 calculation, INGAA added 35 percent as estimated fringe benefits. The full cost of an engineering manager is therefore \$89.33 per hour. http://www.bls.gov/oes/current/naics3 486000.htm#17-0000.

³² INGAA's present cost estimates are based on information for mainline and transmission laterals only.

PHMSA's Advisory Committee members have advised the agency about the potential costs that would be involved in requiring five foot accuracy. During the August 2013 Advisory Committee meeting, Chad Zamarin of the Gas Pipeline Advisory Committee stated that "...I think it is important just to note that the better the accuracy, the higher the costs for the operator. It sounds simple. GPS technology has come a long way, but it still requires an extensive amount of manpower and expense to go out and survey lines." Mr. Zamarin also stated that "...there are areas of our systems where you can't achieve submeter. You know, in mountainous terrain, it is sometimes very difficult to get the same accuracy that you can get in the open plain." However, PHMSA has not taken into account these concerns when calculating their burden estimate.

Given the staggering costs to comply with the proposed ICR (\$820 million for only INGAA members), PHMSA should substantially narrow the data requested under the ICR, or alternatively consider proposing the ICR as a rulemaking. The anticipated costs for compliance far exceed the \$100 million threshold for a significant rulemaking. PHMSA should afford the same review and analysis to this information collection as would be given to a significant rulemaking.

PHMSA should consider all of these concerns before finalizing its NPMS requirements.

II. PHMSA has failed to describe how it will protect the collected information, some of which is highly sensitive.

Much of the information PHMSA is requesting in the ICR would create an infrastructure security risk if exposed or is commercially sensitive. Most importantly, PHMSA is proposing to consolidate all of this information (some which is already collected by the agency and some of which is not) and place it in a centralized, online location. Yet, PHMSA fails to acknowledge any security protections or limitations on public access to the data it is requesting. PHMSA is certainly aware of the security implications given that this topic was discussed extensively during the August 2013 Advisory Committee meeting and during informal stakeholder meetings in November 2013. The information PHMSA is requesting, particularly daily throughput at the segment level, wall thickness, and maximum allowable operating pressure is proprietary. Taken together, these attributes could be useful to anyone wanting to commit harm to the nation's energy infrastructure.

While INGAA understands PHMSA's desire to enhance its database, PHMSA should not lose sight of the serious security implications of its proposal. As discussed during the November 17th public meeting, the present data security policies and processes that PHMSA relies do not compare to other agencies handling sensitive information. PHMSA must ensure that it can protect the data prior to collecting this sensitive information.

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³⁴ See PHMSA 2013-0156-0016, at 44.

³⁵ *Id.* at 49.

Although PHMSA may not intend to distribute some of the collected information to the public, the agency is overlooking the implications of allowing non-federal officials access to the information. PHMSA no longer has control over the information once a state official has access to these records. The data becomes a state record and subject to state open public record statutes or sunshine laws. These laws typically provide less protection than the federal Freedom of Information Act (FOIA). The state statutes err on the side of broad disclosure. Therefore, many states may be unable to protect sensitive pipeline data in their possession. For instance, in the State of Washington, "[t]he provisions of the act are to be liberally construed to promote full access to public records so as to assure continuing public confidence in governmental processes, and to assure that the public interest will be fully protected." *Spokane Police Guild v. Washington State Liquor Control*, 112 Wash. 2d 30, 33 (1989). A state's ability to enter a confidentiality agreement with a federal agency can be compromised by state law. The Washington State courts have held that "[p]romises cannot override the requirements of the disclosure law." *Id.* at 40 (citing *Hearst Corp. v. Hoppe*, 90 Wash. 2d 123, 137 (1978)).

The Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 does not provide any additional protection. Section 11 of that law provides that the data collected under NPMS is only protected *if* it meets an existing FOIA exemption.³⁶ It is unlikely that PHMSA will be able to protect NPMS data in mass under FOIA. Rather, PHMSA would have to engage in time consuming efforts to consult with each operator on its individual data prior to responding to a FOIA request.

