



U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

INCIDENT REPORT – LIQUEFIED NATURAL GAS (LNG) FACILITIES

Report Date _____
No. _____
(DOT Use Only)

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2137-0635. Public reporting for this collection of information is estimated to be approximately 12 hours per response, including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

INSTRUCTIONS

Important: Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the PHMSA Pipeline Safety Community Web Page at <http://www.phmsa.dot.gov/pipeline/library/forms>.

PART A – KEY REPORT INFORMATION

Report Type: (select all that apply) Original Supplemental Final

Last Revision Date: _____

A1. Operator's OPS-issued Operator Identification Number (OPID): / / / / / / /

A2. Name of Operator: _____

A3. Address of Operator:

A3a. _____
(Street Address)

A3b. _____
(City)

A3c. State: / /

A3d. Zip Code: / / / / / - / / / / /

A4. Local time (24-hr clock) and date of incident:
 / / / / / / /
Hour Month Day Year

A5. Initial Operator National Response Center Report Number:
 / / / / / / /

A4a. Time Zone for local time (select only one)
 Alaska Eastern Central
 Hawaii-Aleutian
 Mountain Pacific.

A6. Local time (24-hr clock) and date of initial telephonic report to the National Response Center (if reported):
 / / / / / / /
Hour Month Day Year

A4b. Daylight Saving in effect?
 Yes No

A6a. Additional NRC Report numbers submitted by the operator: _____

A4c. Local time of confirmed discovery
 / / / / / / /
Hour Month Day Year

A7. Incident resulted from:
 Unintentional release of commodity
 Intentional release of commodity
 Emergency shutdown
 Reasons other than the above ⇨ *Describe: _____

A8. Commodity released: (select only one, based on predominant volume released)
 No release of commodity involved
 Natural Gas while being handled in gaseous phase
 LNG (Liquefied Natural Gas) while being handled in liquid phase
 LPG (Liquefied Petroleum Gas) while being handled in liquid phase
 Petroleum Gas while being handled in gaseous phase
 Refrigerant Gas
 Other Commodity ⇨ *Name: _____

A9. Estimated volume of commodity released unintentionally: / / / / / / / / Thousand Cubic Feet (MCF)

A10. Estimated volume of intentional and controlled release/blowdown : / / /, / / / / Thousand Cubic Feet (MCF)

A11. Estimated volume of liquid spilled to the ground : / / /, / / / / Bbls

A12. Were there fatalities? Yes No

If Yes, specify the number in each category:

A12a. Operator employees / / / / /

A12b. Contractor employees working for the Operator / / / / /

A12c. Non-Operator emergency responders / / / / /

A12d. General public / / / / /

A12e. Total fatalities (sum of above) / / / / /

A13. Were there injuries requiring inpatient hospitalization? Yes No

If Yes, specify the number in each category:

A13a. Operator employees / / / / /

A13b. Contractor employees working for the Operator / / / / /

A13c. Non-Operator emergency responders / / / / /

A13d. General public / / / / /

A13e. Total injuries (sum of above) / / / / /

A14. Was the LNG Facility shut down due to the incident?

Yes No Explain: _____

If Yes, complete Questions 14a and 14b: (use local time, 24-hr clock)

A14a. Local time and date of shutdown / / / / / / / / / / / / / /
Hour Month Day Year

A14b. Local time LNG Facility restarted / / / / / / / / / / / / / / Still shut down*
Hour Month Day Year (*Supplemental Report required)

A15. Was there an ignition? Yes No

If A15. is Yes, answer A15a. and A16:

A15a. Estimated volume of gas consumed by fire (MCF): _____ (must be less than or equal to A9.)

A16. Was there an explosion? Yes No

A17. Number of general public evacuated: / / / /, / / / /

A18. Number of operator/contractor personnel evacuated: / / / /, / / / /

Injured Persons not included in A13 The number of persons injured, admitted to a hospital, and remaining in the hospital for at least one overnight are reported in A13. **If a person is included in A13, do not include them in A19.**

A19. Estimated number of persons with injuries requiring treatment in a medical facility but not requiring overnight in-patient hospitalization: _____

If a person is included in A19, do not include them in A20.

A20. Estimated number of persons with injuries requiring treatment by EMTs at the site of incident: _____

Buildings Affected

A21. Number of residential buildings affected (evacuated or required repair or gas service interrupted): _____

A22. Number of business buildings affected (evacuated or required repair or gas service interrupted): _____

PART B – ADDITIONAL FACILITY INFORMATION

B1. Facility Information: (select Facility/Plant from dropdown list)

LNG FACILITY / PLANT

Name of LNG Plant / Facility _____

NPMS LNG ID _____

Plant / Facility Status _____

Plant / Facility Location State / / / /

Process

Liquefaction/Vaporization Rate (MMCF/D) at the time of the Incident _____

Number of Vaporizers in service at the time of the Incident _____

Total Capacity (MMCF/D) _____

LNG Source (list all that apply) _____

Interstate or Intrastate _____

LNG Storage

Number of LNG Tanks: _____

Volume of LNG in Storage at the time of the Incident (Bbls) _____

B2. Type of LNG Plant / Facility: (select all that apply)

- Base Load
- Peak Shaving
- Satellite
- Mobile / Temporary (select the following based on use at time of Incident)
 - Intrastate
 - Interstate
- Other ⇨ *Describe: _____

B3. Function of LNG Plant / Facility at the time and date of the Incident: (select all that apply)

- Marine Terminal (select one or both)
 - Import Terminal
 - Export Terminal
- Storage (select one or both)
 - With Liquefaction
 - Without Liquefaction
- Stranded Utility
- Vehicular Fuel
- Nitrogen Rejection Unit or Other Special Use ⇨ *Describe: _____

B4. Item involved in Incident: (select only one)

- Pump
- Compressor
- Vaporizer
- Cold Box
- High Pressure Hose/Line
- Break-away Coupling
- Emergency Shut-Off Valve (ESV)
- In-plant Piping
- Storage Tank / Vessel
- Meter / Regulator / Control Valve
- Relief Valve
- Strainer / Filter
- Instrumentation / Sensor Line
- Flange / Gasket
- Weld
- Other ⇨ *Describe: _____
- No item involved

PART C – ADDITIONAL CONSEQUENCE INFORMATION

C1. Estimated Property Damage:

C1a. Estimated cost of public and non-Operator private property damage	\$ / / / / / / / / / /
C1b. Estimated cost of Operator’s property damage & repairs	\$ / / / / / / / / / /
C1c. Estimated cost of emergency response	\$ / / / / / / / / / /
C1d. Estimated other costs	\$ / / / / / / / / / /
Describe _____	
C1e. Total estimated property damage (sum of above)	\$ / / / / / / / / / /
Cost of Commodity Released	
C1f. Estimated cost of commodity released unintentionally	\$ / / / / / / / / / /
C1g. Estimated cost of commodity released during intentional and controlled blowdown	\$ / / / / / / / / / /
C1h. Total estimated cost of commodity released (sum of 1.f & 1.g above)	\$ / / / / / / / / / /
C1i. Estimated Total Cost (sum of 1.e and 1.h above)	\$ / / / / / / / / / /

PART D – ADDITIONAL OPERATING INFORMATION

D1. Was a computerized Control System in place?

