



EMERGENCY RESPONSE PLAN

REVISION: 2
August 7, 2019



REVIEW AND REVISION LOG

This Emergency Response Plan shall be reviewed at intervals not exceeding 15 months, but at least once each calendar year, and appropriate changes shall be made as necessary to ensure that the manual is current, complete, and effective.

Revision Number	Revision Date	Annual Review Y/N	Approval	Revision Description
0	3/15/2017		Eric Bengtson	Initial Issue
1	4/15/2018	Y	Eric Bengtson	Annual Review Added controlled version of document on LMS server to footer Updated definition of Incident in 4.3 Notification to NRC Added to contact Fire, Police and other Public Official of Pipeline Emergencies in 5.1 General Emergency Response Changed Area Manager to Local Management Added Safely reinstate operations when the state of emergency is over in sections 5.2 and 5.4 Changed the next level of Supervisor or designated alternate to "Appropriate Personnel in Section 5.0 Emergency Response Appendix A – Formatted Phone numbers Appendix A – Removed Stretch Wempen and Phone #, replaced with Jerry Weiland and cell number Removed name of Williams Co. Sheriff name in the Local Agency and Responders section
2	8/7/2019	Y		Annual Review and Update for Alliance Sales Line Section 1.3 added information on Alliance Sales Line Added Appendix D



TABLE OF CONTENTS

1	OVERVIEW	1
1.1	Purpose	1
1.2	General	1
1.3	System Overview	1
2	EMERGENCY PLAN ADMINISTRATION	2
2.1	Plan Review and Distribution	2
2.2	Training	2
2.3	Investigation after Emergency	2
3	IDENTIFYING AND CLASSIFYING EMERGENCIES	3
3.1	Definition of Emergencies	3
3.2	Classification of Emergencies	3
3.2.1	Minor Emergency	3
3.2.2	Serious Emergency	3
3.2.3	Major Emergency	4
4	EMERGENCY COMMUNICATIONS	5
4.1	Required Information	5
4.2	Liaison with Public Officials	5
4.3	Notification to the National Response Center	6
5	EMERGENCY RESPONSE PROCEDURES	7
5.1	General Emergency Response	7
5.2	Gas Detected in or Near a Building	7
5.3	Fire located near or directly involving a pipeline facility	8
5.4	Explosions Involving or Near a Pipeline Facility	9
5.5	Natural Disasters	11
5.6	Determining the End of an Emergency	12
6	APPENDICES	13
	APPENDIX A – Emergency Contact Numbers	14
	APPENDIX B – WBI Interconnect Pipeline Map	15
	APPENDIX C – Safety Data Sheet	15
	APPENDIX D – Alliance Sales Line Map	22



ABBREVIATIONS/ACRONYMS

Acronym	Meaning
EMT	Emergency Management Team
ERP	Emergency Response Plan
DOT	Department of Transportation
LMS	Liberty Midstream Solutions
NRC	National Response Center
OSHA	Occupational Safety & Health Administration
PPE	Personal Protective Equipment
PSOM	Pipeline Specific Operation Manual



1 OVERVIEW

1.1 Purpose

The purpose of this Emergency Response Plan (ERP) is to provide written procedures on how to respond to an emergency arising in association with Liberty Midstream Solutions' (LMS) natural gas transmission pipelines, and to address the requirements of the U.S. Department of Transportation (DOT) Natural Gas Pipeline Safety Regulations presented in 49 CFR §192.615.

This ERP will identify emergency events and scenarios arising from LMS operations that may impact people, property, or the environment. The plan details the organizational responsibilities, actions, available resources and reporting requirements to ensure effective and timely management of an incident by LMS personnel. This response plan can be used in conjunction with Procedure *P-191.5 Reporting Incidents*.

1.2 General

When using this procedure, it is the responsibility of the operator to remember that these are only general guidelines and one must use their best judgment at all times to protect people first and then the environment. It is also the operator's responsibility to take into consideration other emergency response guidelines (ex OSHA regulations). These should be considered and used to compliment the guidelines of this procedure throughout the emergency response.

1.3 System Overview

LMS operates two natural gas transmission pipelines, the WBI Interconnect Pipeline and the Alliance Sales Line. The WBI Interconnect Pipeline is a 0.77-mile long, 8" natural gas transmission pipeline. It is located in Williams County, ND beginning at LMS's County Line Plant and terminating at the WBI Meter Station. The WBI Interconnect consists of a single lateral that delivers gas to WBI Energy Midstream. Custody transfer of the pipeline occurs at the WBI Meter Station downstream of valve #1133101. The entire pipeline is in Class 1 locations, as defined by 49 CFR §192.5(b). See *Appendix B: WBI Interconnect Pipeline Map*. The Alliance Sales Line is a 4.72-mile long, 8" natural gas transmission pipeline. It is located in Williams and Mountrail Counties, ND beginning at LMS's County Line Plant and terminating at the Alliance interconnect. The Alliance Sales Line consists of a single lateral that delivers gas to Alliance Pipeline's Tioga Lateral. Custody transfer of the pipeline occurs at the Alliance Interconnect, just upstream of valve A1. The entire pipeline is in Class 1 locations, as defined by 49 CFR §192.5(b). See *Appendix C: WBI Sales Line Pipeline Map*.