Unlike FERC, PHMSA does not have the statutory authority to limit pipeline data from disclosure, other than applying a relevant FOIA exemption. FERC has the authority to limit mandatory disclosure of critical energy infrastructure information or CEII. FERC defines CEII as:

...specific engineering, vulnerability, or detailed design information about proposed or existing critical infrastructure that: (1) relates details about the production, generation, transportation, transmission, or distribution of energy; (2) could be useful to a person in planning an attack on critical infrastructure; (3) is exempt from mandatory disclosure under the Freedom of Information Act, 5 U.S.C. 552 (2000); and (4) does not simply give the general location of the critical infrastructure.³⁷

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³⁶ See 49 U.S.C. § 60132. The Act states that "the Secretary may not disclose information collected pursuant to section (a) except to the extent permitted by section 552 of title 5." Section 552 of title 5 (FOIA) mandates the release of agency records unless an agency can apply one of the nine exemptions or three exclusions. Therefore, unless PHMSA can apply a FOIA exemption to the requested dataset, they would have to release the information to the public.

³⁷ See FERC Order. No. 683.

It is hard to justify how PHMSA could release the same sensitive pipeline information that is classified by FERC as CEII and not publicly disseminated. PHMSA's only recourse is to review FOIA exemptions, determine if any apply to the requested information, and release the information, if none are applicable.

In order to resolve this issue, INGAA suggests that PHMSA isolate the data it truly needs to incorporate in NPMS. PHMSA should reconsider whether all of the requested attributes need to be in NPMS and accessible by state and local officials and potentially public viewers. INGAA urges PHMSA to consider how it will protect sensitive pipeline data prior to collecting it.

III. Other clarifications are needed.

INGAA requests that PHMSA clarify the following issues in the ICR:

Scope of Information Collection

First, PHMSA should clarify the scope of the information request. The NPMS Operator Standards Manual (Standards Manual) states that certain requirements only apply to mainline pipe. This raises the question whether the other proposed requirements such as a diameter, wall thickness, etc. apply to <u>all</u> pipelines or just mainline pipelines. If it is PHMSA's intention to collect information on facility piping, it should clarify this point and factor in the costs and time of upgrading existing GIS systems to include this type of data.

In addition, 49 U.S.C. § 60132 excludes distribution and gathering pipelines from NPMS requirements. However, PHMSA has included offshore gas gathering in its ICR. PHMSA should be mindful that (1) gathering pipelines are not subject to NPMS requirements per the statute and (2) geospatial data for offshore gas transmission pipelines are already collected by the Bureau of Safety and Environmental Enforcement.

Finally, PHMSA states in the ICR that the five-foot positional accuracy requirements apply to "pipeline segments located within Class 3, Class 4, High Consequence Areas, or 'could affect' HCAs". ³⁸ However, in the Standards Manual, PHMSA states that these same requirements apply "when a gas transmission line could affect a High Consequence Area **and** is in a Class 3 or 4 location." INGAA requests clarification on this discrepancy.

Use of idle or retired

In the NPMS Operator Submission Guide, PHMSA requests that operators designate their pipeline facilities as "in-service", "idle", "abandoned", or "retired". ³⁹ Yet at the same time, PHMSA has stated publicly that the agency does not recognize idle or retired pipelines. ⁴⁰

³⁸ ICR, at 2.

³⁹NPMS Operator Submission Guide (February 2014) at 53.

Timing. PHMSA did not list a proposed effective data in the ICR. During the 2013 Advisory Committee meeting, PHMSA's GIS Manager stated that "we are going to give the operators enough time to re-GPS lines, if needed...[f]or older lines that might need to be re-GPSed, we are building the time into the timeframe of this information collection." Operators are aware that the ICR is only the first of two notices and OMB will take at least 60 days to review PHMSA's request. However, PHMSA should indicate when this proposal *could* take effect as this information is critical to developing an accurate burden estimate. Given the significant amount of work needed to comply with this proposal, PHMSA should recognize that a 2016 effective date for all 31 attributes is unrealistic.

