Joint Industry Project
Gas Transmission Guidance for
Records Verification and MAOP Reconfirmation
January 11, 2016

1. Introduction

This document represents the work of a joint industry project (JIP) to develop guidance as a recommended practice for Gas Transmission Records Verification and MAOP Reconfirmation[1]. It draws upon earlier efforts conducted by the Interstate Natural Gas Association of America (INGAA), and individually by members of the JIP. The guidance has been developed to support operators' programs, for diligent, practicable processes to reconfirm MAOP by applying the concepts of Traceable, Verifiable and Complete (TVC) records. The guidance is also intended to help operators prepare for and have common materials for use in inspections by U.S. DOT Pipelines and Hazardous Materials Safety Administration (PHMSA) and applicable state pipeline safety agencies.

Members of the JIP were Boardwalk Pipelines, Columbia Pipeline Group, Iroquois Pipelines, Kinder Morgan, Pacific Gas and Electric and Spectra Energy (JIP Members). The group was facilitated by Process Performance Improvement Consultants (P-PIC). The group met in April 2014 to explore the possibility of developing guidance for records verification and MAOP reconfirmation. The JIP was formed by the members and met monthly to develop the guidance herein.

Guiding Principle
As part of a commitment to maintain a safe and reliable pipeline, the pipeline operator shall develop, implement and maintain a process for reconfirming the maximum allowable operating pressure (MAOP). The process results in an inventory of data for MAOP variables for the pipeline based on guidance provided herein.

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[1] Section 23(b) (1) of the PLSA 2011 uses the term confirmation. Within this document, the term "reconfirmation" is used as MAOPs were first confirmed as required by the PLSA and the first pipeline safety regulations in the 1970s, under 49 CFR 192.607.

2. Background

Prior to the first regulations in 1970 there were no federal regulatory requirements that specified a method for determination of MAOP or the records that should be retained. Pre-regulation editions of ASME B31.8[2] (ASA B31.8) provided guidance on the methods for determination of MAOP using the design factor and hydrostatic test pressure. The recordkeeping guidance for MAOP related records was limited to the test pressure and test fluid.

When Federal gas transmission regulations were first issued in 1970, operators were required to apply 49 CFR 192.619 to confirm MAOPs in accordance with the methods described in Section 2.1, below. The 1970 regulations specified the allowable methods for MAOP determination, but only included explicit requirements to retain pressure test records. The preamble to the 1970 regulations did include the following statement:

> *"The recordkeeping requirements of present section 841.417 [ASME B31.8, 1968] have been expanded to state additional information that it is felt must be recorded to comply with the spirit and intent of Chapter V of the code."*

The regulations did not, and still do not, specify the material records to be retained. A complete version of 49 CFR 192.619 from 1970 is presented in Exhibit A.

In 1974, the Office of the Federal Register, within the National Archives and Records Service of the General Services Administration, published a "Guide to Record Retention Requirements" ("Guide"). This Guide listed the recordkeeping requirements that were expressly stated in Federal laws and regulations. The JIP Members obtained a version dated January 1, 1974, which was published in the Federal Register on March 21, 1974. The Guide specified the following records be retained:

- Welding procedures
- Number of girth welds made, number destructively tested, the number rejected and disposition of rejected welds

[2] Early editions of this standard were titled ASA B31.1.8 or ASA B31.8, depending on the year.

- Safety tests (pressure tests)
- Segments that have been uprated, including each investigation, all work performed and pressure tests performed as part of the uprate
- Administration of the Operations and Maintenance Plan
- Each leak discovered, repair made, line break, leakage survey, line patrol and inspection
- Corrosion control records and maps

It is notable that no material records were listed in this Guide, since there was no express regulatory requirement to maintain those records. Pressure test records are listed in the Guide. The sections of the Guide applicable to gas transmission pipelines are provided in Exhibit B.

In summary, no explicit Federal regulatory requirements for maintaining MAOP records, including hydrostatic testing and material records, existed prior to 1970. Pre-regulation editions of ASME B31.8 Standard did specify retention of pressure test records, but there was no Federal mandate that required operators to comply with ASME B31.8. Current regulations include specific requirements for pressure test records, but do not specify the material records that must be retained to validate MAOP.

2.1 Initial Confirmation of MAOP

Simply stated, in applying 49 CFR 192.619, the operator established or confirmed the MAOP by using the following methods:

1. The lowest of design, pressure test, operating history and pipe condition in confirming MAOPs for pipelines constructed prior to 1970 (§192.619(a)); or
2. The highest actual operating pressure for the 5-year period between July 1, 1965 and July 1, 1970 (192.619(c)). 49 CFR 192.619(c) is referred to as the grandfather clause.

In the early 1970s, operators were also required to apply the requirements of 49 CFR 192.607 to identify the then current class locations on their pipeline and to confirm

the MAOP based on the class location. 49 CFR 192.607 required pipe in Class 2, 3 and 4 to meet the requirements of 49 CFR 192.611. A complete version of 49 CFR 192.607 from 1970 is presented in Exhibit C.

One of the questions that arose as some JIP Members began records searches was why there were instances where only pressure test records were available. One possible explanation is that pre-regulation editions of ASME B31.8 and the original 49 CFR 192.517 specified that hydrostatic test records must be retained for the useful life of the pipeline. Thus, operators maintained those records due to the B31.8 Standard and expressed regulatory requirement. Another possible explanation is that 49 CFR 192.619(a) required operators to use the lowest of (a)(1 through 4), which are design basis, pressure test, the five-year high pressure (referred to as "MP5" in this guidance) and pipeline condition, when initially establishing an MAOP. Some JIP Members found documents that reflected analyses in 1970 comparing (a)(1 through 4) with a conclusion that resulted in selecting the lowest value among design basis, pressure test, the five-year high pressure and pipeline condition. In many instances it appears that the records for the method used above as the basis for confirming the MAOP may have been the only ones maintained, as these were the basis of compliance under 49 CFR 192.619(a) and 49 CFR 192.607. It is noteworthy that 49 CFR 192.607 was removed from the regulations in 1996 because "the compliance date had long since passed."

2.2 The Need for Records Verification and MAOP Reconfirmation

The Pacific Gas and Electric (PG&E) pipeline failure in San Bruno, CA on September 9, 2010 brought to light the need to verify records and reconfirm MAOPs on gas transmission pipeline systems. On January 3, 2011, the National Transportation Safety Board (NTSB) issued a set of Recommendations to PG&E following the incident in San Bruno, CA, including the following Recommendations relating to MAOP records.

> *Aggressively and diligently search for all as-built drawings, alignment sheets, and specifications, and all design, construction, inspection, testing, maintenance, and other related records, including those records in locations controlled by personnel or firms other than Pacific Gas and Electric Company,*

> *relating to pipeline system components, such as pipe segments, valves, fittings, and weld seams for Pacific Gas and Electric Company natural gas transmission lines in class 3 and class 4 locations and class 1 and class 2 high consequence areas that have not had a maximum allowable operating pressure established through prior hydrostatic testing. These records should be traceable, verifiable, and complete. (P-10-2) (Urgent)*
>
> *Use the traceable, verifiable, and complete records located by implementation of Safety Recommendation P-10-2 (Urgent) to determine the valid maximum allowable operating pressure, based on the weakest section of the pipeline or component to ensure safe operation, of Pacific Gas and Electric Company natural gas transmission lines in class 3 and class 4 locations and class 1 and class 2 high consequence areas that have not had a maximum allowable operating pressure established through prior hydrostatic testing. (P-10-3) (Urgent)*

Many operators began their own records search programs based on these recommendations.

On January 10, 2011, PHMSA issued an Advisory Bulletin, ADB 11-01, Establishing Maximum Allowable Operating Pressure or Maximum Operating Pressure Using Record Evidence, and Integrity Management Risk Identification, Assessment, Prevention, and Mitigation. A complete version of ADB 11-01 is presented in Exhibit D.

The Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (Act) was signed into law on January 7, 2012. It requires PHMSA to direct each owner or operator of a gas transmission pipeline and associated facilities to provide verification that their records accurately reflect MAOP of their pipelines within Class 3 and Class 4 locations and in Class 1 and Class 2 locations in High Consequence Areas (HCAs).

PHMSA issued a second Advisory Bulletin ADB 12-06, Verification of Records and Establishing MAOP and MOP, on May 7, 2012. A complete version of ADB 12-06 is presented in Exhibit E.

For a number of reasons discussed above, there may be gaps in the records needed to reconfirm MAOP data. In these cases, the operator should develop and implement processes to close these data gaps through on-going work related to records research, operations, maintenance, pipeline integrity or additional testing. See Section 4, Step G for additional guidance.

2.3 Ongoing Management of Risk, Maintenance and Integrity of the Pipeline

Data supporting the MAOP are supplemented with those representing the condition of the assets and the environment in proximity to the pipeline for ongoing pipeline safety evaluation. While these data are not required to reconfirm the initially established MAOP[3], they are important for maintaining the safety of the pipeline through an effective integrity management program. However, these data are not the subject of this guidance.

2.4 Sustaining Commitment to Maintain Records to Support MAOPs

Operators should develop, implement and maintain policies and procedures for maintaining records that support current MAOPs. Records for newly-constructed and newly-acquired assets should be reviewed to confirm the MAOP. These records shall be maintained for the life of pipeline, irrespective of the record format (e.g. hard copy, electronic). Operators should consider the condition of the records, records format and possible technology changes to assure records can be retrieved and are readable at some future date.

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[3] It is important to recognize that "pipeline condition" (49 CFR 192.619(a)(4)) applied at the time of initial MAOP confirmation in 1970. It is not appropriate to use in current "reconfirmation" efforts unless records reflecting the pipeline condition from that time are available. An important distinction to acknowledge is that pipeline condition is a part of on-going operations and maintenance (49 CFR 613 and .485, among others) and integrity management (Subpart O).

The work completed in responding to the PHMSA advisory bulletins should be viewed as a "baseline review" of records supporting the "reconfirmation" of MAOP. Operators should establish and maintain processes for ongoing review of data and identification of gaps, consistent with the concept of continuous improvement. In addition, operators should develop, implement and maintain processes to address "data conflicts", "known unknowns" and "unknown unknowns" on an ongoing basis. The process should include integration of data from ongoing work, such as in-line inspections, pipeline excavations and new construction records, to identify and resolve discrepancies.

3. Scope of Coverage

The scope of this document is to address MAOP reconfirmation for gas transmission pipelines, as defined in 49 CFR 192, including the time before regulations promulgated for natural gas transmission pipelines came into effect, as well as post-regulation[4].

Operators should prioritize transmission line pipe within HCAs, class 3 and 4, as required by the PHMSA Advisory Bulletins and the Pipeline Safety, Regulatory Certainty and Job Creation Act of 2011. Operators are required to report the findings of their MAOP reconfirmation efforts in the PHMSA Annual Reports, Form 7100.2-1, initially required in 2013.

Operators should define the scope of pipeline components to be addressed, balancing the efficiency of gathering and evaluating data with the need to address the breadth of components, including but not limited to:

- Line Pipe
- Bends
- Fittings
- Valve Assemblies
- Facilities

[4] The concepts described herein can be applied to both pre-regulation and post regulation pipeline systems.

- Compression
- Metering and Regulation

4. MAOP Reconfirmation Process

A generalized process to describe "what" is done in records verification and MAOP reconfirmation is helpful to develop detailed steps and procedures for MAOP verification. The process, as depicted in Figure 1, defines key steps to be applied. The sequence of process steps noted in the figure may vary among operators, but all are necessary. Operators should develop and implement a quality assurance and quality control (QA/QC) process at the appropriate steps. It is critical that both the processes and the QA/QC tasks embedded within those processes be formally documented and followed, with any exceptions recorded.

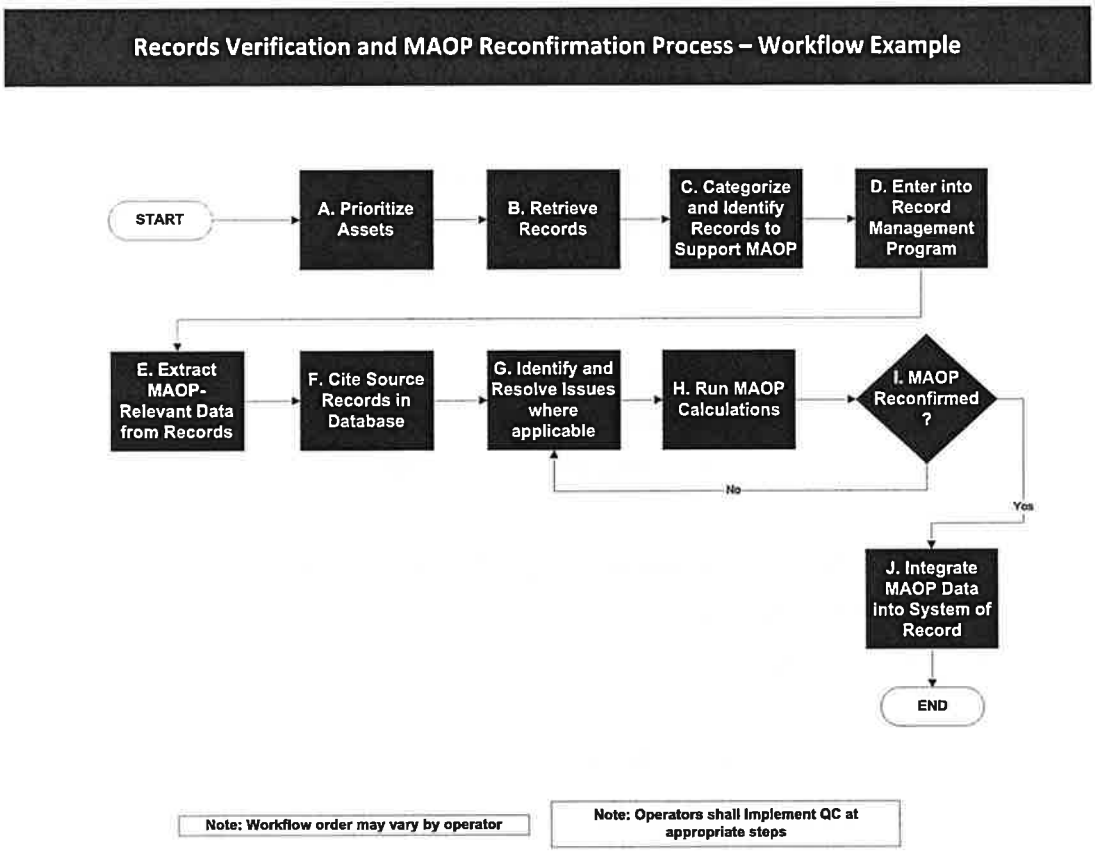


Figure 1
Records Verification and MAOP Reconfirmation Process
Workflow Example

QA/QC is done at applicable stage gates throughout the process, and should specifically be addressed before integrating into the system of record.

The following is a detailed description of each of the steps in Figure 1.

Step A. Prioritize Assets

The objective of the first step in the process is to prioritize the assets to be addressed. Factors that may be considered by the operator in determining the priority of their work efforts include (in no specific order):

- Population density (proximity)
  - HCA
  - Class location
- Advisory bulletins or other regulatory requirements/drivers
- Data collection and evaluation effectiveness
  - Component level data and availability
    - Line Pipe
    - Facilities
      - Compression
      - Metering and Regulation
    - Other
  - Process effectiveness and efficiency that achieves stated goals
- Criticality of service
- Risk assessment
  - Vintage
  - Stress level (%SMYS)
- Other factors determined by the operator

The way in which a particular operator will use these factors depends upon the specific circumstances of its pipeline system. Collectively they provide the foundation of a risk-based approach.

Step B. Retrieve Records

The objective of this step is to locate and retrieve available records. Operators may have records in centralized on-site records storage, with additional non-critical records and copies stored off site in secure storage. Other operators may have records stored centrally, but because of the nature of pipeline operations, may also have records at field operating locations.