2 EMERGENCY PLAN ADMINISTRATION

2.1 Plan Review and Distribution

The Director of Operations and Engineering will conduct a review of this plan annually, not to exceed 15 months to consider any updates or revisions to the plan based on legislative changes, industry trends, company experience, and best practices. All revisions will be documented in the *Review and Revision Log* at the beginning of this manual. Copies of the latest edition shall be distributed to all appropriate emergency response personnel, including supervisors.

2.2 Training

All appropriate employees and contractors shall be informed, instructed, and trained in executing the emergency procedures. Training may include classroom discussions on the procedures to be followed or field demonstration. Documentation of compliance will be on *F-192.615(b)(2): Emergency Response Training Form*. LMS management shall verify the effectiveness of this training.

Employee activities after a qualified incident shall be reviewed to determine whether the procedures were effectively followed and response times were adequate. Additional training shall be implemented if needed.

2.3 Investigation after Emergency

All investigations following an incident or emergency will follow Procedure *P-192.617 Investigating and Analyzing Incidents and Failures*. The investigation's primary purpose is to determine facts and obtain information, which will help to prevent recurrence of incidents. All incident investigations shall be performed as soon as possible following the emergency, and will include the selection of samples of the failed pipeline or equipment for laboratory examination, interviewing all personnel participating, and reviewing the emergency procedures. This review will be documented on form *F-191.1: Incident Notification Reporting and Investigation Packet*.

3 IDENTIFYING AND CLASSIFYING EMERGENCIES

3.1 Definition of Emergencies

For the purposes of this plan, an emergency is considered to be any hazardous or potentially hazardous situation presenting danger to personnel, the environment or property. If there is any doubt as to whether a hazardous situation constitutes an emergency, then it must be treated as an emergency.

There are several broad categories of emergencies that are likely to occur in relation to the operations:

- Gas Leak
- Fire/Explosion
- Injury/Illness to Personnel/Public
- Major Property Damage
- Natural Events (brush fires, flooding, earth slippage)
- Third-Party Damage

3.2 Classification of Emergencies

In the event of an emergency, the Emergency Management Team (EMT) will classify the situation under the category of Minor, Serious or Major.

3.2.1 Minor Emergency

A *minor emergency* is one that can be satisfactorily handled by company personnel and does not affect or threaten parties beyond the scope of the direct operations. A minor emergency would involve:

- Minor injuries to on-site personnel.
- Public safety is not threatened.
- Environmental impacts are confined to the location.
- No external assistance is needed.

3.2.2 Serious Emergency

A *serious emergency* is one that has implications beyond the control of local personnel. It would generally involve parties outside the direct scope of the operations including Government Agencies and outside contractors. A serious emergency would involve:

- Recordable and/or lost time injuries to multiple persons on site.
- Limited environmental impacts off-site with no long-term effects.
- Potential or actual threat to public safety.
- Risk of reputational damage or media coverage.

3.2.3 Major Emergency

A *major emergency* is an incident having major safety, environmental, Governmental, economic or public welfare implications. A major emergency would involve:

- Multiple lost time injuries or a fatality
- Public health and/or safety has been or is threatened.
- Long-term environmental effects expected.
- Environmental impacts are extended off site.
- Outside responders are involved.
- Major property damage.
- Media coverage expected.
- Potential reputational damage.

4 EMERGENCY COMMUNICATIONS

4.1 Required Information

When an employee discovers or is notified of a pipeline leak, break, or emergency situation that requires prompt and effective response, they should obtain the following information on form *F-191.1: Incident Notification Reporting and Investigation Packet*.

- Name of person finding or reporting the leak or emergency situation;
- Telephone number and location where this person can be contacted;
- Description of emergency
- Severity of leak, break or emergency;
- Location of emergency;
- Cause of emergency;
- Description of injuries;
- Distance to nearest structure; and
- Damage to property or structure.

The Director of Operations and Engineering or his designee shall handle all calls pertaining to emergency pipeline activities. After steps have been taken to protect people first, then property, steps shall be taken to make safe any actual or potential hazard and to notify the appropriate public officials required at the emergency scene. If an outside party notifies LMS of a possible emergency situation, the Director of Operations and Engineering will investigate further, and take appropriate action.

LMS's Emergency Contacts are listed in *Appendix A: Emergency Contact Numbers*.

4.2 Liaison with Public Officials

In accordance with LMS's Public Awareness Program, regular meetings and/or exercises are conducted with public officials/agencies in the vicinity of the pipeline. Methods of establishing and maintaining emergency communication and coordination are pre-planned in these meetings. The purpose of these meetings will be to:

- Allow LMS to learn about the responsibilities and resources of appropriate government organizations such as Fire and Police Departments.
- Acquaint Public Officials with LMS's ability to respond to gas pipeline emergencies.
- Review LMS's Emergency Response Plan and to identify the types of gas pipeline emergencies requiring notification of public officials.
- Plan how LMS and public officials can engage in mutual assistance to minimize hazards to life or property. A record of material covered and attendees, including LMS representatives conducting the meeting, shall be maintained.