Predominant

PHMSA uses the word "predominant" to characterize the information needed for pipe grade, class location, and year of construction or installation. However, PHMSA does not define "predominant" in the ICR or the Standards Manual. PHMSA offers no context to explain what it means by "predominant."

Nominal diameter

PHMSA is seeking nominal diameter computed to at least three decimal places. In the Standards Manual, PHMSA defines "nominal" as "a dimensionless designator of pipe that indicates the standard pipe size". ⁴² PHMSA should clarify whether it is requesting nominal or actual outside diameter and ensure that its definition is consistent.

IV. INGAA Proposal

INGAA understands PHMSA's desire to improve the existing NPMS and modify its risk-based inspection methodology. Notwithstanding the arguments discussed above, INGAA suggests the following attributes and timing as a possible path forward to achieve PHMSA's goals yet address the concerns articulated in these comments.

Scope of Collection

INGAA has examined PHMSA's 31 proposed attributes and identified those that will result in a meaningful improvement to NPMS for PHMSA and other stakeholders. These attributes are:

- Pipe Material (e.g. steel, plastic, cast iron)
- Nominal Pipe Diameter

⁴⁰Statement by Administrator Quarterman during House Transportation and Infrastructure Committee, Subcommittee for Railroads and Pipelines, http://www.c-span.org/video/?319490-1/pipeline-safety-review&start=5318 at 1:35 (May 20, 2014). "There are active pipelines and there are abandoned pipelines" "The term 'idle pipeline' does not exist in pipeline law."

⁴¹ PHMSA-2013-0156-0016 at 41.

⁴² Standards Manual, at 86.

- HCAs (beginning and ending points existing at the beginning of reporting year)
- Method used to determine HCA (Method 1 or 2)
- Pipe Coated (Y/N)
- Cathodically Protected (Y/N)
- Is the segment piggable or able to be internally inspected (Y/N)
- Commodity type (e.g. natural gas)
- Support AGA's proposal to indicate low-stress pipelines using the 30 percent SMYS threshold

INGAA would commit to provide these attributes without linear accuracy constraints to PHMSA by 2016.

In addition, INGAA is willing to commit to 50' centerline accuracy in accordance with the following schedule. This level of positional accuracy will assist emergency responders, the public, PHMSA and state regulators. An accuracy tolerance of five feet is infeasible.

Timing of Collection

PHMSA's modifications to NPMS should be phased in over time.

| Phase | NPMS Submission | Proposed Centerline Accuracy |
|-------|-----------------|--|
| 1 | 2016 | Best Estimate Available (actual accuracy rather than conservative estimate) using the following categories: |
| | | ≤ 50 feet 51 feet - 100 feet ≥ 101 feet |
| 2 | 2016-2023 | Incremental improvements for centerline accuracy as operators conduct integrity management assessments on a seven year rolling basis |
| 3 | 2023 | 70 percent of INGAA mileage=50 feet (this mileage covers 90% of the population) 30 percent of INGAA mileage=100 feet |

This phased-in approach coordinates field verifications with existing integrity management requirements and thereby significantly reduces the actual compliance burden as well as the burden estimate for the information collection. The additional time also allows for improvements in technology to avoid base mapping and other concerns addressed above. This proposal strikes a balance between PHMSA's desire to enhance NPMS and the burden on the

regulated community by narrowing the collection to necessary and useful information and avoiding duplication.

INGAA also suggests that PHMSA create a working group of stakeholders, similar to the previous MAPQUAT 1 and 2 teams, to develop a sensible plan to modify NPMS. The working group could evaluate the definition, format, and security sensitivity of the remaining data requested by PHMSA.

