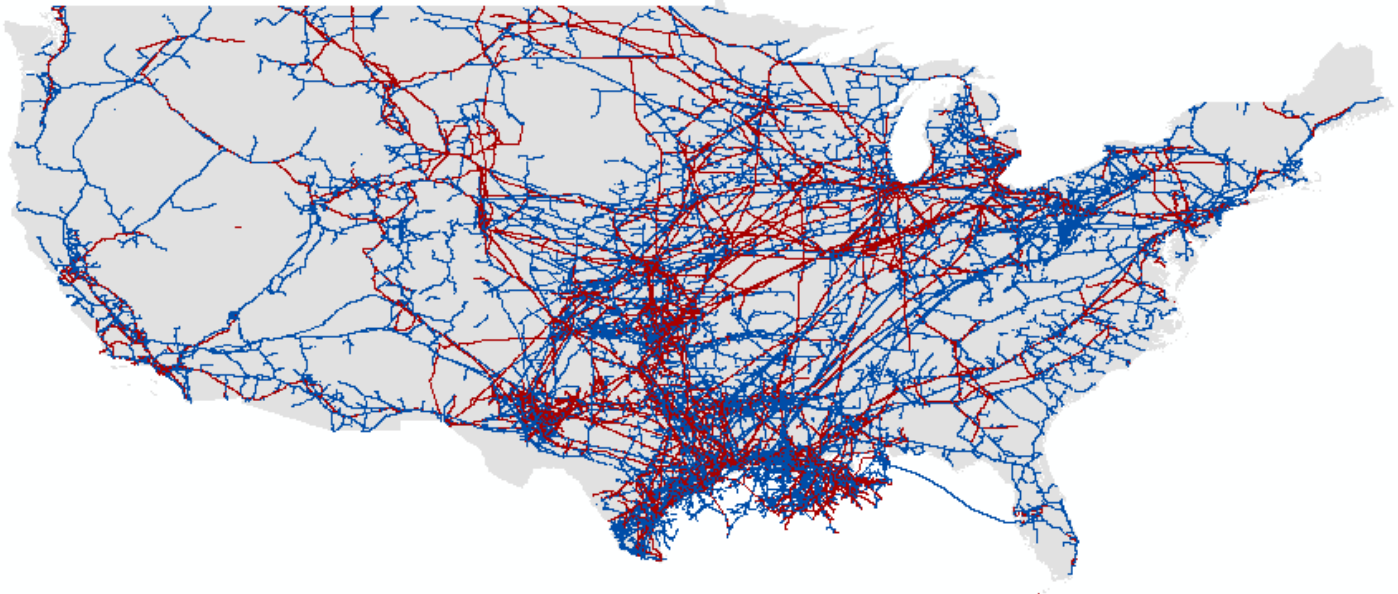


National Pipeline Mapping System

Standards for

Pipeline, Liquefied Natural Gas and Breakout Tank Farm Operator Submissions *January 2024*



www.npms.phmsa.dot.gov



**Pipeline and Hazardous
Materials Safety Administration**

Revisions to the Standards in January 2024 v2

1. In v2, the Building the Attribute Data File, which was Section 3.4 is now Section 3.5
2. In v2, The Required Diameter Values as NPS is now Section 3.4. This section was updated to include a more detailed description of the required Diameter attribute for pipelines. A list of acceptable Diameter values as Nominal Pipe Size is detailed in Figure 3-1.
3. Previously voluntary data elements now outlined as required, includes permanently abandoned pipelines, pipeline diameter, and breakout tank locations with attributes.
4. Breakout Tank Cover/Transmittal Letter was altered to collect required contact information as well as additional data previously collected from the breakout tank attributes table.
5. New required breakout tank attributes outlined in Appendix A.3
6. Removed The Acceptable Values for State Plane Category Table from Appendix A.3
7. Blank attribute templates in Excel format updated for pipelines and breakout tanks.
8. Blank file geodatabase templates created by NPMS staff for operator's convenience added to template zip files for pipelines, LNG plant, and breakout tank submissions.
9. PIMMA Accounts used for PIMMA and OSAVE Access now referenced as NPMS Accounts.
10. Removal of references and links to the Forgot Login tool – no longer available.
11. Updated NPMS Account online application links.
12. Based on operator and industry feedback, added more clarity to Section 4.1 about pipeline segments to omit from NPMS submittals.

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List of Acronyms

AA	Anhydrous Ammonia
AGA	American Gas Association
API	American Petroleum Institute
ASCII	American Standard Code for Information Interchange
BDB	Biodiesel Blend
BTS	Bureau of Transportation Statistics, U.S. Department of Transportation
CAD	Computer-Aided Drafting
CADD	Computer-Aided Drafting and Design
CO2	Carbon Dioxide
CRD	Crude Oil
CRW	Sweet Crude Oil
CRR	Sour Crude Oil
DOE	Department of Energy
EPG	Empty Gas
EPL	Empty Liquid
ETB	Ethanol Blended Gasoline
ETH	Fuel Grade Ethanol
FERC	Federal Energy Regulatory Commission
FGDC	Federal Geographic Data Committee
FTP site	File Transfer Protocol site
GIS	Geographic Information System
GPS	Global Positioning System
HG	Hydrogen Gas
HVL	Highly Volatile Liquid
INGAA	Interstate Natural Gas Association of America
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
MQAT	Joint Government-Industry Pipeline Mapping Quality Action Team
NAD27	North American Datum of 1927
NAD83	North American Datum of 1983
NG	Natural Gas
NG1	Pipeline Quality or Tariff Quality Natural Gas

NG2	Wet But Non-Sour Natural Gas
NG3	Sour But Non-Wet Natural Gas
NG4	Wet, Sour Natural Gas
NGL.....	Natural Gas Liquids
NPS.....	Nominal Pipe Size
NPMS.....	National Pipeline Mapping System
OBI.....	Other Biofuels
OHV	Other HVL
OMB	Office of Management and Budget
OPS.....	Office of Pipeline Safety
OPID.....	Operator Identification Number
OSAVE	Operator Submission And Validation Environment
OTG	Other Gas
OTR.....	Other Refined and/or Non-HVL Petroleum Products
PG	Propane Gas
PHMSA	Pipeline and Hazardous Materials Safety Administration
PRD.....	Product
RFD	Refined Fuel Oil, Diesel
RGS.....	Refined Non-Ethanol Blended Gasoline
RKJ.....	Refined Kerosene, Jet Fuel
ROW	Right-Of-Way
SG	Synthetic Gas
SMYS	Specified Minimum Yield Strength
SPCS.....	State Plane Coordinate System
USDOT	U.S. Department of Transportation
USGS.....	United States Geological Survey
UTM.....	Universal Transverse Mercator

List of Useful NPMS Website Links

National Pipeline Mapping System (NPMS):

<https://www.npms.phmsa.dot.gov>

Pipeline Operator page:

<https://www.npms.phmsa.dot.gov/PipelineOperator.aspx>

Pipeline Information Management and Mapping Application (PIMMA):

<https://www.npms.phmsa.dot.gov/PIMMA/>

Apply for Operator NPMS Account:

<https://www.npms.phmsa.dot.gov/ApplyForNPMSAccess.aspx>

Public Map Viewer:

<https://pvnnpms.phmsa.dot.gov/PublicViewer/>

Find Who's Operating Pipelines in Your Area:

<https://www.npms.phmsa.dot.gov/FindWhosOperating.aspx>

NPMS Operator Submission Supplemental Instructions:

https://www.npms.phmsa.dot.gov/Documents/NPMS_Supplemental_Instructions.pdf

Operator Submission And Validation Environment:

<https://www.npms.phmsa.dot.gov/OSAVE/>

Operator Submission And Validation Environment User Guide:

https://www.npms.phmsa.dot.gov/Documents/OSAVE_User_Guide.pdf

Summary of Required Components – Pipeline:

<https://www.npms.phmsa.dot.gov/RequiredComponentsSummary.aspx>

Overview of the Pipeline Submission Process:

<https://www.npms.phmsa.dot.gov/SubmissionProcessOverview.aspx>

NPMS Pipeline Shapefile and File Geodatabase template:

https://www.npms.phmsa.dot.gov/Documents/PIPE_SHP_FGDB_Template.zip

NPMS Pipeline Data Submission Attribute template:

https://www.npms.phmsa.dot.gov/Documents/NPMS_Pipeline_Data_Submission_Attribute_Table.xlsx

Summary of Required Components – LNG Plant:

<https://www.npms.phmsa.dot.gov/RequiredComponentsSummaryLNG.aspx>

NPMS LNG Plant Cover Letter template:

https://www.npms.phmsa.dot.gov/Documents/LNGplant_CoverLetter_Template.docx

NPMS LNG Plant Shapefile and File Geodatabase template:

https://www.npms.phmsa.dot.gov/Documents/LNG_SHP_FGDB_Template.zip

NPMS LNG Plant Data Submission Attribute template:

https://www.npms.phmsa.dot.gov/Documents/NPMS_LNG_Data_Submission_Attribute_Table.xlsx

Summary of Required Components – Breakout Tank:

<https://www.npms.phmsa.dot.gov/RequiredComponentsSummaryBOT.aspx>

NPMS Breakout Tank Cover Letter template:

https://www.npms.phmsa.dot.gov/Documents/BOT_CoverLetter_Template.docx

NPMS Breakout Tank Shapefile and File Geodatabase template:

https://www.npms.phmsa.dot.gov/Documents/BOT_SHP_FGDB_Template.zip

NPMS Breakout Tank Data Submission Attribute template:

https://www.npms.phmsa.dot.gov/Documents/NPMS_BOT_Data_Submission_Attribute_Table.xlsx

Preface

The NPMS standards and this document was prepared by the second Joint Government/Industry Pipeline Mapping Quality Action Team (MQAT II). The team was sponsored by the U.S. Department of Transportation (USDOT) Pipeline and Hazardous Materials Safety Administration (PHMSA), American Petroleum Institute (API), American Gas Association (AGA), and Interstate Natural Gas Association of America (INGAA). Representatives on the team included PHMSA, Bureau of Transportation Statistics (BTS), U.S. Department of Energy (USDOE), U.S. Geological Survey (USGS), Federal Energy Regulatory Commission (FERC), state representatives from California, Louisiana, New York, and Texas, and representatives from the pipeline industry. This document has since been maintained with updates by NPMS staff.

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Introduction

The National Pipeline Mapping System is a program within the Pipeline and Hazardous Materials Safety Administration (PHMSA) that collects, processes, and disseminates geospatial data. The NPMS contains the location and selected attributes of hazardous liquid and gas transmission pipelines located onshore and offshore, liquefied natural gas (LNG) plants, and breakout tanks operating in the United States and subject to PHMSA reporting requirements. The NPMS also contains contact information for pipeline operators that is accessible to the public.

PHMSA works with other governmental agencies and private organizations to add other relevant data layers to the system. These include layers on high consequence areas, hydrography, and transportation networks. PHMSA uses the system to 1) depict pipelines in relation to populated areas and natural resources, 2) coordinate information with other governmental agencies, 3) provide regulatory oversight, 4) better prepare for a possible pipeline release, and 5) work with governmental agencies and private industries in the event of a release.

The NPMS is built and maintained using information supplied by pipeline and LNG plant operators. On an annual basis, operators are required to provide geospatial and attribute data about their operations as well as contact information.

1.1 Regulatory Requirements

The [Pipeline Safety: Miscellaneous Changes to Pipeline Safety Regulations](#) rulemaking requires that pipeline operators provide information to PHMSA appropriate for use in the NPMS, and references this document (NPMS Operator Standards Manual) as specifying acceptable formats and additional information. 49 CFR 195.61 pertains to hazardous liquid pipeline operators and 49 CFR 191.29 pertains to gas transmission and LNG plant operators. This rule became effective on October 1, 2015 and supersedes the Pipeline Safety Improvement Act of 2002. The Department of Transportation is utilizing the National Pipeline Mapping System to handle all geospatial pipeline data. The regulations state that operators must annually submit:

- Data appropriate for use in the National Pipeline Mapping System (NPMS). A complete data submission includes the geospatial data, attribute data, and transmittal letter (metadata) for all LNG, hazardous liquid, and natural gas transmission pipeline systems operated by a company.
- The name and address of the person with primary operational control to be identified as its operator.
- Public contact information, which is used by members of the public to contact the operator for additional information about pipeline holdings.
- Annual updates of the above information to reflect changes.

Data updates and data accuracy verification are discussed further in Section 1.4.

It is requested that the data have a **minimal** positional accuracy of ± 500 feet of its known geographic location. Research indicates that most operators can easily achieve ± 500 foot accuracy with current in-house data records.

Information Collection 2137-0596 requires that all pipeline facilities previously subject to NPMS submission regulations and abandoned as of December 31, 2023, be submitted as part of an operator's annual NPMS submission. Additionally, according to 49 CFR 195.59 (a) and 49 CFR 192.727 (g) Abandonment or Deactivation of Facilities: "For each abandoned offshore pipeline facility or each abandoned onshore pipeline facility that crosses over, under or through a commercially navigable waterway, the operator of that facility must file a report upon abandonment of that facility." In addition to the NPMS-required attributes, operators must submit a letter that contains the date of abandonment, diameter,

method of abandonment, and certification that, to the best of the operator's knowledge, all of the reasonable available information requested was provided and, to the best of the operator's knowledge, the abandonment was completed in accordance with applicable laws. A template to assist operators in providing this information is available in Appendix B of this document; additionally, a MS Word version of the template is available on the Making a NPMS Submission page on the NPMS website (www.npms.phmsa.dot.gov).