Following PG&E's pipeline failure in San Bruno, CA, many operators began the retrieval process (some in advance of the PHMSA Advisory Bulletins). A typical process is to transport records to a central location to be processed and reviewed. Reaching out to current and former employees may help identify additional possible

locations of records. Once records are received at the central location, they should be processed in accordance with the operator's existing record management procedures.

Step C. Categorize and Identify Records to Support MAOP

The objective of this step is to identify TVC records that provide the data required for MAOP reconfirmation.

What? Where? When? How? Who? – Importance in MAOP Reconfirmation

Reflecting on the experience of verifying records and reconfirming MAOPs, JIP Members have developed some simple concepts.

It is critical to place emphasis on knowing "what", "where" and "when"

"What" relates to pipeline attributes, including diameter, wall thickness, grade and long seam type or longitudinal joint factor. "What" also includes the highest pressure from 1965 to 1970 (often referred to as MP5[1]) and pressure test history. "What" also includes pressure rating for fittings and appurtenances.

"Where" relates to specifically where they are in the system. Being able to document "what" and "where" enables an operator to reconfirm MAOPs.

"When" manufactured, purchased, installed, pressure tested and placed in-service are also important in reconfirming MAOP.

"How" generally relates to installation, operations, and maintenance and can be of value in integrity management, outside the scope of MAOP reconfirmation.

"Who" is not as important for pipelines installed before regulations became effective. It is important for pipelines installed after regulations came into effect, as the operator's name, the name of the person making the test and the name of the test company is required as part of pressure test records under 49 CFR 192.517(a)(1).

The intent of researching and retrieving records is to produce data for MAOP Calculations. These data include but are not limited to:

- Pipe attributes (Diameter, wall thickness, grade and seam type)
- Pressure testing (including dates)
- 5-year high pressure[5]
- Location (linear referencing/ stationing or GPS coordinates)
- In-service date
- Design factor

Examples of potential records and or data sources include, but are not limited to:

- Job files
- Locations on system
- GIS (can serve as an index for records; not used as a primary source)
- Compressor station logs
- Personnel familiar with the original construction

Work order or project/ job numbers can provide traceability between the various facility records themselves and the location and attributes of the assets in the system of record.

The historical processes for record creation, record types and recordkeeping practices may have varied by operating company and vintage of construction. It is important to know these historical processes and practices in order to evaluate the reliability of each type of record.

Electronic images can be the official record provided the image is of the original record. For more recent projects, electronic data capture is often incorporated and would serve as the official record.

Operators should develop processes for determining if available records contain data sufficient to establish TVC. These processes should include the following concepts.

- Witness of actual activity is better than intent

[5] Highest actual operating pressure in the 5 years prior to the original regulations

- As–built, when available, is preferred over construction specifications or issued for construction
- First person is better than record of second or third person
- Some records, such as project completion reports, can be used as a sole source record if they established "what, where and when"
- Determining the quality of records, either by a numerical value or judgment
- Development of "white papers" to cover unique circumstances
- Processes for resolving conflicting records
- Use of records created some time after construction, such as records related to 192.607 and class location studies
- Mill test reports are useful, but not necessary for establishing TVC

Depending on the data included in an operator's available records, TVC may be established using a stand-alone record or may require complementary records. Operators should document their TVC determination methodology. Exhibit F provides a matrix of typical records that an operator may use to identify records that are stand-alone and those that need complementary records to validate data.

It is common that records from original construction were assembled in a progression that followed the sequence of construction (e.g., records are not organized by Class or HCA status). Therefore, it is necessary to correlate class location and HCA-status to be able to sort records for subsequent analysis using the prioritization established above. This is in line with the Advisory Bulletins to reconfirm the MAOP in Class 1 and 2 HCAs, and Class 3 and 4.

An operator should consider processes for managing records containing data unrelated to MAOP calculations that are found during the MAOP reconfirmation efforts. Some of these records may be beneficial in supporting Integrity Management or on-going Operations and Maintenance.

Examples of categories

- MAOP related
  - Pressure test records

- Material test reports
- Bill of materials
- Purchase orders
- Records of MP5

- Integrity related
  - In-Line Inspection (ILI)
  - Coating type
    - Including field joint coating
  - Welded sleeves, composite wrap locations, etc...
  - Cathodic protection (rectifiers and ground beds)
- Other

JIP members, in initially sharing approaches used in reconfirming MAOPs, observed that an oft-missing piece of data was the long seam type. They noted that the records often indicated a longitudinal joint factor. This was perplexing at first. The group then realized that ASME B31.8 required use of the longitudinal joint factor and not explicitly the long seam type. We understand today the importance of wanting to know whether the long seam of electric resistance or flash welded or lacks a long seam but in the 1960s and before, the seam type was only important in defining the longitudinal joint factor.

Step D. Enter into Record Management Program

This step entails entering records into a records management program. The objectives are to create a program that supports MAOP reconfirmation.

The records management program should define how records are indexed and filed. Operators may elect to scan and store images electronically, maintain paper documents, or a combination thereof. An essential first step in this process is definition and continued use of consistent terminology within an operator's program. It may vary among operators.

Work products created during application of the process depicted in Figure 1 (process depiction) should be indexed and filed. These documents are a critical part of maintaining and sustaining a record of how TVC was established. These documents can be of value in audits or inspections as they summarize the efforts of MAOP reconfirmation.

An essential part of the records management program is establishment of procedures for checking out and checking in records to help prevent loss of the records. Consideration should be given to maintenance of back-up copies and to disaster recovery.

In developing this guidance, JIP Members identified the value and importance of capturing lessons learned during records management program development. The lessons learned will be of value in managing records for subsequent priorities and for new construction records. Operators should consider methods to simplify updating of records as a part of a lessons learned review.

Step E. Extract MAOP-Relevant Data from Records

The objective of this step is to extract pertinent MAOP data from records. Note: class location, design factors and pressure test factors are regulatory requirements and are not extracted from pertinent MAOP records. However, they are used in MAOP calculations in Step H of the flow chart.

The design data required are:

- diameter,
- wall thickness,
- grade,
- joint factor,
- year of installation, and
- location.

The pressure test data desired are:

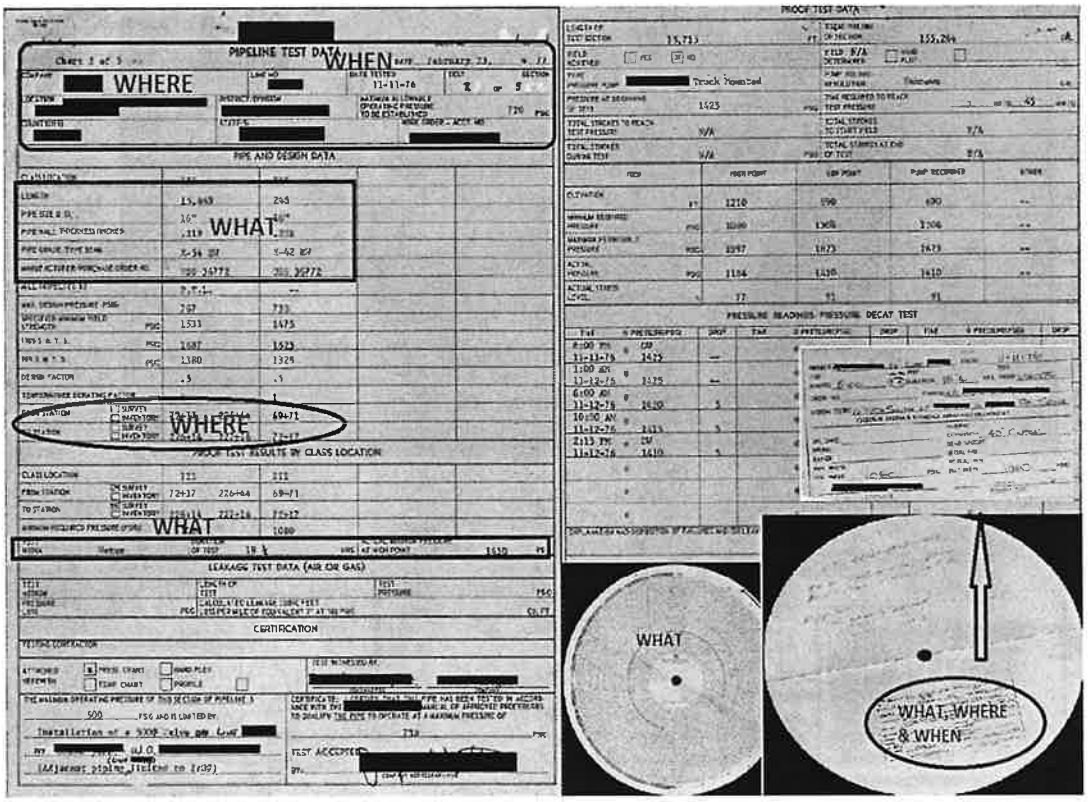
1. Test medium used,
2. Test pressure,
3. Test duration,
4. Elevation variations, wherever significant for a particular test,
5. Pressure test date, and
6. Location (milepost or engineering stationing, starting and ending points).

MP5 data required for 49 CFR 192.619(a)(3) and 619(c) are the highest operating pressures during five years prior to the regulations having come into effect.

In applying this step, operators may compare these extracted data with existing compiled MAOP data, including correlation of records to physical pipe location. However, this comparison may occur in a later process step for some operators. It is necessary, however, to identify and resolve gaps and discrepancies.

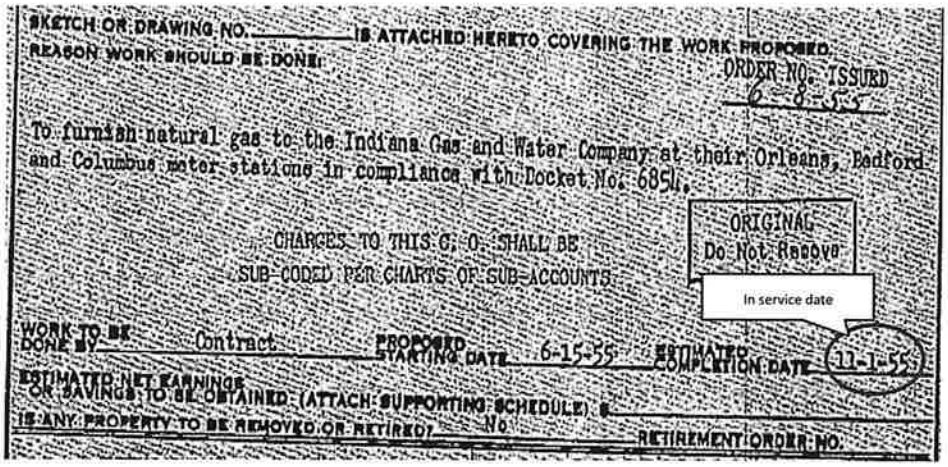
Example 1

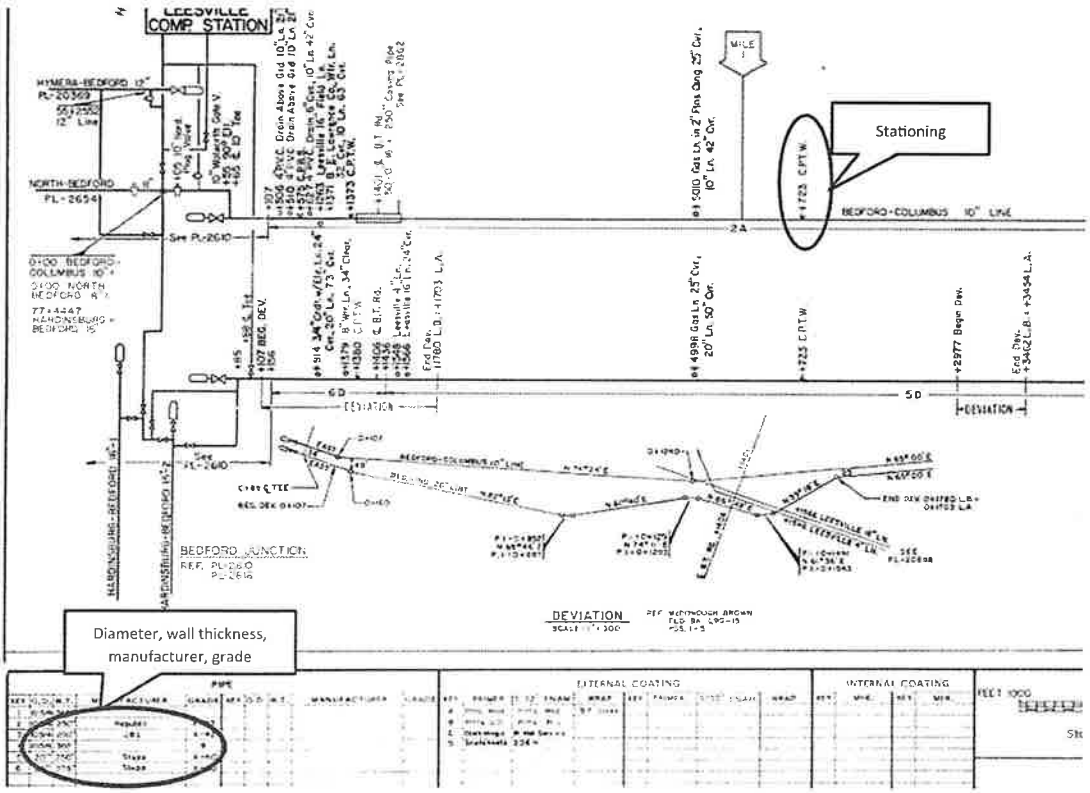
In this example, the pressure test record pipe attributes, pressure test data and location are all recorded in this single record.



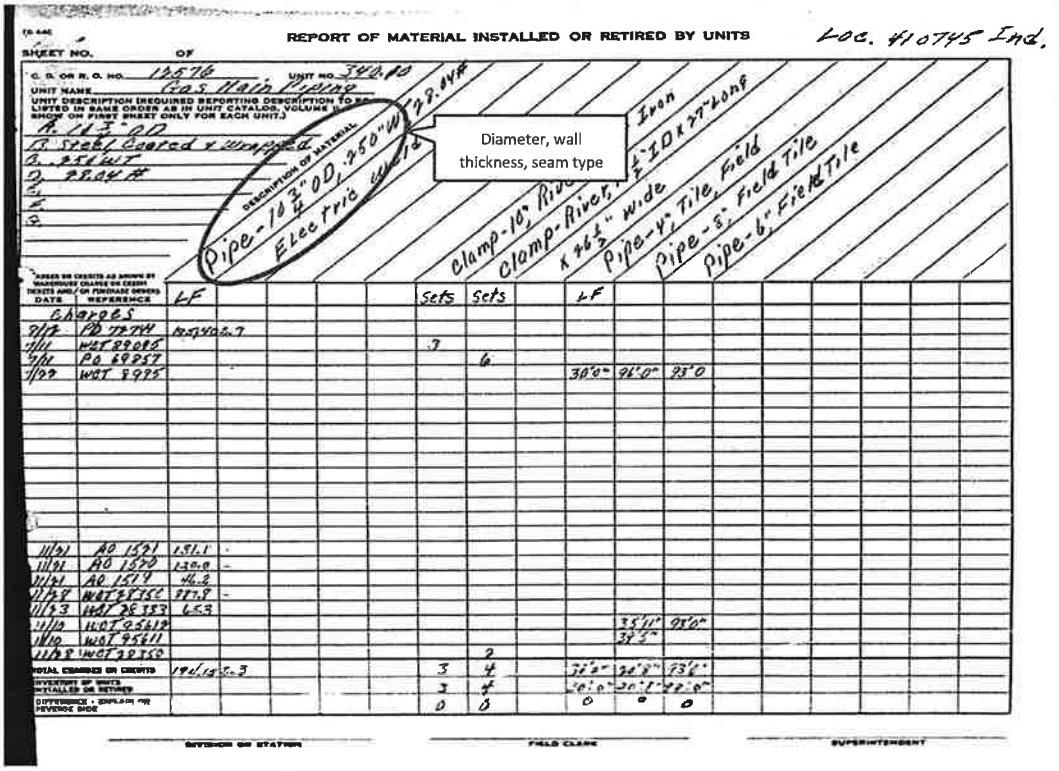
Example 2

In this example, the date is provided by the first record, material and location data are provided by the As Built Drawing and Report of Material Installed/Retired Drawing.