V. Conclusion

INGAA supports PHMSA's desire to improve its NPMS and make certain information more accessible to first responders and members of the public. However, INGAA has significant concerns with the scope and content of PHMSA's ICR. Specifically, PHMSA requests many pipeline attributes that are unnecessary to achieve PHMSA's stated goals, the proposal is not the "least burdensome" approach as required by OMB regulations, and it lacks a practical utility. PHMSA has not acknowledged the necessary security protections that would be required to protect the highly sensitive portions of the requested data. Finally, PHMSA has grossly underestimated the costs of producing the data in the format and at the level of accuracy requested. Because of these specific concerns, PHMSA's ICR does not comply with the PRA or OMB's regulatory requirements for paperwork burdens. INGAA urges PHMSA to review its ICR with these implications in mind.

Finally, in an effort to accomplish PHMSA's goal of modernizing NPMS but at a pace and cost burden that is sustainable for the regulated community, INGAA puts forward a counterproposal for PHMSA's consideration.

Appendix A

Study Objectives and Methodology

The Interstate Natural Gas Association of America (INGAA) chose to survey emergency response officials online survey to

- Understand the importance of pipeline operators supplying mapping,
- 2. What emergency response officials utilize maps for,
- Gauge emergency response officials expectations for accuracy of the maps, and
- Understand what method emergency response officials wished to receive maps.

Paradigm manages a national stakeholder database, which contains permission based e-mail addresses, INGAA supplied questionnaire and solicited feedback through an on-line survey mechanism to collect obtained through implementing pipeline operator public awareness programs. Paradigm utilized an survey data. The distribution was tiered in order of rank for the purposes of monitoring results. NGAA partnered with Paradigm to request emergency response officials participation in the study.

| | - | |
|-----------------------------|---------------------------------|---------|
| keholder Audience Breakdown | Sample Size and Margin of Error | |
| Fire and Police Chiefs | Population 9 | 96,605 |
| 14,106 | Distribution 2 | 28,121 |
| | Delivered 2 | 22,173 |
| Other Agencies | Sample Size | 985 |
| 700'01 | Confidence Factor | 95% |
| Fire & Police Others | Margin of Error | ± 3.12% |
| 16,062 | | |





Constant Contact Survey Results

Survey Name: 2014 INGAA Emergency Emergency Responder Survey

Response Status: Partial & Completed

Filter: None

3/3/2014 3:05 PM CST

| ≯ My department | is (select one): | | | |
|------------------------|------------------|--------|-----------------------|-------------------|
| Answer | 0% | 100% | Number of Response(s) | Response Ratio |
| Volunteer | | | 575 | 58.3 % |
| Paid | | | 227 | 23.0 % |
| Combination | | | 180 | 18.2 % |
| No Response(s) | | | 3 | <1 % |
| | | Totals | 985 | 100% |

| * have been in my | position for (select one): | | | |
|--------------------|----------------------------|--------|-----------------------|-------------------|
| Answer | 0% | 100% | Number of Response(s) | Response Ratio |
| Less than 1 year | | | 48 | 4.8 % |
| 1-5 years | | | 260 | 26.3 % |
| 5-10 years | | | 195 | 19.7 % |
| 10-20 years | ar a 151.0 | | 209 | 21.2 % |
| More than 20 years | | | 272 | 27.6 % |
| No Response(s) | | | 1 | <1 % |
| | | Totals | 985 | 100% |

In your role as an emergency responder, how useful are maps depicting natural gas and/or petroleum pipelines in your jurisdiction? (One answer only)

| Answer | 0% | 100% | Number of Response(s) | Response Ratio |
|-------------------|----|--------|--------------------------|-------------------|
| Very useful | | | 789 | 80.1 % |
| Somewhat useful | | | 175 | 17.7 % |
| Not at all useful | 1 | | 20 | 2.0 % |
| No Response(s) | | | 1 | <1 % |
| | | Totals | 985 | 100% |

Has your local pipeline company provided a map to you or your agency when requested?

| Answer | 0% | 100% | Number of Response(s) | Response Ratio |
|----------------|----|--------|--------------------------|-------------------|
| Yes | | | 536 | 54.4 % |
| No | | | 447 | 45.3 % |
| No Response(s) | | | 2 | <1 % |
| | | Totals | 985 | 100% |

TextBlock:

If "yes" answer questions 5, 6 and 7. If "no", skip to question 8.