Note: *Once a pipeline is officially abandoned in the NPMS, do not include it in future NPMS submissions. Please contact NPMS staff if you are unsure of which lines are currently abandoned in the NPMS for your company. Since abandonment is permanent, abandoned pipelines are disassociated from your Operator ID and your company's abandoned lines will not appear when you log in to PIMMA; however, pipelines previously reported as abandoned by the OPID may be viewed via the Operator Submission And Validation Environment (OSAVE).*

As of March 2023, the Office of Management and Budget (OMB) approved changes to the NPMS information collection. For planning purposes, you can access the Future Attribute Standards and Revision Summary from the Pipeline Operator section of the NPMS website. That document outlines changes approved by OMB, data submission requirements planned for those changes, and implementation timelines. The official NPMS Operator Standards Manual (this document) will be updated by January 1st each year to reflect the updated requirements for NPMS submissions reported during that year. For example, new changes required in NPMS submissions received during 2026 (reflecting operations as of 12/31/2025) will be reflected in an updated NPMS Operator Standards Manual published by January 1, 2026.

1.2 Development of NPMS and Standards for Data Submission

A Joint Government/Industry Pipeline Mapping Quality Action Team (MQAT II) was formed to work with PHMSA on creating the digital pipeline location and attribute layer of the NPMS. The team was sponsored by PHMSA, American Petroleum Institute (API), American Gas Association (AGA), and Interstate Natural Gas Association of America (INGAA), and included representatives from multiple federal and state governmental agencies, and the natural gas and hazardous liquid pipeline industry.

MQAT II drafted standards and incorporated appropriate recommendations from outside entities, including comments from mapping vendors, pipeline operators, and state agencies outside the MQAT II. The standards underwent two pilot tests. These tests helped to determine the:

- Ability of pipeline operators to submit data that meet the standards,
- Problems they encountered while trying to meet the standards,
- Cost and effort required to meet the standards,
- Usability of data formats other than those in the standards, and
- Ability of the pilot repositories to process the submitted data based on the draft standards.

To the greatest extent possible, MQAT II resolved the problems encountered in both pilot tests in an effort to further minimize the time and effort required to meet the standards. The majority of the operators and repositories that participated in the pilot tests stated that the standards were clear and could be met without an undue burden on their company.

Various state agencies currently request or require that operators submit pipeline and LNG data to them. Some state agencies are using the operators' data to create a digital pipeline and LNG layer for their state. NPMS does not supersede or replace state regulations. Operators must still comply with all applicable state regulations.

1.3 Data Submission Due Dates, Data Updates, and OSAVE

1.3.1 Annual Resubmission Requirement

Operators are required to examine their existing gas transmission pipeline, hazardous liquid pipeline, LNG plant and breakout tank data in the NPMS every year and report changes or verify the accuracy of the previously submitted data. NPMS submissions are used to fulfill this annual requirement. You can read about the types of NPMS submissions in Section 2.1, and information throughout this document explains differing submission requirements and procedures for pipelines, LNG plants and breakout tanks. To report geospatial changes, the NPMS prefers that operators resubmit the entire pipeline, LNG plant, or breakout tank system except for previously abandoned lines, plants, or tanks. Do not resubmit lines, plants, or tanks already submitted as abandoned to the NPMS. If you are unsure of which lines, plants, or tanks are already in the NPMS as abandoned for your company, please contact NPMS Staff at npms@dot.gov. Operator ID (OPID) numbers and contact information for the submission must be included.

Effective October 1, 2015 operators submit their NPMS data concurrently with hazardous liquid, breakout tank, LNG plant, and gas transmission annual report submissions to PHMSA. Annual reports are due on March 15 each year for gas transmission and LNG plant operators and on June 15 for hazardous liquid and breakout tank operators. The data included in the submission must reflect conditions in the field as of December 31 of the previous year. NPMS staff appreciates early submissions (as early as January 1, depending on OSAVE availability). Submissions are processed by NPMS staff in the order they are received.

For those operators reporting both gas transmission and hazardous liquid pipelines under one OPID, PHMSA prefers a single NPMS submission containing the changes for both the gas transmission and hazardous liquid pipelines reflecting as of December 31 of the previous year by March 15. If the operator is submitting both updated hazardous liquid and gas transmission pipelines in a single submission, the operator should clearly indicate that both types reflect as of December 31 of previous year on the cover/transmittal letter that accompanies the submission (a form to collect all transmittal letter components is integrated in the OSAVE submission workflow). If the operator is unable to submit updated hazardous liquid and gas transmission pipelines in a single submission by March 15, the operator must complete a submission with only the gas transmission pipelines by March 15, and a second submission with only the hazardous liquid pipelines by June 15. In this case the March 15th submission cannot contain hazardous liquid pipelines and the June 15th submission cannot contain gas transmission pipelines. Both individual submissions should be accompanied by all required components of the submission. The OSAVE transmittal letter components in the individual submissions should clearly denote the pipeline type included in the submission and the as-of year reflected. When NPMS staff receive a submission containing only the gas transmission pipelines they conduct a cursory review of the submission and notify the operator. NPMS staff will conduct the full submission review and processing after receiving the hazardous liquid submission.

Each year operators must report the same gas transmission and hazardous liquid operations and mileage on the annual report and NPMS submittal to PHMSA. Operators must use the same OPID number to report a pipeline, LNG, or breakout tank asset in both the annual report and NPMS submission, as well as for other PHMSA reporting requirements (e.g., incidents or national registry notifications). Synchronizing the OPID numbers alleviates confusion in identifying

operator assets and improves PHMSA's ability to accurately describe the pipeline, plant or tank operated by a specific pipeline operator. The ability to accurately identify and track operator physical assets is beneficial to PHMSA, pipeline operators, and all stakeholders who utilize our data, and ultimately helps promote pipeline safety.

PHMSA encourages operators to submit data prior to the deadlines. Submitting early will speed submission processing and provide time for NPMS staff to notify operators if a submission is incomplete. Submissions reflecting December 31 of the previous year will be accepted starting January 1 of the current year (e.g., submissions reflecting assets as of December 31, 2022, will be accepted starting January 2, 2023).

If operators have no changes since their previous NPMS submission, a No Change Notification may be submitted to the NPMS in lieu of making a data submission. If all the data currently in the NPMS for the OPID should be removed to reflect a change in classification (e.g., all pipelines downgraded to distribution, or all pipelines approved for transfer to DOI/BSEE jurisdiction), permanent abandonment, or divestiture, a request to remove all pipeline, LNG plant or breakout tank data from the NPMS may be submitted in lieu of making a data submission as well. As with all removals from the NPMS, the operator must include an explanation for the removal. NPMS staff will validate this explanation prior to accepting the request to remove all data from the NPMS.

PHMSA has developed the Operator Submission And Validation Environment (OSAVE) to assist operators with the pipeline submission process. OSAVE is a one-stop shop for operators to:

- Review the pipeline, LNG plant and breakout tank data currently in the NPMS national layer for the OPID via a web map viewer,
- View the NPMS pipeline submission history for the OPID,
- Update information for the pipeline submission OPID's primary, technical, and public contacts,
- Convey a notification of no changes for pipelines,
- Mark desired attribute edits and spatial deletions for the OPID's pipelines via a web map viewer in lieu of a traditional data submission,
- Submit pipeline data to be added to existing data in the NPMS national layer for the OPID in lieu of a traditional data submission,
- Submit pipeline data intended to fully replace existing feature(s) in the NPMS national layer for the OPID (traditional data submission),
- Request that all pipelines in the NPMS national layer for the OPID be removed, and
- Submit LNG plant and breakout tank submission data to the NPMS for the OPID.

[OSAVE](#) is accessible from the internet and requires a NPMS account to login. If you do not have a NPMS account, please complete the [online application](#) on the NPMS website. Sharing of NPMS accounts between individuals is expressly prohibited by multifactor authentication (MFA) protocols and in the NPMS Access Policy. A contractor (e.g., consultant, subcontractor) cannot request a NPMS account. However, if you have a consultant/subcontractor working on the NPMS data submission on your behalf, and you have an active NPMS account, you may opt to sponsor a NPMS contractor account for your consultant provided you have a confidentiality agreement in place that states that the login will only be used for the purposes of the project and will not be redistributed. NPMS contractor accounts can access the same NPMS data and functionality in OSAVE as the sponsor NPMS account holder. The operator (NPMS Sponsor) takes responsibility for the consultant's usage in accordance with the NPMS Access Policy. At the end of the contracted

period, the NPMS Sponsor must terminate the consultant's access. An active pipeline operator NPMS account holder can read about the NPMS Sponsor process, requirement and submit a request from the [NPMS Sponsor Request](#) page.

The OSAVE map viewer is updated approximately every other month with newly processed data. If your submission data was recently incorporated into the NPMS national layer but is not yet viewable on the map viewer, please contact NPMS staff for information regarding the potential "live" date.

For additional information regarding the Operator Submission And Validation Environment (OSAVE), please refer to the [OSAVE User Guide](#) and the [About OSAVE page](#) from the [NPMS website](#).

1.3.2 OPID Contact Information

All operators must submit primary, technical, and public contact information for their pipeline systems. The public contact information is intended to be used by private citizens outside of PHMSA and the pipeline industry. The public contact information is posted on the NPMS website for any visitor to access. The primary and technical contacts are intended for PHMSA use in case they have questions regarding your company's submission or need to communicate NPMS changes to the operator community. The contact information should be reviewed, submitted, and updated via the Update OPID Contact Information section within [OSAVE](#) for pipeline submissions. The contact information may be updated at any time throughout the year or by email for LNG plant and breakout tank submissions. Please see Section 5 for a detailed explanation of the type of information that is required.

1.4 Distribution of NPMS Data

Federal, tribal, state, and local governmental agencies, emergency responders and the pipeline industry may request access to all or portions of the pipeline, LNG, and breakout tank GIS data from the NPMS. PHMSA distributes GIS data reflecting high consequence areas, as collected from various government, security sensitive and proprietary data sources, to the extent permitted by the data source. The data collected for the NPMS is necessary for regulatory oversight and for monitoring pipeline security. In 2007, a [Public Viewer](#) was launched. The Public Viewer allows the general public to view maps of and information from the NPMS in a user-specified county with map scale and attribute limitations.

One of the goals of the NPMS is to assist operators in progressing toward a digital mapping environment. Upon request, digital pipeline, LNG plant, and breakout tank data is provided to the contributing operator at no cost. The NPMS may charge a fee for other products and services. The data contained in the NPMS are for reference purposes only and are not to be construed as actual survey-quality data or as a replacement for contacting 811 or a one-call center.

1.5 About these Standards

These standards were created with input from the pipeline industry, governmental agencies, and the public. They address the submission of digital pipeline, LNG, and breakout tank data to support the development of a reasonably accurate NPMS. Operators are responsible for providing data that complies with these standards. The following sections discuss in detail the format, content, and quality of pipeline, LNG plant, and breakout tank data that are to be submitted for inclusion into the NPMS. Three types of data are required: geospatial data (location information), attribute data (descriptive information), and metadata (data about the data). A cover/transmittal letter, separate metadata file, and contact information for the pipeline operator are required components; however, the OSAVE workflow eliminates the need for each of these components to be submitted as separate files within a data package. Instead, the cover/transmittal letter information metadata, and primary, technical, and public contact information are

incorporated into the submission workflow as a series of questions for pipeline submissions only. See Section 5 for more details about contact information. OSAVE may be used to view the location and attributes of existing LNG plants and breakout tanks for an OPID, and to submit a complete data package for LNG plants or breakout tanks via the corresponding related tools. OSAVE cannot be used to submit a notification of no changes for LNG plants or breakout tanks. Operators should refer to the instructions specifically for LNG plants or breakout tanks for additional details.

2. General Requirements (Key Terms and Definitions)

This section establishes general NPMS terms and requirements.

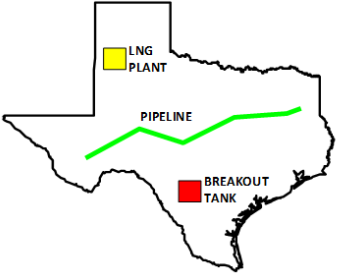
Geospatial Data	Attribute Data	Metadata	Contact Information						
<p>Digital data with lines and/or points marking the location of pipelines, LNG Plants, and breakout tanks.</p> 	<p>A computer database containing descriptive information about pipelines or LNG Plants. There is one record in the database for each <i>pipeline segment</i>.</p> <table border="1" data-bbox="456 621 738 982"> <tr> <td>Pipeline Attribute Table</td> </tr> <tr> <td>Descriptive Field 1</td> </tr> <tr> <td>Descriptive Field 2</td> </tr> <tr> <td>Descriptive Field ...</td> </tr> <tr> <td>LNG Attribute Table</td> </tr> <tr> <td>Descriptive Field 1 ...</td> </tr> </table>	Pipeline Attribute Table	Descriptive Field 1	Descriptive Field 2	Descriptive Field ...	LNG Attribute Table	Descriptive Field 1 ...	<p>Descriptive information about how the geospatial and attribute data were prepared (i.e. data about data). This information includes the data projection, datum, and units.</p>	<p>Information about the person or entity who serves as a contact for the pipeline system. Contains either a person's name and title or the name of an entity. Also contains address, phone, and email information.</p>
Pipeline Attribute Table									
Descriptive Field 1									
Descriptive Field 2									
Descriptive Field ...									
LNG Attribute Table									
Descriptive Field 1 ...									

Figure 2-1. The Types of NPMS data

The NPMS includes location and selected attributes of hazardous liquid and gas transmission pipelines, LNG plants, and breakout tanks. Information on other types of pipelines and facilities are not required at this time. **Pipelines and facilities other than those described below cannot be included in your NPMS submission.**

Gas Transmission Line: A pipeline system, other than a gathering line, that:

1. Transports gas from a gathering line or storage facility to a distribution center, storage facility, or large-volume customer that is not downstream from a distribution center. A large-volume customer may receive similar volumes of gas as a distribution center, and includes factories, power plants, and institutional users of gas.
2. Operates at a hoop stress of 20 percent or more of specified minimum yield strength (SMYS) or
3. Transports gas within a storage field.
4. Is voluntarily designated by the operator as a transmission pipeline.

Additional information about PHMSA-regulated gas lines is in [CFR §192](#).