Example 2 (continued)



REPORT OF MATERIAL INSTALLED OR RETIRED BY UNITS

Loc. 410745 Ind.

SHEET NO. OF

C. O. OR R. O. NO. 12576 UNIT NO 340.10

UNIT NAME Gas Main Piping

UNIT DESCRIPTION (REQUIRED REPORTING DESCRIPTION TO BE LISTED IN SAME ORDER AS IN UNIT CATALOG, VOLUME II. SHOW ON FIRST SHEET ONLY FOR EACH UNIT.)

A. 10 3/4" OD
B. Steel Coated x Wrapped
C. PSI WT
D. 28.04 #
E.
F.

DESCRIPTION OF MATERIAL: Pipe-10 3/4" OD, .250" W.T. Electric Weld — 28.04#

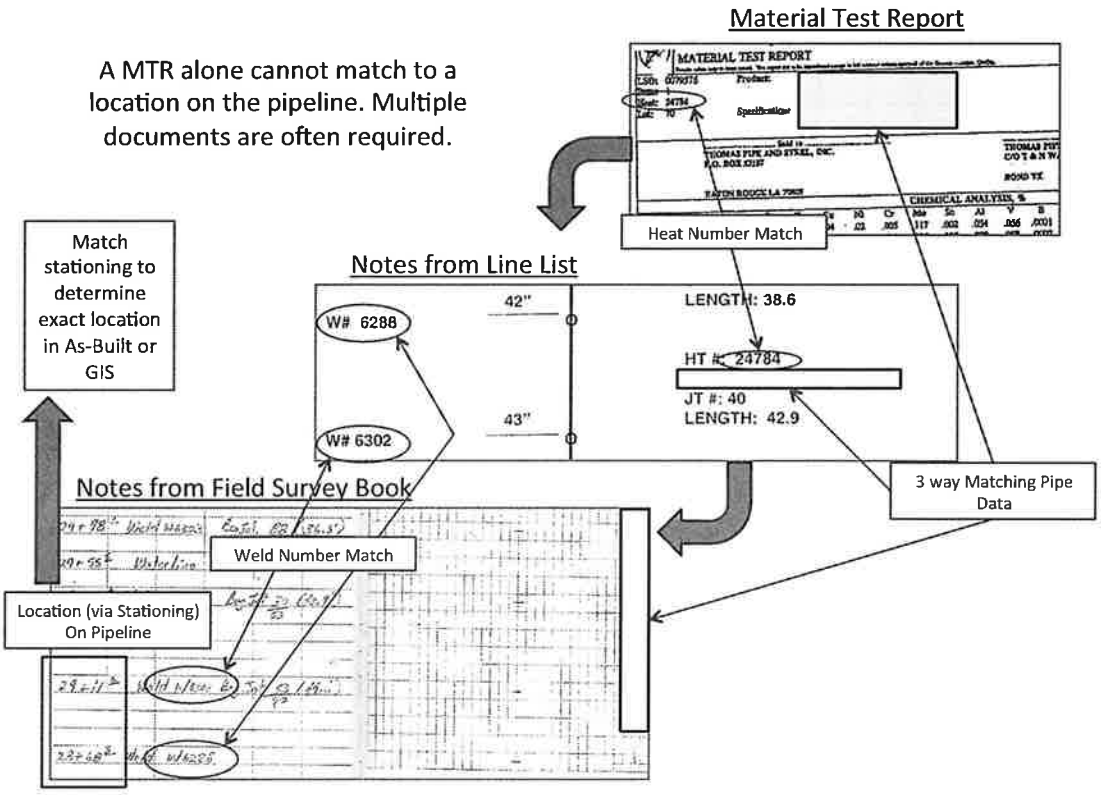
Diameter, wall thickness, seam type

DATE	REFERENCE	LF	Clamp-10" Rive	Clamp-River, 1/2" IDx27"Long Iron x 46 1/2" wide	Pipe-4" Tile, Field	Pipe-5" Field Tile	Pipe-6" Field Tile
	Charges		sets	sets	LF		
9/72	PO 77744	1054.7					
7/11	WOT 89085		3				
7/11	PO 69857			6			
11/99	WOT 8995				30'0"	96'0"	93'0
11/21	AO 1521	151.1					
11/21	AO 1520	120.0					
11/21	AO 1519	46.2					
11/58	WOT 98350	977.8					
11/93	WOT 98353	665					
11/10	WOT 95619					35'11"	95'0"
11/10	WOT 95611					39'5"	
11/58	WOT 98350			2			
TOTAL CHARGES OR CREDITS		1904.8	3	4	30'0"	32'8"	73'6"
INVENTORY OF UNITS INSTALLED OR RETIRED			3	4	30'0"	30'1"-32'0"	73'6"
DIFFERENCE - EXPLAIN ON REVERSE SIDE			0	0	0	0	0

DISTRICT OR STATION — FIELD CLERK — SUPERINTENDENT

Example 3

In this example, mill test reports are available for the pipe and location is provide by complementary records.



Step F. Cite Source Records in Database (Important for traceability)

The objective of this step is to document the source of each MAOP data element in the operator's database and to facilitate locating these records in the future. Operators should develop a methodology to link each data element to source records so they are easily retrievable. Operators should consider applying a quality control check at the completion of this step to assure the correlation or link is 'traceable'.

Step G. Identify and Resolve Issues (Where Applicable)

G.1. – Issue Identification Related to Records

There may be instances where there are potential gaps (incomplete records) for a particular pipe attribute after applying the process described above. Gaps may fall into several categories, including:

- Record does not exist
- Attribute is not available on records
- The applicable record has not been located
- Records are inconclusive or conflicting

While continuing to look for records to close the gaps, operators should apply the concepts described below.

Operators should develop processes to track gaps and maintain information on which attributes are unknown. The information will be made available to appropriate groups within the organization that can consider how to address those gaps in the course of conducting other operations, maintenance and integrity-related work.

ASME B31.8S, Appendix A4.2, provides guidance for unknown or missing data,

> *"Where the operator is missing data,* ***conservative assumptions*** *shall be used when performing the risk assessment or, alternatively, the segment should be prioritized higher."*

While ASME B31.8S applies to integrity management, the principle of using conservative assumptions is broadly applicable. There is also a note at the end of that section that states,

> *"When pipe data is unknown, the operator may refer to History of Line Pipe Manufacturing in North America by J. F. Kiefner and E. B. Clark, 1996, ASME."*

Another publication that may be of value is Pipe Characteristics Handbook, Williams Natural Gas Company, Pennwell, Tulsa, OK, ISBN 0878146113, 1996.

In addition, an operator may have subject matter expert(s) review the data to identify possible discrepancies, correct or refine data based on known manufacturing practices using sources such as the History of Line Pipe in North America, Kiefner & Clark, 1996 and the Pipe Characteristics Handbook, Williams Natural Gas Company, 1996.

Operators should also consider applying quality control at the completion of this step.

G.2 – Issues Related to MAOP Not Being Reconfirmed

The successful resolution of issues will allow the process to continue through the MAOP Calculation and MAOP Reconfirmation steps; however, the resolution process may not always be successful and could result in a continued unresolved state for MAOP reconfirmation. This non-confirmation could be triggered by an unverifiable, unknown, or conflicting pipeline or test attribute (OD, wall thickness, SMYS, test duration, etc.). Where MAOP is not confirmed, identify limiting factors, which may include:

- Strength test pressure

- Strength test duration
- Grade
- Joint factor
- Wall thickness
- Diameter
- Location

G.3 - The objective of this process is to resolve issues identified in G1 and G.2 above.

A number of different processes will likely be required to address different types of issues or gaps that are identified. This section summarizes the possible approaches depending on the type of gap identified.

Where different records provide conflicting data, an operator may compare records and evaluate the quality or reliability of each of the conflicting records. A record quality evaluation can entail defining a record quality hierarchy. Possible approaches include:

- First person versus transcription
- More conservative result
- Engineering judgment to select one of the above

Operators may elect to apply conservative engineering assumptions to address gaps in data. With respect to historical purchasing practices, operators must also consider installation date versus purchase date. Operators may apply a window around purchase date, depending on their knowledge of historical purchasing practices.

Operators may draw upon company engineering standards and purchase specifications in effect at the time of procurement, construction and testing. Operators may also draw upon historical consensus standards, such as ASME B31.8, and its predecessor documents (published since 1935), and API 5L (published since 1928), among others. Operators may also draw upon published documents that describe historical manufacturing practices such as the History of Line Pipe and Pipe

Characteristics Handbook, among others. These resources can serve as a means to resolve a discrepancy or as a complementary record.

In some cases, operators may elect to conduct additional records research.

White papers or position papers may be developed to describe the approach(es) used to resolve issues and support positions used (see Exhibit G for an example of a Position Paper methodology). In other instances, operators may conduct studies or reports to define approaches.

When excavations are made while conducting operations, maintenance and integrity-related work, information collected on the pipe inspection form may be used to identify and correct existing data errors or to close identified gaps. Diameter, wall thickness and long seam type may be confirmed during an excavation. Data collected in the ditch may be used as a complementary source. If the SMYS is unknown, a pipe end can be exposed and personnel can search for indications of mill stencils or etching on either the coating (especially in the case of FBE coated pipe) or pipe (coating removed).

Operators should develop processes to utilize results of in-line inspections in closing potential gaps. The portion of the report that identifies changes in wall thicknesses may be used to provide data to identify and potentially resolve discrepancies supporting potential gap closure and in some instances, where feasible, long seam type. It should be noted that the in-line inspection tool may identify additional discrepancies, where a wall thickness, diameter or possibly a seam type change is not reflected in the available records. This is an important element of gap identification and continuous improvement.

In general, technology advancements may be considered to help resolve gaps, similar to the use of ILI information. An example may include in-situ chemical analyses and micro ball indentation to estimate yield strength.

As described above, one of the products of a report for an ILI run is a listing of pipeline attributes and features. Operators should develop processes for reviews of this portion of the report (for future runs) and confirm pipeline attribute data and identify discrepancies. This may include checking existing records against joint lengths and distances between girth welds to identify possible discrepancies. Specifically, are the lengths as expected based on existing records or are there indications of possible pipe replacements that are not in current records. Where discrepancies are identified, a resolution plan (including prioritization) should be developed.

Operators should consider using planned operational or integrity-management excavations to confirm attributes related to MAOP calculations. Examples of measurements include but are not limited to:

- GPS or survey location of attribute change
- UT for wall thickness
- Seam characterization
    - Acid etch
    - X-ray
    - Visual (possible)
- Non-destructive testing
    - Correlation of hardness and yield strength to establish a lower bound
- Destructive testing of removed pipe
- Extrapolation – "like pipe"

Operators should also draw upon ILI results to check and confirm wall thickness, diameter, seam type and location. At the time of developing this guidance there are several technology combinations that are emerging to potentially identify a minimum value for yield strength. This provides an alternative to the regulatory minimum value of 24 ksi. Operators are encouraged to track progress on these and other emerging technologies. At present there are technology solutions that appear to be able to confirm grade. They use a combination of technology, such as ILI, optical methods such as optical emissions spectroscopy and x-ray fluorescence.

In some instances, operators may use absolute minimum values in effect at the time of manufacturing based on consensus standards, the most prominent being API 5L, or draw upon company engineering standards and purchase specifications in effect at the time of procurement, construction and testing. These can include:

- Minimum commercial wall thickness
- Minimum Federal accepted SMYS (49 CFR 192.107(b)(2))
- Minimum long seam factor (49 CFR 192.113)
    - >4" – 0.8 (if not furnace butt welded)
    - </ 4" - 0.6 as default

An important aspect of initial records searches conducted by JIP Members was that the long seam type was often not indicated on records. This was a trend noted by every JIP Member. The group decided to investigate this further and look at what operators did in applying 49 CFR 192.607 in the early 1970s. The calculation of MAOP required a seam factor which for most seam types was 1.0. It appears that when the seam type met the type to be classified having a value of 1.0, the specific seam type was no longer as important. Today EFW, ERW and DSAW, for example, have known characteristics that are considered in operations, maintenance and integrity. However, in the 1970s when MAOP were being established, differences among the seam types were unknown and not considered relevant.

Strength testing, reducing pressure and replacing pipe are options when MAOP reconfirmation efforts are unsuccessful. The INGAA integrity verification process (IVP) is also an option.

Step H. Run MAOP Calculations

The objective of this step is Run MAOP Calculations based on a. or b. below:

a. Run minimum of
    i. design - 49 CFR 192.619(a)(1) and, §192.611[6], if applicable

[6] The operator specifications will apply the more stringent of Federal or state regulation, where applicable, or operator specifications in effect at the time of installation or test as applicable.

ii. pressure test - most stringent of 192.619(a)(2) and §192.611, if applicable
iii. MAOP of record (current)(can be MP5 - §192.619(a)(3))
iv. Maximum safe pressure as applicable §192.619(a)(4)

b. Grandfathered pipe - §192.619(c).
c. Alternative MAOP - §192.620(a)
d. Alternative MAOP Special Permits – meet applicable requirements

This exercise of calculating MAOP should be regarded as a QA/QC step and not as the official determination of MAOP. Official MAOP reconfirmation should not be performed until after Step J, where the data are integrated into the system of record.

Step I. MAOP Reconfirmed

The objective of this step is to review the results of MAOP calculations to determine if the MAOP is reconfirmed When the MAOP is not reconfirmed, refer back to Step G.2.

Quality Assurance/Quality Control (QA/QC): Figure 1 (Process) depicts a process workflow model that operators may use for records verification and MAOP reconfirmation. QA/QC activities should be embedded within the process and are executed at different points within the process workflow. The objective of QA/QC stage gates is to minimize human error that may occur within a process, to provide cross checks for data validity and reasonableness, and to assure the process is being executed in a valid and consistent manner. Some of the techniques that may be utilized to meet the objectives of QA/QC include, but are not limited to:

1. Peer review for protocol comparison against industry best practices;
2. Training, including periodic refresher training;
3. Documentation preparation and periodic review for current applicability;
4. Periodic lessons learned sessions and integration of relevant lessons learned into future processes and protocols;
5. Systematic technical lead (or applicable SME) work deliverable review;

6. Execution of scripts against the scrubbed data to flag anomalies related to improper data associations;
7. Random sampling of work orders to perform a second review by a different analyst to be sure the first review was performed correctly;
8. Comparison of previous deliverables to current deliverables to fully understand differences; and
9. Periodic process audits by neutral third parties; and
10. Leveraging existing systems such as GIS to compare material characteristics to construction year; and
11. Comparison of record dates (e.g. pressure test to material records) to confirm the test used for reconfirmation is associated with the material currently in service.

As the processes and protocols for record verification and MAOP reconfirmation should be documented, specific QA/QC plans and protocols should be published and monitored against. The goal of QA/QC should be to assist in the effort of keeping the reconfirmed data 'clean', closing identified data gaps ('known unknowns'), the identification of new data gaps, and focusing on program continuous improvement.

As previously stated, QA/QC activities are performed at various stage gate points; it is also recommended that a rigorous QA/QC protocol be performed immediately preceding the integration of the reconfirmed MAOP data into the system of record (Process Step J).