Please specify which company(s) provided the map(s).

392 Response(s)

| Answer | 0% | 100% | Number of Response(s) | Response Ratio |
|--|----|--------|--------------------------|-------------------|
| Digital/electronic image | | | 82 | 16.8 % |
| They provided me with a link to the National Pipeline Mapping System | | | 153 | 31.3 % |
| Paper copy from the pipeline operator | | | 340 | 69.6 % |
| Online mapping or GIS files from the pipeline operator | | | 40 | 8.1 % |
| State / county / municipal maps that include natural gas pipelines | | | 106 | 21.7 % |
| Other | | | 16 | 3.2 % |
| | | Totals | 488 | 100% |

| What | | | | |
|--|-----------------------------|--------|--------------------------|-------------------|
| did you do with the | map? (Check all that apply) | | | |
| Answer | 0% | 100% | Number of Response(s) | Response Ratio |
| Looked at it once | | | 65 | 12.8 % |
| Posted it in a location wit is available to others | here | | 234 | 46.1 % |
| Filed it away for future reference | | | 231 | 45.5 % |
| Used it for emergency of community planning | or | | 175 | 34.5 % |
| Discarded it | | | 3 | <1 % |
| Other | | | 56 | 11.0 % |
| | | Totals | 507 | 100% |

| Answer | format for receiving maps? | 100% | Number of Response(s) | Response Ratio |
|--|----------------------------|--------|--------------------------|-------------------|
| Digital/electronic image | | | 302 | 30.6 % |
| The National Pipeline Mapping System website | | | 73 | 7.4 % |
| Paper copy from the pipeline operator | | | 345 | 35.0 % |
| Online mapping or GIS files from the pipeline operator | | | 77 | 7.8 % |
| State/county/municipal maps that include natural gas pipelines | | | 164 | 16.6 % |
| Other | | | 17 | 1.7 % |
| No Response(s) | | | 7 | <1 % |
| | | Totals | 985 | 100% |

*What pipeline related information is most important to you in your role as an emergency responder (ex. contact information, location, etc)?

946 Response(s)

| purposes? Answer | 0% | 100% | Number of Response(s) | Response Ratio |
|-------------------|----|--------|-----------------------|-------------------|
| Yes | | | 291 | 29.5 % |
| No | | | 672 | 68.2 % |
| No Response(s) | | | 22 | 2.2 % |
| | | Totals | 985 | 100% |

Based on your answer to question 7, is there a pipeline location accuracy required for your planning

If "yes" please specify in feet.

191 Response(s)

| *Are you aware o | f the National Pipeline Mapping S | System (NPMS)? | | |
|------------------|-----------------------------------|----------------|--------------------------|-------------------|
| Answer | 0% | 100% | Number of Response(s) | Response Ratio |
| Yes | | | 626 | 63.5 % |
| No | | | 347 | 35.2 % |
| No Response(s) | I | | 12 | 1.2 % |
| | | Totals | 985 | 100% |

| Answer | 0% | 100% | Number of Response(s) | Response Ratio |
|---|----|--------|--------------------------|-------------------|
| I have not heard of it | | | 319 | 32.3 % |
| I have heard of it but have never used it | | | 436 | 44.2 % |
| I have used it once or twice | | | 206 | 20.9 % |
| I use it frequently | | | 19 | 1.9 % |
| No Response(s) | | | 5 | <1 % |
| | | Totals | 985 | 100% |

TextBlock:

Based on your answers to question 13:If you have heard of or used the NPMS,

The NPMS is a website that provides the general location, contact information, and product type of transmission pipelines in the United States. How helpful is a website like this to you in your role as an emergency responder?