Hazardous Liquid Line: A pipeline system that transports hazardous liquids and is covered by 49 CFR Part 195, (some exceptions include non-regulated gathering lines and in-plant pipelines). Hazardous liquids include petroleum, petroleum products, anhydrous ammonia, and ethanol or other non-petroleum fuel, including biofuel, which is flammable, toxic, or would be harmful to the environment if released in significant quantities.

Additional information about PHMSA-regulated liquid lines is in [CFR §195](#).

Regulated Rural Hazardous Liquid Gathering Lines: a regulated rural gathering line means an onshore gathering line in a rural area that meets all of the following criteria:

1. A nominal diameter from 6.625 to 8.625 inches.
2. Is located in or within one-quarter mile (.40 km) of an unusually sensitive area as defined in §195.6; and
3. Operates at a maximum operating pressure established under §195.406 corresponding to a stress level greater than 20% of SMYS, or if the stress level is unknown, or the pipeline is not constructed with steel pipe, at a pressure of more than 125 pounds per square inch (psi) gauge.
4. Located in or within a quarter mile of an Unusually Sensitive Areas as defined in §195.6.

GIS data layers depicting locations that meet the definition of certain unusually sensitive areas are available to pipeline operators as a starting point for determining whether their liquid lines are jurisdictional. Operators can download or read about requesting access to this GIS data from the Pipeline Operator section of the NPMS website.

LNG Facility: A pipeline facility that is used for liquefying natural gas or synthetic gas or transferring, storing or vaporizing liquefied natural gas (49 CFR 193.2007).

LNG Plant: An LNG facility or system of LNG facilities functioning as a unit (49 CFR 193.2007).

Breakout Tank: A tank used to a) relieve surges in a hazardous liquid pipeline system or b) receive and store hazardous liquid transported by a pipeline for re-injection and continued transportation (49 CFR 195.2).

Pipeline system: All parts of a natural gas transmission line or hazardous liquid line through which gas or hazardous liquid is transported. By definition, only one firm can operate a pipeline system. Operators should assign unique and consistent names to each of their pipeline systems. A pipeline system may have an unlimited number of branches. Each pipeline system must be represented by one or more pipeline segments.

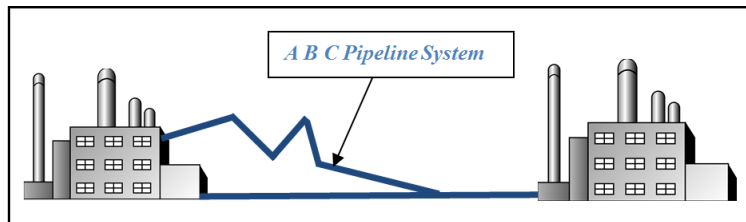


Figure 2-2. Sample of annotated pipelines system

Pipeline segment: A linear feature representing part or all of a pipeline system. A pipeline segment must have only two ends. No branches are allowed. A pipeline segment may be a straight line or may have any number of vertices. Each pipeline segment must be uniquely identified. The number of pipeline segments should be kept to the minimum needed to represent a pipeline system and its associated attributes. A unique line segment in the computer-aided drafting (CAD) or GIS dataset should represent each pipeline segment.

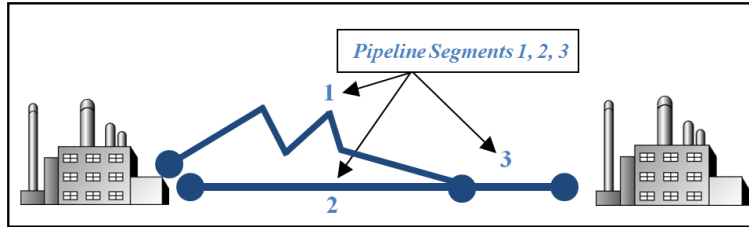


Figure 2-3. A pipeline system consisting of three pipeline segments

A pipeline system should be broken into multiple pipeline segments for only two reasons:

1. To represent a branch or intersection with another pipeline segment, and/or
2. To allow for a change of associated attributes such as diameter.

Pipeline intersection: A point where a physical connection between two pipelines occurs. A commodity from one pipeline can flow into another pipeline(s), either through a branch within a pipeline system or a connection between two pipeline systems. When submitting digital geospatial data, line segments in the CAD or GIS data set should be broken at the point of intersection. The intersection will be a common endpoint (node) representing the two pipeline segments.

Pipeline crossing: A point where two or more pipelines cross, but where there is no physical connection between the pipelines. Pipeline segments should not be broken at pipeline crossings.

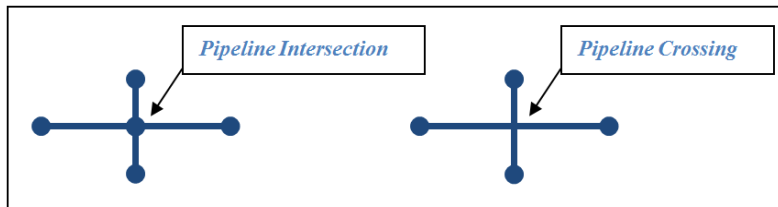


Figure 2-4. Sample annotation of pipeline intersection and pipeline crossing

Pipeline corridor: A pipeline corridor is a linear area where two or more pipelines (either part of the same or different pipeline systems) are closely grouped in a single right-of-way. Each line in a pipeline corridor must be represented as a separate segment including its unique attributes.

2.1 Types of NPMS Submissions

Operators must classify submissions according to one of the following types. The various types of submissions are intended to facilitate maintenance of the NPMS and minimize the effort required by operators. OSAVE is the method pipeline data submissions are conveyed to NPMS staff. The OSAVE workflow eliminates the need for the type of pipeline submission to be identified in a separate cover/transmittal letter. Instead, operators select the type of pipeline submission before submitting any actions through the submission workflow. However, the type of submission must be identified in the cover/transmittal letter accompanying a LNG plant or breakout tank submission.

INI – Initial Submissions to the NPMS contain data for a first-time submittal for a given OPID. If data has ever been submitted under your OPID in the past, then you cannot make an Initial Submission under that OPID again. The revision codes (REVIS_CD) of all pipeline segments should be set to **“C”** for addition due to construction; **“J”** for addition due to an asset that is new to the NPMS reporting requirement (e.g., upgraded from gas gathering to gas transmissions, new to Part 195 reporting requirement); or **“A”** for addition due to reasons other than new construction or newly subject to NPMS submission requirements.

FRP – Full Replacement Submissions should be made whenever it is necessary to apply changes to your data. A full replacement must include all data for your OPID as you want it to appear online after processing because it will replace all previously submitted data. **Abandoned lines should not be included in this resubmission if they were previously reported to the NPMS as abandoned (e.g., abandoned prior to this reporting year). Contact NPMS Staff at npsms@dot.gov if you are unsure which abandoned lines your company previously submitted.* The revision codes (REVIS_CD) for pipeline segments may be **“C”** for addition due to construction; **“J”** for addition due to an asset that is new to the NPMS reporting requirement (e.g., upgraded from gas gathering to gas transmissions, new to Part 195 reporting requirement); **“A”** for addition due to reasons other than new construction or newly subject to NPMS submission requirements; **“S”** for spatial modification; **“T”** for attribute modification; **“B”** for both spatial and attribute modification; or **“N”** for no change.

RMV – Removal of OPID Submissions should only be made when all of the data under your OPID needs to be removed from the NPMS for one of the following reasons:

1. All pipelines were sold/divested to another OPID/operator and are no longer operated under the previous OPID;
2. All pipelines are no longer classified as gas transmission (reclassified to gas gathering or distribution) or hazardous liquid pipelines are no longer subject to Part 195 Subpart B reporting requirements).
3. All pipelines were physically removed from the ground (does not include pipelines that are abandoned in place); or
4. All pipelines were permanently abandoned in place. (Abandoned pipelines are not removed from the NPMS because they are a required submission component. Rather, NPMS staff will convert all pipelines associated with your OPID into a permanently abandoned status, which disassociates them from your OPID).

If any one of these scenarios describes all of the pipelines previously submitted to the NPMS under your OPID, you should submit a Request for Removal of OPID via the OSAVE tool. The OSAVE workflow eliminates the need for a removal request to be submitted using the cover/transmittal letter as required in the past. Instead, the type of pipeline data removal, reason for pipeline data removal, and effective date of pipeline data removal are incorporated into the submission workflow as a series of questions. Additionally, if the pipelines were sold, the transaction date, company

name, contact name, and phone number where NPMS staff can reach the new operator to verify the sale are also incorporated into the submission workflow as a series of questions.

If any of these scenarios describes only some of the pipelines previously submitted to the NPMS under your OPID, the type of submission needed will depend on the type of changes and how your data was previously submitted to the NPMS. If the only changes to your OPID are the removal of a subset of entire pipeline segments due to any of the scenarios described above, you may submit edits via the OSAVE map viewer in place of a traditional data submission. However, if the changes to your OPID are a removal of partial pipeline segments (i.e., requires a spatial change to the location of the previously submitted pipeline segment), a full replacement data submission is required. The OSAVE workflow eliminates the need for each of the required components to be submitted as separate files within a data package as required in the past.

For a Removal of all LNG plants or breakout tanks previously submitted to the NPMS under your OPID, please complete the cover/transmittal letter only (see Section 2.2). Under Question 4 of the cover/transmittal letter, include an explanation of why all of the LNG plant or breakout tank data under this OPID should be removed from the NPMS, including an effective date for the change. If the LNG plants or breakout tanks were sold, include the transaction date, company name, contact name, and phone number where NPMS staff can reach the new operator to verify the sale. If any removal scenario describes only some of the LNG plants or breakout tanks previously submitted to the NPMS under your OPID and no other changes have occurred, you may complete the cover/transmittal letter only. Be sure to clearly identify the LNG plants and breakout tanks that need to be removed, the reason for removal, the effective/transaction date, and if sold, the buyer's contact information, in place of a traditional LNG or Breakout Tank data submission. Do not use OSAVE to submit a removal of all LNG plant or breakout tank data previously submitted to the NPMS under your OPID; this option is only available to remove all pipelines previously submitted to the NPMS under your OPID.

NC – Notification of No Changes should only be made when all of the pipeline, LNG plant, or breakout tank previously submitted to the NPMS under your OPID is accurate and no operational changes occurred during the reporting year. In other words, the pipeline, LNG plant or breakout tank data previously submitted to the NPMS under your OPID still accurately reflects the spatial location and attribute values as of December 31 of the previous year. This notification fulfills the yearly NPMS submission requirement. The best method for submitting a notification of no changes depends on the system type:

1. For pipeline submissions use OSAVE, which is accessible on the [Pipeline Operator](#) page on the NPMS website or directly via <https://www.npms.phmsa.dot.gov/OSAVE/>.
2. For LNG plant or breakout tank submissions, send an email to npms@dot.gov. The content of the email should include the OPID, system type (LNG plant or breakout tank), a statement saying that the data previously submitted accurately reflects operations as of 12/31 of the previous year, and either a statement saying that the primary or technical contact information has not changed or provide updated primary or technical contact information in the email. Sample email content may include:
 - a. "There have been no changes to the <"LNG plant" or "breakout tank"> operations or NPMS data for OPID 12345 since the last submission. Additionally, there are no changes to the primary or technical contact information".
 - b. "The <"LNG plant" or "breakout tank"> data previously submitted to the NPMS for OPID 12345 still accurately reflects operations as of 12/31 of the previous year. The primary or technical contact information has changed as follows:".

2.2 Cover/Transmittal Letter Requirement

All submissions must be accompanied by a cover/transmittal letter. This letter is meant to provide NPMS Staff with key information for processing your submission. The content of the letter is dependent upon if your submission is for pipeline, LNG plant, or breakout tank data.

If you are submitting pipeline data, the OSAVE workflow, which includes the cover/transmittal letter-related questions, eliminates the need to submit this component as a separate file within a data package.

If you are submitting LNG plant or breakout tank data, a separate cover/transmittal letter must be included in your LNG or breakout tank data package. The [Summary of Required Components for LNG Plant Submissions](#) page on the NPMS website has a downloadable template with all required questions for LNG plant submissions. The [Summary of Required Components for Breakout Tank Submissions](#) page on the NPMS website has a downloadable template with all the required questions for breakout tank submissions. Operators may compile their own letter including the following items:

Pipeline Data Submissions

Please note that submitting via the OSAVE workflow eliminates the need for the following questions to be submitted as a separate cover/transmittal letter file within a data package as required in the past. Instead, the cover/transmittal letter-related questions are incorporated into the submission workflow as a series of questions. If OSAVE is not used to submit to the NPMS, these questions must be included the cover letter:

1. The submission and operator information (i.e., the Operator ID and the Operator Name).
2. Provide the primary, technical, and public contact information of the OPID. The full name, job title, company name, work mailing address, work phone number, and work email address should be included for each contact person. (NOTE: *You can review your contact information on the [NPMS website](#) by logging into [OSAVE](#)*)
 - a. **The Primary Contact (required).** This person must be an employee of the operator and is only used by NPMS staff for questions about the Operator ID and its pipelines. This contact also receives general notifications from the NPMS that impact submissions, such as when the NPMS Operator Standards is updated or a reminder to operators about the submission deadline dates.
 - b. **The Technical Contact (required).** This person puts together the submissions to the NPMS and is only used by NPMS staff for questions about the submission(s) made to the NPMS. This person may be an employee of the operator or a designated contractor. If the same person as the primary contact fulfills the role of the technical contact, then clearly state that the contact represents both the primary and technical contact.
 - c. **The Public Contact (required).** This person must be an employee of the operator and is expected to receive communications from the general public, emergency responders as well as local, state, and federal government staff. The contact that is chosen to be responsible for handling public questions about their pipelines may be either an individual (e.g., “Joe Smith”) or an entity (e.g., “Public Relations Department”).
3. Does this pipeline data reflect conditions in the field as of December 31 of last year?
(NOTE: *If the OPID operates both gas transmission and hazardous liquid pipelines and both are included in the submission, clearly state if the response to this question pertains to both the gas transmission and hazardous liquid portions.*)