No

Yes ⇨

1a. Was it operating at the time of the Incident?

Yes

No

1b. Was it fully functional at the time of the Incident?

Yes

No

D2. What was the Operator's initial indication of the Failure? (*select only one*)

Computerized Control System ((such as alarm(s), alert(s), event(s), leak detection, temperature, pressure, etc.)

Gas Detectors

Low Temperature Sensors

Flame Detectors

Static shut-in test or other pressure or leak test

Local operating personnel, including contractors working for the Operator

Remote operating personnel

Notification from Public

Other ⇨ * _____ (*Explain in PART G Narrative*)

PART E – DRUG & ALCOHOL TESTING INFORMATION

E1. As a result of this Incident, were any Operator employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?

No

Yes

E1a. Specify how many were tested: / / /

E1b. Specify how many failed: / / /

E2. As a result of this Incident, were any Operator contractor employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?

No

Yes

E2a. Specify how many were tested: / / /

E2b. Specify how many failed: / / /

PART F – APPARENT CAUSE **Select only one APPARENT Cause of the Incident, and answer any questions on the right or below as indicated. Enter secondary, contributing, or root causes of the Incident in Part I – Contributing Factors.*

F1 - Corrosion Failure

External Corrosion

Internal Corrosion

F2 - Natural Force Damage

Earth Movement, NOT due to Heavy Rains/Floods Includes earthquakes, subsidence, landslide, or other geological events

Heavy Rains/Floods Includes washouts/scouring, flotation, mudslide, and other rain- or floodwater-caused events.

Lightning Includes a direct lightning strike or secondary impact such as resulting nearby fires or wildfires

Temperature (Weather-related) Includes thermal stress, frost heave, frozen components, and other weather-related temperature effects

High Winds

Other Natural Force Damage 1. Describe: _____

Complete the following if any Natural Force Damage sub-cause is selected.

2. Were the natural forces causing the Incident generated in conjunction with an extreme weather event? Yes No

2a. If Yes, specify: (*select all that apply*)

Hurricane

Tropical Storm Tornado

Other _____

F3 – Excavation Damage

- Excavation Damage by Operator (First Party)
- Excavation Damage by Operator’s Contractor (Second Party)
- Excavation Damage by Third Party
- Previous Damage due to Excavation Activity

F4 - Other Outside Force Damage

- Nearby Industrial, Man-made, or Other Fire/Explosion as Primary Cause of Incident

- Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation
 1. Vehicle/Equipment operated by: *(select only one)*
 Operator Operator’s Contractor Third Party

- Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring
 2. Select one or more of the following IF an extreme weather event was a factor: Hurricane Tropical Storm Tornado
 Heavy Rains/Flood Other _____

- Electrical Arcing from Other Equipment or Facility

- Previous Mechanical Damage NOT Related to Excavation

- Intentional Damage
 3. Specify:
 - Vandalism
 - Theft of commodity
 - Other _____
 - Terrorism
 - Theft of equipment
 4. Did the Intentional Damage involve a breach of security?
 No
 Yes *(Explain fully in the PART G Narrative)*

- Other Outside Force Damage
 5. Describe: _____

F5 - Material Failure of Pipe or Weld Use this section to report material failures ONLY IF the “Item Involved in Incident” (from PART B, Question 4) is “In-plant Piping” or “Weld”.

1. The sub-cause selected below is based on the following: *(select all that apply)*
- Field Examination Determined by Metallurgical Analysis Other Analysis _____
 - Sub-cause is Tentative or Suspected; Still Under Investigation *(Supplemental Report required)*
-
- Construction-, Installation-, or Fabrication-related
 - Original Manufacturing-related **(NOT girth weld or other welds formed in the field)**
 - Low Temperature Embrittlement (due to a process fluid)
2. Was insulation degradation a factor in this failure? Yes No

F6 - Equipment Failure

- Malfunction of Control/Relief Equipment
- Pump/Compressor or Pump/Compressor-related Equipment
- Threaded Connection/Coupling Failure
- Non-threaded Connection Failure
- Defective or Loose Tubing or Fitting
- Failure of Equipment Body (except Pump/Compressor), Vessel Plate, or other Material
- Other Equipment Failure 1. Describe: _____

Complete the following if any Equipment Failure sub-cause is selected.

2. Did this failure involve Low Temperature Embrittlement due to process fluids? Yes No

3. Was **insulation degradation** a factor in this failure? Yes No

F7 - Incorrect Operation

- Damage by Operator or Operator's Contractor NOT Related to Excavation and NOT due to Motorized Vehicle/Equipment Damage
- Storage Tank or Pressure Vessel Allowed or Caused to Overfill or Overpressure
- Valve Left or Placed in Wrong Position, but NOT Resulting in an Overfill or Overpressure
- Pipe or Equipment Overpressured
- Equipment Not Installed Properly
- Wrong Equipment Specified or Installed
- Other Incorrect Operation 1. Describe: _____

Complete the following if any Incorrect Operation sub-cause is selected.

2. Was this Incident related to: (select all that apply)

- Inadequate procedure
- No procedure established
- Failure to follow procedure
- Other:* _____

F8 – Other Incident Cause

- Miscellaneous 1. Describe: _____
- Unknown 2. Specify: Investigation complete, cause of Incident unknown
 Still under investigation, cause of Incident to be determined* (*Supplemental Report required)

PART I – CONTRIBUTING FACTORS The Apparent Cause of the accident is contained in Part F. Do not report the Apparent Cause again in this Part I. If Contributing Factors were identified, select all that apply below and explain each in the Narrative

External Corrosion

- External Corrosion, Galvanic
- External Corrosion, Atmospheric
- External Corrosion, Stray Current Induced
- External Corrosion, Microbiologically Induced
- External Corrosion, Selective Seam

Internal Corrosion

- Internal Corrosion, Corrosive Commodity
- Internal Corrosion, Water drop-out/Acid
- Internal Corrosion, Microbiological
- Internal Corrosion, Erosion

Natural Forces

- Earth Movement, NOT due to Heavy Rains/Floods
- Heavy Rains/Floods
- Lightning
- Temperature
- High Winds
- Snow/Ice
- Tree/Vegetation Root

Excavation Damage

- Excavation Damage by Operator (First Party)
- Excavation Damage by Operator's Contractor (Second Party)
- Excavation Damage by Third Party
- Previous Damage due to Excavation Activity