4.3 Notification to the National Response Center

***National Response Center 1-800-424-8802 or
electronically at <http://www.nrc.uscg.mil>
and North Dakota PSC at 877-245-6685***

The LMS will notify the National Response Center (NRC) and North Dakota Public Service Commission (PSC) within one hour as soon as possible of confirmed discovery of an Incident involving pipeline facilities that meet any of the following:

1. An event that involves a release of gas from a pipeline and results in one or more of the following consequences.
 - a. A death, or personal injury necessitating in-patient hospitalization; or
 - b. Estimated property damage of \$50,000 or more including loss to LMS and others, or both, but excluding cost of gas lost; or
 - c. Unintentional estimated gas loss of three million cubic feet or more.
2. An event that is considered significant even though it did not meet the criteria above

See procedure, *P-191.5: Reporting Incidents*, for additional reporting requirements

5 EMERGENCY RESPONSE PROCEDURES

5.1 General Emergency Response

The following emergencies will be responded to immediately:

- Gas detected inside or near a building
- Fire located near or directly involving a pipeline facility
- Explosion involving or near LMS's pipeline
- Natural Disasters (such as earthquake, hurricane, tornado and severe flooding).

After steps have been taken to protect people first, then property, steps shall be taken to make safe any actual or potential hazard and to notify the appropriate fire, police, and other public officials of the gas pipeline emergency. Coordinate with them the planned and actual responses during the emergency.

5.2 Gas Detected in or Near a Building

Reports of gas detected in or near a building are considered emergencies and shall be responded to promptly and will take precedence over all non-emergency orders.

Detecting or Receiving Notice of the Leak

1. Report the suspected leak location to the local Management immediately.
2. Evacuate all persons in the building.
3. In the event the leak may affect the public, immediately notify the appropriate public safety officials, businesses and the general public to initiate an evacuation.
4. Shut in the appropriate pipeline segment (and/or booster site if necessary) to cut off the gas supply using the Pipeline Specific Operation Manual (PSOM) Shutdown Procedure. Take the necessary steps to prevent ignition of the released gas. Utilize the appropriate personal protective equipment (PPE) and "back-up" personnel.
5. Determine if any persons are missing. Initiate rescue activities (as necessary). Re-entry into an area of unknown concentration of H₂S will require the use of self-contained breathing equipment and "back-up" personnel.

Local Management

1. Confirm that personnel and public safety precautions appropriate for the circumstances are being taken. Evacuate personnel and the public from the areas most likely affected by the gas released (i.e. roadblocks, ambient air testing).
2. Notify Upper Management of the condition and actions to be taken.
3. Verify that public safety officials have been notified as necessary.
4. Ensure that additional personnel, equipment, tools and materials are dispatched as needed to the scene of the emergency.
5. Confirm that steps have been taken to stop the source of the release through the use of emergency shutdown systems or manual valves at safe locations.

6. Start an Emergency Log to collect data for required Agency reporting.
7. Coordinate with local public safety officials as necessary.
8. Confirm appropriate personnel have the following information which is necessary for reporting to the appropriate state and federal agencies and to assure that the adequate safety precautions are being taken:
 - a. Location of leak.
 - b. Time of detection of the leak.
 - c. Fatalities or personal injuries, if any.
 - d. Cause of the leak.
 - e. Amount and H₂S content of the gas released.
 - f. Present location of the gas released and direction of travel.
 - g. Possibilities of eminent danger or damage.
 - h. Weather Conditions.
 - i. Containment actions taken.
 - j. Risk to the public.
9. Consult with the Director of Operations and Engineering for required agency notifications.
10. Initiate site security measures.
11. Consider the need for specialized company assistance (i.e. Industrial Hygiene, Environmental, Security, etc.).
12. Safely reinstate operations when the state of emergency is over.

5.3 Fire located near or directly involving a pipeline facility

Discovering or Receiving Notice of the Fire

1. If you are the person discovering the explosion, confirm you are at a safe distance and call 911.
2. Contact the Local Management and advise of situation.
3. Discontinue all tasks in progress in the area (hot work, maintenance, etc.).
4. Evacuate personnel and the public from the area most likely affected by the fire (i.e. roadblocks).
5. If the fire threatens the public (roads, homes, businesses) call the necessary public safety officials (police, fire, ambulance, etc.) to assist in the emergency. Contact any effective public in the affected area to initiate an evacuation if necessary.
6. Shut in and depressurize the appropriate pipelines by engaging emergency shutdowns and/or manually closing the appropriate valves from a safe distance to isolate the fuel source using the Shutdown Procedures located in the PSOM.
7. Continue measures to contain the fire, apply water to protect adjacent equipment from a safe distance.