Step J. Integrate MAOP Data into a System of Record

The objective of this step is to integrate MAOP data into the system of record. The operator should consider a process for communication with relevant stakeholders regarding updates of MAOP data specifically as an output of this reconfirmation process.

5. Additional Guidance

The JIP Members identified a number of other issues that operators should consider when conducting their MAOP reconfirmation work. Some of these issues are summarized below.

1. The overall Part 192 MAOP calculations do consider other factors (different design factors for road crossings, etc.) and should be part of an operator's overall MAOP calculation program. However, for purposes of this exercise, reconfirmation is specifically limited to §192.611 and §192.619.
2. Hydrostatic test pressure must account for elevation changes in the test section. The test pressure at the high elevation of the test will typically be lower than the test pressure indicated on the test chart or test log. Where elevation data is not available from the test records, the operator should utilize another source of elevation information, such as an elevation profile of the pipeline route from available sources or ILI data (where an inertial monitoring unit was used).
3. If the test pressure at the high elevation of the test section does not meet the requirements of §192.611 or §192.619 for the current MAOP, the operator should consider defining the range of pipe that did not receive an adequate hydrostatic test. One method of doing this is to calculate the elevation above which the hydrostatic test did not meet the required pressure and applying an elevation profile to the test section to establish the range of pipe above that elevation.
4. Lacking the name of the person conducting a pressure test for post 1970 tests may be a compliance issue, but does not invalidate the pressure test for use in reconfirming MAOP.
5. In cases where records are not found, an affidavit may be used for reconfirming MAOP data if the affidavit has the required data, the name or signature of the affiant, and the date of the affidavit is commensurate with the date of activity. An operator should carefully consider the validity of affidavits that were prepared long after the activity was conducted.

6. Pressure tests conducted to establish the material strength of the pipeline should be considered as appropriate in reconfirmation analysis even when the test duration does not meet post-1970 requirements. The basis for this is that a strength test is a short duration test, typically the time to stabilize the test pressure. The remaining test time is to identify leaks.

6. Governance and Controls Going Forward

Records verification and MAOP reconfirmation should eventually transition from a specific 'program' to ongoing processes within an organization. Managing how this transition takes place and how it is handled on a 'going forward' basis is important to maintaining the integrity of the scrubbed data that has gone through the MAOP Reconfirmation Process. In addition, as new construction records enter into the system of record, it is important to confirm that these new records also meet the TVC requirements for MAOP verification. Considerations for a rigorous sustainability program should include:

1. Resources and Organizational Structure: obtaining the skill sets required to effectively execute and oversee the sustainability program. The development of explicit roles and responsibilities should also be considered;
2. Management of Change (MOC): defining the planning and processes requirements for recognizing and adapting to both known and unknown trigger events related to MAOP confirmation. Anticipating and acknowledging these trigger events, such as potential changes to regulations, is critical to managing the communication and process changes for proper strategic and tactical responses to the events;
3. Governance: executing project management methodology, establishing a governance structure for checks and balances, understanding data ownership, and implementing communication protocols are part of the governance structure that should be considered when organizing a sustainability program;
4. Process Improvements – As-Builting and Other Associated Protocols: considering the impacts of upstream and downstream activities on the midstream as-built process (and other associated processes relating to MAOP verification) should be a deliberate business process improvement activity

once the initial MAOP Reconfirmation is complete. Opportunities for improvement will most likely have been observed during the MAOP Reconfirmation program – both in the processes and the tools/applications utilized within the process – that can be addressed from an efficiency and effectiveness standpoint in sustainability.

5. Process Dependencies: Field activities such as anomaly repairs and other opportunities to expose the pipe could be considered as a data source for identifying discrepancies and reconciling the 'known unknowns' discovered during MAOP Reconfirmation. Excavation data either confirm current data and records or help to correct errors, not previously known to be errors. It may be necessary to modify procedures to maximize the opportunity to collect pertinent data. Additionally, data sharing with internal and external stakeholders could reveal opportunities to edit or add additional MAOP related data. Two-way communication and feedback mechanisms should be part of sustainability implementation.

7. Conclusion

This guidance has been developed to support operators' programs, using a diligent, practicable process to reconfirm MAOP by applying the concepts of Traceable, Verifiable and Complete (TVC) records. The JIP members believe following this guidance meets all of the requirements of applicable PHMSA ADBs, NTSB Recommendations and Legislative Mandates. The guidance is also intended to help operators prepare for and have common materials for use in inspections by U.S. DOT Pipelines and Hazardous Materials Safety Administration (PHMSA) and applicable state pipeline safety agencies. Records verification and MAOP reconfirmation should eventually transition from a specific 'program' to ongoing processes within an organization.

Exhibit A
1970 Version of 192.619

§ 192.619 Maximum allowable operating pressure: steel or plastic pipelines.

(a) Except as provided in paragraph (c) of this section, no person may operate a segment of steel or plastic pipeline at a pressure that exceeds the lowest of the following:

(1) The design pressure of the weakest element in the segment, determined in accordance with Subparts C and D of this part.

(2) The pressure obtained by dividing the pressure to which the segment was tested after construction as follows:

(i) For plastic pipe in all locations, the test pressure is divided by a factor of 1.5.

(ii) For steel pipe, the test pressure is divided by a factor determined in accordance with the following table:

Class location	Factor: Segment installed before (Nov. 12, 1970)	Factor: Segment installed after (Nov. 11, 1970)
1	1.1	1.1
2	1.25	1.25
3	1.4	1.5
4	1.4	1.5

(3) The highest actual operating pressure to which the segment was subjected during the 5 years preceding July 1, 1970, unless the segment was tested in accordance with paragraph (a)(2) of this section after July 1, 1965, or the segment was uprated in accordance with Subpart K of this part.

(4) For furnace butt welded steel pipe, a pressure equal to 60 percent of the mill test pressure to which the pipe was subjected.

(5) For steel pipe other than furnace butt welded pipe, a pressure equal to 85 percent of the highest test pressure to which the pipe has been subjected, whether by mill test or by the post installation test.

(6) The pressure determined by the operator to be the maximum safe pressure after considering the history of the segment, particularly known corrosion and the actual operating pressure.

(b) No person may operate a segment to which paragraph (a)(6) of this section is applicable, unless over-pressure protective devices are installed on the segment in a manner that will prevent the maximum allowable operating pressure from being exceeded, in accordance with § 192.195.

(c) Notwithstanding the other requirements of this section, an operator may operate a segment of pipeline found to be in satisfactory condition, considering its operating and maintenance history, at the highest actual operating pressure to which the segment was subjected during the 5 years preceding July 1, 1970, subject to the requirements of § 192.611.

§ 192.621 Maximum allowable operating pressure: high-pressure distribution systems.

(a) No person may operate a segment of a high pressure distribution system at a pressure that exceeds the lowest of the following pressures, as applicable:

(1) The design pressure of the weakest element in the segment, determined in accordance with Subparts C and D of this part.

(2) 60 p.s.i.g., for a segment of a distribution system otherwise designed to operate at over 60 p.s.i.g., unless the service lines in the segment are equipped with service regulators or other pressure limiting devices in series that meet the requirements of § 192.197(c).

(3) 25 p.s.i.g. in segments of cast iron pipe in which there are unreinforced bell and spigot joints.

(4) The pressure limits to which a joint could be subjected without the possibility of its parting.

(5) The pressure determined by the operator to be the maximum safe pressure after considering the history of the segment, particularly known corrosion and the actual operating pressures.

(b) No person may operate a segment of pipeline to which paragraph (a)(5) of this section applies, unless overpressure protective devices are installed on the segment in a manner that will prevent the maximum allowable operating pressure from being exceeded, in accordance with § 192.195.

§ 192.623 Maximum and minimum allowable operating pressure: low-pressure distribution systems.

(a) No person may operate a low-pressure distribution system at a pressure high enough to make unsafe the operation of any connected and properly adjusted low-pressure gas burning equipment.

(b) No person may operate a low pressure distribution system at a pressure lower than the minimum pressure at which the safe and continuing operation of any connected and properly adjusted low-pressure gas burning equipment can be assured.

§ 192.625 Odorization of gas.

(a) Combustible gases in mains and service lines must be odorized as provided in this section.

(b) The intensity of the odor of combustible gases must be such as to be readily detectable at concentrations of one fifth of the lower explosive limit.

(c) In the concentrations in which it is used, the odorant in combustible gases must comply with the following:

(1) The odorant may not be deleterious to persons, materials, or pipe.

(2) The products of combustion from the odorant may not be toxic when breathed nor may they be corrosive or harmful to those materials to which the products of combustion will be exposed.

(d) The odorant may not be soluble in water to an extent greater than 2.5 parts to 100 parts by weight.

(e) Equipment for odorization must introduce the odorant without wide variations in the level of odorant.

(f) Each operator shall conduct periodic sampling of combustible gases to assure the proper concentration of odorant in accordance with this section.

§ 192.627 Tapping pipelines under pressure.

Each tap made on a pipeline under pressure must be performed by a crew qualified to make hot taps.

§ 192.629 Purging of pipelines.

(a) When a pipeline is being purged of air by use of gas, the gas must be released into one end of the line in a moderately rapid and continuous flow. If gas cannot be supplied in sufficient quantity to prevent the formation of a hazardous mixture of gas and air, a slug of inert gas must be released into the line before the gas.

(b) When a pipeline is being purged of gas by use of air, the air must be released into one end of the line in a moderately rapid and continuous flow. If air cannot be supplied in sufficient quantity to prevent the formation of a hazardous mixture of gas and air, a slug of inert gas must be released into the line before the air.

Subpart M—Maintenance

§ 192.701 Scope.

This subpart prescribes minimum requirements for maintenance of pipeline facilities.

§ 192.703 General.

(a) No person may operate a segment of pipeline, unless it is maintained in accordance with this subpart.

(b) Each segment of pipeline that becomes unsafe must be replaced, repaired, or removed from service.

(c) Hazardous leaks must be repaired promptly.

§ 192.705 Transmission lines: patrolling.

(a) Each operator shall have a patrol program to observe, at intervals not exceeding 1 year, surface conditions on and adjacent to the transmission line right-of-way for indications of leaks, construction activity, and other factors affecting safety and operation.

(b) The frequency of the patrol must be determined by the size of the line, the operating pressures, the class location, terrain, weather, and other relevant factors.

(c) Highway and railroad crossings must be patrolled more often and in greater detail than transmission lines in open country.

§ 192.707 Transmission lines: markers.

Each operator shall install signs or markers wherever necessary to identify the location of a transmission line in order to reduce the possibility of damage or interference.

§ 192.709 Transmission lines: recordkeeping.

Each operator shall keep records covering each leak discovered, repair made, transmission line break, leakage survey, line patrol, and inspection, for as long as the segment of transmission line involved remains in service.

OFFICE OF THE FEDERAL REGISTER

GUIDE TO RECORD RETENTION REQUIREMENTS

REVISION AS OF JANUARY 1, 1974

This is a Guide in digest form to the provisions of Federal laws and regulations relating to the keeping of records by the public. It tells the user (1) what records must be kept, (2) who must keep them, and (3) how long they must be kept.

The Guide is derived from the laws published in the United States Code, as amended by laws enacted during 1973, and from the regulations published in the Code of Federal Regulations, as amended in the daily issues of the FEDERAL REGISTER through December 31, 1973.

The Guide is prepared by the Office of the Federal Register, National Archives and Records Service, General Services Administration and published in the CFR volume entitled "Finding Aids."

Coverage

In preparing the Guide it was necessary to establish boundaries in order to keep it from going beyond its intended purpose. The nature of these boundaries is outlined below.

As indicated by its name, the Guide adheres strictly to the retention of records. It does not cover such matters as the furnishing of reports to Government agencies, the filing of tax returns, or the submission of supporting evidence with applications or claims.

The Guide is limited to provisions which apply to a class. Requirements applying only to named individuals or bodies have been omitted.

The Guide is confined to requirements which have been expressly stated. In many laws and regulations there is an implied responsibility to keep copies of reports and other papers furnished to Federal agencies, and to keep related working papers. Such implied requirements have not been included in the Guide.

The following types of requirements have also been excluded from the Guide:

(1) Requirements as to the keeping of papers furnished by the Government, such as passports, licenses, permits, etc., unless they are closely related to other records which must be kept.

(2) Requirements as to the display of posters, notices, or other signs in places of business.

(3) Requirements contained in individual Government contracts, unless the contracts are incorporated in the Code of Federal Regulations.

Arrangement

The digests of recordkeeping provisions comprising the Guide are grouped under the Departments or independent agencies which impose or administer them (see "Contents"). Individual items are numbered to simplify indexing.

In general, the items retain their original numbers from year to year. Renumbering occurs only after a major revision of the material and is so indicated in brackets after the name of the agency involved. Individual items revised, amended, deleted, or added are shown in brackets following the item heading.

Two supplements to the Guide contain generalized information about certain requirements under the Second War Powers Act of 1942 and detailed information on requirements imposed by the Federal Aviation Administration relative to the availability of credentials for inspection.

An index to the Guide follows the last supplement.

NOTICE

The Guide to Record Retention Requirements does not have the effect of law, regulation, or ruling. It is published as a guide to legal requirements that appear to be in effect as of January 1, 1974.

Exhibit B

5.2 Operators of aircraft involved in an accident or incident.

To retain all records and reports, including all internal documents and memoranda dealing with the accident or incident.

Retention period: Until authorized by the Board to the contrary. 14 CFR 430.10

6. Office of the Secretary

Pipeline Safety

6.1 Welders of steel materials to be used in pipelines.

To keep records of welding procedures that have been qualified under either section IX of the ASME Boiler and Pressure Vessel Code or section 2 of API Standard 1104.

Retention period: As long as procedure is used. 49 CFR 192.225(c)

6.2 Operators of natural gas pipelines.

Records must be retained showing by milepost, engineering station, or by geographic feature, the number of girth welds made, the number nondestructively tested, the number rejected and the disposition of the rejects whenever nondestructive testing is required under 192.241(b).

Retention period: Life of the pipeline. 49 CFR 192.243(f)

6.3 Operators of natural gas pipelines.

To keep records of safety tests required with names of those involved, methods used, and results of the tests.

Retention period: Duration of pipeline's use. 49 CFR 192.517

6.4 Operators of natural gas pipelines.

To retain records of each segment of pipeline that has been uprated showing each investigation required by the subpart, all work performed and each pressure test conducted in connection with the uprating.

Retention period: Life of the segment of pipeline. 49 CFR 192.553(b)

6.5 Operators of natural gas pipelines.

To keep records necessary to administer the operating and maintenance plan established for each segment of pipeline.

Retention period: Not specified. 49 CFR 192.603(b)

6.6 Operators of natural gas transmission lines.

To keep records governing each leak discovered, repair made, transmission line break, leakage survey, line patrol and inspection.

Retention period: As long as the segment of transmission line involved remains in service. 49 CFR 192.709

6.7 Operators of liquid pipelines.

To retain records of the nondestructive testing of welds, including (if radiography is used) the developed film, with so far as practicable, the location of the weld.

Retention period: 3 years following the placement of the line in operation. 49 CFR 195.234(g)

6.8 Operators of liquid pipelines.

To maintain records showing the total number of girth welds and the number nondestructively tested, including the number rejected and the disposition of each rejected; the amount, location, and cover of each size of pipe installed; the location of each crossing of another pipeline; the location of each buried utility crossing; the location of each overhead crossing; the location of each valve, weighted pipe, corrosion test station, or other item connected to the pipe.

Retention period: Life of each facility. 49 CFR 195.266

6.9 Operators of liquid pipelines.

To retain records of each hydrostatic test including the recording gauge charts, deadweight tester data, and the reasons for any failure during a test. Where elevation differences in the section under test exceed 100 feet, a profile of the pipeline that shows the elevation and test sites over the entire length of the test section must also be included.