Other Outside Force

- Nearby Industrial, Man-made, or Other Fire/Explosion
- Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation
- Damage by Boats, Barges, Drilling Rigs, or Other Adrift Maritime Equipment
- Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation
- Electrical Arcing from Other Equipment or Facility
- Previous Mechanical Damage NOT Related to Excavation
- Intentional Damage
- Other underground facilities buried within 12 inches of the failure location

Pipe/Weld Failure

- Design-related
- Construction-related
- Installation-related
- Fabrication-related
- Original Manufacturing-related

Equipment Failure

- Malfunction of Control/Relief Equipment
- Threaded Connection/Coupling Failure
- Non-threaded Connection Failure
- Valve Failure

Incorrect Operation

- Damage by Operator or Operator's Contractor NOT Excavation and NOT Vehicle/Equipment Damage
- Valve Left or Placed in Wrong Position, but NOT Resulting in Overpressure
- Pipeline or Equipment Overpressured
- Equipment Not Installed Properly
- Wrong Equipment Specified or Installed
- Inadequate Procedure
- No procedure established
- Failure to follow procedures

PART H – PREPARER AND AUTHORIZED PERSON

Preparer's Name (type or print)

Preparer's Title (type or print)

Preparer's E-mail Address

Authorized Signer's-Name

Date

Authorized Signer's Title

Preparer's Telephone Number

Preparer's Facsimile Number

Authorized Signer Telephone Number

Authorized Signer's E-mail Address

GENERAL INSTRUCTIONS

Each operator of a liquefied natural gas (LNG) facility shall file Form PHMSA F 7100.3 for an incident that meets the criteria in 49 CFR §191.3 as soon as practicable but not more than 30 days after detection of the incident. Requirements for submitting reports are in §191.7 and §191.15.

Activation of an emergency shutdown system for any reason other than an actual emergency need not be reported, as described in §191.3 under "Incident". For purposes of this requirement, an emergency is defined in §193.2007.

PHMSA requires electronic reporting. Follow these instructions for electronic filing or to request an alternative reporting method. If you have questions about this report or these instructions, contact PHMSA's Information Resources Manager at 202-366-8075. If you need copies of Form PHMSA F 7100.3 and/or instructions they can be found on <http://phmsa.dot.gov/pipeline/library/forms>. The applicable forms are listed in the section titled Accidents/Incidents/Annual Reporting Forms.

ONLINE REPORTING REQUIREMENTS

Incident Reports must be submitted online through the PHMSA Portal at <https://portal.phmsa.dot.gov/portal>, unless an alternate method is approved (see Alternate Reporting Methods below). You will not be able to submit reports until you have met all of the Portal registration requirements – see

http://opsweb.phmsa.dot.gov/portal_message/PHMSA_Portal_Registration.pdf

Completing these registration requirements could take several weeks. Plan ahead and register well in advance of the report due date.

Use the following procedure for online reporting:

1. Go to the PHMSA Portal at <https://portal.phmsa.dot.gov/portal>
2. Enter PHMSA Portal Username and Password ; press *enter*
3. Select OPID; press "*continue*" button.
4. On the left side menu under "Incident/Accident (2010 to present)" select "**ODES 2.0**"
5. Under "**Create Reports**" on the left side of the screen, select "Liquefied Natural Gas (LNG)" and proceed with entering your data.
6. Click "**Submit**" when finished with your data entry to have your report uploaded to PHMSA's database as an official submission of an Incident Report; or click "**Save**" which doesn't submit the report to PHMSA but stores it in a draft status to allow you to come back to complete your data entry and report submission at a later time. *Note: The "Save"*

feature will allow you to start a report and save a draft of it which you can print out and/or save as a PDF to email to colleagues in order to gather additional information and then come back to accurately complete your data entry before submitting it to PHMSA.

7. Once you click “**Submit**”, the system will check if all applicable portions of the report have been completed. If portions are incomplete, a listing of these portions will appear above the row of Parts. If all applicable portions have been completed, the system will show your Saved Incident/Accident Reports in the top portion of the screen and your Submitted Incident/Accident Reports in the bottom portion of the screen. *Note: To confirm that your report was successfully submitted to PHMSA, look for it in the bottom portion of the screen where you can also view a PDF of what you submitted.*

Supplemental Report Filing – Follow Steps 1 through 4 above, and double-click a submitted report from the Submitted Incident/Accident Reports list. The report will default to a “Read Only” mode that is pre-populated with the data you submitted previously. To create a supplemental report, click on “Create Supplemental” found in the upper right corner of the screen. At this point, you can amend your data and make an official submission of the report to PHMSA as either a Supplemental Report or as a Supplemental Report *plus* Final Report (see “Specific Instructions, PART A, Report Type”), or you can use the “**Save**” feature to create a draft of your Supplemental Report to be submitted at some future date.

Alternate Reporting Methods

Operators for whom electronic reporting imposes an undue burden and hardship may submit a written request for an alternate reporting method. Operators must follow the requirements in §191.7(d) to request an alternate reporting method and must comply with any conditions imposed as part of PHMSA’s approval of an alternate reporting method.

RETRACTING A 30-DAY WRITTEN REPORT

An operator who reports an incident in accordance with §191.15 (oftentimes referred to as a 30-day written report) and upon subsequent investigation determines that the event did not meet the criteria in §191.3 may request that the report be retracted. Requests to retract a 30-day written report are to be emailed to InformationResourcesManager@dot.gov. Requests are to include the following information:

- a. The Report ID (the unique 8-digit identifier assigned by PHMSA)
- b. Operator name
- c. PHMSA-issued OPID number
- d. The number assigned by the National Response Center (NRC) when an immediate notice was made in accordance with §191.5. If Supplemental Reports were made to the NRC for the event, list all NRC report numbers associated with the event.
- e. Date of the event
- f. Location of the event
- g. A brief statement as to why the report should be retracted.

Note: PHMSA no longer requests that operators rescind erroneously reported “Immediate Notices” filed with the NRC in accordance with §191.5 (oftentimes referred to as “Telephonic Reports”).

SPECIAL INSTRUCTIONS

Certain data fields must be completed before an Original Report will be accepted. Your Original Report will not be able to be submitted online until the required information has been provided, although your partially completed form can be saved online so that you can return at a later time to provide the missing information.

1. An entry should be made in each applicable space or check box, unless otherwise directed by the section instructions.
2. If the data is unavailable, enter “Unknown” for text fields and leave numeric fields and fields using check boxes or “radio” buttons blank.
3. Estimate data only if necessary. Provide an estimate in lieu of answering a question with “Unknown” or leaving the field blank. Estimates should be based on best-available information and reasonable effort.
4. For unknown or estimated data entries, the operator should file a Supplemental Report when additional or more accurate information becomes available.
5. If the question is not applicable, enter “N/A” for text fields and leave numeric fields and fields using check boxes or “radio” buttons blank. Do not enter zero unless this is the actual value being submitted for the data in question.
6. If **OTHER** is checked for any answer to a question, include an explanation or description on the line provided, making it clear why “Other” was the necessary selection.
7. Pay close attention to each question for the phrase:
 - a. *(select all that apply)*
 - b. *(select only one)*

If the phrase is not provided for a given question, then “select only one” should apply. “Select only one” means that you should select the single, primary, or most applicable answer. **DO NOT SELECT MORE ANSWERS THAN REQUESTED.** “Select all that apply” requires that all applicable answers (one or more than one) be selected.