| Answer | 0% | 100% | Number of Response(s) | Response Ratio |
|-------------------|----|--------|-----------------------|-------------------|
| Very | | | 477 | 48.4 % |
| Somewhat | | | 273 | 27.7 % |
| Not at all likely | | | 45 | 4.5 % |
| No Response(s) | | | 190 | 19.2 % |
| | | Totals | 985 | 100% |

| How useful was the | NPMS system? | | | |
|--------------------|--------------|--------|-----------------------|-------------------|
| Answer | 0% | 100% | Number of Response(s) | Response Ratio |
| Very useful | | | 269 | 27.3 % |
| Somewhat useful | | | 275 | 27.9 % |
| Not at all useful | | | 44 | 4.4 % |
| No Response(s) | | | 397 | 40.3 % |
| | | Totals | 985 | 100% |

TextBlock:

The NPMS is a system available to the public. There is a similar system called PIMMA (Pipeline Information Management Mapping Application) that has more information for local officials.

| Have you requested PII | MMA access? | | | |
|---|-------------|--------|--------------------------|-------------------|
| Answer | 0% | 100% | Number of Response(s) | Response Ratio |
| Yes. It was helpful in seeing more detailed information. | | | 90 | 9.1 % |
| Yes. I do not believe I was ever granted access. | | | 42 | 4.2 % |
| Yes. I couldn't tell whether it made a difference in the level of information provided. | | | 29 | 2.9 % |
| No | | | 720 | 73.0 % |
| No Response(s) | | | 104 | 10.5 % |
| | | Totals | 985 | 100% |

| *Personal Information | |
|-------------------------------|-----------------------|
| Answers | Number of Response(s) |
| First Name | 920 |
| Last Name | 920 |
| Job Title | 920 |
| Company Name | 920 |
| Work Phone | 920 |
| Email Address | 920 |
| Address 1 | 920 |
| City | 920 |
| State/Province (US/Canada) | 920 |
| Postal Code | 920 |

| Mileage Summary | | | | | | |
|--|--|-----------------------------|---|----------------------------------|---|--|
| Number of HCA Miles Orchore | | | | | | |
| Number of HCA Milles Onsnore | | | | | | |
| Miles of Class Location - Class 3 | | | | | | |
| Entimated Total Miles of LICA or Class 2 or A | | | | | | |
| Estimated Total Miles of IIIA OF Liass 5 of 4 | Yes | ON | | | | |
| Do you presently have a Geographic Information System (GIS) | | | | | | |
| aPipelineSystem - Do you have the sub system (SUBSYS_NM) average throughput defined in your present GIS system? (Y or N) | | | | | | |
| SUMMARY | Do you have this information in this format recorded presently in this format in your GIS system | ıtıy in this format in your | If Yes for the first question, do you have this particular information recorded in a GIS to the accuracy of 5 feet? | his particular acy of 5 feet? | How much mileage do you have this information recorded in your GIS within 50 foot accuracy for locations not within In HCA or a Class 3 or 4 area | How much mileage do you have this information recorded in your GIS within 5 foot accuracy for locations within in A area |
| QUESTION | Yes | No | Yes | No | Miles | Miles |
| GeoSpatial - Do you have the Lat/Long defined with this format and choices in your present GIS system? (Y or N). | | | | | | |
| PipeSegment - Do you have MATERIAL defined in this format and choice options in your present GIS system? | | | | | | |
| PipeSegment - Do you have DIAMETER defined in this format in your present GIS system? | | | | | | |
| PipeSegment - Do you have WALL_TH defined in this format in your present GIS system? | | | | | | |
| PipeSegment - Do you have GRADE defined in this format and choice options in your present GIS system? | | | | | | |
| PipeSegment - Do you have PIPE_JOIN defined in this format and choice options in your present GIS system? | | | | | | |
| PipeSegment - Do you have SMYS defined in this format in your present GIS system? | | | | | | |
| | | | | - | | |