8. Extinguish gas fires only if the source of the fuel can be stopped.

Local Management

1. Confirm that personnel and public safety precautions appropriate for the circumstances are being taken.
2. Notify Upper Management of the condition and actions to be taken.
3. Verify that public safety officials have been notified as necessary.
4. Confirm that steps have been taken to stop the source of the release through the use of emergency shutdown systems or manual valves at safe locations.
5. Ensure that the appropriate personnel, equipment, tools and materials are dispatched as needed to the scene of the emergency.
6. Start an Emergency Log to collect data for required Agency reporting.
7. Coordinate with local public safety officials as necessary.
8. Confirm appropriate personnel have the following information which is necessary for reporting to the appropriate state and federal agencies and to assure that the adequate safety precautions are being taken:
 - a. Location of fire.
 - b. Time of discovery.
 - c. Fatalities or personal injuries, if any.
 - d. Cause of the fire.
 - e. Present location of the fire and direction of travel.
 - f. Amount and H₂S content of the gas released.
 - g. Possibilities of eminent danger or damage.
 - h. Weather Conditions.
 - i. Containment actions taken.
 - j. Risk to the public.
9. Consider the need for specialized company assistance, i.e. Industrial Hygiene, Environmental, Security, etc.
10. Consult with Director of Operations and Engineering for required agency notifications.
11. Initiate site security measures as required.
12. Safely reinstate operations when the state of emergency is over.

5.4 Explosions Involving or Near a Pipeline Facility

Discovering or Receiving Notice of the Explosion

1. If you are the person discovering the explosion, confirm you are at a safe distance and call 911.

2. Report the explosion to the Local Management from a safe distance.
3. Check for possible sources of ignition close by.
4. Where it is safe to do so; evacuate all persons in the immediate area by an escape route upwind of the released materials.
5. In the event of an explosion, which has affected or may affect the public, immediately notify the appropriate public safety officials (police, fire, ambulance, etc.), and the general public to initiate an evacuation of the area.
6. Shut in and depressurize the appropriate pipelines and facilities by engaging emergency shutdowns and/or manually closing the appropriate valves from a safe distance to isolate the source using the Shutdown Procedures located in the PSOM.
7. Take the necessary steps to prevent ignition of the released material.
8. Utilize the appropriate PPE and "back-up" personnel.
9. Determine all persons are accounted for.

Local Management

1. Confirm that personnel and public safety precautions are appropriate for the circumstances and are being taken. Ensure that personnel and the public are evacuated from the areas most likely affected by the released materials (i.e. roadblocks, ambient air testing).
2. Notify Upper Management of the condition and actions to be taken.
3. Verify that public safety officials have been notified as necessary.
4. Ensure that the appropriate personnel, equipment, tools and materials are dispatched as needed to the scene of the emergency.
5. Confirm that steps have been taken to stop the source of the release through the use of emergency shutdown systems or manual valves at safe locations.
6. Start an Emergency Log to collect data for required Agency reporting.
7. Coordinate with local public safety officials as necessary.
8. Confirm appropriate personnel have the following information which is necessary for reporting to the appropriate state and federal agencies and to assure that the adequate safety precautions are being taken:
 - a. Location of explosion.
 - b. Time of occurrence or discovery of the explosion.
 - c. Fatalities or personal injuries, if any.
 - d. Cause of the explosion if known.
 - e. Amount and type and of material released.
 - f. Present location of materials released and direction of travel.
 - g. Possibilities of eminent danger or damage.

- h. Weather conditions.
 - i. Containment and cleanup actions taken.
 - j. Risk to the public.
9. Verify that appropriate environmental protection measures are being taken (igniting the released gas, diking, skimmers, etc.) and that the appropriate external contacts have been made.
 10. Consider the need for specialized company assistance (i.e. Industrial Hygiene, Environmental, Security, etc.).
 11. Consult with Director of Operations and Engineering for required agency notifications.
 12. Initiate site security measures.
 13. Safely reinstate operations when the state of emergency is over.

5.5 Natural Disasters

Earthquake

During an earthquake, all LMS personnel are to first protect themselves. When the ground shaking stops, the actions listed below are to be taken.

1. If a release or a fire results, take action in accordance with the applicable LMS procedures.
2. Evaluate the extent of the emergency.
3. Shut in the affected pipelines if necessary by engaging the emergency shutdowns and/or manually closing the appropriate valves using the Shutdown Procedures located in the PSOM.
4. Divide the pipeline system among available personnel and conduct a thorough search of the system for ruptures, leaks, and equipment failures.
5. Contact the Local Management and advise of situation and any need for repairs or other assistance.
6. Contact local public safety officials as required.
7. Conduct a thorough follow-up inspection for residual safety hazards while observing the need for PPE.
8. Arrange for necessary repairs.
9. Safely reinstate operations when the state of emergency is over.

Severe Weather/Tornado

When a tornado is approaching the area, the following actions are to be taken:

1. Alert LMS personnel of the sighting of a tornado or the presence of severe weather.
2. Instruct personnel to seek cover in low areas or ditches. Do not seek refuge in processing areas or vehicles.
3. Shut in the affected pipelines if necessary using the Shutdown Procedures located in the PSOM.

4. After the storm has passed, conduct a thorough search of the system for ruptures, leaks, and equipment failures.
5. Contact local public safety officials as required.
6. Contact the Local Management and advise of situation and any need for repairs or other assistance.
7. Conduct a thorough follow-up inspection for residual safety hazards while observing the need for PPE.
8. Arrange for necessary repairs.
9. Safely reinstate operations when the state of emergency is over.