Retention period: As long as the facility tested is in use. 49 CFR 195.310

6.10 Operators of liquid gas pipelines.

To maintain maps and records of its pipeline systems including at least the location and identification of all major facilities, all crossings of public roads, railroads, rivers, buried utilities and foreign pipelines, the maximum operating pressure of each pipeline, the diameter, grade, type and nominal wall thickness of all pipe.

Retention period: Not specified. 49 CFR 195.404(a)

6.11 Operators of liquid pipelines.

To maintain daily operating records that indicate the discharge pressures at each pump station and any unusual operations of a facility.

Retention period: At least 3 years. 49 CFR 195.404(b)

6.12 Operators of liquid pipelines.

To maintain records that indicate the date, location and description of each repair made to its pipeline systems as well as a record of each inspection and test required by the subpart.

Retention period: Useful life of the part of the pipeline system to which the record relates. 49 CFR 195.404(c)

6.13 Operators of natural or other gas pipelines.

To maintain corrosion control records and maps as indicated in section cited.

Retention period: Length of pipeline service. 49 CFR 192.491

6.14 Operators of liquid pipelines. [Added]

To maintain, at the principal place of business, a copy of each accident report required to be filed with the Director, Office of Pipeline Safety.

Retention period: Not specified. 49 CFR 195.54

6.15–6.19 [Reserved]

Hazardous Materials

6.20 State agencies participating in relocation assistance programs.

(a) To maintain all documents associated with an appeal.

Retention period: Not specified. 49 CFR 25.21(b)(4)

(b) To maintain relocation records as cited in Appendix A of Part 25.

Retention period: 3 years. 49 CFR 25.23

6.21 Manufacturers of compressed gas cylinders.

To maintain data sheets recording the results of visual inspections of certain compressed gas cylinders.

Retention period: Permanent. 49 CFR 173.34(e)(10)

6.22 Owners of compressed gas cylinders.

To maintain records showing results of reinspection and retest of such cylinders.

Retention period: Until expiration of retest period, or until cylinder is reinspected and retested, whichever occurs first. 49 CFR 173.34(e)(5)

6.23 Motor carriers operating MC 330 and MC 331 cargo tanks. [Amended]

To maintain (a) records showing each MC 330 and MC 331 in service, and (b) records relating to reason for, and date of, withdrawal of certification of cargo tank.

Retention period: At least 1 year after period of use or withdrawal of the certification. 49 CFR 177.824(f)

6.24 Owners of tank motor vehicles transporting flammable liquids.

To maintain records of inspection as required in section cited.

Retention period: 2 years after date of inspection. 49 CFR 177.824(b)

6.25 Manufacturers of cylinders and tanks.

To maintain (a) inspector's report on specification DOT-39 cylinders, and (b) test samples on specification DOT-56 and 57 portable tanks.

Retention period: (a) 3 years; (b) 1 year. 49 CFR 178.65-15(a), 178.251-5(a)

6.26 Motor carriers operating cargo tanks.

To maintain manufacturer's data report and certificate of compliance and related papers on specification MC331 cargo tanks; and manufacturer's certificate of compliance on specifications MC 306, 307, and 312 cargo tanks.

Retention period: During time of use of tank plus 1 year thereafter. 49 CFR 178.337-18(b), 178.340-10(c)

6.27 Cargo tank manufacturers.

To maintain sketch of location of plate in specification MC331 cargo tank and records of welder qualification in fabrication of such cargo tanks.

Retention period: 5 years. 49 CFR 178.337-2(a)(3), 178.337-4(b)

Exhibit C
1970 Version of 192.607

Subpart L—Operations

§ 192.601 Scope.

This subpart prescribes minimum requirements for the operation of pipeline facilities.

§ 192.603 General provisions.

(a) No person may operate a segment of pipeline unless it is operated in accordance with this subpart.

(b) Each operator shall establish a written operating and maintenance plan meeting the requirements of this part and keep records necessary to administer the plan.

§ 192.605 Essentials of operating and maintenance plan.

Each operator shall include the following in its operating and maintenance plan:

(a) Instructions for employees covering operating and maintenance procedures during normal operations and repairs.

(b) Items required to be included by the provisions of Subpart M of this part.

(c) Specific programs relating to facilities presenting the greatest hazard to public safety either in an emergency or because of extraordinary construction or maintenance requirements.

(d) A program for conversion procedures, if conversion of a low-pressure distribution system to a higher pressure is contemplated.

(e) Provision for periodic inspections to ensure that operating pressures are appropriate for the class location.

§ 192.607 Initial determination of class location and confirmation or establishment of maximum allowable operating pressure.

(a) Before April 15, 1971, each operator shall complete a study to determine for each segment of pipeline with a maximum allowable operating pressure that will produce a hoop stress that is more than 40 percent of SMYS—

(1) The present class location of all such pipeline in its system; and

(2) Whether the hoop stress corresponding to the maximum allowable operating pressure for each segment of pipeline is commensurate with the present class location.

(b) If an operator finds that the hoop stress corresponding to the established maximum allowable operating pressure of a segment of pipeline is not commensurate with the present class location and the segment is in satisfactory physical condition, the operator shall confirm or revise the maximum allowable operating pressure of the affected segment of pipeline as required by § 192.611 in accordance with the following schedule:

(1) Before January 1, 1972, the operator shall complete the confirmation or revision of at least 50 percent of the affected pipelines.

(2) Before January 1, 1973, the operator shall complete the confirmation or revision of the remainder of the affected pipelines.

§ 192.609 Change in class location: required study.

Whenever an increase in population density indicates a change in class location for a segment of an existing steel pipeline operating at hoop stress that is more than 40 percent of SMYS, or indicates that the hoop stress corresponding to the established maximum allowable operating pressure for a segment of existing pipeline is not commensurate with the present class location, the operator shall immediately make a study to determine—

(a) The present class location for the segment involved.

(b) The design, construction, and testing procedures followed in the original construction, and a comparison of these procedures with those required for the present class location by the applicable provisions of this part.

(c) The physical condition of the segment to the extent it can be ascertained from available records;

(d) The operating and maintenance history of the segment;

(e) The maximum actual operating pressure and the corresponding operating hoop stress, taking pressure gradient into account, for the segment of pipeline involved; and

(f) The actual area affected by the population density increase, and physical barriers or other factors which may limit further expansion of the more densely populated area.

§ 192.611 Change in class location: confirmation or revision of maximum allowable operating pressure.

If the hoop stress corresponding to the established maximum allowable operating pressure of a segment of pipeline is not commensurate with the present class location, and the segment is in satisfactory physical condition, the maximum allowable operating pressure of that segment of pipeline must be confirmed or revised as follows:

(a) If the segment involved has been previously tested in place to at least 90 percent of its SMYS for a period of not less than 8 hours, the maximum allowable operating pressure must be confirmed or reduced so that the corresponding hoop stress will not exceed 72 percent of SMYS of the pipe in Class 2 locations, 60 percent of SMYS in Class 3 locations, or 50 percent of SMYS in Class 4 locations.

(b) If the segment involved has not been previously tested in place as described in paragraph (a) of this section, the maximum allowable operating pressure must be reduced so that the corresponding hoop stress is not more than that allowed by this part for new segments of pipelines in the existing class location.

(c) If the segment of pipeline involved has not been qualified for operation under paragraph (a) or (b) of this section, it must be tested in accordance with the applicable requirements of Subpart J of this part, and its maximum allowable operating pressure must then be established so as to be equal to or less than the following:

(1) The maximum allowable operating pressure after the requalification test is 0.8 times the test pressure for Class 2 locations, 0.667 times the test pressure for Class 3 locations, and 0.555 times the test pressure for Class 4 locations.

(2) The maximum allowable operating pressure confirmed or revised in accordance with this section, may not exceed the maximum allowable operating pressure established before the confirmation or revision.

(3) The corresponding hoop stress may not exceed 72 percent of the SMYS of the pipe in Class 2 locations, 60 percent of SMYS in Class 3 locations, or 50 percent of the SMYS in Class 4 locations.

(d) Confirmation or revision of the maximum allowable operating pressure of a segment of pipeline in accordance with this section does not preclude the application of §§ 192.553 and 192.555.

(e) After completing the study required by § 192.609, the operator shall confirm or revise the maximum allowable operating pressure in each segment of pipeline in accordance with this section within 1 year of the date when a change in class location has occurred.

§ 192.613 Continuing surveillance.

(a) Each operator shall have a procedure for continuing surveillance of its facilities to determine and take appropriate action concerning changes in class location, failures, leakage history, corrosion, substantial changes in cathodic protection requirements, and other unusual operating and maintenance conditions.

(b) If a segment of pipeline is determined to be in unsatisfactory condition but no immediate hazard exists, the operator shall initiate a program to recondition or phase out the segment involved, or, if the segment cannot be reconditioned or phased out, reduce the maximum allowable operating pressure in accordance with § 192.619 (a) and (b).

§ 192.615 Emergency plans.

Each operator shall—

(a) Have written emergency procedures;

(b) Acquaint appropriate operating and maintenance employees with the procedures;

(c) Establish liaison with appropriate public officials, including fire and police officials, with respect to the procedures; and

(d) Establish an educational program to enable customers and the general public to recognize and report a gas emergency to the appropriate officials.

§ 192.617 Investigation of failures.

Each operator shall establish procedures for analyzing accidents and failures, including the selection of samples of the failed facility or equipment for laboratory examination, where appropriate, for the purpose of determining the causes of the failure and minimizing the possibility of a recurrence.

provisions of Federal transit laws (49 U.S.C. 5323(b), and 5324), the project-level air quality conformity regulation of the U.S. Environmental Protection Agency (EPA) (40 CFR part 93), the section 404(b)(1) guidelines of EPA (40 CFR part 230), the regulation implementing section 106 of the National Historic Preservation Act (36 CFR part 800), the regulation implementing section 7 of the Endangered Species Act (50 CFR part 402), section 4(f) of the Department of Transportation Act (23 CFR part 774), and Executive Orders 12898 on environmental justice, 11988 on floodplain management, and 11990 on the protection of the wetlands.

The FTA regulations implementing NEPA, as well as provisions of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU), requires that FTA and METRO (1) invite other Federal and non-Federal agencies and Native American Tribes that may have an interest in the proposed project to become "participating agencies;" (2) provide an opportunity for involvement by participating agencies and the public to help define the purpose and need, and the range of alternatives for consideration; and (3) establish a plan for coordinating public and agency participation in, and comment on, the environmental review. It is possible that FTA and METRO will not be able to identify all Federal and non-Federal agencies and Native American Tribes that may have such an interest. Any Federal or non-Federal agency or Native American Tribe interested in the proposed project that does not receive an invitation to become a participating agency should notify at the earliest opportunity the Project Manager identified above under **ADDRESSES**.

Paperwork Reduction

The Paperwork Reduction Act seeks, in part, to minimize the cost to the taxpayer of the creation, collection, maintenance, use, dissemination, and disposition of information. Consistent with this goal and with principles of economy and efficiency in government, it is FTA policy to limit insofar as possible distribution of complete printed sets of environmental documents. Accordingly, unless a specific request for a complete printed set of environmental documents is received (preferably in advance of printing), FTA and its grantees will distribute only the executive summary of the environmental document together with a Compact Disc of the complete environmental document. A complete printed set of the environmental document will be available for review at the libraries and governments offices in the project area; an electronic copy of the complete environmental document will also be available on the project Web site at *http://www.ridemetro.org.*

Blas M. Uribe,

FTA Deputy Regional Administrator.

[FR Doc. 2011–149 Filed 1–7–11; 8:45 am]

BILLING CODE P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

[Docket No. PHMSA–2010–0381

Pipeline Safety: Establishing Maximum Allowable Operating Pressure or Maximum Operating Pressure Using Record Evidence, and Integrity Management Risk Identification, Assessment, Prevention, and Mitigation

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA); DOT.

ACTION: Notice; issuance of Advisory Bulletin.

SUMMARY: PHMSA is issuing an Advisory Bulletin to remind operators of gas and hazardous liquid pipeline facilities of their responsibilities, under Federal integrity management (IM) regulations, to perform detailed threat and risk analyses that integrate accurate data and information from their entire pipeline system, especially when calculating Maximum Allowable Operating Pressure (MAOP) or Maximum Operating Pressure (MOP), and to utilize these risk analyses in the identification of appropriate assessment methods, and preventive and mitigative measures.

FOR FURTHER INFORMATION CONTACT: Alan Mayberry by phone at 202–366–5124 or by e-mail at *alan.mayberry@dot.gov.* All materials in this docket may be accessed electronically at *http://www.regulations.gov.* General information about the PHMSA Office of Pipeline Safety (OPS) can be obtained by accessing OPS's Internet home page at *http://www.phmsa.dot.gov/pipeline.*

SUPPLEMENTARY INFORMATION:

Background

PHMSA's goal is to improve the overall integrity of pipeline systems and reduce risks. To adequately evaluate risk, it is necessary to identify and evaluate the physical and operational characteristics of each individual pipeline system. To that end, the Hazardous Liquid and Gas Transmission Pipeline Integrity Management (IM) Programs were created with the following objectives:

- Ensuring the quality of pipeline integrity in areas with a higher potential for adverse consequences (high consequence areas or HCAs);
- Promoting a more rigorous and systematic management of pipeline integrity and risk by operators;
- Maintaining the government's prominent role in the oversight of pipeline operator integrity plans and programs; and
- Increasing the public's confidence in the safe operation of the nation's pipeline network.

The IM regulations supplement PHMSA's prescriptive safety regulations with requirements that are intelligent, performance based and process-oriented. One of the fundamental tenets of the IM program is that pipeline operators must be aware of the physical attributes of their pipeline as well as the physical environment that it transverses. These programs reflect the recognition that each pipeline is unique and has its own specific risk profile that is dependent upon the pipelines attributes, its geographical location, design, operating environment, the commodity being transported, and many other factors. This information is a vital component in an operator's ability to identify and evaluate the risks to its pipeline and identify the appropriate assessment tools, set the schedule for assessments of the integrity of the pipeline segments and identify the need for additional preventive and mitigative measures such as lowering operating pressures. If this information is unknown, or unknowable, a more conservative approach to operations is dictated.

An IM program must go beyond simply assessing pipeline segments and repairing defects. Improving operator IM programs, the analytical processes involved in identifying and responding to risk, and the application of assessment and development of preventive and mitigative measures is also a critical objective. In addition, the ability to integrate and analyze threat and integrity related data from many sources is essential for enhanced safety and proactive integrity management. However, some operators are not sufficiently aware of their pipeline attributes nor are they adequately or consistently assessing threats and risks as a part of their IM programs.

Over the past several years, PHMSA inspections and investigations have revealed deficiencies in individual

operators' risk analysis approaches, the integration of data into these risk assessments, the abilities to adequately support the selection of assessment methods, identification and implementation of preventive and mitigative measures, and maintenance of up-to-date risk information and findings about their pipeline segments. In particular, operators' programs fail to adequately address stress corrosion cracking, seam failure, or internal corrosion in their threat identification and risk assessments. The actual use of threat and risk information to determine assessment methods, to evaluate other preventive and mitigative measures, and to use those measures during periodic evaluation have been found to be deficient. Inspections and investigations have revealed examples where assessment methods, specific tools, and schedules were not based on a rigorous assessment of the type of threats posed by the pipeline segment, including consideration of the age, design, pipe material including seam type, coating, welding technique, cathodic protection, soil type, surrounding environment, operational history, or other relevant factors. Finally, inspections and investigations indicate that efforts to collect and integrate risk information can be inappropriately narrow, lack verification and fail to take into account relevant risk information and lessons learned from other parts of their system.