| Pupil departer: De you have GOSTU, MY pages and being from start of my supported GOSTU, MY pages and being from start of my supported GOSTU, MY pages and being from start of my supported GOSTU, MY pages and the control of my supported GOSTU, MY pages and the control of my supported GOSTU, MY pages and the control of my supported GOSTU, MY pages and the control of my supported GOSTU, MY pages GOSTU pages GOSTU pages GOSTU pages GOSTU pages GOS | PipeSegment - Do you have SEAM_TYPE defined in this format and choice options in your present GIS system? | | | |
|--|---|--|--|--|
| And designant Copy up bear 57 (10.5). Common and copy to be the copy of the co | PipeSegment - Do you have CNSTR_YR defined in this format and in your present GIS system? | | | |
| In each to you have III, Ast if defined in the format and choice options in your research (35 system) in the format and choice options in your present (35 system) in the format and choice options in your present (35 system) in the format and choice options in your present (35 system) in your present (35 syste | PipeSegment - Do you have STATUS_CD defined in this format and choice options in your present GIS system? | | | |
| marbitation feet body to have 1861. We'll He'll | PipeSegment - Do you have IL_ABLE defined in this format and choice options in your present GIS system? | | | |
| Centerful w. Course, Do you have QUALITY_CD defined in this format and dolore Gost Gastra. Co. Do you have GAS defined in this Gost Gastra. Co. Do you have GAS FXA defined in this format in your present GIS system? Quality Gastra. Co. Do you have SP PERMITY Quality Co. Do you have SP PE | InstallationMethod - Do you have INST_METH defined in this format and choice options in your present GIS system? | | | |
| MAOP - Do you have MAOP defined in this format in your present Gis system? Gasclassi-CA - Do you have CLASS defined in this format in your present Gis system? Gasclassi-CA - Do you have GAS, EKA defined in this format in your present Gis system? Special Permit - Do you have SP - PERMT - MO defined in this format in your present Gis system? Special Permit - Do you have SP - PERMT - MO defined in this format in your present Gis system? IL_DA - Do you have IL_COR defined in this format in your present Gis system? IL_DA - Do you have IL_COR defined in this format in your present Gis system? IL_DA - Do you have IL_COR defined in this format in your present Gis system? | CenterlineAccuracy - Do you have QUALITY_CD defined in this format and choice options in your present GIS system? | | | |
| GasClassHCA - Do you have CLASS defined in this format in your present Gls system? GasClassHCA - Do you have GAS, HCA defined in this format in your present Gls system? Special Permit - Do you have SP, PERMIT of the format in your present Gls system? Special Permit - Do you have SP, PERMIT NO defined in this format in your present Gls system? Special Permit - Do you have IU_COR defined in this format in your present Gls system? IU_DA - Do you have IU_DRIT defined in this format in your present Gls system? IU_DA - Do you have IU_DRIT defined in this format in your present Gls system? IU_DA - Do you have IU_DRIT defined in this format in your present Gls system? | MAOP - Do you have MAOP defined in this format in your present GIS system? | | | |
| Gasclassi-CA - Do you have GAS_HCA defined in this format in your present GIS system? SpecialPermit - Do you have SP_PERMIT SpecialPermit - Do you have SP_PERMIT NO defined in this format in your present GIS system? SpecialPermit - Do you have SIP_PERMIT NO defined in this format in your present GIS system? IL DA - Do you have IL LOR defined in this format in your present GIS system? IL DA - Do you have IL LOR defined in this format in your present GIS system? | GasClassHCA - Do you have CLASS defined in this format in your present GlS system? | | | |
| SpecialPermit - Do you have SP_PERMIT defined in this format in your present GIS system? SpecialPermit - Do you have SP_PERMIT NO defined in this format in your present GIS system? ILI_DA - Do you have ILI_COR defined in this format in your present GIS system? ILI_DA - Do you have ILI_CRA defined in this format in your present GIS system? ILI_DA - Do you have ILI_CRA defined in this format in your present GIS system? | GasClassHCA - Do you have GAS_HCA defined in this format in your present GIS system? | | | |
| Special Permit - Do you have SP_PERMIT_NO defined in this format in your present GIS system? IL_DA - Do you have IL_COR defined in this format in your present GIS system? IL_DA - Do you have IL_DENT defined in this format in your present GIS system? IL_DA - Do you have IL_CRA defined in this format in your present GIS system? | SpecialPermit - Do you have SP_PERMIT defined in this format in your present GIS system? | | | |
| L _DA - Do you have L _COR defined in this format in your present GIS system? L _DA - Do you have L _DENT defined in this format in your present GIS system? L _DA - Do you have L _CRA defined in this L _DA - Do you have L _CRA defined in this L _DA - Do you have L _CRA defined in this L _CRA defined in thi | Special Permit - Do you have SP_PERMIT_NO defined in this format in your present GIS system? | | | |
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| _DA - Do you have _CRA defined in this | L_DA - Do you have LL_DENT defined in this format in your present GlS system? | | | |
| normat in your present cas system? | IU_DA - Do you have IU_CRA defined in this format in your present GIS system? | | | |