Natural Disaster – Severe Flooding

1. LMS personnel should first protect themselves when severe flooding is in the area
2. Evaluate the accessibility of pipeline facilities that may be in jeopardy
3. Determine if pipeline facilities have become submerged and in danger of being struck by vessel or debris
4. Deploy operating personnel in positions to take emergency action
5. Contact local public safety officials as required.
6. Contact the Local Management and advise of situation and any need for repairs or other assistance.
7. Conduct a thorough follow-up inspection for exposed pipe, and other residual safety hazards while observing the need for PPE.
8. Arrange for necessary repairs.
9. Safely reinstate operations when the state of emergency is over.

5.6 Determining the End of an Emergency

1. The highest-ranking LMS employee at the scene of an emergency will be responsible for determining when an emergency situation is over.
2. The end of an emergency should be communicated to all employees responding to that emergency. The minimum criteria listed below must be met before declaring the end of an emergency
 - a. LMS facilities no longer pose a threat to the public, employees or property.
 - b. Any fires resulting from the incident have been extinguished.
 - c. Natural gas or other products are no longer being released to the atmosphere, ground or water.
 - d. The probability of additional releases of natural gas or other products are unlikely.
 - e. The incident scene is secure from any unauthorized entry.
 - f. Service outages have been safely restored.



6 APPENDICES

APPENDIX A: Emergency Contact Numbers

APPENDIX B: WBI Interconnect Pipeline Map

APPENDIX C: Safety Data Sheet

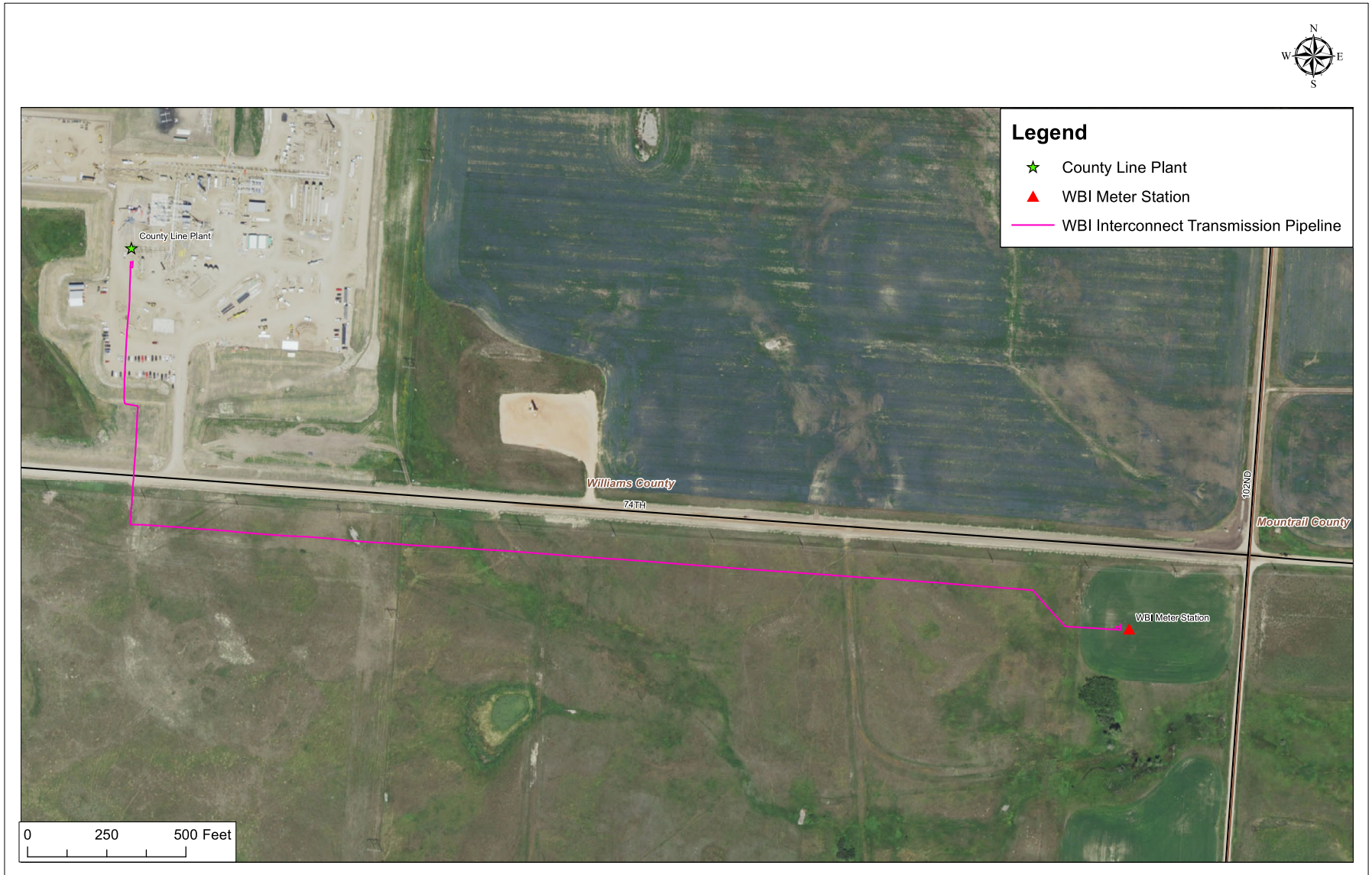
APPENDIX D: Alliance Sales Line Pipeline Map