8. **Date format** = mm/dd/yy or for year = /yyyy/
9. **Time format:** All times are reported as a 24-hour clock:

Time format Examples:

- a. (0000) = midnight = /0/0/0/0/
- b. (0800) = 8:00 a.m. = /0/8/0/0/
- c. (1200) = Noon = /1/2/0/0/
- d. (1715) = 5:15 p.m. = /1/7/1/5/
- e. (2200) = 10:00 p.m. = /2/2/0/0/

Local time always refers to time at the site of the incident. Note that time zones at the incident site may be different than the time zone for the person discovering or reporting the event. For example, if a release occurs at an gas transmission facility in Denver, Colorado at 2:00 pm MST, but an individual located in Houston is filing the report after having been notified at 3:00 pm CST, the time of the incident is to be reported as 1400 hours based on the time in Denver, which is the physical site of the incident.

SPECIFIC INSTRUCTIONS

PART A – KEY REPORT INFORMATION

Report Type: (select all that apply)

Select the appropriate report box or boxes to indicate the type of report being filed. Depending on the descriptions below, the following combinations of boxes – and only one of these combinations - may be selected:

- Original Report
- Original Report plus Final Report
- Supplemental Report
- Supplemental Report plus Final Report

Original Report

Select this type of report if this is the FIRST report filed for this incident, and not enough information is available at this time to conclude that this is also a Final Report where no further information will be forthcoming. Select Original Report in cases where further information may be forthcoming, such as when final property damage numbers or apparent failure cause is not immediately available.

Original Report *plus* **Final Report**

Select **both** Original Report and Final Report if ALL of the information requested is known and can be provided at the time the initial report is filed, including final property damage costs and apparent failure cause information. Selecting both these types of reports will indicate that further information is not expected to be forthcoming through a Supplemental Report. If, however, for some reason new, updated, and/or corrected information becomes available unexpectedly, the operator is to still file a Supplemental Report indicating such and explaining the circumstances in PART G – Narrative Description of the Incident.

Supplemental Report

Select this type of report only if you have already filed an Original Report AND you are now providing new, updated, and/or corrected information. Multiple Supplemental Reports are to be submitted, as necessary, in order to provide new, updated, and/or corrected information ***when it becomes available*** and, per §191.15(c), each Supplemental Report containing new, updated, and/or corrected information is to be filed as soon as practicable. Submission of new, updated, and/or corrected information is NOT to be delayed in order to accumulate “enough” to “warrant” a Supplemental Report, or to complete a Final Report. ***Supplemental Reports must be filed as soon as practicable following the Operator’s awareness of new, updated, and/or corrected information.*** Failure to comply with these requirements can result in enforcement actions, including the assessment of civil penalties as provided in 49 USC 60122.

In those cases in which investigations are ongoing, operators should file a Supplemental Report within one year even in those instances where no new, updated, and/or corrected information has been obtained, indicating such in PART G – Narrative Description of the Incident.

For Supplemental Reports filed online, all data previously submitted will automatically populate in the form. Page through the form to make edits and additions where needed.

Supplemental Report *plus* **Final Report**

If an Original Report has already been filed AND new, updated, and/or corrected information is now being submitted via a Supplemental Report, AND the operator is reasonably certain that no further information will be forthcoming, then Final Report is to also be selected along with Supplemental Report. (See also the requirements stated above under “Supplemental Report”.)

Important: If an operator files one of the two types of Final Reports (either Original *plus* Final or Supplemental *plus* Final) and then subsequently finds that new, updated, and/or corrected information needs to be provided, the operator is to submit another Supplemental Report, selecting the appropriate report types (Supplemental or Supplemental *plus* Final) for the newly submitted report and explaining the circumstances in PART G – Narrative Description of the Incident.

In PART A, answer Questions 1 thru 18 by providing the requested information or by making the appropriate selection.

A1. Operator’s OPS-Issued Operator Identification Number (OPID)

For online entries, the OPID will automatically populate based on the selection you made when entering the Portal. If you have log-in credentials for multiple OPID, be sure the report is being created for the appropriate OPID. Contact PHMSA’s Information Resources Manager at 202-366-8075 if you need assistance with an OPID. Business hours are 8:30 AM to 5:00 PM Eastern Time.

A2. Name of Operator

This is the company name associated with the OPID. For online entries, the name will automatically populate based on the OPID entered in A1. If the name that appears is not correct, you need to submit an Operator Name Change (Type A) Notification.

A3. Address of Operator

For online entries, the headquarters address will automatically populate based on the OPID entered in A1. If the address that appears is not correct, you need to change it in the online Contacts module.

A4. Local time (24-hour clock) and date of incident

Enter the *earliest* of the following:

- estimate of the time/date when the release of commodity began; *or*
- time/date that personal injury or damage to property first occurred rather than the time/date the consequences are quantified; *or*
- time/date of emergency shutdown.

See “Special Instructions”, numbers 8 and 9 for examples of **Date format** and **Time format** expressed as a 24-hour clock.

A4a. Select the local time zone where the Incident occurred (select only one).

A4b. Select “Yes” if Daylight Saving was in effect at the time of the Incident, or “No” if it was not.

A4c. Enter local time and date of Confirmed Discovery as defined in 49 CFR §191.3.

A5. Initial Operator National Response Center (NRC) Report Number

§191.5 requires that incidents meeting the criteria outlined in §191.3 be reported directly to the **24-hour National Response Center (NRC) at 1-800-424-8802** at the earliest practicable moment. The NRC assigns numbers to each call. The number assigned to that Immediate Notice (sometimes referred to as the “Telephonic Report”) is to be entered in Question 5.

A6. Local time (24-hr clock) and date of initial operator report to the National Response Center

Enter the time and date of the initial operator Immediate Notice/telephonic report of the incident to the NRC. The time is to be shown by 24-hour clock notation, and is to reflect the time in the time zone where the incident was physically located. (See “Special Instructions”, numbers 8 and 9.)

A6a. Additional NRC Report Numbers

If the operator made more than one call to the NRC, enter each additional NRC report number.

A7. Incident resulted from

Indicate whether the incident resulted from the intentional or unintentional release of commodity, an emergency shutdown, or as the result of other reasons. If “Reasons other than the above” is selected, describe the circumstances.

A8. Commodity released

Select the type of commodity released. Select “No release of commodity involved” if the incident is from an emergency shutdown or other cause that did not involve a release. If “Other Commodity” is selected, enter the specific name of the commodity released.