4. A brief description of the pipeline data changes reflected in the submission (e.g., were pipelines sold, acquired, re-routed, abandoned, etc. since the previous submission). If some of the pipelines were sold or transferred to another OPID, please try to include as much information as possible such as affected systems/subsystems or PLINE_ID values. Be sure to also include the information of whom the pipelines were sold or transferred to, if known. If the purchasing company is unknown, state that as well. If portions of your data have been reclassified from transmission to gathering or distribution since your last submission, or from PHMSA to DOI/BSEE jurisdiction in an offshore area, please provide a brief description of the impacted System, Subsystem, or PLINE_ID values to assist NPMS staff in the comparison of this year's submission to your previously submitted pipeline data.
5. Which of the submission types described below indicates how this submission as a whole should affect the previously submitted data for this OPID? You can read more about these submission types in Section 2.1:
 - a. **Initial Submission:** This is the first pipeline submission to the NPMS for this OPID. Pipeline data has never been submitted to the NPMS for this OPID in previous year(s). This submission type can only include revision types that add pipeline mileage (e.g., additions, new construction, or new to NPMS submission requirements).
 - b. **Full Replacement Submission:** This submission should replace all data currently in the NPMS for this OPID. Submissions to the NPMS have been made in previous year(s) for this OPID. This submission type can include any type of revision, including additions and modifications, to the existing data.
 - c. **Removal of OPID Submission:** This submission is to inform NPMS staff that all of your pipeline data needs to be removed from the NPMS national layer. Provide an explanation under Question 4, including an effective date for any change. If a sale has taken place, include a company name, contact name, and phone number for the new company. If the purchasing company/contact is unknown, please clearly state it under Question 4 as well. Similarly, if all pipelines in this OPID have been reclassified to gathering/distribution, please indicate so under Question 4.
6. Include the answers for the following questions:
 - a. Does this specific OPID operate only gas, only liquid, or both gas and liquid lines?
 - b. Does this specific submission contain only gas, only liquid, or both gas and liquid lines? (NOTE: *It is preferable that operators with both gas and liquid lines make a single NPMS submission with both types included.*)
 - c. Does this specific submission contain any lines permanently abandoned during the previous calendar year (STATUS_CODE value "B")?
 - d. If the submission does contain abandoned lines, have you confirmed that the abandoned lines in this submission have not been previously submitted to NPMS? (NOTE: *Never resubmit abandoned lines to the NPMS; even Full Replacement submissions should only include lines abandoned during the previous calendar year. Your previously submitted abandoned lines are not visible when you sign into PIMMA. Previously submitted abandoned pipelines may be viewed via the OSAVE map viewer. Please contact NPMS staff at npms@dot.gov with any questions regarding previously submitted abandoned pipelines.*)
7. List the state(s) covered by the submitted Pipeline data.
8. Provide the projection/reference system of the geospatial data.
 - a. What is the datum of the geospatial data? (e.g., WGS84, NAD27, NAD83, etc.)
 - b. What are the measurement units of the geospatial data? (e.g., Decimal Degrees, Feet, Meters, Miles, etc.)

- c. What is the projection of the geospatial data? (e.g., Geographic (Lat/Long), State Plane Coordinate System (SPCS), Universal Transverse Mercator (UTM), etc.)
 - d. If the projection is State Plane Coordinate System (SPCS), Universal Transverse Mercator (UTM), you must also include the State Plane Zone or UTM Zone.
9. Does your NPMS submission match your PHMSA Annual Report? (NOTE: *Your NPMS submission must correspond with your PHMSA Annual Report. Discrepancies between the two regarding mileage, interstate/intrastate designation or commodities could result in the rejection of your submission.*)
 10. Include any additional information you would like to convey to NPMS staff.

LNG Plant Data Submissions

1. The submission and operator information (i.e., the Operator ID and the Operator Name).
2. The primary and technical contact information of the Operator ID. The full name, job title, company name, work mailing address (including city, state, and zip code), work phone number, and work email address should be included for each contact person.
 - a. **The Primary Contact (required).** This person must be an employee of the operator and is only used by NPMS staff for questions about the Operator ID and its pipelines. This contact also receives general notifications from the NPMS that impact submissions, such as when the NPMS Operator Standards is updated or a reminder to operators about the submission deadline dates.
 - b. **The Technical Contact (required).** This person puts together the submissions to the NPMS and is only used by NPMS staff for questions about the submission(s) made to the NPMS. This person may be an employee of the operator or a designated contractor. If the same person as the primary contact fulfills the role of the technical contact, then clearly state that the contact represents both the primary and technical contact.
3. Does this LNG plant data reflect conditions in the field as of December 31 of last year?
4. A brief description of the LNG plant changes reflected in the submission (e.g., were LNG plants sold, acquired, removed from the ground, abandoned, etc. since the previous submission). If portions of the LNG plants were sold or transferred to another OPID, please try to include as much information as possible such as LNG_ID values. Be sure to also include the information of whom the LNG plants were sold or transferred to, if known. If the purchasing company is unknown, state that as well.
5. Which of the submission types described below indicates how this submission as a whole should affect the previously submitted data for this OPID? You can read more about these submission types in Section 2.1:
 - a. **Initial Submission:** This is the first LNG submission to the NPMS for this OPID. LNG plant data has never been submitted to the NPMS for this OPID. This submission type can only include revisions that add LNG plants to the NPMS for your OPID.
 - b. **Full Replacement Submission:** This submission should replace all data currently in the NPMS for this OPID. Submissions to the NPMS have been made in previous year(s) for this OPID. This submission type can include any type of revision, including additions and modifications, to the existing data.
 - c. **Removal of OPID Submission:** This submission is to inform NPMS staff that all of your LNG plant data needs to be removed from the NPMS national layer. Provide an explanation under Question 4, including an effective date for any change. If a sale has taken place, include a company name, contact name, and

phone number for the new company. If the purchasing company/contact is unknown, please clearly state that under Question 4 as well.

6. List the state(s) covered by the submitted LNG plant data.
7. Provide the projection/reference system of the geospatial data.
 - a. What is the datum of the geospatial data? (e.g., WGS84, NAD27, NAD83, etc.)
 - b. What are the measurement units of the geospatial data? (e.g., Decimal Degrees, Feet, Meters, Miles, etc.)
 - c. What is the projection of the geospatial data? (e.g., Geographic (Lat/Long), State Plane Coordinate System (SPCS), Universal Transverse Mercator (UTM), etc.)
 - d. If the projection is State Plane Coordinate System (SPCS), Universal Transverse Mercator (UTM), you must also include the State Plane Zone or UTM Zone.
8. Include any additional information you would like to convey to NPMS staff.

Breakout Tank Data Submissions

1. The submission and operator information (i.e., the Operator ID and the Operator Name).
2. The primary and technical contact information of the Operator ID. The full name, job title, company name, work mailing address (including city, state, and zip code), work phone number, and work email address should be included for each contact person.
 - a. **The Primary Contact (required).** This person must be an employee of the operator and is only used by NPMS staff for questions about the Operator ID and its data. This contact also receives general notifications from the NPMS that impact submissions, such as when the NPMS Operator Standards is updated or a reminder to operators about the submission deadline dates.
 - b. **The Technical Contact (required).** This person puts together the submissions to the NPMS and is only used by NPMS Staff for questions about the submission(s) made to the NPMS. This person may be an employee of the operator or a designated contractor. If the role of the technical contact is fulfilled by the same person as the primary contact then clearly state that the contact represents both the primary and technical contact.
3. Does this breakout tank data reflect conditions in the field as of December 31 of last year?
4. A brief description of the changes reflected in the submission (e.g., were breakout tanks sold, acquired, removed from the ground, abandoned, etc. since the previous submission). If portions of the breakout tanks were sold or transferred to another OPID, please try to include as much information as possible such as TANK_ID values. Be sure to also include the information of whom the breakout tanks were sold or transferred to, if known. If the purchasing company is unknown, state that as well.
5. Which of the submission types described below indicates how the submission as a whole should affect the previously submitted breakout tank data for this OPID? You can read more about these submission types in Section 2.1:
 - a. **Initial Submission:** This is the first breakout tank submission to the NPMS for this OPID. Breakout tank data has never been submitted to the NPMS for this OPID. This submission type can only include revisions that add breakout tanks to the NPMS for your OPID.

- b. **Full Replacement Submission:** This submission should replace all breakout tank data currently in the NPMS for this OPID. Submissions to the NPMS have been made in previous year(s) for this OPID. This submission type can include any type of revision ("C" for addition to the NPMS due to new construction, "J" for addition to the NPMS due to being new to the NPMS reporting requirement, "E" for addition to the NPMS due to not previously submitting in error, "Q" for addition to the NPMS due to an acquisition/transfer from another operator/OPID, "B" for spatial and/or attribute modification to a breakout tank point location included in the previous NPMS submittal for this OPID, or "N" for no change to the matching breakout tank included in the previous breakout tank NPMS submittal for this OPID) to the existing data.
 - c. **Removal of OPID Submission:** This submission is to inform NPMS staff that all of your breakout tank data needs to be removed from the NPMS national layer. Provide an explanation under Question 4, including an effective date for any change. If a sale has taken place, include a company name, contact name, and phone number for the new company. If the purchasing company/contact is unknown, please clearly state that under Question 4 as well.
6. List the state(s) covered by the submitted breakout tank data.
 7. Provide the projection/reference system of the geospatial data.
 - a. What is the datum of the geospatial data? (e.g., WGS84, NAD27, NAD83, etc.)
 - b. What are the measurement units of the geospatial data? (e.g., Decimal Degrees, Feet, Meters, Miles, etc.)
 - c. What is the projection of the geospatial data? (e.g., Geographic (Lat/Long), State Plane Coordinate System (SPCS), Universal Transverse Mercator (UTM), etc.)
 - d. If the projection is State Plane Coordinate System (SPCS) or Universal Transverse Mercator (UTM), you must also include the State Plane Zone or UTM Zone.
 8. Include any additional information or concerns you would like to relate to NPMS staff.

3. Attribute Data

Operators are required to provide descriptive information about the pipelines, LNG plants, and breakout tanks when submitting data to the National Pipeline Mapping System. The attribute data is essential information about the pipeline, LNG plant, or breakout tank such as its name and commodity transported or stored. View detailed pipeline attribute standards in Appendix A.

3.1 Required and Optional Attributes

Each pipeline segment, LNG plant, or breakout tank submitted must be accompanied by a corresponding record in the attribute database table. For information about required and optional attributes, refer to Appendix A.

3.2 Rules for Attribute Data Input

When submitting digital attribute information, adhere to the following rules:

1. Adhere to standards in Appendix A.
2. Use only UPPERCASE when defining field names.
3. Use only UPPERCASE when inputting data into the attribute tables.
4. Omit all punctuation except for periods (.), spaces (), backslashes (\), colons (:), commas (,), hyphens (-), and underscores (_). Semicolons (;) should be used only as a delimiter when submitting attribute data in ASCII-delimited text files.
5. Use only NPMS-specified abbreviations.
6. Select the correct attribute value or code to represent the pipeline segment, LNG plant, or breakout tank. For example, the revision code must reflect the correct revision type. Read more about selecting the correct type of data revision below.
7. Be consistent. Names and terms should be exactly replicated throughout a submission. For example, if a pipeline system is named Pennsylvania Line (SYS_NM = "PENNSYLVANIA LINE"), the operator should consistently use the full and exact name. The operator should not use alternative names like "Penn Line" or "PA Line" or "Pennsylvania."
8. Use the correct OPID. OPID is an accounting number assigned by the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration to firms that operate pipelines, LNG plants, or breakout tanks. In accordance with 49 CFR 191.22(d) and 49 CFR 195.64(d), you must use the same OPID number to describe a pipeline, LNG, or breakout tank asset in both the annual report and NPMS submission. If you do not know your company's OPID number, check with your company's accounting department or you can look up OPIDs based on company names through [this PHMSA Pipeline Data Mart tool](#) available from the [Pipeline Operator](#) page on the NPMS website.

3.3 Types of Data Revisions

Pipeline and LNG plant Revisions:

The type of revision must be specified for each pipeline segment or LNG plant. The revision type (or field name REVIS_CD), which is indicated with a code, describes the changes that have occurred to that segment or plant since the last NPMS submission. It is likely that one code will not describe the entire submission properly; therefore, attribute each pipeline segment, or plant with the correct code. To remove a pipeline segment or LNG plant previously submitted for your OPID, do not include it in your new submission and explain the reason for removal during the OSAVE workflow

or on the cover/transmittal letter. A thorough explanation of each data revision code for pipelines and LNG plants is below:

A - Addition to the NPMS. Use this revision code when the pipeline segment or LNG plant has not been previously submitted to the NPMS for this OPID for reasons other than new construction or a re-route (both revision code “C”) or changes that impact NPMS submission regulation applicability (revision code “J”). Revision code “A” is most commonly used for pipelines or plants that were omitted from previous submissions in error or when a pipeline or plant was acquired from another operator, and this is the first time it is being submitted under this OPID. In the case of an acquisition, NPMS staff will add this segment or plant to your OPID and confirm it is removed from the previous operator’s.

C - Addition due to construction. Use this revision code when the pipeline segment is new construction that adds mileage or is considered a re-route and, therefore, has never been included in the NPMS under any OPID. This code also applies to new construction that adds a new LNG plant to the NPMS. For example, this pipeline segment is a new lateral laid into the ground in time for this year’s submission. NPMS staff will add this segment to your OPID’s data in the NPMS. Note that portions of an existing pipeline that are replaced with a new section of pipeline in the same ditch (not a re-route, often called in situ) are considered a repair and not new construction. Construction related to repairs should be categorized as revision code “S,” “T,” or “B” depending on what else has changed.

J - Addition due to mileage that is newly subject to the NPMS submission requirements. Use this revision code when a change to the pipeline segment, LNG plant, or operation of these facilities resulted in it becoming subject to the NPMS submission requirements (49 CFR 191.29 and 49 CFR 195.61) and, therefore, was not included in the NPMS under any OPID last year. For example, your company previously operated this pipeline segment as a gas distribution line, but it was re-categorized to a gas transmission line as of December 31 of the previous year. This data is new mileage to the NPMS this year because gas transmission is subject to the NPMS submission requirements, but gas distribution is not. NPMS staff will add this segment to your OPID.