APPENDIX A – Emergency Contact Numbers

Federal and State Agencies, North Dakota		Phone Numbers:
National Response Center (24-hour)		(800) 424-8802
Pipeline and Hazardous Materials Safety Administration (PHMSA) Central Region Office		(816) 329-3800
U.S. Department of Transportation: OPS		(202) 366-4595
North Dakota Public Service Commission		(877) 245-6685
U.S. Environmental Protection Agency: Regional Office Denver, CO.		(800) 227-8917
Federal Emergency Management Agency (24-hour)		(202) 646-2500
U.S. Department of Agriculture		(202) 720-2791
Occupational Safety & Health Administration: OSHA		(800) 321-6742
Agency for Toxic Substances & Disease Registry (24-hour)		(800) 232-4636
Local Agencies and Responders		Phone Numbers:
Law Enforcement		
Williams Co. Sheriff Dept.		(701) 577-7700
Tioga, ND Police Dept.		(701) 664-2514
North Dakota State Highway Patrol		(844) 474-6347
Local Agencies and Responders		Phone Numbers:
Fire and Rescue		
Tioga, ND Volunteer Fire Dept.		911
Other Important Numbers:		Phone Numbers:
Liberty Midstream Solutions Emergency Number		(701) 664-3035
Jerry Weiland (Local Management)		(406) 860-8319
Eric Bengtson (Director of Operations and Engineering)		(303) 886-7046
Receipts and Deliveries:		
<i>*See Operations & Maintenance Plan</i>		

APPENDIX B – WBI Interconnect Pipeline Map



Appendix C: Safety Data Sheet



SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name: **Natural Gas**
SDS Manufacturer Number: 724330

Other means of identification:

Synonyms: Synonyms/ Fuel Gas; Residue Gas; Processed Gas; Natural Gas, Dry; Compressed Natural Gas

Recommended use of the chemical and restrictions on use:

Product Use/Restriction: Intended Use: Fuel

Chemical manufacturer address and telephone number:

Manufacturer Name: Conoco Phillips
Address: 600 N Dairy Ashford
Houston, TX 77079-1175
Website: www.conocophillips.com
General Phone Number: 855-244-0762.....E-mail: SDS@conocophillips.com

Emergency phone number:

Emergency Phone Number: Chemtrec: 800-424-9300 (24 Hours)

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

GHS Pictograms:



Signal Word: DANGER.

GHS Class: Flammable gases, Category 1.
Compressed gases under pressure.
Simple Asphyxiant.

Hazard Statements: H220 - Extremely flammable gas.
H280 - Contains gas under pressure; may explode if heated.

Precautionary Statements: P210 - Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - Eliminate all ignition sources if safe to do so.
P410+P403 - Protect from sunlight. Store in a well-ventilated place.

Hazards not otherwise classified that have been identified during the classification process:

Natural gas, dried

Carcinogenicity: Not expected to cause cancer. This substance is not listed as a carcinogen by IARC, NTP or OSHA.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
Natural gas, dried	68410-63-9	100 %	

Notes : ¹ All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4 : FIRST AID MEASURES

Natural Gas
Revision: 10/08/2015

Product Code: 724330

Description of necessary measures:

Eye Contact: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Skin Contact: First aid is not normally required. However, it is good practice to wash any chemical from the skin.

Inhalation: (Breathing): If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If breathing is difficult, oxygen or artificial respiration should be administered by qualified personnel. If symptoms persist, seek medical attention.

Ingestion: (Swallowing): This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Indication of immediate medical attention and special treatment needed:

Note to Physicians: Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents (e.g., in enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

Notes : Most important symptoms and effects:
Acute: Anesthetic effects at high concentrations.
Delayed: None known or anticipated. See Section 11 for information on effects from chronic exposure, if any.

SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media: Dry chemical or carbon dioxide is recommended. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Specific hazards arising from the chemical:

Hazardous Combustion Byproducts: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of nitrogen and sulfur may also be formed.

Unusual Fire Hazards: Extremely flammable. This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe). Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. If container is not properly cooled, it can rupture in the heat of a fire. Contents under pressure.

Fire Fighting Instructions: For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. If this cannot be done, allow fire to burn. Move undamaged containers from immediate hazard area if it can be done safely. Stay away from ends of container. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely.

NFPA Ratings:

NFPA Health: 1
NFPA Flammability: 4
NFPA Reactivity: 0



Notes : NFPA 704 Hazard Class:
(0-Minimal, 1-Slight, 2-Moderate, 3-Serious, 4-Severe)

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personnel Precautions: Extremely flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof electrical equipment is recommended. Beware of accumulation of gas in low areas or contained areas, where explosive concentrations may occur. Prevent from entering drains or any place where accumulation may occur. Ventilate area and allow to evaporate. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

Environmental precautions:

Environmental Precautions: Stop spill/release if it can be done safely. Water spray may be useful in minimizing or dispersing vapors. If spill occurs on water notify appropriate authorities and advise shipping of any hazard.

Methods for cleanup: Notify relevant authorities in accordance with all applicable regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

SECTION 7 : HANDLING and STORAGE

Precautions for safe handling:

Handling: Precautions for safe handling: Keep away from ignition sources such as heat/sparks/open flame – No smoking. Take precautionary measures against static discharge. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8).