General Information for Questions 9, 10, and 11:

Important Note: Volumes consumed by fire and/or explosion are to be included in the estimated volumes reported in 9 and 10.

A9. Estimated volume of commodity released unintentionally

Estimate the amount of commodity that was released (in thousands of standard cubic feet, MCF) from the beginning of the incident until such time as the commodity is no longer being released from the facility or until intentional and controlled blowdown has commenced. Estimates are to be based on the best-available information.

A10. Estimated volume of intentional and controlled release/blowdown

Estimate the amount of commodity that was released (in thousands of standard cubic feet, MCF) during any intentional release or controlled blowdown conducted as part of responding to or recovering from the incident. Intentional and controlled blowdown implies a level of control of the facility and situation by the operator such that the area and the public are protected during the controlled release.

A11. Estimated volume of liquid spilled to the ground

Estimate the amount of commodity that was spilled to the ground (or other containment) as a liquid (in barrels) from the beginning of the incident until such time as the commodity is no longer being released from the facility. Barrel means a unit of measurement equal to 42 U.S. standard gallons. If less than 1 barrel, report to 1 decimal place (see table below). Small volumes, including but not limited to those which sometimes result in some form of ignition, are to be reported as 0.1 barrels.

If estimated volume is	Report	If estimated volume is	Report
<5 gallons	0.1 barrels	24-27 gallons	0.6 barrels
5-10 gallons	0.2 barrels	28-31 gallons	0.7 barrels
11-14 gallons	0.3 barrels	32-35 gallons	0.8 barrels
15-18 gallons	0.4 barrels	36-39 gallons	0.9 barrels
19-23 gallons	0.5 barrels	40-42 gallons	1.0 barrels

A12. Were there fatalities?

If a person dies at the time of the incident or within 30 days of the initial incident date due to injuries sustained as a result of the incident, report as a fatality. If a person dies subsequent to an injury more than 30 days past the incident date, report as an injury. (Note: This aligns with the Department of Transportation's general guidelines for all jurisdictional transportation modes for reporting deaths and injuries.)

Contractor employees working for the operator are individuals hired to work for or on behalf of the operator of the facility. These individuals are not to be reported as “Operator employees”.

Non-Operator emergency responders are individuals responding to render professional aid at the incident scene including on-duty and volunteer fire fighters, rescue workers, EMTs, police officers, etc. “Good Samaritans” that stop to assist are to be reported as “General public.”

A13. Were there injuries requiring inpatient hospitalization?

Injuries requiring inpatient hospitalization are injuries sustained as a result of the incident and that require hospital admission *and* at least one overnight stay.

See Question 12 for additional definitions.

A14. Was the LNG Facility shut down due to the incident?

Report any shutdowns that occur as a result of the incident, including but not limited to those required for damage assessment, temporary repair, permanent repair, and clean-up. Instances in which an incident was caused by a situation that did not involve damage to the facility (e.g., emergency shutdown) and in which no need for repairs resulted are not to be reported as being shutdown, even though the facility may have been shutdown as a precautionary measure to inspect for damages.

If No is selected, explain the reason that no shutdown was needed in the space provided.

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INCIDENT REPORT – LIQUEFIED NATURAL GAS (LNG) FACILITIES

If Yes is selected, complete Questions 14a and 14b.

A14a. Local time (24hr clock) and date of shutdown

A14b. Local time facility restarted

The time is to be shown by 24-hour clock notation, and is to reflect the time in the time zone where the incident was physically located. (See “Special Instructions”, numbers 8 and 9.) Enter the time and date of the shutdown that is associated with the onset or occurrence of the incident in 14a and the time and date of restart in 14b. The intent with this data is to capture the total time that the facility is shutdown due to the incident. If the facility has not been restarted at the time of reporting, select “Still shut down” for Question 14b and then include the restart time and date in a future Supplemental Report.

A15. Was there an ignition?

Ignite means the released commodity caught fire.

A15a. Estimate volume of gas consumed by fire in thousands of standard cubic feet, MCF

A16. Was there an explosion?

Explode means the ignition of the released commodity occurred with a sudden and violent release of energy.

A17. Number of general public evacuated

The number of people evacuated is to be estimated based on operator knowledge, or police, fire department, or other emergency responder reports. If there was no evacuation involving the general public, report zero (0). If an estimate is not possible for some reason, leave the field blank but include an explanation of why it was not possible to provide a number in PART G – Narrative Description of the Incident.

A18. Number of operator/contractor personnel evacuated

Report here the number of operator employees or contracted personnel evacuated from the facility. If there was no evacuation from the facility, report zero (0).

Injured persons not included in A13. The number of persons injured, admitted to a hospital, and remaining in the hospital for at least one overnight are reported in A13. *If a person is included in A13, do not include them in A19.*

A19. Estimated number of persons with injuries requiring treatment in a medical facility but not requiring overnight in-patient hospitalization.

If a person is included in A19, do not include them in A20.

A20. Estimated number of persons with injuries requiring treatment by EMTs at the site of incident.

Buildings Affected The term ‘affected’ means the building was damaged and required repair, or evacuated, or had gas service interrupted.

A21. Enter the number of residential buildings affected.

A22. Enter the number of commercial and industrial buildings affected.

PART B – ADDITIONAL FACILITY INFORMATION

B1. Facility Information

Complete the table, providing or editing information for the facility involved in the incident.

Name of LNG Plant / Facility is the name used by the operator to identify the facility. This is to be the same as the LNG_NM field reported to the National Pipeline Mapping System (NPMS)

NPMS ID is to be the same as the NPMS field LNG_ID.

Plant / Facility Status is to be the same as NPMS field STATUS_CD. Select one of the following Status Code descriptions to indicate Plant / Facility Status:

Status Codes

- I In Service
- B Abandoned
- R Retired

Plant / Facility Location is the two-digit abbreviation for the State in which the plant/facility is located

Process is to report the listed process information for the facility at the time of the incident. Total capacity refers to the entire facility, not any specific piece of equipment.

LNG Source. Identify the source or sources of the LNG for the Plant / Facility such as Truck, Railroad, Marine (ship/barge), or Liquefaction. All LNG sources that apply are to be selected. Select one or more of the following LNG Sources:

LNG Source

- T Truck
- R Railroad
- M Ship/Barge
- L Liquefaction

Interstate or Intrastate

Select Interstate if the LNG Plant/Facility operates under a certificate from the Federal Energy Regulatory Commission (FERC). Select Intrastate if the LNG Plant/Facility does not operate under a FERC certificate.

LNG Storage. Report both the number of LNG Tanks and the total volume of LNG in storage at the time of the incident.

B2. Type of LNG Plant / Facility

Select the type of LNG Plant / Facility involved in the incident:

Base Load: A facility that operates throughout the year to provide gas supply.

Peak Shaving: LNG peak shaving facilities are used for storing surplus natural gas for use during peak demand periods such as winter and summer.