S - Spatial modification of the existing NPMS feature. Use this revision code when the pipeline segment or LNG plant data has been spatially modified since the previous submission. For example, more accurate GPS coordinates have been gathered for this pipeline segment, as a result, its location in the data set has changed slightly. This segment in the submission still represents the same pipeline that was in last year’s submission, and there are no attribute changes. NPMS staff will find the equivalent segment from your previous submission and replace it with this segment.

T - Attribute modification of the existing NPMS feature. Use this revision code when the only change to a pipeline segment or LNG plant since the previous submission is an attribute change. For example, this pipeline segment was in service for last year’s submission, but for this year’s submission the status code has changed to permanently abandoned and there have been no spatial changes. NPMS staff will find the equivalent segment from your previous submission and replace it with this segment.

B - Both a spatial and attribute modification of the existing NPMS feature. Use this revision code when both an attribute and spatial change have occurred to this pipeline segment or LNG plant since the previous submission. For example, this pipeline segment has a substantially more accurate location and new GPS coordinates; as a result, the shape of this NPMS feature changed, and the Quality Code changed from “G” for Good to “E” for Excellent. NPMS staff will find the equivalent segment from your previous submission and replace it with this segment. If you are unsure if the

segment only underwent a spatial change, or only an attribute change, please choose this revision code so NPMS staff can consider both types of revisions.

N - No change to the existing NPMS feature. Use this revision code only when there have been no changes to the spatial location, segmentation, or attributes of this pipeline segment or LNG plant since the previous submission. There is no need for NPMS staff to change this segment or plant, but the attributes in the NPMS will change reflect that this segment is up to date and has not changed since the previous year. It is necessary to include these lines in your Full Replacement submission (refer to Section 2.1 for additional details on the types of submissions) even though no changes have occurred. Any segment previously submitted for your OPID that is not included in your current submission will be considered a pipeline segment that requires deletion.

Breakout Tank Revisions:

The type of revision (field name REVIS_CD) must be specified for each breakout tank. Each breakout tank's revision type, which is indicated with a code, describes the changes that have occurred to that point since the last NPMS submission. It is likely that one code will not describe the entire submission properly; therefore, attribute each breakout tank with the correct code. To remove a breakout tank previously submitted for your OPID, do not include it in your new submission and explain the reason for the removal on the cover/transmittal letter. A thorough explanation of each data revision code (i.e., REVIS_CD value) for breakout tanks only is below:

C - Addition due to construction. Use this revision code when the breakout tank is a new addition to the NPMS because it was newly construction and put into service during the previous year. NPMS staff will add the new point feature to your OPID's data in the NPMS.

J - Addition due to mileage that is newly subject to the NPMS submission requirements. Use this revision code when a change to the breakout tank resulted in it becoming subject to the NPMS submission requirements (49 CFR 191.29 and 49 CFR 195.61) and, therefore, was not included in the NPMS under any OPID last year. NPMS staff will add the new point feature to your OPID's data in the NPMS.

E – Addition due to previously omitting in error. Use this revision code when the breakout tank is a new addition to the NPMS because it was not previously submitted to the NPMS in prior data submissions due to it being left out of the submissions in error. To correct this error, include the breakout tank with this revision code value. NPMS will add the new point feature to your OPID's data in the NPMS.

Q – Addition due to an acquisition/transfer. Use this revision code when the breakout tank is a new addition to the NPMS for this OPID this year due to an acquisition or transfer from another operator or OPID. NPMS will add the new point feature to your OPID's data in the NPMS.

B - Both a spatial and attribute modification of the existing NPMS feature. Use this revision code when both an attribute and spatial change have occurred to this breakout tank since the previous submission. For example, this breakout tank has a more accurate location and new GPS coordinates; as a result, the location of this NPMS feature changed, or the Tank ID Number has changed. NPMS staff will find the equivalent point from your previous submission

and replace it with this point. If you are unsure if the point feature only underwent a spatial change, or only an attribute change, please choose this revision code so NPMS staff can consider both types of revisions.

N – No change to the existing NPMS feature. Use this revision code only when there have been no changes to the spatial location or attributes of this breakout tank since the previous submission. There is no need for NPMS staff to change this breakout tank, but the attributes in the NPMS will change to reflect that this tank is up to date and has not changed since the previous year. It is necessary to include these points in your Full Replacement submission (refer to Section 2.1 for additional details on the types of submissions) even though no changes have occurred. Any point previously submitted for your OPID that is not included in your current submission will be considered a breakout tank point that requires deletion.

3.4 Required Diameter Values as NPS

The Diameter is to be reported in Nominal Pipe Size (NPS). Nominal pipe size of the pipeline segment identifies the diameter with a dimensionless value, (e.g., 8.625” outside diameter pipe is reported as NPS 8, 5” outside diameter pipe is NPS 4.5). Decimals are only accepted when less than NPS 5. The NPMS data templates reflect all available NPS values for pipelines expected in NPMS submittals. Send additional NPS value standards in an email to npms@dot.gov if you believe you have a valid NPS value that is not included. See Figure 3-1 for a list of acceptable Diameter (NPS) values required for pipelines in the NPMS.

DIAMETER (NPS values accepted in NPMS submittal)	NPS Value Descrip.	Outer Diameter (in)	Annual Report Attribute Group
0.125	1/8	0.405	4 or less
0.25	1/4	0.54	4 or less
0.375	3/8	0.675	4 or less
0.5	1/2	0.84	4 or less
0.75	3/4	1.05	4 or less
1	1	1.315	4 or less
1.25	1 1/4	1.66	4 or less
1.5	1 1/2	1.9	4 or less
2	2	2.375	4 or less
2.5	2 1/2	2.875	4 or less
3	3	3.5	4 or less
3.5	3 1/2	4	4 or less
4	4	4.5	4 or less
4.5	4 1/2	5	
5	5	5.563	
6	6	6.625	6
7	7	7.625	
8	8	8.625	8
9	9	9.625	
10	10	10.75	10
12	12	12.75	12
14	14	14	14

DIAMETER (NPS values accepted in NPMS submittal)	NPS Value Descrip.	Outer Diameter (in)	Annual Report Attribute Group
16	16	16	16
18	18	18	18
20	20	20	20
22	22	22	22
24	24	24	24
26	26	26	26
28	28	28	28
30	30	30	30
32	32	32	32
34	34	34	34
36	36	36	36
40	40	40	38
42	42	42	42
44	44	44	44
46	46	46	46
48	48	48	48
52	52	52	52
56	56	56	56
60	60	60	58 and over
64	64	64	58 and over
68	68	68	58 and over
72	72	72	58 and over

Figure 3-1: Required Diameter Values Accepted in the NPMS

3.5 Building the Attribute Data File

Attribute data may be provided in one of the following formats: common GIS export, DBASE (.dbf) format, Microsoft Excel (.xlsx) format, or American Standard Code for Information Interchange (ASCII) text file. In all cases, operators should be careful to follow the field name, field type, and field length standards listed in Appendix A.

The Pipeline and Hazardous Materials Safety Administration has developed blank pipeline, LNG plant, and breakout tank attribute templates to be used by operators that do not have the ability to incorporate the NPMS attributes directly into their spatial data (e.g., the submission is a CAD drawing or GPS coordinates). The attribute templates have been created in Microsoft Excel (.xlsx) format and may be downloaded from the NPMS website.

- **Common GIS export format:** Operators using GIS systems can package attribute data with the associated geospatial data. Acceptable GIS formats are discussed in section 4.1, General Requirements for Digital Geospatial Data. For your convenience, NPMS staff developed a template ESRI shapefile and file geodatabase containing attributes that meet the NPMS requirements. If you wish to utilize these templates, you may download a zipped file containing the shapefile and geodatabase for [pipelines](#), [LNG plants](#), or [breakout tanks](#) from the relevant Summary of Required Components page within the [Pipeline Operator](#) page on the NPMS website. Please note that the defined projection for these templates is Geographic Latitude/Longitude, NAD83, Decimal Degrees, if your data is projected in a different way, please re-project as necessary before adding data.
- **Microsoft Excel (.xlsx):** Operators can use the [pipeline](#), [LNG plant](#), or [breakout tank](#) attribute template to create a properly formatted .xlsx file for submission. Each is available for download from the relevant Summary of Required Components page within the [Pipeline Operator](#) page on the NPMS website.
- **ASCII format:** The file should be a comma-delimited text file.

Uploading pipeline submissions via the OSAVE workflow allows for the upload of the geospatial and the attribute data file(s), along with any supporting documentation that the pipeline operator would like to include.

To accommodate a range of capabilities, the NPMS accepts the geospatial and attribute data for pipelines, LNG plants, and breakout tanks in several different combinations. Please refer to Section 4 of the [NPMS Operator Submission Supplemental Instructions](#) to learn more about the combinations.

Additionally, for operators submitting separate geospatial and attribute components for their pipeline, LNG plants, or breakout tanks, a unique OPER_LINK value must be included on each feature in the geospatial data file and its corresponding record in the attribute file. Please refer to Section 5 of the [NPMS Operator Submission Supplemental Instructions](#), which provides a detailed explanation along with examples and scenarios on how this should be completed.

4. Geospatial Data

Geospatial data represent pipeline systems (linear), LNG plant (point), and breakout tank (point) elements. Pipeline, LNG plant, and breakout tank data must be submitted in digital format. All submissions should meet the ± 500 -foot accuracy standard.

4.1 General Requirements for Digital Geospatial Data

The following discusses various requirements and formats for submitting digital geospatial data.

1. Use a real-world coordinate system such as those based on North American Datum (NAD) 1983. NPMS staff accepts un-projected data in decimal degrees and data that employ a common projection scheme such as Universal Transverse Mercator (UTM) or State Plane. Projected data may employ either English (feet) or metric (meters) measurement units. For pipeline data submissions, the OSAVE workflow will gather information about **the datum, coordinate system/projection, and measurement units** from the operator as part of the submission process. If the OSAVE workflow is bypassed for the pipeline data submission, the operator must include the datum, coordinate system/projection, and measurement units as part of the cover/transmittal letter (refer to Section 2.2).

For LNG plant and breakout tank submissions, operators must clearly state the **datum, coordinate system/projection, and measurement units** within the cover/transmittal letter (refer to Section 2.2), which is a required submission component. Please note that as part of the processing of the NPMS submission, NPMS staff will re-project data to Geographic, NAD83, Latitude Longitude, Decimal Degrees, if necessary, before it is incorporated into the NPMS national layer.

Note: *Digital data that does not employ real world coordinates, such as CAD files that employ an origin point of 0,0 in the lower left-hand corner of the drawing cannot be accepted by the NPMS.*

2. Always submit pipelines (lines), LNG plants (points), and breakout tanks (points) in separate files.
3. Submit only qualifying pipeline, LNG plant, and breakout tank data. The submitted digital file should contain only pipeline segments representing natural gas transmission lines, hazardous liquid trunk lines, regulated rural hazardous liquid gathering lines, or points representing LNG plants or breakout tanks. The submission data should not contain any other types of data such as non-regulated gathering lines; small, intricate piping or devices such as spur lines, valves, blow offs, stubs, launchers, or receivers; facility, plant or station piping (potentially associated with a 'site' within the PODS data model); or base map data including buildings, roads, property lines, political boundaries, scanned images, etc. As well, all pipeline segments shorter than .00005 miles should be omitted regardless of their location. These small, intricate pipes and instrumentation are not compatible with the goal of the NPMS and should be omitted from NPMS submittals. However, it is not considered an error to include a section of a pipe that crosses the fence line into a plant, station, or facility. We understand omitting small, intricate pipeline instrumentation and plant, station, or facility data may result in certain operators omitting small segments from an NPMS submittal that are included on the Annual Report; NPMS staff mitigates this circumstance by accepting up to a 5% mileage discrepancy between the reporting methods. PHMSA expects operators to use their best judgement considering pipeline safety benefits and consistency in NPMS reporting when applying this instruction, and for operators to indicate such decisions in their OSAVE notes to help NPMS analysts understand changes or omissions without the need for additional discussion. This instruction is unique to your NPMS submittal; it has no implication on your Annual Report or any other regulation or reporting requirement that would apply to a pipeline facility.

4. Curves should be represented by a pipeline segment with as many vertices/shape points as is required to provide the appropriate cartographic appearance. Avoid CAD system arcs.
5. **Abandonment of pipeline facilities is permanent.** Only submit abandoned pipeline facilities to the NPMS once. This must occur in the reporting year reflecting when the line was abandoned. Do not resubmit abandoned facilities to the NPMS, even when completing a full replacement submission. Your company's abandoned lines will not be displayed with your OPID in the PIMMA web map viewer. In the OSAVE web map viewer (operators log in with their NPMS account), however, the pipelines previously reported as abandoned for your OPID are displayed in a separate map layer. If you wish to receive an export of the abandoned pipelines previously reported by your OPID in GIS format, please contact NPMS staff.
6. Review data for quality. Common problems include:
 - a. Missing points or lines where a pipeline, LNG plant or breakout tank was operated during the reporting year.
 - b. Duplicate points and lines.
 - c. Including in-plant pipeline, intricate facility or station piping, instrumentation, blow offs or pipeline devices.
 - d. Stray points and lines that do not represent a pipeline or LNG plants, often left from deleting non-NPMS data.
 - e. Overshoots and undershoots at pipeline intersections.
 - f. Not segmenting a pipe as necessary to reflect the correct Revision Code.

4.2 Suitable Geospatial Data Formats

Operators may submit data to the NPMS using any of the following suitable formats:

- Shapefile Format Data Submission
- Esri File Geodatabase Format Data Submission
- AutoCAD Data Submission
- Coordinate Data Submission

If opting to submit an AutoCAD or Coordinate file, please refer to the [NPMS Operator Submission Supplemental Instructions](#) for further information related to these formats.