In recent pipeline accident investigations, NTSB and PHMSA have discovered indications that operator oversight of IM programs has been lacking and thereby failed to detect flaws and deficiencies in their programs. The level of self-evaluation and oversight currently being exercised by some pipeline operators is not uniformly applied. The NTSB is also concerned that pipeline operators throughout the United States may have discrepancies in their records that could potentially compromise the safe operation of their pipelines. NTSB has recommended that operators diligently and objectively scrutinize the effectiveness of their programs, identify areas for improvement, and implement corrective measures.

On January 3, 2011, NTSB recommended that PHMSA inform the pipeline industry of the circumstances leading up to and the consequences of the September 9, 2010, pipeline rupture in San Bruno, California, to ensure that both PHMSA and NTSB findings and recommendations with respect to the verification of records used to establish or adjust MAOP or MOP are expeditiously incorporated into the IM programs for pipeline operators. The pipeline rupture in San Bruno, CA involved a 30-inch-diameter natural gas transmission pipeline owned and operated by Pacific Gas and Electric Company (PG&E). The rupture occurred in a residential area killing eight people, injuring many more, and causing substantial property damage. The rupture created a crater about 72 feet long by 26 feet wide. A ruptured pipe segment about 28 feet long was found about 100 feet away from the crater. The resulting fire destroyed 37 homes and damaged 18. NTSB's preliminary findings indicate that the pipeline operator did not have an accurate basis for the MAOP calculation.

There are several methods available for establishing MAOP or MOP. A hydrostatic pressure test that stresses the pipe to a designated percent of the desired MAOP or MOP, without failure, is generally the most effective method. Hydrostatic testing requirements and restrictions for natural gas pipelines are specified in Title 49 CFR Part 192, Subpart J. Similar requirements for hazardous liquid pipelines are found in 49 CFR Part 195, Subpart E. Although hydrostatic testing is recognized to be the most direct and effective methodology for validating a MAOP or MOP, its implementation requires that operating lines be shut down, which may adversely affect customers dependent on the natural gas supplied by the pipeline, particularly if the pipe fails during the test, which could necessitate a protracted shutdown. Consequently, operators prefer to use available design, construction, inspection, testing, and other related records to calculate the valid MAOP or MOP. However, this method is susceptible to error if pipeline records are inaccurate. With respect to the portion of the pipeline that failed in the September 9, 2010, San Bruno incident, PG&E used available design, construction, inspection, testing, and other related records to calculate the MAOP. The NTSB's examination of the ruptured pipe segment and review of PG&E records revealed that although the as-built drawings and alignment sheets mark the pipe as seamless API 5L Grade X42 pipe, the pipeline in the area of the rupture was constructed with longitudinal seam-welded pipe. The ruptured pipe segment was constructed of five sections of pipe, some of which were short pieces measuring about four feet long, containing different longitudinal seam welds of various types, including single- and double-sided welds. Consequently, the short pieces of pipe of unknown specifications in the ruptured pipe segment may not have been as strong as the seamless API 5L Grade X42 steel pipe listed in PG&E's records. PG&E's records also identify Consolidated Western Steel Corporation as the manufacturer of the accident segment of Line 132. However, after physical inspection of the ruptured section, investigators were unable to confirm the manufacturing source of some of the pieces of ruptured pipe.

Integrity Management Regulatory Provisions

For hazardous liquid pipelines, § 195.452 establishes requirements for IM programs in HCAs. Section 195.452(b)(1) requires that each operator of a hazardous liquid pipeline "develop a written IM program that addresses the risks on each segment of pipeline." Section 195.452(e) defines the minimum list of risk factors that must be included in the risk assessments used to schedule segment assessments. Appendix C provides additional guidance on these risk factors. Section 195.452(f) defines the required elements of an IM program. These elements include an analysis that integrates all available information about the integrity of the entire pipeline and the consequences of a failure, including data gathered during previous integrity assessments and data gathered in conjunction with other maintenance inspections and investigations. These elements also include an identification of additional preventive and mitigative measures to protect the HCAs (§ 195.452(i)), including conducting a risk analysis in which an operator must evaluate the likelihood of a pipeline release and how it could affect the HCAs. Preventive and mitigative measures to be evaluated based on risk factors include, but are not limited to, leak detection system modifications and installation of additional Emergency Flow Restricting Devices.

For natural gas pipelines, Subpart O of 49 CFR Part 192 establishes the requirements for IM programs in HCAs. Section 192.911(c) requires that IM programs include "[a]n identification of threats to each covered pipeline segment, which must include data integration and a risk assessment." This section further requires "[a]n operator must use the threat identification and risk assessment to prioritize covered segments for assessment (§ 192.917) and to evaluate the merits of additional preventive and mitigative measures (§ 192.935) for each covered segment." Section 192.917(b) requires an operator to integrate existing data and information on the entire pipeline that could be relevant to a covered segment. In performing this data gathering and

integration, an operator must follow the requirements in ASME/ANSI B31.8S, section 4. At a minimum, an operator must gather and evaluate the set of data specified in Appendix A to ASME/ANSI B31.8S, and consider both on the covered segment and similar non-covered segments, past incident history, corrosion control records, continuing surveillance records, patrolling records, maintenance history, internal inspection records, operating stress levels, past pressure test information, soil characteristics, and all other conditions specific to each pipeline. Section 192.917(c) states that an operator must conduct a risk assessment that follows ASME/ANSI B31.8S, section 5, and considers the identified threats for each covered segment. An operator must use the risk assessment to prioritize the covered segments for the baseline and periodic reassessments, and to determine what additional preventive and mitigative measures are needed for the covered segment. Sections 192.919 and 192.921(a) further require that the operator explain why the particular assessment method for each segment was selected to address the identified threats to each covered segment. Specifically, § 192.921(a) requires the operator to select the method or methods best suited to address the identified threats to the covered segment (pipeline), which include internal inspection tool[s], pressure test, direct assessment, or other technology that an operator demonstrates can provide an equivalent understanding of the condition of the pipeline. More than one assessment method may be required to address all the threats to the covered pipeline segment. Section 192.935 requires that an operator take additional measures beyond those already required by Part 192 to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a HCA. An operator must base the additional measures on the threats the operator has identified to each pipeline segment. This section requires that an operator conduct, in accordance with one of the risk assessment approaches in ASME/ANSI B31.8S, section 5, a risk analysis of its pipeline to identify additional measures to protect the HCA and enhance public safety.

Advisory Bulletin (ADB–11–01)

To: Owners and Operators of Hazardous Liquid and Gas Pipeline Systems.

Subject: Establishing Maximum Allowable Operating Pressure or Maximum Operating Pressure Using Record Evidence, and Integrity Management Risk Identification, Assessment, Prevention, and Mitigation.

Advisory: To further enhance the Department's safety efforts and implement the NTSB's January 3, 2011, recommendation to PHMSA [P–10–1], PHMSA is issuing this Advisory Bulletin concerning establishing MAOP and MOP using record evidence and integrity management; threat and risk identification; risk assessment; risk information collection, accuracy and integration, and identification and implementation of preventive and mitigative measures.

I. Establishing MAOP or MOP Using Record Evidence

As PHMSA and NTSB recommended, operators relying on the review of design, construction, inspection, testing and other related data to calculate MAOP or MOP must assure that the records used are reliable. An operator must diligently search, review and scrutinize documents and records, including but not limited to, all as-built drawings, alignment sheets, and specifications, and all design, construction, inspection, testing, maintenance, manufacturer, and other related records. These records shall be traceable, verifiable, and complete. If such a document and records search, review, and verification cannot be satisfactorily completed, the operator cannot rely on this method for calculating MAOP or MOP. Copies of the recommendations issued by NTSB to PHMSA, PG&E, and the California Public Utilities Commission, are available in the public docket and at PHMSA's Web site: *http://www.phmsa.dot.gov/pipeline/regs/ntsb.*

II. Performing Risk Identification, Assessment, Data Accuracy, Prevention, and Mitigation

Pipeline operators are reminded of their responsibilities to identify pipeline integrity threats, perform rigorous risk analyses, integrate information, and identify, evaluate, and implement preventive and mitigative measures as required by the Federal pipeline safety regulations. Operators should thoroughly review their current IM programs and make any changes necessary to become fully compliant with the Federal pipeline safety regulations. Future, PHMSA inspections will place emphasis on the areas noted in this Advisory Bulletin.

Operators are also advised that PHMSA and its State partners intend to sponsor a public workshop on threat and risk identification, risk assessment, risk information collection and integration, and identification of preventive and mitigative measures. The purpose of the workshop will be to expand the industry's knowledge base about effective IM programs. At this workshop, PHMSA will discuss the progress it has seen and the challenges remaining. Operators with demonstrably effective programs will be invited to share information. Public participation will be encouraged.

A. Risk and Threat Identification

PHMSA emphasizes the need for operators to be fully cognizant of the physical and operational characteristics of their systems, understand the threats to their systems, and the risks posed by their systems. Each operator is ultimately responsible for identifying all risk factors and cannot rely solely on the factors in § 195.452(e) and Appendix C of Part 195 or § 192.917. Any operator of a hazardous liquid or gas transmission pipeline that is not fully cognizant of the location, pipe material and seam type, coating, cathodic protection history, repair history, previous pressure testing, or operational pressure history, and other assessment information, incident data, soil type and environment, operational history, or other key risk factors of a pipeline operating at or above 30% SMYS should (1) institute an aggressive program as soon as possible to obtain this information, (2) assess the risks, and (3) take the proper mitigative measures based upon the operator's IM program risk findings. In addition, if these operators do not have verified information on key risk factors, an immediate and interim mitigation measure that should be strongly considered is a pressure reduction to 80 percent of the operating pressure for the previous month, hydro testing the pipeline or creating a remediation program to identify threat risks. Operators of transmission pipelines operating below 30% SMYS should also conduct an integrity threat and risk review of these pipelines to ensure safety in HCAs. PHMSA will require an operator that has not adequately identified all threats to take mitigative measures.

B. Risk Assessment

Operators are advised to re-examine the basis for their IM assessment, as well as their MAOP or MOP calculations and documentation to meet Federal regulations in 49 CFR Parts 192 and 195. Operators must consider all significant risk factors in their risk assessments; conduct risk assessments capable of supporting identification of preventive and mitigative measures; integrate into their threat and risk

assessments all relevant risk information from prior integrity assessments, inspections, investigations, and incidents with design, construction, operational and maintenance data; to critically analyze the integrated data and incorporate the analysis into their risk assessments and integrity-related decision making; update and maintain their risk information; and to ensure that the risk information is made available throughout the organization in a form that can effectively support decisions on integrity assessment methods, tools, process and procedure changes, and schedule during the required periodic evaluations of pipeline integrity. PHMSA and its State partners intend to verify that operators have taken these actions during the course of future pipeline safety inspections and investigations.

C. Data Accuracy

Operators must review and scrutinize pipeline infrastructure documents and records, including but not limited to, all as-built drawings, alignment sheets, specifications, and all design, construction, inspection, testing, material manufacturer, operational maintenance data, and other related records, to ensure company records accurately reflect the pipeline's physical and operational characteristics. These records should be traceable, verifiable, and complete to meet §§ 192.619 and 195.302. Incomplete or partial records are not an adequate basis for establishing MAOP or MOP using this method. If such a document and records search, review, and verification cannot be satisfactorily completed, the operator may need to conduct other activities such as in-situ examination, pressure testing, and nondestructive testing or otherwise verify the characteristics of the pipeline when identifying and assessing threats or risks.

D. Risk Mitigation and Prevention

PHMSA advises operators to implement a robust IM process that includes methods best suited to address the threats and risks identified (§ 192.921(a) and § 195.452(f)). Operators must use post assessment and continuing evaluation processes to evaluate program effectiveness in identifying threats, addressing threat preventative and mitigative measures, and providing internal IM program feedback of assessment findings so the assessment process can be updated based upon threat findings.

Issued in Washington, DC, on January 4, 2011.

Jeffrey D. Wiese,

Associate Administrator for Pipeline Safety.

[FR Doc. 2011–208 Filed 1–7–11; 8:45 am]

BILLING CODE 4910–60–P

DEPARTMENT OF TRANSPORTATION

Surface Transportation Board

Release of Waybill Data

The Surface Transportation Board has received a request from Michael Behe representing FRN, LLC (WB604–9–1/03/11) for permission to use certain data from the Board's 2009 Carload Waybill Sample. A copy of this request may be obtained from the Office of Economics.

The waybill sample contains confidential railroad and shipper data; therefore, if any parties object to these requests, they should file their objections with the Director of the Board's Office of Economics within 14 calendar days of the date of this notice. The rules for release of waybill data are codified at 49 CFR 1244.9.

Contact: Scott Decker, (202) 245–0330.

Andrea Pope-Matheson,

Clearance Clerk.

[FR Doc. 2011–155 Filed 1–7–11; 8:45 am]

BILLING CODE 4915–01–P

DEPARTMENT OF THE TREASURY

Departmental Offices; Privacy Act of 1974, as Amended

AGENCY: Departmental Offices, Treasury.

ACTION: Notice of Proposed Privacy Act System of Records.

SUMMARY: In accordance with the Privacy Act of 1974, as amended, the Departmental Offices, U.S. Department of the Treasury ("Treasury") gives notice of the establishment of a Privacy Act System of Records.

DATES: Comments must be received no later than February 9, 2011. The new system of records will be effective February 9, 2011 unless the comments received result in a contrary determination.

ADDRESSES: Comments should be sent to Claire Stapleton, Consumer Financial Protection Bureau Implementation Team, 1801 L Street, NW., Washington, DC 20036. Comments will be made available for inspection upon written request. Treasury will make such comments available for public inspection and copying in Treasury's Library, Room 1428, Main Treasury Building, 1500 Pennsylvania Avenue, NW., Washington, DC 20220, on official business days between the hours of 10 a.m. and 5 p.m. Eastern Time. You can make an appointment to inspect comments by telephoning (202) 622–0990. All comments, including attachments and other supporting materials, will become part of the public record and subject to public disclosure. You should submit only information that you wish to make available publicly.

FOR FURTHER INFORMATION CONTACT: Claire Stapleton, Consumer Financial Protection Bureau Implementation Team, 1801 L. Street, NW., Washington, DC 20036, (202) 435–7220.

SUPPLEMENTARY INFORMATION: The Dodd-Frank Wall Street Reform and Consumer Protection Act ("Act"), Public Law 111–203, Title X, established the Consumer Financial Protection Bureau (CFPB). Once fully operational, CFPB will administer, enforce and implement Federal consumer financial protection laws, and, among other powers, will have authority to protect consumers from unfair, deceptive, and abusive practices when obtaining consumer financial products or services. The Act grants Treasury certain "interim authority" to help stand up the agency. The CFPB implementation team, currently within Treasury, will maintain the records covered by this notice.

The new systems of records described in this notice, Treasury/DO.315—CFPB Implementation Team Consumer Inquiry and Complaint Database, will be used to collect, respond to, and refer consumer inquiries and complaints concerning consumer financial products and services. A description of the new system of records follows this Notice.

The report of a new system of records has been submitted to the Committee on Oversight and Government Reform of the House of Representatives, the Committee on Homeland Security and Governmental Affairs of the Senate, and the Office of Management and Budget, pursuant to Appendix I to OMB Circular A–130, "Federal Agency Responsibilities for Maintaining Records About Individuals," dated November 30, 2000, and the Privacy Act, 5 U.S.C. 552a(r).

The system of records entitled, "Treasury/DO.315—CFPB Implementation Team Consumer Inquiry and Complaint Database" is published in its entirely below.

criteria given in § 388.4 of MARAD's regulations at 46 CFR part 388.

Privacy Act

Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477–78).

By Order of the Maritime Administrator.

Dated: April 26, 2012.

Julie P. Agarwal,

Secretary, Maritime Administration.

[FR Doc. 2012–10864 Filed 5–4–12; 8:45 am]

BILLING CODE 4910–81–P

DEPARTMENT OF TRANSPORTATION

Maritime Administration

[Docket No. MARAD–2012–0056]

Requested Administrative Waiver of the Coastwise Trade Laws: Vessel LONGWOOD BATEAU; Invitation for Public Comments

AGENCY: Maritime Administration, Department of Transportation.