Satellite: Satellite peak shaving plants do not include process equipment to convert natural gas to LNG. Instead, trucks deliver LNG for storage on site. Satellite peak shaving plants typically inject natural gas into distribution pipeline systems.

Mobile/Temporary: These facilities are used to provide a temporary supply during scheduled activities such as maintenance or construction or supply emergencies that may arise. For these facilities, identify whether the facility is associated with or providing commodity for an interstate or intrastate pipeline.

Other: Describe the plant or facility type in the space provided.

B3. Function of LNG Plant / Facility at the time and date of the Incident

Identify the function or functions of the plant or facility at the time and date of the Incident. Indicate all of the functions which were capable of being operational at the Plant / Facility, and not just those which were involved in the Incident or which were actually operating at the time and date of the Incident.

B4. Item involved in Incident

Identify the primary item involved in the incident. If the incident occurred on an item not listed in this section, select Other and specify in the space provided the item that failed or was otherwise involved in the incident.

PART C – ADDITIONAL CONSEQUENCE INFORMATION

C1. Estimated Property Damage

All relevant costs available at the time of submission must be included on the initial written Incident Report as well as being updated as needed on Supplemental Reports. This includes (but is not limited to) costs due to property damage to the operator’s facilities and to the property of others, facility repair and replacement, and environmental cleanup and damage. Do NOT include cost of commodity lost. Additionally, do NOT include costs incurred for facility repair, replacement, or changes that are NOT related to the incident and which are typically done solely for convenience. An example of doing work solely for convenience is working on other portions of the facility that were shut down because of the incident. Litigation and other legal expenses related to the incident are not reportable.

Operators are to report costs based on the best estimate available at the time a report is submitted. It is likely that an estimate of final repair costs may not be available when the initial report must be submitted (within 30 days, per §191.15). The best available estimate of these costs is to be included in the initial report. For convenience, this estimate can be revised, if needed, when Supplemental Reports are filed for other reasons, however, when no other changes are forthcoming, Supplemental Reports are to be filed as new cost information becomes available. If Supplemental Reports are not submitted for other reasons, a Supplemental Report is to be filed for the purpose of updating or correcting the estimated cost if these costs differ from those already reported by 20 percent or \$20,000, whichever is greater.

Public and Non-operator private property damage estimates generally include physical damage to the property of others, the cost of investigation and remediation of a site not owned or operated by the operator, laboratory costs, third party expenses such as engineers or scientists, and other reasonable costs, excluding litigation and other legal expenses related to the incident.

Operator’s property damage estimates generally include physical damage to the property of the operator or owner company such as the estimated installed or replacement value of the equipment damaged due to the incident, excluding the cost of any commodity lost. Also to be excluded are litigation and other legal expenses related to the incident.

When estimating the **Cost of repairs** to company facilities, the standard shall be the cost necessary to safely restore property to its predefined level of service. Property damage estimates include the cost to access, secure, excavate, and repair the pipeline using methods, materials, and labor necessary to re-establish operations at a predetermined level. When more comprehensive repairs or improvements are justified but not required for continued operation, the cost of such repairs or replacement is not attributable to the incident. Costs associated with improvements to the facility to mitigate the risk of future failures are not included.

Estimated cost of **emergency response** includes emergency response operations necessary to return the incident site to a safe state, actions to minimize the volume of commodity released, conduct reconnaissance, and to identify the extent of incident impacts. They include materials,

supplies, labor, and benefits. Costs related to stakeholder outreach, media response, etc. are not to be included.

Other costs are to include any and all costs which are not included above. Cost of any commodity lost is NOT to be reported here but is to be reported under **Cost of Commodity Released**. Operators are to NOT use this category to report any costs which belong in cost categories separately listed above.

Costs are to be reported in only one category and are not to be double counted. Costs can be split between two or more categories when they overlap more than one reporting category.

Cost of Commodity Released use your gas cost, excluding taxes, in dollars per thousand standard cubic feet (mcf) and the volumes shown below to calculate the commodity cost.

Cost of commodity released unintentionally is to be based on the volume reported in PART A, Question 9.

Cost of commodity released during intentional and controlled blowdown is to be based on the volume reported in PART A, Question 10.

PART D – ADDITIONAL OPERATING INFORMATION

D1. Was a computerized Control System in place?

Computerized control systems include distributed control systems (DCS), supervisory control and data acquisition systems (SCADA), and other types of computer-based systems used for control of all or a portion of the facility. Computer-based control of an individual piece of equipment is not considered a computerized control system.

Select Yes or No to indicate whether a computerized control system was installed in the facility. If Yes, then indicate whether the system was operating at the time of the incident, indicating separately whether the computerized control system was capable of performing all of its functions, and whether or not it was actually in operation at the time of the incident. If No, describe why the system was not operating or describe the functions that were not operational at the time of the incident in PART G – Narrative Description of the Incident.

D2. What was the Operator’s initial indication of the Failure? (select only one)

Local operating personnel including contractors means employees or contractors working on behalf of the operator outside the control room.

Remote operating personnel would include controllers or other individuals monitoring or operating a facility from a control room, whether located at the facility or remotely.

Notification from Public includes notification to the operator directly by a member of the public including emergency responders, or notification from public safety personnel when a member of the public reports an incident (such as by dialing 911), or when public safety personnel, themselves, identify the incident.

PART E – DRUG & ALCOHOL TESTING INFORMATION

Requirements for post-incident drug and alcohol tests are in 49 CFR §199.105 and §199.225 respectively. If the incident circumstances were such that tests were not required per these regulations, and if no tests were conducted, select No. If tests were administered, select Yes and report separately the number of operator employees and the number of contractors working for the operator that were tested and the number of each that failed such tests.

PART F – APPARENT CAUSE

Select the one, single sub-cause listed under sections F1 thru F8 that best describes the apparent cause of the Incident. These sub-causes are contained in the shaded column on the left under each main cause category. Answer the corresponding questions that accompany your selected sub-cause, and describe any secondary, contributing, or root causes of the Incident in PART G – Narrative Description of the Incident.

F1 – Corrosion Failure

Corrosion includes a release or failure caused by galvanic, atmospheric, stray current, microbiological, or other corrosive action. A corrosion release or failure is not limited to a hole in the pipe or other piece of equipment. If the bonnet or packing gland on a valve or flange on piping deteriorates or becomes loose and leaks due to corrosion and failure of bolts, it is to be classified as Corrosion. (Note: If the bonnet, packing, or other gasket has deteriorated before the end of its expected life but not due to corrosive action, the failure is to be classified under F6 - Equipment Failure.)

F2 – Natural Force Damage

Natural Force Damage includes a release or failure resulting from earth movement, earthquakes, landslides, subsidence, lightning, heavy rains/floods, washouts, flotation, mudslide, scouring, temperature, frost heave, frozen components, high winds, or similar natural causes.

Earth Movement NOT due to Heavy Rains/Floods refers to incidents caused by land shifts such as earthquakes, landslides, or subsidence, but not mudslides which are presumed to be initiated by heavy rains or floods.