. .Contents under pressure. Gas can accumulate in confined spaces and limit oxygen available for breathing. Use only with adequate ventilation. The use of explosion-proof electrical equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-70 and/or API RP 2003 for specific bonding/grounding requirements. Electrostatic charge may accumulate and create a hazardous condition when handling or processing this material. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Cold burns may occur during filling operations. Containers and delivery lines may become cold enough to present cold burn hazard.

The use of hydrocarbon fuel in an area without adequate ventilation may result in hazardous levels of incomplete combustion products (e.g. carbon monoxide, oxides of sulfur and nitrogen, benzene and other hydrocarbons) and/or dangerously low oxygen levels.

Conditions for safe storage, including any incompatibilities:

Storage: Conditions for safe storage: Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Store only in approved containers. Post area "No Smoking or Open Flame." Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. Avoid exposing any part of a compressed-gas cylinder to temperatures above 125 deg F(51.6 deg C). Gas cylinders should be stored outdoors or in well ventilated storerooms at no lower than ground level and should be quickly removable in an emergency.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Information related to product mixture:

Guideline Info: Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

Natural gas, dried:

Guideline ACGIH: 1000 ppm TWA as Aliphatic Hydrocarbons C1-4

Appropriate engineering controls:

Engineering Controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Individual protection measures:

Eye/Face Protection: The use of eye/face protection is not normally required; however, good industrial hygiene practice suggests the use of eye protection that meets or exceeds ANSI Z.87.1 whenever working with chemicals.

Skin Protection Description: The use of skin protection is not normally required; however, good industrial hygiene practice suggests the use of gloves or other appropriate skin protection whenever working with chemicals.

Respiratory Protection: NIOSH approved, self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode should be used in situations of oxygen deficiency (oxygen content less than 19.5 percent), unknown exposure concentrations, or situations that are immediately dangerous to life or health (IDLH).

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use.

Notes : Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State: Physical Form: Compressed Gas

Color: Colorless

Odor: Slight hydrocarbon

Odor Threshold: No Data

Boiling Point: Initial Boiling Point/Range: No data

Melting Point: No Data

Solubility: Slight

Vapor Density: (Air=1): 0.5

Percent Volatile: 100%

Evaporation Rate: (nBuAc=1): No data

pH: Not Applicable

Coefficient of Water/Oil Distribution: (n-octanol/water) (Kow): No data



Revision Date: 08/07/2019
Revision No: Rev 2

WBI Interconnect and Alliance Sales Pipelines
Appendix C: Safety Data Sheet

Flash Point: -299 deg F/-184 deg C
Flash Point Method: (estimate)
Lower Flammable/Explosive Limit: (vol % in air): 2.0
Upper Flammable/Explosive Limit: (vol % in air): 10.0
Auto Ignition Temperature: 999 deg F/537 deg C

9.2. Other information:

Notes : Flammability (solid, gas): Extremely Flammable

Note: Unless otherwise stated, values are determined at 20 deg C (68 deg F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:

Chemical Stability: Stable under normal ambient and anticipated conditions of use.

Possibility of hazardous reactions:

Hazardous Polymerization: Not known to occur

Conditions To Avoid:

Conditions to Avoid: Avoid all possible sources of ignition. Heat will increase pressure in the storage tank.

Incompatible Materials:

Incompatible Materials: Avoid contact with acids, aluminum chloride, chlorine, chlorine dioxide, halogens and oxidizing agents.

Hazardous Decomposition Products:

Special Decomposition Products: Not anticipated under normal conditions of use.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Natural gas, dried:

Eye: Not expected to be irritating.

Skin: Skin Absorption:
Hazard: Skin absorption is not anticipated
LD50: Not Applicable

Skin exposure is not anticipated.

Inhalation: Hazard: Unlikely to be harmful

Additional Information: Asphyxiant. High concentrations in confined spaces may limit oxygen available for breathing. See Signs and Symptoms.

LC50: > 20,000 ppm (gas)

Ingestion: Ingestion (Swallowing):
Hazard: Ingestion is not anticipated
LD50: Not Applicable

Sensitization: Skin Sensitization: Skin contact is not anticipated.
Respiratory Sensitization: Not expected to be a respiratory sensitizer.

Carcinogenicity: Not expected to cause cancer. This substance is not listed as a carcinogen by IARC, NTP or OSHA.

Mutagenicity: Germ Cell Mutagenicity: Not expected to cause heritable genetic effects.

Reproductive Toxicity: Not expected to cause reproductive toxicity.

Other Toxicological Information: Signs and Symptoms: Light hydrocarbon gases are simple asphyxiants and can cause anesthetic effects at high concentrations. Symptoms of overexposure, which are reversible if exposure is stopped, can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting. Continued exposure can lead to hypoxia (inadequate oxygen), rapid breathing, cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death.

Other Comments: High concentrations may reduce the amount of oxygen available for breathing, especially in confined spaces. Hypoxia (inadequate oxygen) during pregnancy may have adverse effects on the developing fetus.

Target Organ Single Exposures: Not expected to cause organ effects from single exposure.

Target Organ Repeated Exposures: Not expected to cause organ effects from repeated exposure.