5. NPMS Submission OPID Contact Information

For pipelines there are three contacts – primary, technical, and public – associated with each submission per OPID. The primary, technical and public contacts may be updated separately from the annual submission process at any time throughout the year (Section 5.2 includes an overview of that process), but you must include/review/update contact information as part of every annual submission process. In OSAVE, pipeline operators are prompted to review and update, if applicable, all contact information as part of the NPMS submission and notification workflows. Through OSAVE, the operator can view the current contact information and change only the information that needs to be updated.

For LNG plant submissions, the primary and technical contacts are submitted each year within the required cover/transmittal letter through the data submission to the NPMS (refer to Section 2.2), but may be updated, as needed, at any time throughout the year. If changes are needed to only the contact information, an email should be sent to the NPMS at npms@dot.gov stating the OPID, which contact person (i.e. primary, technical, or both) is being updated, and the new contact's name, job title, company name, work mailing address, work phone number, and work email address. Unlike pipeline submissions, at this time, there is no public contact associated with LNG plants.

For Breakout tanks, through the data submission to the NPMS, the primary contact and the technical contact is submitted each year within the required cover/transmittal letter (refer to Section 2.2). If changes are needed to only the contact information, an email should be sent to the NPMS at npms@dot.gov stating the OPID, which contact person (i.e. the primary contact, the technical contact, or both) is being updated, and the new contact's name, job title, company name, work mailing address, work phone number, and work email address. Like LNG plants, at this time, there is no public contact information associated with Breakout tanks.

5.1 Types of NPMS Submission OPID Contacts

For pipeline OPIDs, there are three contacts – primary, technical, and public – that are associated with the OPID. For LNG plant or breakout tank submissions, the NPMS only collects two contacts – primary and technical – that are associated with the OPID.

➤ **Primary Contact Person:**

- The primary contact is required for all pipeline, LNG plant, and breakout tank submissions for your OPID and must be an employee of the operating company.
- This contact is used by NPMS staff for questions about the OPID and its pipelines, LNG plants, or breakout tanks.
- This contact also receives general notifications from PHMSA that relate to the NPMS, such as updates to the NPMS Operator Standards, High Consequence Area data layers or the NPMS submission deadline dates.
- This contact will be included in all NPMS regulation compliance communications from PHMSA.

➤ **Technical Contact Person:**

- The technical contact is required for all pipeline, LNG plant, and breakout tank submissions for your OPID.
- This contact is the person who compiled the NPMS submission or would be the best person to answer questions about or provide corrections to the NPMS submission.

- This contact may be an employee of the operating company or a contractor/consultant if they are responsible for submitting, correcting, and responding to questions about the NPMS submission.
- The same person may fulfill the role of both the primary and technical contact. For pipeline data submissions completed via OSAVE, the operator may indicate that the technical contact is the same as the primary contact. For pipeline data submissions not sent with OSAVE and for LNG plant or breakout tank submissions, the cover letter should clearly state that the same person fulfills both roles.
- This contact is used by NPMS staff for questions about or corrections necessary to the NPMS submission.
- This contact may also receive communications sent to the primary contact.

➤ **Public Contact Person:**

- The public contact is required for all pipeline submissions for your OPID and must be an employee of the operating company.
- This contact is posted on the NPMS website, specifically, the [Find Who's Operating Pipelines in Your Area](#) tool, [PIMMA](#), and the [Public Viewer](#), and is expected to receive communications from the general public, emergency responders as well as local, state, and federal government staff.
- The public contact that is chosen to be responsible for handling public questions about their pipelines may be either an individual (example: "Joe Smith") or an entity (example: "Public Relations Department). **One or the other of these options must be selected; not both.**
- There may be multiple public contacts based on the geography or operating units within the company; however, **operators with this scenario (i.e., having more than one public contact) must contact NPMS staff before submitting this information via the OSAVE workflow.**

For pipeline, LNG plant, and breakout tank submissions the following information is captured for each contact:

- Full name
- Job title
- Entity (pipelines public contact only; in lieu of an individual)
- Company employed by
- Work mailing address
- Work phone number and, if applicable, extension
- Work fax number (pipelines public contact only)
- Work email address
- Public Awareness Website URL (pipelines public contact only)

5.2 Submitting NPMS Pipeline Submission OPID Contact Information via OSAVE

Most of the information is self-explanatory. Figure 5-1 illustrates how to review and update contact information separate from the annual pipeline submission process, but Figure 5-2 reflects how the screen appears for this workflow as well as the workflow when submitting/reviewing/updating contact information during the pipeline annual submission process. Please note that you will need to go through each tab on the OSAVE contact information interface before clicking the Submit button. Under the Technical Contact tab, you will need to select “Same as Primary Contact” if the role of the technical contact is fulfilled by the primary contact. Under the Public Contact tab, you will need to decide whether you are designating an individual or an entity. If you choose an individual, fill in the individual’s first name, last name, and job title. If you choose an entity, fill in the “Contact Entity” field. When finished reviewing/updating all three Contact tabs, click on the Submit button.

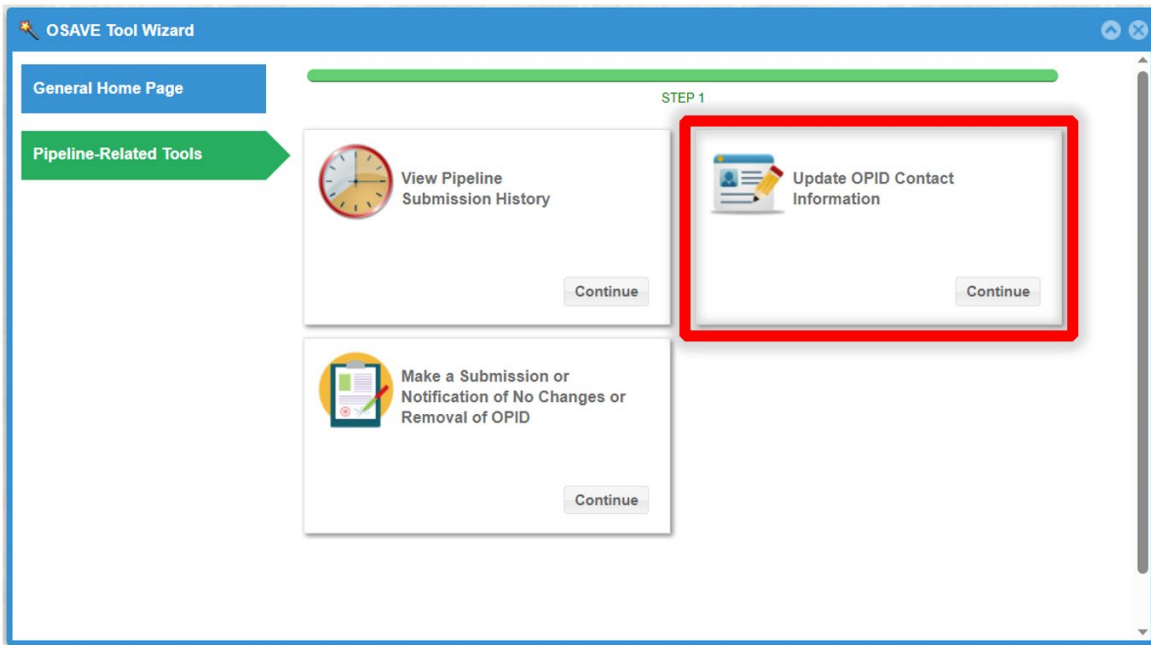


Figure 5-1. Update OPID Contact Information in OSAVE Tool Wizard.

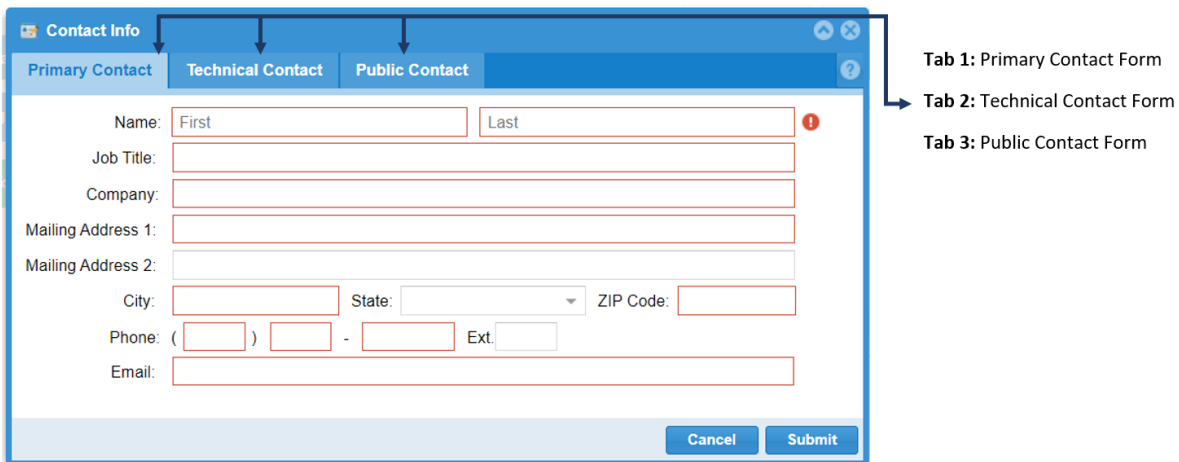


Figure 5-2. Contact Information: Primary, Technical, and Public Contact Form.

6. Metadata

Metadata is textual information that describes your NPMS data submission, particularly the geospatial data component. It describes the content, quality, condition, and other characteristics of this data submission. It provides additional background information such as descriptions and points of contact.

Uploading pipeline submissions via the OSAVE workflow eliminates the need for a separate metadata file within a data package. Instead, the metadata-related questions are incorporated into the submission workflow as a series of questions. OSAVE currently allows for only the pipeline geospatial and attribute data file(s), along with any supporting documentation that the pipeline operator would like to include, to be uploaded via the pipeline submission workflow.

At this time, LNG plants and breakout tanks must still be submitted to the NPMS as a complete data package. The OSAVE tool has been updated to include two new tools on the General Home Page – one related to LNG plants and one related to breakout tanks. However, the metadata-related questions are incorporated into the LNG and breakout tank cover/transmittal letter templates, which are outlined in Section 2.2 – a required component of the LNG plant and/or breakout tank submission package.

6.1 Background

Metadata was developed to help “insure an organization’s investment in data. As personnel change or time passes, information may be lost and the data may lose their value.”¹ Where metadata is not collected, future staff may not trust the data due to its unknown quality. Metadata also provides information necessary for data transfer. It allows the receiver to process, interpret, and incorporate the data properly with another data set.

Executive Order 12906 requires that each federal agency use the Federal Geographic Data Committee (FGDC) Metadata Standard, “Content Standards for Digital Geospatial Metadata,” to document digital geospatial data that they produce. The FGDC is an interagency committee that promotes the coordinated use, sharing, and dissemination of geospatial data on a national basis. PHMSA must produce metadata compliant with the FGDC Metadata Standard.

The *FGDC Metadata Standard for Digital Geospatial Metadata* provides a standard format, specifies the requirements for data collection, and establishes a common set of terminology and definitions. The standard is somewhat complex and is composed of mandatory, mandatory if applicable, and optional sections. PHMSA is collecting only mandatory information or information that is critical to clear understanding of the operator submittal.

¹ Content Standards for *Digital Geospatial Metadata Workbook*, Version 1.0, March 24, 1995.

7. Abandoned Pipeline Certification

As required by 49 CFR 192.727(g) and 195.402(c)(10), for each abandoned offshore pipeline facility or each abandoned onshore pipeline facility that crosses over, under or through a commercially navigable waterway, the last operator of that facility must file a report upon abandonment of that facility. To simplify this process, operators can use the Abandonment Certification Template available in Appendix B to certify one, or many applicable abandonments on a single form to the NPMS. Operators should upload this form along with their NPMS data submission through OSAVE or send it in an email to npms@dot.gov. If an operator's submission with applicable abandoned pipelines does not include this form, the submission will not be processed and NPMS staff will contact the operator for the required certification.

8. Submitting the Data

8.1 Submitting Pipeline Data to the NPMS

In the fall of 2016, NPMS staff released the Operator Submission And Validation Environment (OSAVE) tool. OSAVE is a one-stop shop for operators to:

- Review the pipeline data currently in the NPMS national layer for the OPID via a web map viewer,
- View the NPMS pipeline submission history for the OPID,
- Update information for a pipeline submission OPID's primary, technical, and public contacts,
- Convey a notification of no changes for pipelines,
- Mark desired attribute edits and spatial deletions for the OPID's pipelines via a web map viewer in lieu of a traditional data submission,
- Submit pipeline data to be added to existing data in the NPMS national layer for the OPID in lieu of a traditional data submission,
- Submit pipeline data intended to fully replace existing feature(s) in the NPMS national layer for the OPID (traditional data submission), and
- Request that all pipelines in the NPMS national layer for the OPID be removed.

OSAVE is accessible from the internet at <https://www.npms.phmsa.dot.gov/OSAVE/> and requires a NPMS account to login. If you do not have a NPMS account, please complete the [online application](#).

At this time, the OSAVE Data Summary tools only reflect the pipelines in the NPMS national layer for that OPID. The display of submission history reflects only the pipeline submissions. **The submission-based workflows (e.g., notification of no changes, edits via a map viewer or additions to existing data in place of a traditional submission, traditional submissions replacing all existing data, and removal of all pipelines) are for pipeline data only.**

For pipeline data submissions, OSAVE eliminates the need for the operator to create separate cover/transmittal letter and metadata components; this information, including a review of the primary, technical, and public contact information, is gathered from the operator in the form of a series of questions as part of the workflow. Detailed information and step-by-step instructions on the different submission workflows within the OSAVE tool can be found in the [OSAVE User Guide](#) and the [NPMS Operator Submission Supplemental Instructions](#).