Heavy Rains/Floods refer to all water-related natural force causes. While mudslides involve earth movement, report them here since typically they are an effect of heavy rains or floods.

Lightning includes both damage and/or fire caused by a direct lightning strike and damage and/or fire as a secondary effect from a lightning strike in the area. An example of such a secondary effect would be a forest fire started by lightning that results in damage to an LNG facility which results in an incident. (See also the discussion of “secondary ignition” under the *General Instructions*.)

Temperature (Weather-related) includes weather-related temperature and thermal stress effects, either heat or cold, where temperature was the initiating cause. Thermal stress refers to mechanical stress induced in a pipe or component when some or all of its parts are not free to expand or contract in response to changes in the ambient temperature. Do NOT report here incidents caused by embrittlement due to handling of cryogenic/process fluids which are to be reported under either F5 – Material Failure of Pipe or Weld if occurring on in-plant piping or welds, or under F6 – Equipment if occurring on other equipment.

High Winds includes damage caused by wind-induced forces. Select this category if the damage is due to the force of the wind itself. Damage caused by impact from objects blown by wind would be reported under F4 - Other Outside Force Damage.

Other Natural Force Damage. Select this sub-cause for types of Natural Force Damage not included otherwise, and describe in the space provided. If necessary, provide additional explanation in PART G – Narrative Description of the Incident.

Answer Questions 2 and 2.a if the incident occurred in conjunction with an extreme weather event such as a hurricane, tropical storm, or tornado. If an extreme weather event related to something other than a hurricane, tropical storm, or tornado was involved, indicate Other and describe the event in the space provided.

F3 – Excavation Damage

Excavation Damage includes a release or failure resulting directly from excavation damage by operator's personnel (oftentimes referred to as “first party” excavation damage) or by the operator’s contractor (oftentimes referred to as “second party” excavation damage) or by people or contractors not associated with the operator (oftentimes referred to as “third party” excavation damage). Also, this section includes a release or failure determined to have resulted from previous damage due to excavation activity. For damage from outside forces OTHER than excavation which results in a release, use F2 - Natural Force Damage or F4 - Other Outside Force, as appropriate. Also, for a strike, physical contact, or other damage to equipment or a facility that apparently was NOT related to excavation and that results in a delayed or eventual release, report the incident under F4 as “Previous Mechanical Damage NOT related to Excavation.”

Excavation Damage by Operator (First Party) refers to incidents caused as a result of excavation by a direct employee of the operator.

Excavation Damage by Operator’s Contractor (Second Party) refers to incidents caused as a result of excavation by the operator’s contractor or agent or other party working for the operator.

Excavation Damage by Third Party refers to incidents caused by excavation damage resulting from actions by personnel or other third parties not working for or acting on behalf of the operator or its agent.

Previous Damage due to Excavation Activity refers to incidents that were apparently caused by prior excavation activity and that then resulted in a delayed or eventual release. Indications of prior excavation activity might come from the condition of the pipe when it is examined, or from records of excavation at the site, or through metallurgical analysis or other inspection and/or testing methods. Dents and gouges in the 10:00-to-2:00 o’clock positions on the pipe, for instance, may indicate an earlier strike, as might marks from the bucket or tracks of an earth moving machine or similar pieces of equipment.

F4 – Other Outside Force Damage

Other Outside Force Damage includes, but are not limited to, a release or failure resulting from non-excavation-related outside forces, such as nearby industrial, man-made, or other fire or explosion; damage by vehicles or other equipment; failures due to mechanical damage; and, intentional damage including vandalism and terrorism.

Nearby Industrial, Man-made or other Fire/Explosion as Primary Cause of Incident applies to situations where the fire occurred before - and *caused* - the release. (See also the discussion of “secondary ignition” under the *General Instructions*.) Examples of such a failure would be an explosion or fire at a neighboring facility or installation (chemical plant, tank farm, or other industrial facility) or structure, debris, or brush/trees that results in an incident at the operator’s facility. This includes forest, brush, or ground fires that are caused by human activity. If the fire, however, is known to have been started as a result of a lightning strike, the incident’s cause is to be classified under F2 - Natural Force Damage. Arson events directed at harming the facility or the operator are to be reported as F4 - Intentional Damage (see below). This sub-cause is NOT to be used if the release occurred first and then the gas released from the LNG Facility ignited.

Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation. An example of this sub-cause would be a stopple tee that releases LNG when damaged by a pickup truck maneuvering at the facility. Other motorized vehicles or equipment include tractors, backhoes, bulldozers and other tracked vehicles, and heavy equipment that can move. Include under this sub-cause, incidents caused by vehicles operated by the operator, the operator’s contractor, or a third party and specify the vehicle/equipment operator’s affiliation from one of these three groups. If the activity that caused the incident involved digging, drilling, boring, grading, cultivation or similar excavation activities, report under F3 - Excavation Damage.

Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring. This sub-cause includes impacts by maritime equipment or vessels (including their anchors or anchor chains or other attached equipment) that have lost their moorings and are carried into the LNG facility by the current. This sub-cause also includes maritime equipment or vessels set adrift as a result of severe weather events and carried into the LNG facility by waves, currents, or high winds. In such cases, also indicate the type of severe weather event. Do NOT report in this sub-cause incidents which are caused by the impact of maritime equipment or vessels while they are engaged in their normal or routine activities; such incidents are to be reported as “Other Outside Force Damage” in this section F4 (see below) so long as those activities are not excavation activities. If those activities are excavation activities such as dredging or bank stabilization or renewal, the incident is to be reported under F3 - Excavation Damage.

Electrical Arcing from Other Equipment or Facility such as a pole transformer or adjacent facility’s electrical equipment.

Previous Mechanical Damage NOT Related to Excavation. This sub-cause covers incidents where damage occurred at some time prior to the release that was apparently NOT related to excavation activities, and would include prior outside force damage of an unknown nature, prior natural force damage, prior damage from other outside forces, and any other previous mechanical damage other than that which was apparently related to prior excavation. Incidents resulting from

previous damage sustained during construction, installation, or fabrication of the pipe or weld from which the release eventually occurred are to be reported under F5 - Material Failure of Pipe or Weld. (See this sub-cause for typical indications of previous construction, installation, or fabrication damage.) Incidents resulting from previous damage sustained as a result of excavation activities should be reported under F3 – Previous Damage due to Excavation Activity. (See this sub-cause for typical indications of prior excavation activity.)

Intentional Damage

Vandalism means willful or malicious destruction of the operator’s facility or equipment. This category would include arson, pranks, systematic damage inflicted to harass the operator, motor vehicle damage that was inflicted intentionally, and a variety of other intentional acts. (See also the discussion of “secondary ignition” under the *General Instructions*.)

Terrorism, per 28 CFR §0.85 General Functions, includes the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives. Operators selecting this item are encouraged to also notify the FBI.