ACTION: Notice.

SUMMARY: As authorized by 46 U.S.C. 12121, the Secretary of Transportation, as represented by the Maritime Administration (MARAD), is authorized to grant waivers of the U.S.-build requirement of the coastwise laws under certain circumstances. A request for such a waiver has been received by MARAD. The vessel, and a brief description of the proposed service, is listed below.

DATES: Submit comments on or before June 6, 2012.

ADDRESSES: Comments should refer to docket number MARAD–2012–0056. Written comments may be submitted by hand or by mail to the Docket Clerk, U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590. You may also send comments electronically via the Internet at *http://www.regulations.gov*. All comments will become part of this docket and will be available for inspection and copying at the above address between 10 a.m. and 5 p.m., E.T., Monday through Friday, except federal holidays. An electronic version of this document and all documents entered into this docket is available on the World Wide Web at *http://www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT: Joann Spittle, U.S. Department of Transportation, Maritime Administration, 1200 New Jersey Avenue SE., Room W21–203, Washington, DC 20590. Telephone 202–366–5979, Email *Joann.Spittle@dot.gov*.

SUPPLEMENTARY INFORMATION: As described by the applicant the intended service of the vessel LONGWOOD BATEAU is: INTENDED COMMERCIAL USE OF VESSEL: "Day outings, harbor cruises and sightseeing cruises for no more than six passengers with one licensed captain on a seasonal basis." GEOGRAPHIC REGION: "Massachusetts, Rhode Island, Connecticut and New York."

The complete application is given in DOT docket MARAD–2012–0056 at *http://www.regulations.gov*. Interested parties may comment on the effect this action may have on U.S. vessel builders or businesses in the U.S. that use U.S.-flag vessels. If MARAD determines, in accordance with 46 U.S.C. 12121 and MARAD's regulations at 46 CFR Part 388, that the issuance of the waiver will have an unduly adverse effect on a U.S.-vessel builder or a business that uses U.S.-flag vessels in that business, a waiver will not be granted. Comments should refer to the docket number of this notice and the vessel name in order for MARAD to properly consider the comments. Comments should also state the commenter's interest in the waiver application, and address the waiver criteria given in § 388.4 of MARAD's regulations at 46 CFR Part 388.

Privacy Act

Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477–78).

By Order of the Maritime Administrator.

Dated: April 26, 2012.

Julie P. Agarwal,

Secretary, Maritime Administration.

[FR Doc. 2012–10867 Filed 5–4–12; 8:45 am]

BILLING CODE 4910–81–P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

[Docket No. PHMSA–2012–0068]

Pipeline Safety: Verification of Records

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

ACTION: Notice; Issuance of Advisory Bulletin.

SUMMARY: PHMSA is issuing an Advisory Bulletin to remind operators of gas and hazardous liquid pipeline facilities to verify their records relating to operating specifications for maximum allowable operating pressure (MAOP) required by 49 CFR 192.517 and maximum operating pressure (MOP) required by 49 CFR 195.310. This Advisory Bulletin informs gas operators of anticipated changes in annual reporting requirements to document the confirmation of MAOP, how they will be required to report total mileage and mileage with adequate records, when they must report, and what PHMSA considers an adequate record. In addition, this Advisory Bulletin informs hazardous liquid operators of adequate records for the confirmation of MOP.

FOR FURTHER INFORMATION CONTACT: John Gale by phone at 202–366–0434 or by email at *john.gale@dot.gov*. Information about PHMSA may be found at *http://phmsa.dot.gov*.

SUPPLEMENTARY INFORMATION:

Background

On January 10, 2011, PHMSA issued Advisory Bulletin 11–01. This Advisory Bulletin reminded operators that if they are relying on the review of design, construction, inspection, testing and other related data to establish MAOP and MOP, they must ensure that the records used are reliable, traceable, verifiable, and complete. If such a document and records search, review, and verification cannot be satisfactorily completed, the operator cannot rely on this method for calculating MAOP or MOP and must instead rely on another method as allowed in 49 CFR 192.619 or 49 CFR 195.406.

Section 192.619 currently contains four methods for establishing MAOP: (1) The design pressure of the weakest element in the segment; (2) pressure testing; (3) the highest actual operating pressure in the five years prior to the segment becoming subject to regulation under Part 192; and (4) the maximum safe pressure considering the history of the segment, particularly known corrosion and the actual operating

pressure. The third method, often referred to as the "grandfather clause," allows pipelines that had safely operated prior to the pipeline safety MAOP regulations to continue to operate under similar conditions without retroactively applying recordkeeping requirements or requiring pressure tests.

Many of the pipelines being newly subjected to safety regulation in the 1970's were relatively new and had demonstrated a safe operating history. PHMSA is now considering whether these pipelines should be pressure tested to verify continued safe MAOP. In its August 20, 2011, accident investigation report on the September 9, 2010, Pacific Gas and Electric Company natural gas transmission pipeline rupture and fire, the National Transportation Safety Board (NTSB) recommended that PHMSA should:

> Amend Title 49 CFR 192.619 to delete the grandfather clause and require that all gas transmission pipelines constructed before 1970 be subjected to a hydrostatic pressure test that incorporates a spike test. (P–11–14)

PHMSA will be addressing this recommendation in a future rulemaking.

On January 3, 2012, President Obama signed the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (Act), which requires PHMSA to direct each owner or operator of a gas transmission pipeline and associated facilities to provide verification that their records accurately reflect MAOP of their pipelines within Class 3 and Class 4 locations and in Class 1 and Class 2 locations in High Consequence Areas (HCAs). Beginning in 2013, PHMSA intends to require operators to submit data regarding verification of records in these class locations via the Gas Transmission and Gathering Systems Annual Report.

Operators of both gas and hazardous liquid pipelines should review their records to determine whether they are adequate to support operating parameters and conditions on their pipeline systems or if additional action is needed to confirm those parameters and assure safety. The Research and Special Programs Administration and the Materials Transportation Bureau, PHMSA's predecessor agencies, recognized the importance of verifying MAOP. Prior to 1996, there was a regulatory requirement titled: "Initial Determination of Class Location and Confirmation or Establishment of Maximum Allowable Operating Pressure" at 49 CFR 192.607. This regulation required operators to confirm the MAOP on their systems relative to class locations no later than January 1, 1973. The regulatory requirement was removed in 1996 because the compliance dates had long since passed. PHMSA believes documentation that was used to confirm MAOP in compliance with this requirement may be useful in the current verification effort.

Advisory Bulletin (ADB–2012–06)

To: Owners and Operators of Gas and Hazardous Liquid Pipeline Systems.

Subject: Verification of Records Establishing MAOP and MOP.

Advisory: As directed in the Act, PHMSA will require each owner or operator of a gas transmission pipeline and associated facilities to verify that their records confirm MAOP of their pipelines within Class 3 and Class 4 locations and in Class 1 and Class 2 locations in HCAs.

PHMSA intends to require gas pipeline operators to submit data regarding mileage of pipelines with verifiable records and mileage of pipelines without records in the annual reporting cycle for 2013. On April 13, 2012, (77 FR 22387) PHMSA published a **Federal Register** Notice titled: "Information Collection Activities, Revision to Gas Transmission and Gathering Pipeline Systems Annual Report, Gas Transmission and Gathering Pipeline Systems Incident Report, and Hazardous Liquid Pipelines Systems Accident Report." PHMSA plans to use information from the 2013 Gas Transmission and Gathering Pipeline Systems Annual Report to develop potential rulemaking for cases in which the records of the owner or operator are insufficient to confirm the established MAOP of a pipeline segment within Class 3 and Class 4 locations and in Class 1 and Class 2 locations in HCAs. Owners and operators should consider the guidance in this advisory for all pipeline segments and take action as appropriate to assure that all MAOP and MOP are supported by records that are traceable, verifiable and complete.

Information needed to support establishment of MAOP and MOP is identified in § 192.619, § 192.620 and § 195.406. An owner or operator of a pipeline must meet the recordkeeping requirements of Part 192 and Part 195 in support of MAOP and MOP determination.

Traceable records are those which can be clearly linked to original information about a pipeline segment or facility. Traceable records might include pipe mill records, purchase requisition, or as-built documentation indicating minimum pipe yield strength, seam type, wall thickness and diameter. Careful attention should be given to records transcribed from original documents as they may contain errors. Information from a transcribed document, in many cases, should be verified with complementary or supporting documents.

Verifiable records are those in which information is confirmed by other complementary, but separate, documentation. Verifiable records might include contract specifications for a pressure test of a line segment complemented by pressure charts or field logs. Another example might include a purchase order to a pipe mill with pipe specifications verified by a metallurgical test of a coupon pulled from the same pipe segment. In general, the only acceptable use of an affidavit would be as a complementary document, prepared and signed at the time of the test or inspection by an individual who would have reason to be familiar with the test or inspection.

Complete records are those in which the record is finalized as evidenced by a signature, date or other appropriate marking. For example, a complete pressure testing record should identify a specific segment of pipe, who conducted the test, the duration of the test, the test medium, temperatures, accurate pressure readings, and elevation information as applicable. An incomplete record might reflect that the pressure test was initiated, failed and restarted without conclusive indication of a successful test. A record that cannot be specifically linked to an individual pipe segment is not a complete record for that segment. Incomplete or partial records are not an adequate basis for establishing MAOP or MOP. If records are unknown or unknowable, a more conservative approach is indicated.

PHMSA is aware that other types of records may be acceptable and that certain state programs may have additional requirements. Operators should ensure all records establish confidence in the validity of the records. If a document and records search, review, and verification cannot be satisfactorily completed to meet the need for traceable, verifiable, and complete records, the operator may need to conduct other activities such as in-situ examination, measuring yield and tensile strength, pressure testing, and nondestructive testing or otherwise verify the characteristics of the pipeline to support a MAOP or MOP determination.

PHMSA is supportive of the use of alternative technologies to verify pipe characteristics. Owners and operators seeking to use alternative or non-traditional technologies in the determination of MAOP or MOP, or to

meet other regulatory requirements, should first discuss the proposed approach with the appropriate state or Federal regulatory agencies to determine its acceptability under regulatory requirements.

PHMSA will issue more direction regarding how operators will be required to bring into compliance gas and hazardous liquid pipelines without verifiable records for the entire mileage of the pipeline. Further details will also be provided on the manner in which PHMSA intends to require operators to reestablish MAOP as discussed in Section 23(a) of the Act.

Finally, PHMSA notes that on September 26, 2011, NTSB issued Recommendation P–11–14: Eliminating Grandfather Clause. Section 192.619(a)(3) allows gas transmission operators to establish MAOP of pipe installed before July 1, 1970, by use of records noting the highest actual operating pressure to which the segment was subjected during the five years preceding July 1, 1970. NTSB Recommendation P–11–14 requests that PHMSA delete § 192.619(a)(3), also known as the "grandfather clause," and require gas transmission pipeline operators to reestablish MAOP using hydrostatic pressure testing. PHMSA reminds operators that this recommendation will be acted upon following the collection of data, including information from the 2013 Gas Transmission and Gathering Pipeline Systems Annual Report, which will allow PHMSA to determine the impact of the requested change on the public and industry in conformance with our statutory obligations.

Issued in Washington, DC, on May 1, 2012.

Alan K. Mayberry,

Deputy Associate Administrator for Field Operations.

[FR Doc. 2012–10866 Filed 5–4–12; 8:45 am]

BILLING CODE 4910–60–P

DEPARTMENT OF TRANSPORTATION

Research & Innovative Technology Administration

[Docket ID Number RITA 2008–0002]

Agency Information Collection; Activity Under OMB Review; Reporting Required for International Civil Aviation Organization (ICAO)

AGENCY: Research & Innovative Technology Administration (RITA), Bureau of Transportation Statistics (BTS), DOT.

ACTION: Notice.

SUMMARY: In compliance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), this notice announces that the Information Collection Request (ICR) abstracted below has been forwarded to the Office of Management and Budget (OMB) for extension of currently approved collections. The ICR describes the nature of the information collection and its expected burden. The **Federal Register** Notice with a 60-day comment period soliciting comments on the following collection of information was published on February 29, 2012 (77 FR 12364). No comments were received.

DATES: Written comments should be submitted by June 6, 2012.

FOR FURTHER INFORMATION CONTACT: Jeff Gorham, Office of Airline Information, RTS–42, Room E34, RITA, BTS, 1200 New Jersey Avenue SE., Washington, DC 20590–0001, Telephone Number (202) 366–4406, Fax Number (202) 366–3383 or Email *jeff.gorham@dot.gov.*

Comments: Send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725–17th Street NW., Washington, DC 20503, Attention: RITA/BTS Desk Officer.

SUPPLEMENTARY INFORMATION:

OMB Approval No.: 2138–0039.

Title: Reporting Required for International Civil Aviation Organization (ICAO).

Form No.: BTS Form EF.

Type of Review: Extension of a currently approved collection.

Respondents: Large certificated air carriers.

Number of Respondents: 40.

Number of Responses: 40.

Total Annual Burden: 26 hours.

Needs and Uses: As a party to the Convention on International Civil Aviation (Treaty), the United States is obligated to provide ICAO with financial and statistical data on operations of U.S. air carriers. Over 99% of the data filed with ICAO is extracted from the air carriers' Form 41 submissions to BTS. BTS Form EF is the means by which BTS supplies the remaining 1% of the air carrier data to ICAO.

The Confidential Information Protection and Statistical Efficiency Act of 2002 (44 U.S.C. 3501), requires a statistical agency to clearly identify information it collects for non-statistical purposes. BTS hereby notifies the respondents and the public that BTS uses the information it collects under this OMB approval for non-statistical purposes including, but not limited to, publication of both Respondent's identity and its data, submission of the information to agencies outside BTS for review, analysis and possible use in regulatory and other administrative matters.

Comments are invited on: Whether the proposed collection of information is necessary for the proper performance of the functions of the Department concerning consumer protection. Comments should address whether the information will have practical utility; the accuracy of the Department's estimate of the burden of the proposed information collection; ways to enhance the quality, utility and clarity of the information to be collected; and ways to minimize the burden of the collection of information on respondents, including the use of automated collection techniques or other forms of information technology.

Issued in Washington, DC on May 1, 2012.

Pat Hu,

Director, Bureau of Transportation Statistics, Research and Innovative Technology Administration.

[FR Doc. 2012–10909 Filed 5–4–12; 8:45 am]

BILLING CODE 4910–HY–P

DEPARTMENT OF TRANSPORTATION

Research & Innovative Technology Administration

[Docket ID Number RITA 2008–0002]

Agency Information Collection; Activity Under OMB Review; Submission of Audit Reports—Part 248

AGENCY: Research & Innovative Technology Administration (RITA), Bureau of Transportation Statistics (BTS), DOT.