8.2 Submitting LNG Plant and Breakout Tank Data to the NPMS

As of August 2023, the NPMS Submission FTP Upload site has been retired. To submit your NPMS LNG plant and/or breakout tank submission package(s) to NPMS staff, please upload your submission data package via the [Operator Submission And Validation Environment \(OSAVE\)](#) tool. The OSAVE tool has been updated to include two new tools on the General Home Page – one related to LNG plants and one related to breakout tanks. OSAVE may continue to be used to review LNG plant and breakout tank data currently in the NPMS national layer for the OPID via a web map viewer.

Please note that the metadata-related questions are incorporated into the LNG and breakout tank cover/transmittal letter templates, which are outlined in Section 2.2. Be sure to zip all your required components (i.e., data files) before uploading via OSAVE. The zipped data files should contain your OPID and/or submission type for easier processing (e.g., OPID_12345_LNG submission.zip or OPID_12345_BOT_submission.zip). To transmit your files through the OSAVE tool, navigate to the corresponding LNG plant and/or Breakout tank workflow, browse to the location of your zipped data file and upload it.

For LNG plant and breakout tank OPIDS, OSAVE cannot be used to submit a notification of no changes, submit a notification/request for removal, or change contact information. If it is determined that the LNG plant and/or breakout tank data is accurate as is and, therefore, needs no changes, please notify NPMS staff at npms@dot.gov in lieu of a traditional data submission. If the existing NPMS national layer data for the LNG plant or breakout tank OPID needs to be removed, please notify NPMS staff at npms@dot.gov. If at any time throughout the year the LNG plant and/or breakout tank primary and/or technical contact has changed, please notify NPMS staff via npms@dot.gov.

Appendix A.1: Pipeline Attribute Table

Field Name	Field Type ¹	Field Length	Short Description	Full Description	Acceptable Values (UPPERCASE)	Required Field	Public Viewer Attribute ²
OPER_LINK	I	8	Unique Link ID	<p>Link between the geospatial elements (pipeline segments) and their respective attribute records. Assigned by the operator or the operator's software package (i.e., COVER-ID, MSLINK_ID, etc.).</p> <p>Note the OPER_LINK and the PLINE_ID may be identical.</p> <p>Note that once processing is complete, the OPER_LINK value will be removed from the data by NPMS staff as it will no longer be needed.</p>	Positive integer	<p>Required - If your attributes are not included in the geospatial file; refer to Section 3.4</p> <p>Not Required - If your attributes are included in the geospatial file.</p>	Not Public
OPID	I	5	Operator Number	<p>Unique tracking number assigned by PHMSA to the company that physically operates the pipeline system. If you do not know your firm's OPID, check with your DOT/Regulatory Compliance department or the NPMS website.</p>	Positive integer	Required	Public
OPER_NM	C	100	Operator Name	<p>The company name that physically operates the pipeline system.</p>	Character	Required	Public
SYS_NM	C	40	System Name	<p>Assigned by the operator. The operator's name for a functional grouping of pipelines.</p>	Character	Required	Public
SUBSYS_NM	C	40	Sub System Name	<p>Assigned by the operator. A unique name for a smaller sub-section of a pipeline system. A subset of SYS_NM.</p>	Character, <null>	Not Required	Public
PLINE_ID	C	20	Pipeline ID	<p>Assigned by the operator. A unique identifier for a specific section of pipeline within a pipeline system.</p>	Character	Required	Public
DIAMETER	D	5, 3	Diameter reported in Nominal Pipe Size (NPS)	<p>Nominal pipe size (NPS) of the pipeline segment; identifies the diameter with a dimensionless value (e.g., 8.625" outside diameter pipe is reported as NPS 8; 5" outside diameter pipe is NPS 4.5). Decimals are only accepted when less than NPS 5.</p> <p>OSAVE and NPMS data templates reflect all available NPS values for pipelines expected in NPMS submittals. Send an email to npms@dot.gov if you believe you have a valid NPS value that is not included.</p>	<p>Positive Integer or Decimal when less than NPS 5</p> <p>Refer to Section 3.4 (Figure 3-1) for the list of acceptable values.</p>	Required	Not Public
COMMODITY	C	3	Commodity Category	<p>Abbreviation for the primary commodity carried by the pipeline system.</p> <p>Valid Liquid Commodities: CRD=crude oil, PRD=non-HVL product, AA=anhydrous ammonia, LPG=liquefied petroleum gas, NGL=natural gas liquids, OHV=other HVLS, CO2=carbon dioxide, ETH=fuel grade ethanol, and EPL=abandoned pipelines that previously transported a liquid</p> <p>Valid Gas Commodities: NG=natural gas, PG=propane gas, SG=synthetic gas, HG=hydrogen gas, OTG=other gas, and EPG=empty gas.</p> <p>Note that when propane is transported as a liquid, use the LPG commodity abbreviation. The PG abbreviation should only be used when the commodity is in gaseous form.</p> <p>Note that when the pipeline is permanently abandoned, the use of EPL or EPG should represent the commodity that was previously transported.</p>	<p>Liquid Commodities: CRD, PRD, AA, LPG, NGL, OHV, CO2, ETH, EPL</p> <p>Gas Commodities: NG, PG, SG, HG, OTG, EPG</p>	Required	Public

Field Name	Field Type ¹	Field Length	Short Description	Full Description	Acceptable Values (UPPERCASE)	Required Field	Public Viewer Attribute ²
				<p>For instance, a natural gas transmission line that was later filled with water during the permanent abandonment process would be coded EPG because a gas commodity was last transported. Please report if the pipeline is filled with water, nitrogen, or another fill material in the Commodity Description.</p> <p>Note that EPG and EPL may only be used for abandoned pipelines. Idle and Retired pipelines should report the commodity last transported. If the pipeline is purged, please report if the pipeline is filled with water, nitrogen, or another fill material in the Commodity Description.</p>			
CMDTY_DTL1	C	3	Commodity Detail 1	<p>Abbreviation for the primary commodity's first subcategory detail. If the primary commodity defined in the COMMODITY field is not CRD, PRD, or NG, this field should be left blank. If the primary commodity in the COMMODITY field is CRD, PRD, or NG and the subcategory is not known or stated, this field should be left blank.</p> <p>The primary commodity CRD has the following subcategories: CRW=sweet crude, CRR=sour crude.</p> <p>The primary commodity PRD has the following subcategories: RGS=refined non-ethanol blended gasoline, RFD=refined fuel oil, diesel, RKJ=refined kerosene, jet fuel, OTR=other refined and/or non-HVL petroleum products, ETB=ethanol blended gasoline, BDB=biodiesel blend, OBI=other biofuels.</p> <p>The primary commodity NG has the following subcategories: NG1=pipeline quality or tariff quality natural gas, NG2=wet but non-sour natural gas, NG3=sour but non-wet natural gas, NG4=wet, sour natural gas.</p>	CRW, CRR, RGS, RFD, RKJ, OTR, ETB, BDB, OBI, NG1, NG2, NG3, NG4, <Null>	Not Required	Not Public
CMDTY_DTL2	C	3	Commodity Detail 2	Abbreviation for the primary commodity's second subcategory detail. Refer to the CMDTY_DTL1 field for additional information and valid values.	CRW, CRR, RGS, RFD, RKJ, OTR, ETB, BDB, OBI, NG1, NG2, NG3, NG4, <Null>	Not Required	Not Public
CMDTY_DTL3	C	3	Commodity Detail 3	Abbreviation for the primary commodity's second subcategory detail. Refer to the CMDTY_DTL1 field for additional information and valid values.	CRW, CRR, RGS, RFD, RKJ, OTR, ETB, BDB, OBI, NG1, NG2, NG3, NG4, <Null>	Not Required	Not Public
CMDTY_DESC	C	40	Commodity Description	Describes the commodities carried by the pipeline system. For example, "NATURAL GAS" or "PROPANE." If purged, report if that pipeline was filled with water, nitrogen, or another material.	Character, <null>	Not Required	Public
INTERSTATE	C	1	Interstate Designation	(Y)es / (N)o designator to identify if the pipeline system is an interstate pipeline. Y=Interstate, N=Intrastate. (Use PHMSA definition; see glossary).	Y, N	Required	Public
LOW_STRESS	C	1	Low Stress	<p>(Y)es / (N)o designator to identify if the hazardous liquid pipeline segment is a low stress pipeline. Y = Low Stress, N = Not Low Stress</p> <p>Required for active and filled liquid in-service pipelines. If the hazardous liquid pipeline operates</p>	Y, N, <Null>	<p>Required – for in service liquid pipeline segments</p> <p>Not Required – for gas pipeline</p>	Not Public

				at 20% or less of SMYS, the segment is a low stress pipeline. Field should be left blank for gas pipelines or for liquid pipelines, which are idle, abandoned, or retired.		segments or permanently abandoned segments	
Field Name	Field Type ¹	Field Length	Short Description	Full Description	Acceptable Values (UPPERCASE)	Required Field	Public Viewer Attribute ²
STATUS_CD	C	1	Pipeline Status Code	Identifies the status of the pipeline segment as of the reporting year (i.e., December 31 of the previous year). I=in service, D=idle, R=retired (<i>all subcategories of an active pipeline as defined by PHMSA</i>), or B=permanently abandoned. See glossary in Appendix C for status code definitions.	I, D, B, R	Required	Public
QUALITY_CD	C	1	Data Quality Code	Identifies the positional accuracy of the submitted pipeline segment. E=excellent: within 50 feet, V=very good: 50–300 feet, G=good: 301–500 feet, P=poor: 501–1000 feet, U=Unknown.	E, V, G, P, U	Required	Not Public
REVIS_CD	C	1	Revision Code	Identifies this pipeline segment as an A=addition to the NPMS unrelated to new construction or changes that subject the pipeline to NPMS submission requirements, C=addition due to construction that adds mileage or is a re-route, J=addition due to mileage which is newly subject to NPMS submission requirements, S=spatial modification of the existing NPMS feature, T=attribute modification of the existing NPMS feature, B=both a spatial and attribute modification of the existing NPMS feature, or N=no change to the existing NPMS feature. Refer to Section 3.3 for a more detailed description of each code.	A, C, J, S, T, B, N	Required	Not Public
FRP_SEQ	I	10	FRP Sequence Number	Facility Response Plan (FRP) Sequence Number for applicable liquid pipe segments according to 49 CFR §194. Assigned by PHMSA and provided to the operator in the Letter of Approval (LOA) for the submitted FRP.	1234 (example)	Not Required	Not Public

NOTES: 1 I = Integer; C = Character; D = Double.

2 Public = Yes, this attribute is visible on NPMS Public Viewer tools; Not Public = No, this attribute is **not** visible on NPMS Public Viewer tools.

Appendix A.2: LNG Plant Attribute Table

Field Name	Field Type ¹	Field Length	Short Description	Full Description	Acceptable Values (UPPERCASE)	Required Field	Public Viewer Attribute ²
OPER_LINK	I	8	Unique Link ID	Link between the geospatial elements (points) and their respective attribute records. Assigned by the operator or the operator's software package (i.e., COVER-ID, MSLINK_ID, etc.). Note the OPER_LINK and the LNG_ID can be identical.	Positive integer	Required- If your attributes are not included in your geospatial file; refer to section 3.4 Not Required – If your attributes are included in your geospatial file.	Not Public
OPID	I	5	Operator Number	Unique tracking number assigned by PHMSA to the company that physically operates the LNG plant. If you do not know your firm's OPID, check with your DOT/Regulatory Compliance department or the NPMS website.	Positive integer	Required	Public
OPER_NM	C	100	Operator Name	The company name that physically operates the LNG Plant.	Character	Required	Public
LNG_NM	C	40	LNG Plant Name	Assigned by the operator. The operator's name for the LNG plant. The operator must submit the same value on their LNG Annual Report to PHMSA.	Character	Required	Public
LNG_ID	C	20	LNG Plant ID	Assigned by the operator. A unique identifier for a specific plant.	Character	Required	Public
STATUS_CD	C	1	LNG Status Code	Identifies the status of the LNG plant as of the reporting year (i.e., December 31 of the previous year). I=in service, R=retired, B=abandoned permanently in accordance with federal regulations (See glossary in Appendix C for status code definitions.).	I, B, R	Required	Public
QUALITY_CD	C	1	Data Quality Code	Identifies the positional accuracy of the submitted data. E=excellent: within 50 feet, V=very good: 50–300 feet, G=good: 301–500 feet, P=poor: 501–1000 feet, U=Unknown.	E, V, G, P, U	Required	Not Public
REVIS_CD	C	1	Revision Code	Identifies the facility as an A=addition to the NPMS unrelated to construction or changes that subject the LNG plant to NPMS submission requirements, J=addition, which is newly subject to NPMS submission requirements, S=spatial modification of the existing NPMS feature, T=attribute modification of the existing NPMS feature, B=both a spatial and attribute modification of the existing NPMS feature, or N=no change to the existing NPMS feature. Refer to Section 3.3 for a more detailed description of each code.	A, C, J, S, T, B, N	Required	Not Public

NOTES: 1 I = Integer; C = Character.

2 Public = Yes, this attribute is visible on NPMS Public Viewer tools; Not Public = No, this attribute is **not** visible on NPMS Public Viewer tools.