Theft of commodity or Theft of equipment means damage by any individual or entity, by any mechanism, specifically to steal, or attempt to steal, the transported gas or facility/plant equipment.

Indicate if a breach of security occurred in conjunction with the incident.

Other Describe in the space provided and, if necessary, provide additional explanation in PART G – Narrative Description of the Incident.

Other Outside Force Damage. Select this sub-cause for types of Other Outside Force Damage not included otherwise, and describe in the space provided. If necessary, provide additional explanation in PART G – Narrative Description of the Incident.

F5 – Material Failure of Pipe or Weld

Use this section to report material failures **only if** “Item involved in Incident” (PART B, Question 4) is “**In-plant Piping**” or “**Weld.**” Indicate how the sub-cause was determined or if the sub-cause is still being investigated.

This section includes releases in or failures from defects or anomalies within the material of the pipe body or within the pipe seam or other weld due to faulty manufacturing procedures, defects resulting from poor construction/installation practices, and in-service stresses such as vibration, fatigue, and environmental cracking.

Construction-, Installation-, or Fabrication-related includes a release or failure caused by a dent, gouge, excessive stress, or some other defect or anomaly introduced during the process of

constructing, installing, or fabricating in-plant piping (or welds which are an integral part of in-plant piping), including welding or other activities performed at the facility. Included are releases from or failures of field welds and damage sustained in transportation to the construction or fabrication site. Not included are failures due to seam defects, which are to be reported as Original Manufacturing-related (see below).

Original Manufacturing-related (NOT girth welds or other welds formed in the field) includes a release or failure caused by a defect or anomaly introduced during the process of manufacturing the pipe used in in-plant piping, including seam defects and defects in the pipe body. This option is not appropriate for field welds, girth welds, or other joints fabricated in the field. Use this option for failures such as those due to defects or inclusions in the pipe body.

Low Temperature Embrittlement (due to a process fluid) means a release in or failure of in-plant piping or weld due to the effect of handling cryogenic fluids. Embrittlement failure of equipment other than in-plant piping or weld, including a failure due to the effects of spilled or leaking cryogenic fluids, is to be reported under F6 - Equipment Failure.

Was insulation degradation a factor in this failure? Indicate here whether the reduced effectiveness of insulation was a factor.

F6 – Equipment Failure

This section applies to failures of items **other than** “In-plant Piping” or “Weld”.

Equipment Failure includes a release or failure resulting from: malfunction of control/relief equipment including valves, regulators, or other instrumentation; failures of pumps or compressors, or pump- or compressor-related equipment; failures of various types of connectors, connections, and appurtenances; failures of the body of equipment, vessel plate, or other material (including those caused by construction-, installation-, or fabrication-related and original manufacturing-related defects or anomalies and low temperature embrittlement); and, all other equipment-related failures.

Malfunction of Control/Relief Equipment. Examples of this type of incident cause include: overpressurization resulting from malfunction of a control or alarm device; malfunction of a relief valve; valves failing to open or close on command; or valves which opened or closed when not commanded to do so. If overpressurization or some other aspect of this incident was caused by incorrect operation, the incident is to be reported under F7 - Incorrect Operation.

Other Equipment Failure. Select this sub-cause for types of Equipment Failure not included otherwise, and describe in the space provided. If necessary, provide additional explanation in PART G – Narrative Description of the Incident.

Did this failure involve Low Temperature Embrittlement due to process fluids?

Indicate here whether the equipment failure identified above involved or was caused by embrittlement due to handling cryogenic fluids, including impacts from spills.

Was insulation degradation a factor in this failure?

Indicate here whether the reduced effectiveness of insulation was a factor.

F7 – Incorrect Operation

Incorrect Operation includes a release or failure resulting from operating, maintenance, repair, or other errors by facility personnel, including, but not limited to improper valve selection or operation, inadvertent overpressurization, or improper selection or installation of equipment.

Other Incorrect Operation. Select this sub-cause for types of Incorrect Operation not included otherwise, and describe in the space provided. If necessary, provide additional explanation in PART G – Narrative Description of the Incident.

F8 – Other Incident Cause

This section is provided for incidents whose cause is currently unknown, or where investigation into the cause has been exhausted and the final judgment as to the cause remains unknown, or where a cause has been determined which does not fit into any of the main cause categories listed in sections F1 thru F7.

If the incident cause is known but doesn't fit into any category in sections F1 thru F7, select **Miscellaneous** and enter a description of the incident cause, continuing with a more thorough explanation in PART G - Narrative Description of the Incident.

If the incident cause is unknown at the time of filing this report, select **Unknown** in this section and specify one reason from the accompanying two choices. Once the operator's investigation into the incident cause is completed, the operator is to file a Supplemental Report as soon as practicable either reporting the apparent cause or stating definitively that the cause remains Unknown, along with any other new, updated, and/or corrected information pertaining to the incident. This Supplemental Report is to include all new, updated, and/or corrected information pertaining to *all* portions of the report form known at the time, and not only that information related to the apparent cause.

Important Note: Whether the investigation is completed or not, or if the cause continues to be unknown, Supplemental Reports are to be filed reflecting new, updated, and/or corrected information *as and when this information becomes available*. In those cases in which investigations are ongoing for an extended period of time, operators are to file a Supplemental Report within one year of their last report for the incident even in those instances where no new, updated, and/or corrected information has been obtained, with an explanation that the cause remains under investigation in PART H – Narrative Description of Incident. Additionally, final determination of the apparent cause and/or closure of the investigation does NOT preclude the need for the operator's filing of additional Supplemental Reports as and when new, updated, and/or corrected information becomes available.

PART I – CONTRIBUTING FACTORS

Contributing factor means an action or lack of action that when added to the existing circumstances heightened the likelihood of the release or added to the impact of the release. The Apparent Cause of the accident is contained in Part F. Do not report the Apparent Cause again this Part I. If Contributing Factors were identified, select all that apply and explain each in the Narrative.

PART G – NARRATIVE DESCRIPTION OF THE INCIDENT

Concisely describe the incident, including the facts, circumstances, and conditions that may have contributed directly or indirectly to causing the incident. Include secondary, contributing, or root causes when possible, or any other factors associated with the cause that are deemed pertinent. Use this section to clarify or explain unusual conditions and to explain any estimated data.

If you selected Miscellaneous in section F8, the narrative is to describe the incident in detail, including all known or suspected causes and possible contributing factors.

PART H – PREPARER AND AUTHORIZED PERSON

The Preparer is the person who compiled the data and prepared the responses to the report and who is to be contacted for more information (preferably the person most knowledgeable about the information in the report or who knows how to contact the person or persons most knowledgeable). Enter the Preparer's e-mail address if the Preparer has one, and the phone and fax numbers used by the Preparer.

The Authorized Person is responsible for assuring the accuracy and completeness of the reported data. In addition to their title, a phone number and email address are to be provided for the Authorized Person.