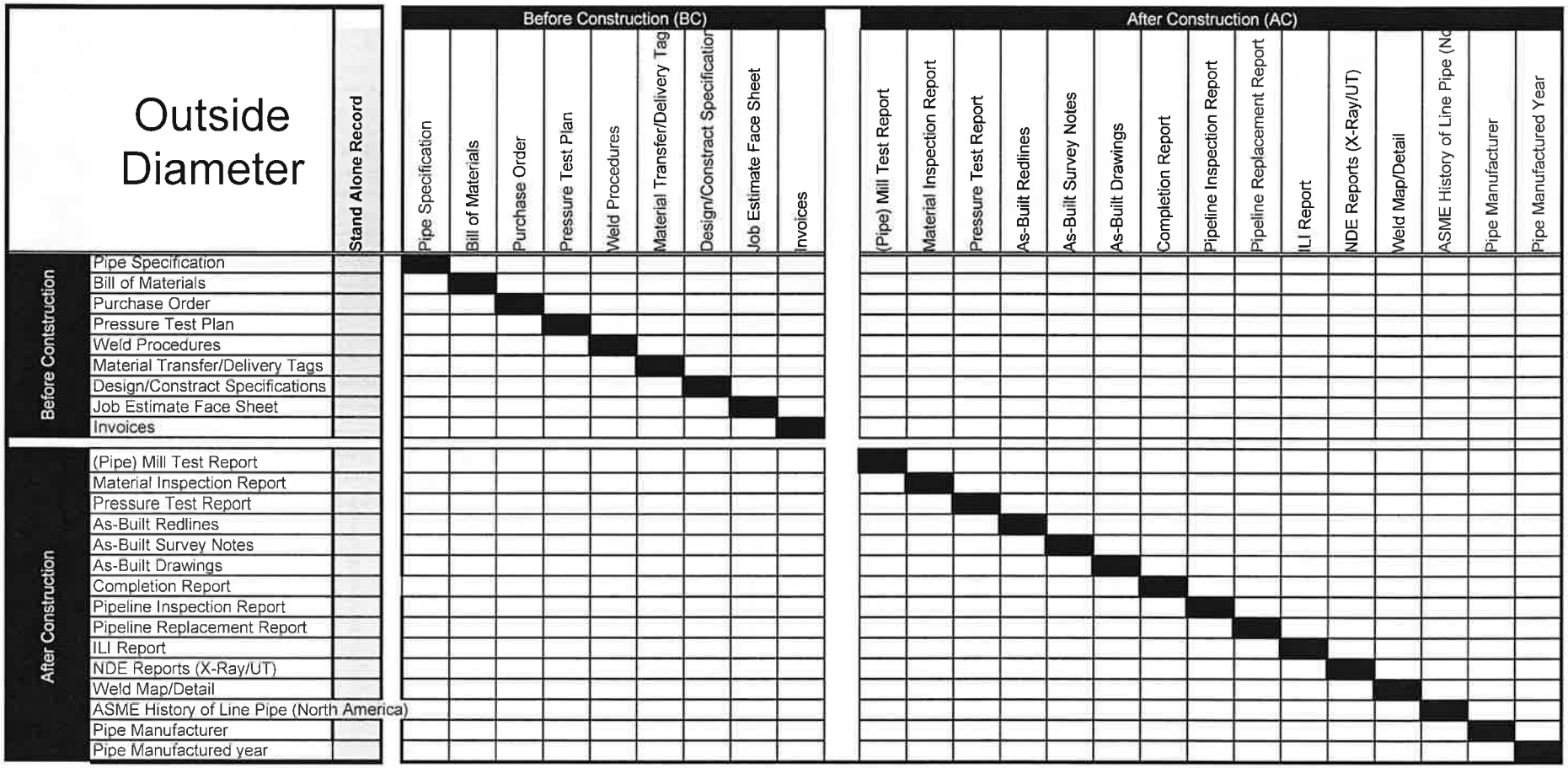
ACTION: Notice.

SUMMARY: In compliance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), this notice announces that the Information Collection Request (ICR) abstracted below has been forwarded to the Office of Management and Budget (OMB) for extension of currently approved collections. The ICR describes the nature of the information collection and its expected burden. The **Federal Register** Notice with a 60-day comment period soliciting comments on the following collection of information was published on February 29, 2012 (77 FR 12365). No comments were received.

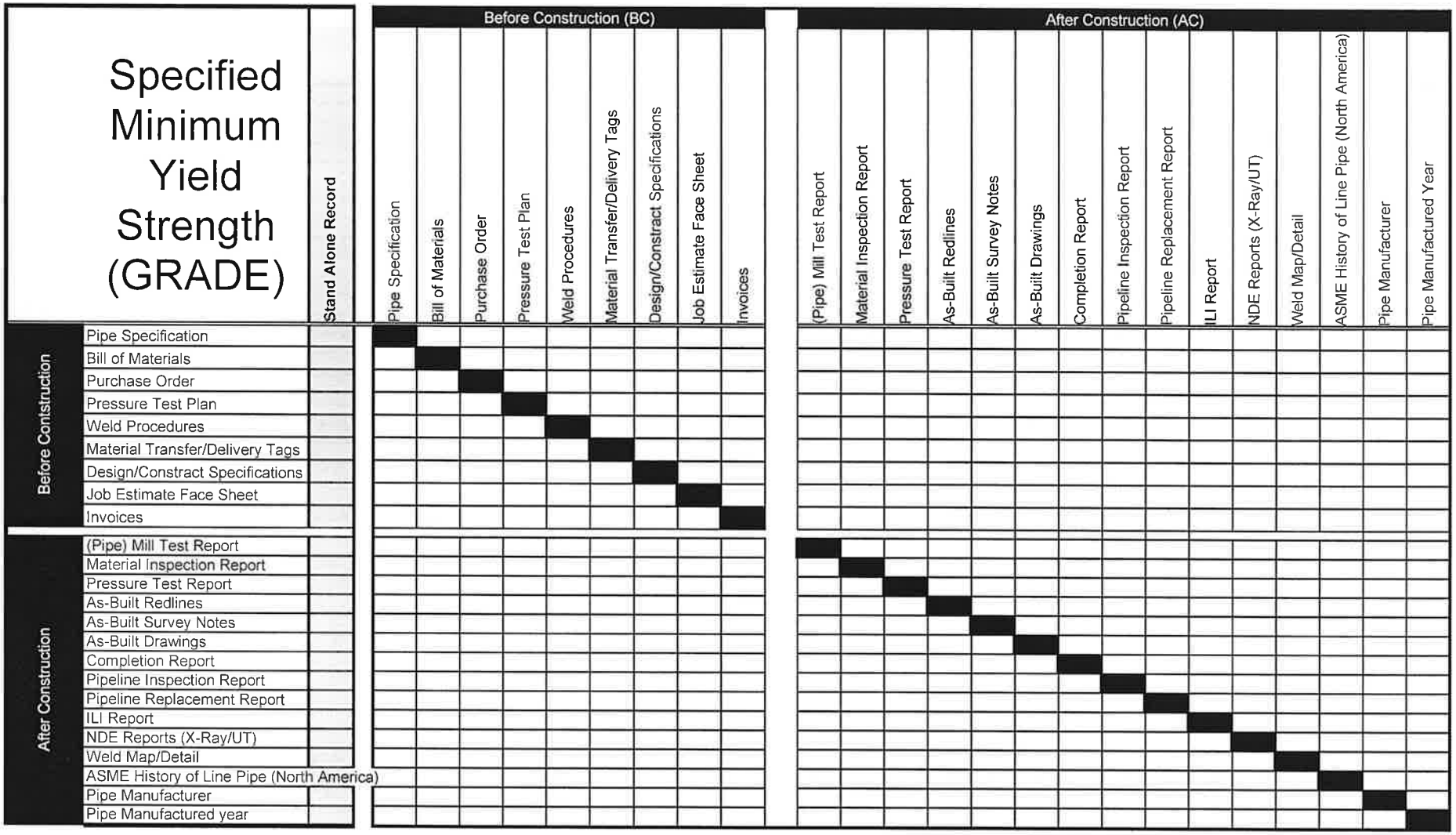
DATES: Written comments should be submitted by June 6, 2012.

FOR FURTHER INFORMATION CONTACT: Jeff Gorham, Office of Airline Information, RTS–42, Room E34, RITA, BTS, 1200 New Jersey Avenue SE., Washington,

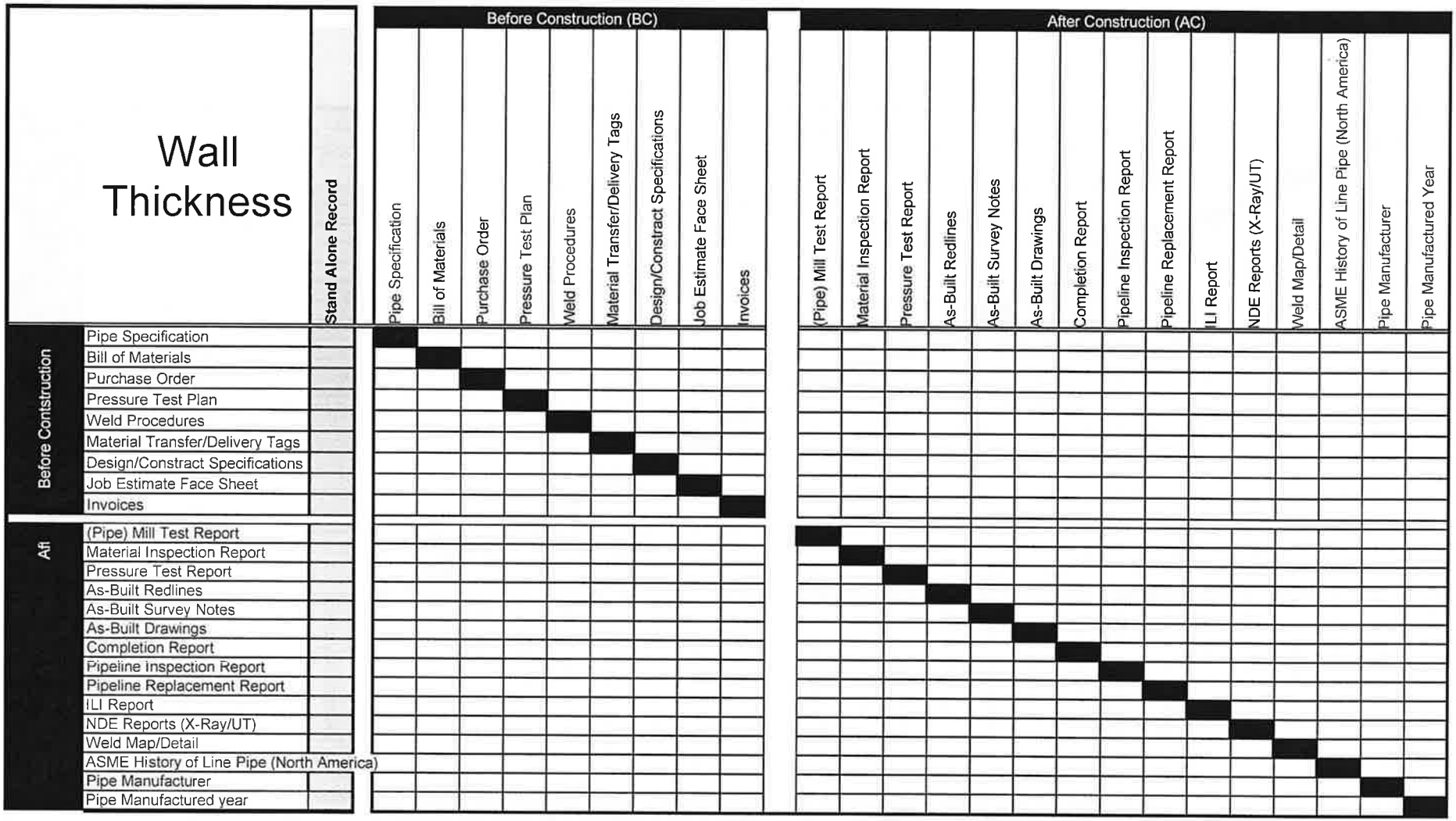
MAOP VERIFICATION - QUALITY /COMPLEMENTARY RECORD MATRICES



MAOP VERIFICATION - QUALITY /COMPLEMENTARY RECORD MATRICES



MAOP VERIFICATION - QUALITY /COMPLEMENTARY RECORD MATRICES



MAOP VERIFICATION - QUALITY /COMPLEMENTARY RECORD MATRICES

Long Seam	Stand Alone Record	Before Construction (BC)									After Construction (AC)															
		Pipe Specification	Bill of Materials	Purchase Order	Pressure Test Plan	Weld Procedures	Material Transfer/Delivery Tag	Design/Constract Specification	Job Estimate Face Sheet	Invoices	(Pipe) Mill Test Report	Material Inspection Report	Pressure Test Report	As-Built Redlines	As-Built Survey Notes	As-Built Drawings	Completion Report	Pipeline Inspection Report	Pipeline Replacement Report	ILI Report	NDE Reports (X-Ray/UT)	Weld Map/Detail	ASME History of Line Pipe (No	Pipe Manufacturer	Pipe Manufactured Year
Before Construction																										
Pipe Specification		■																								
Bill of Materials			■																							
Purchase Order				■																						
Pressure Test Plan					■																					
Weld Procedures						■																				
Material Transfer/Delivery Tags							■																			
Design/Constract Specifications								■																		
Job Estimate Face Sheet									■																	
Invoices										■																
After Construction																										
(Pipe) Mill Test Report											■															
Material Inspection Report												■														
Pressure Test Report													■													
As-Built Redlines														■												
As-Built Survey Notes															■											
As-Built Drawings																■										
Completion Report																	■									
Pipeline Inspection Report																		■								
Pipeline Replacement Report																			■							
ILI Report																				■						
NDE Reports (X-Ray/UT)																					■					
Weld Map/Detail																						■				
ASME History of Line Pipe (North America)																							■			
Pipe Manufacturer																								■		
Pipe Manufactured year																									■	

Exhibit G
Example Position Paper Process

Position Paper Application

Utilization of Pipe Vintage/Manufacturer Published Specifications to Verify Pipe Attributes

- Application: All Business Units
- When longitudinal seam information is incomplete, incorrect, or missing in the project documentation, the seam information can normally be determined from the ASME Research Report "History of Line Pipe Manufacturing in North America" and SME metallurgical information.

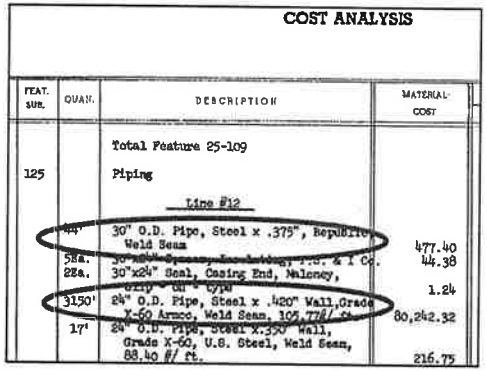
Position Paper Template

- Validation method when normal MAOP reconfirmation protocol may not apply
- Business case forum for pipe, hydrostatic test, or documentation location validation utilizing:
  - Application of engineering logic,
  - Utilization of multiple, complimentary records, and/or
  - Industry specific research
- Complete documentation preparation and tracking strictly enforced.
- Program Manager & Program Sponsor approval required.

Site Specific Application

- The 1977 Cost Analysis record shows the Armco 24" x .420, and the Republic 24" x .350 pipes as being "weld seam."
- SME metallurgical data shows Republic and Armco pipe manufactured in 1977 with a diameter of 24"as DSAW.
- The ASME Research Report History of Line Pipe in Manufacturing in North America shows that in 1977 Republic manufactured both DSAW and SMLS pipe in the 24" size. The weld seam reference eliminates the SMLS option.
- The ASME Research Report History of Line Pipe in Manufacturing in North America also shows that in 1977 Armco manufactured DSAW pipe in the 24" size.
- DSAW is verified as the Republic and ARMCO's pipe's longitudinal weld seam.

Applicable record



COST ANALYSIS

FEAT. SUB.	QUAN.	DESCRIPTION	MATERIAL COST
		Total Feature 25-109	
125		Piping	
		Line #12	
	44'	30" O.D. Pipe, Steel x .375", Republic, Weld Seam	477.40
	58a.	30"x24" Seal, Casing End, Maloney,	44.38
	28a.	[illegible]	1.24
	3150'	24" O.D. Pipe, Steel x .420" Wall, Grade X-60 Armco, Weld Seam, 105.77#/ft.	80,242.32
	17'	24" O.D. Pipe, Steel x .350" Wall, Grade X-60, U.S. Steel, Weld Seam, 88.40 #/ ft.	216.75