Appendix A.3: Breakout Tank Attribute Table

Field Name	Field Type ¹	Field Length	Short Description	Full Description	Acceptable Values (UPPERCASE)	Required Field	Public Viewer Attribute ²
OPID	I	5	Operator ID	Unique tracking number assigned by PHMSA to the company that physically operates the breakout tank farm. If you do not know your firm's OPID, check with your DOT/Regulator Compliance department or the NPMS website.	Positive integer	Required	Public
OPER_NM	C	100	Operator Name	Name of the company that physically operates the breakout tank. This is the company name associated with this OPID in PHMSA records.	Character	Required	Public
TANK_ID	C	20	Breakout Tank ID	Assigned by the operator. A unique identifier for a specific breakout tank. NPMS staff will use the Tank ID to support updates to the NPMS breakout tank database.	Character	Required	Public
FAC_NAME	C	100	Breakout Tank Facility Name	Assigned by the operator. A functional name for a functional grouping of tanks (e.g., a tank facility, a tank farm).	Character	Required	Public
CNSTR_YEAR	I	4	Construction Year	Four-digit year of facility construction (e.g., "1990").	Positive 4 Digit Integer; (example: 2022)	Required	Public
TANKSIZE	I	3	Nominal Size of Breakout Tank	Nominal size of the tank in thousands of barrels (e.g., a tank that holds 50,000 barrels would be reported as 50).	Positive Integer	Required	Not Public
COMMODITY	C	5	Primary Commodity Category	Identifies the primary commodity stored in the breakout tank. CRD=crude oil, PRD=non-HVL petroleum product, AA=anhydrous ammonia, LPG=liquefied petroleum gas, NGL=natural gas liquids, OHV=other HVLs, CO2=carbon dioxide, ETH=fuel grade ethanol, and NONE=the tank did not store a commodity during the reporting year	CRD, PRD, AA, LPG, NGL, OHV, CO2, NONE	Required	Public
COMMODITY2	C	5	Commodity Category 2	Identifies the secondary commodity stored in the breakout tank. Use this field only if more than one commodity type is stored in this tank. CRD=crude oil, PRD=non-HVL petroleum product, AA=anhydrous ammonia, LPG=liquefied petroleum gas, NGL=natural gas liquids, OHV=other HVLs, CO2=carbon dioxide, ETH=fuel grade ethanol. Leave this field blank if the tank does not store a secondary commodity	CRD, PRD, AA, LPG, NGL, OHV, CO2	Not Required	Public
COMMODITY3	C	5	Commodity Category 3	Identifies the tertiary commodity stored in the breakout tank. Use this field only if more than two commodity types are stored in this tank CRD=crude oil, PRD=non-HVL petroleum product, AA=anhydrous ammonia, LPG=liquefied petroleum gas, NGL=natural gas liquids, OHV=other HVLs, CO2=carbon dioxide, ETH=fuel grade ethanol. Leave this field blank if the tank does not store a tertiary commodity.	CRD, PRD, AA, LPG, NGL, OHV, CO2	Not Required	Public
FRP_SEQ	C	20	FRP Sequence Number	Facility Response Plan (FRP) Sequence Number assigned by PHMSA and provided to the operator in the Letter of Approval (LOA) for the operator's submitted FRP. If PHMSA has not assigned the FRP Sequence Number yet, submit 9999. If the Primary Commodity Category is CRD or PRD, this field cannot be left blank.	Character	If applicable, per 49 CFR §194	Not Public
STATUS_CD	C	2	Breakout Tank Status Code	Identifies the status of the breakout tank as of the reporting year (i.e., December 31 of the previous year).	AF, AU, PA	Required	Public

Field Name	Field Type ¹	Field Length	Short Description	Full Description	Acceptable Values (UPPERCASE)	Required Field	Public Viewer Attribute ²
QUALITY_CD	C	1	Data Quality Code (Positional Accuracy)	Identifies the positional accuracy of the submitted data. A=less than 5 feet, B=5-25 feet, C=25.01-50 feet, D=50.01-100 feet, E=100.01 or greater.	A, B, C, D, E	Required	Not Public
REVIS_CD	C	1	Breakout Tank Revision Code	<p>Identifies the type of revision that applies to this breakout tank. Describes how this breakout tank has changed compared to the previous breakout tank NPMS submission for this OPID. NPMS staff rely on this attribute to accurately update the NPMS breakout tank database.</p> <p>C=this breakout tank plant is a new addition to the NPMS for this OPID this year, due to new construction, J=this breakout tank is a new addition to the NPMS for this OPID this year, due to a tank that is new to the NPMS reporting requirement, E=this breakout tank is a new addition to the NPMS for this OPID this year, to correct an error in not submitting previously, Q=this breakout tank is a new addition to the NPMS for this OPID this year, due to an acquisition/transfer from another operator/OPID, B=spatial and/or attribute modification to a breakout tank point location included in the previous NPMS submittal for this OPID, or N=no change to the matching breakout tank included in the previous breakout tank NPMS submittal for this OPID (e.g., nothing about this breakout tank or the data representing this breakout tank changed – the spatial and attribute components are an exact match).</p> <p>Please read more about selecting the correct Revision Code value from the NPMS Operator Submission Supplemental Instructions.</p>	C, J, E, Q, B, N	Required	Public
<p>NOTES: 1 I = Integer; C = Character; D = Double. 2 Public = Yes, this attribute is visible on NPMS Public Viewer tools; Not Public = No, this attribute is not visible on NPMS Public Viewer tools.</p>							

Appendix B: Abandonment Certificate Template

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 U.S. Department of Transportation
 Pipeline and Hazardous Materials Safety Administration
 Operations Systems Division - PHP6
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 E21-106
 Washington, D.C. 20590

NPMS-required attributes:

OPID	System Name	Sub-System	PLINE_ID	Commodity	Diameter	Date of Abandonment	Method of Abandonment <i>(e.g., "capped and filled with salt water")</i>

I certify that, to the best of my knowledge, all of the reasonably available information requested was provided and, to the best of my knowledge, the abandonment was completed in accordance with applicable laws.

Name

Signature

Date

NOTES:

1. "Abandoned" or "Abandoned in place" is NOT a valid description for the Method of Abandonment.
2. 49 CFR 192.3 and 195.2 define Abandoned as "*permanently removed from service*". Pipelines that could potentially return to service in the future or were sold **are not abandoned** per the regulations and should be submitted to the NPMS per guidance in the NPMS Operator Standards and NPMS Operator Submission Supplemental Instructions. Pipelines physically removed rather than abandoned in place should be excluded or removed from the NPMS per guidance in the NPMS Operator Standards and NPMS Operator Submission Supplemental Instructions.
3. This report is required for abandoned pipeline facilities that are offshore or cross over, under or through a commercially navigable waterway, per 49 CFR 192.727(g) and 195.402(c)(10)

Appendix C: Glossary

A

- Abandoned pipeline A pipeline that has been permanently removed from service. The NPMS accepts geospatial data submissions for pipelines that have been abandoned in place, but not for pipelines removed from the ground. This pipeline is not reported on the annual report to PHMSA but is submitted with the code “B” in the Status Code in the NPMS submission.
- Active pipeline A pipeline that is subject to federal regulations. Active pipelines can be transporting commodity, not currently transporting commodity but may again in the future, or not yet properly and permanently abandoned according to federal regulations. Active gas transmission and hazardous liquid pipelines are submitted to the NPMS and included on annual reports to PHMSA. The Status Code field in the NPMS allows the operator to further define if an active pipeline meets the NPMS definition of an in service, idle, or retired active pipeline.
- ASCII American Standard Code for Information Interchange. A popular standard for the exchange of alphanumeric data.
- Attribute A characteristic that helps to describe the data.

B

- Base map A map containing visible surface features and boundaries that is used for local reference.
- Breakout tank A tank used to a) relieve surges in a hazardous liquid pipeline system or b) receive and store hazardous liquid transported by a pipeline for reinjection and continued transportation.

C

- CAD or CADD Computer Aided Drafting (CAD) and Design (CADD). An automated system for the drafting and display of graphic oriented information.
- Coordinates Pairs of numbers expressing a known horizontal location on the earth’s surface.
- Crude oil Liquid petroleum out of the ground, as distinguished from refined oils manufactured from crude oil.

D–E

Database	Structured collection of data defined for a particular use, user, system, or program; may be sequential, network, hierarchical, relational, or semantic.
Datum (geodetic)	The level surface to which elevations are referenced, such as mean sea level. A datum serves as a frame of reference for measuring a location on the surface of the earth.

F

Facilities.....	Components of the pipeline system, such as the pipe, valves, and compressor stations.
FGDC.....	Federal Geographic Data Committee. Established through OMB and charged with coordinating the development, use, sharing, and dissemination of geographic data.

G

GIS	Geographic Information System. Computer hardware, software, and geographic data used to capture, store, update, maintain, analyze, and display graphically referenced information.
GPS	Global Positioning System. Survey instrument/process using satellite-generated timing data to establish either ground or aerial coordinates.

H

Hazardous liquid	Petroleum, petroleum products, or anhydrous ammonia.
Hazardous liquid trunk line	A hazardous liquid transmission pipeline other than a flow line, gathering line, or in-plant pipeline.
Highly volatile liquid (HVL)	A hazardous liquid that will form a vapor cloud when released to the atmosphere and has a vapor pressure exceeding 276 kPa (40 psia) at 37.8° C (100° F). Note: natural gas liquids are also HVLs.

I-K

- In-plant pipeline Piping that is located on the grounds of a plant and used to transfer hazardous liquid or carbon dioxide between plant facilities or between plant facilities and a pipeline or other mode of transportation, not including any device and associated piping that are necessary to control pressure in the pipeline under [CFR §195.406\(b\)](#).
- In service pipeline An active pipeline that currently transports natural gas or hazardous liquid. This pipeline is reported as active on the annual report to PHMSA and with the code “I” in the Status Code field in the NPMS submission.
- Idle pipeline..... An active pipeline that is not transporting commodity, but is maintained to a degree that it may, in the future, be potentially brought back into service. This pipeline is reported as active on the annual report to PHMSA and with the code “D” in the Status Code in the NPMS submission. To avoid confusion with regulatory terms, NPMS web applications display these records with the Status Code of “Active (unfilled)”.
- Interstate pipeline..... A pipeline or part of a pipeline that is regulated by FERC.

L

- Latitude Distance measured north or south of the equator.
- Liquefied Natural Gas (LNG) Natural gas or synthetic gas having methane as its major constituent that has been changed to a liquid or semi-solid.
- Liquefied Petroleum Gas (LPG) Butane and propane separated from natural gasoline and sold in liquid form as fuel. Also known as bottled gas and tank gas.
- LNG facility..... A [pipeline facility](#) that is used for liquefying natural gas or synthetic gas or transferring, storing, or vaporizing liquefied natural gas.
- LNG plant An [LNG facility](#) or system of LNG facilities functioning as a unit.
- Longitude Distance measured east or west from the Prime Meridian in Greenwich, England.
- Low stress pipeline..... Hazardous liquid pipelines operating at 20% or less of SMYS.

M

Metadata..... Descriptive information about data, such as the timeliness of the data, attribute sources, and accuracy of the data.

N

NAD 27, 83 North American Datum (of 1927 or 1983). Two mathematical representations of the earth’s surface.

Natural gas liquid Also referred to as NGL. Can be ethane, butane, propane, or a propane-butane mix.

Natural gas transmission line..... A pipeline system, other than a gathering line, that 1) Transports gas from a gathering line or storage facility to a distribution center, storage facility, or large-volume customer that is not downstream from a distribution center. A large-volume customer may receive similar volumes of gas as a distribution center, and includes factories, power plants, and institutional users of gas, 2) Operates at a hoop stress of 20 percent or more of specified minimum yield strength (SMYS), or 3) Transports gas within a storage field.

Nominal Pipe Size (NPS)..... Identifies the diameter of a pipeline with a standardized dimensionless value, (e.g., 8.625” outside diameter pipe is reported as NPS 8, 5” outside diameter pipe is NPS 4.5). Decimals are only accepted when less than NPS 5. OSAVE and NPMS data templates reflect all available NPS values for pipelines expected in NPMS submittals. Send an email to npms@dot.gov if you believe you have a valid NPS value that is not included.

O

One-Call..... Service to notify underground utilities of planned excavations.

Operator..... A person or firm who operates a pipeline system and engages in the transportation of gas or hazardous liquid. The operator may or may not also be the owner of the pipeline system.

P

Petroleum Crude oil, condensate, natural gasoline, natural gas liquids, and liquefied petroleum gas.

Petroleum product.....	Flammable, toxic, or corrosive products obtained from distilling and processing crude oil, unfinished oils, natural gas liquids, blend stocks, and other miscellaneous hydrocarbon compounds.
Pipeline corridor.....	A linear area where two or more pipelines (either part of the same or different pipeline systems) are closely grouped in a single right-of-way. Pipeline corridors pose a cartographic challenge. In digital files, multiple lines are required, and operators should separate them into individual layers or files.
Pipeline crossing	A point where two or more pipelines cross, but where there is no physical connection between the pipelines. Pipeline segments should not be broken at pipeline crossings.
Pipeline intersection	A point where a physical connection between two pipelines occurs. A commodity from one pipeline can flow into another pipeline(s), either a branch within a pipeline system or a connection between two pipeline systems.
Pipeline segment.....	A linear feature representing part or all of a pipeline system on a map. A pipeline segment must have only two ends. No branches are allowed. A pipeline segment may be a straight line or may have any number of vertices. Each pipeline segment must be uniquely identified. The number of pipeline segments should be kept to the minimum needed to represent a pipeline system and its associated attributes. A unique line segment in the computer-aided drafting (CAD) or GIS data set should represent each pipeline segment.
Pipeline system	All parts of a major natural gas transmission pipeline or hazardous liquid pipeline through which gas or hazardous liquid is transported. By definition, only one firm can operate a pipeline system. Operators should assign unique names to each of their pipeline systems. A pipeline system may have an unlimited number of branches. Each pipeline system must be represented by one or more pipeline segments.

R

Retired pipeline.....	An active pipeline that is no longer maintained, but has not yet been permanently abandoned according to federal pipeline regulations. This pipeline is reported as active on the annual report to PHMSA and with the code “R” in the Status Code field in the NPMS submission. To avoid confusion with regulatory terms, NPMS web applications display these records with the Status Code of “Active (unfilled)”.
ROW	Right-of-Way. A section of land designated for use by one or more pipelines. The NPMS refers to ROWs as pipeline corridors.

S

Scale (large)..... Small map area showing greater detail, e.g., 1:2,400 = 1" to 200'.

Scale (small) Large map area with less detail, e.g., 1:100,000 = 1" to 8333'.

T-Z

Topographic maps..... Map showing horizontal and vertical contours, or lines of equal surface elevation.

Vector..... Data composed of individual coordinate points and lines whose endpoints are defined by coordinate pairs.