Aspiration: Not Applicable

SECTION 12 : ECOLOGICAL INFORMATION

Natural gas, dried:

Ecotoxicity:

Ecotoxicity: Petroleum gases will readily evaporate from the surface and would not be expected to have significant

Natural Gas
Revision: 10/08/2015

Product Code: 724330



adverse effects in the aquatic environment. Classification: No classified hazards.

Persistence and degradability:

Biodegradation: Persistence and Degradability: The hydrocarbons in this material are expected to be inherently biodegradable. In practice, hydrocarbon gases are not likely to remain in solution long enough for biodegradation to be a significant loss process. Hydrogen sulfide, if present in refinery gas streams, will be rapidly oxidized in water and insoluble sulfides precipitated from water when metallic radicals are present.

Bioaccumulative potential:

Bioaccumulation: Bioaccumulative Potential: Since the log Kow values measured for refinery gas constituents are below 3, they are not regarded as having the potential to bioaccumulate.

Mobility in soil:

Mobility In Environmental Media: Mobility in Soil: Due to the extreme volatility of petroleum gases, air is the only environmental compartment in which they will be found. In air, these hydrocarbons undergo photodegradation by reaction with hydroxyl radicals with half-lives ranging from 3.2 days for n-butane to 7 days for propane.

Other Adverse Effects: None anticipated.

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

Information related to product mixture:

Waste Disposal: This material is a gas and would not typically be managed as a waste.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name: Shipping Description: UN1971, Natural gas, compressed, 2.1
Non-Bulk Package Marking: Natural gas, compressed, UN1971
Non-Bulk Package Labeling: Flammable gas
Bulk Package/Placard Marking: Flammable gas / 1971
Packaging - References: 49 CFR 173.306; 173.302; 173.302 (Exceptions; Non-bulk; Bulk)
Hazardous Substance: None
Emergency Response Guide: 115

Note: Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

IATA Shipping Name: UN/ID : UN1971
Proper Shipping Name: Natural gas, compressed
Hazard Class/Division: 2.1
Subsidiary risk: None
Packing Group: None
Non-Bulk Package Marking: Natural gas, compressed, UN1971
Labels: Flammable gas , Cargo Aircraft Only
ERG Code: 10L
Packaging Instruction : LTD. QTY : Forbidden, Passenger Aircraft : Forbidden, Cargo Aircraft Only: 200
Max. Net Qty. Per Package: LTD. QTY : Forbidden, Passenger Aircraft : Forbidden, Cargo Aircraft Only: 150 kg

IMDG Shipping Name : Shipping Description: UN1971, Natural gas, compressed, 2.1
Non-Bulk Package Marking: Natural gas, compressed, UN1971
Labels: Flammable gas
Placards/Marking (Bulk): Flammable gas / 1971
Packaging - Non-Bulk: P200
EMS: F-D, S-U

ICAO Shipping Name: UN/ID : UN1971
Proper Shipping Name: Natural gas, compressed
Hazard Class/Division: 2.1
Subsidiary risk: None
Packing Group: None
Non-Bulk Package Marking: Natural gas, compressed, UN1971
Labels: Flammable gas , Cargo Aircraft Only
ERG Code: 10L
Packaging Instruction : LTD. QTY : Forbidden, Passenger Aircraft : Forbidden, Cargo Aircraft Only: 200
Max. Net Qty. Per Package: LTD. QTY : Forbidden, Passenger Aircraft : Forbidden, Cargo Aircraft Only: 150 kg

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

Information related to product mixture:

TSCA Inventory Status: All components are either listed on the US TSCA Inventory, or are not regulated under TSCA

TSCA 12(b) Export Notification: U.S. Export Control Classification Number: EAR99

CERCLA Section 302: CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPOs (in pounds): This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

Section 311/312 Hazard Categories: CERCLA/SARA - Section 311/312 (Title III Hazard Categories)
Acute Health: Yes
Chronic Health: No
Fire Hazard: Yes
Pressure Hazard: Yes
Reactive Hazard: No

Section 313: CERCLA/SARA - Section 313 and 40 CFR 372: This material does not contain any chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.

EPA (CERCLA) Reportable Quantity (in pounds): EPA's Petroleum Exclusion applies to this material - (CERCLA 101(14)

Natural Gas
Revision: 10/08/2015

Product Code: 724330



Revision Date: 08/07/2019
Revision No: Rev 2

WBI Interconnect and Alliance Sales Pipelines
Appendix C: Safety Data Sheet

California PROP 65: California Proposition 65: This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

Canada DSL: All components are either on the DSL, or are exempt from DSL listing requirements

Canada WHMIS: WHMIS Hazard Class:
A - Compressed Gas
B1 - Flammable Gases

SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Personal Protection:

Health Hazard	
Fire Hazard	
Reactivity	
Personal Protection	

Other Information: SDS Number: 724330
SDS Revision Date: October 08, 2015
MSDS Revision Notes: Supersedes: 02/09/2012
Format change

Guide to Abbreviations: ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; IARC = International Agency for Research on Cancer; INSHS = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

Disclaimer: The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE. THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

Copyright© 1996-2015 Adco Corporation. All Rights Reserved.

Natural Gas
Revision: 10/08/2015

Product Code: 724330

Par

Appendix D: Alliance Sales Line Map