| IL_DA - Do you have IU_OTH defined in this format in your present GIS system? | | |
|---|--|--|
| III_DA - Do you have DA_YR defined in this format in your present GIS system? | | |
| PipeCoating - Do you have COATED defined in this format and choices in your present GIS system? | | |
| PipeCoating - Do you have COAT_TYPE defined in this format and choices in your present GIS system? | | |
| LeakDetectMethod - Do you have LEAK defined in this format and choices in your present GIS system? | | |
| HydroTest - Do you have ORG_HYD defined in this format in your present GIS system? | | |
| HydroTest - Do you have ORG_HYD_PR defined in this format in your present GIS system? | | |
| HydroTest - Do you have LAST_HYD defined in this format in your present GIS system? | | |
| HydroTest - Do you have LAST_HYD_PR defined in this format in your present GIS system? | | |
| | | |
| Compressor Station - Do you have STATION_ID defined in this format in your present GIS system? | | |
| Compressor Station - Do you have PUMPCOMP defined in this format in your present GIS system? | | |
| Valves - Do you have VALVE_ID defined in this format in your present GIS system? | | |
| Valves - Do you have VALVE_TYPE defined in this format in your present GIS system? If no, innove to next tabbed line. | | |
| Valves - Do you have OPER, TYPE defined in this format in your present GIS system? | | |
| — · | | |

| Storage - Do you have SF_ID defined in this | - | |
|---|---|--|
| format in your present GIS system? | | |
| Storage - Do you have STORAGE defined in this format in your present GIS system? | | |
| Storage - Do you have OPER_TYPE defined in this format in your present GIS system? | | |
| Gas Process Plant - Do you have PLANT_ID defined in this format in your present GIS system? | | |





Appendix C

Total Estimated Costs

| Pipeline Category | Centerline Survey Cost | Pipeline Feature List Capture | Pipeline Prep for tool run | MFL IMU Tool Run | LFM IMU Tool Run | Imagery (ortho- rectified with 1 foot | Data Integration | Total Non- piggable per mile costs | |
|---|------------------------------|--|-------------------------------|---------------------------|---------------------------|--|---------------------|------------------------------------|------------------------------|
| Non- piggable +/- 50' | \$1,000 | \$2,400 | NA | N/A | Z/Z | \$110 | \$1,000 | \$4,510 | |
| | | | | | | | | Total MFL/IMU per mile costs | Total LFM/IMU per mile costs |
| Piggable with accurate centerline +/- 5' | \$0 | \$2,400 | \$1,500 | \$3,750 | \$3,750 \$5,070 | \$110 | \$500 | \$8,260 | \$9,580 |
| Piggable without accurate centerline +/- 5' | \$1,000 | \$2,400 | \$1,500 | \$3,750 | \$5,070 | \$110 | \$1,500 | \$10,260 | \$11,580 |