PLAN NUMBER: **220.04.05**
PROCESS OWNERSHIP: **Pipeline**

VERSION NUMBER: **4**
RELATED POLICY:

Prevention of Accidental Ignition

1 SCOPE

This plan describes the procedures to minimize the danger of accidental ignition of gas in any structure or area where the presence of gas may constitute a hazard of fire or explosion.

2 APPLICABILITY

This plan applies to all pipeline facilities and employees or contractors working on those facilities where the presence of gas in air may create a fire or explosion hazard.

2.1 Safety

The Company is committed to the safety of the public and its employees. Employees are to perform their work in the safest manner with the utmost regard for the safety of themselves and the public. All Company safety policies and procedures, as well as the appropriate Job Hazard assessments, should be reviewed as necessary.

2.2. Operator Qualification

All persons performing tasks covered by 49 CFR 192, Subpart N, shall be qualified according to the Company Operator Qualification Plan.

3 PLANS

Natural gas is an odorless, colorless, lighter than air, flammable gas consisting primarily of light hydrocarbons (mostly methane).

Natural gas in air mixtures can be hazardous at certain levels. The Lower Explosive Level (LEL) is the minimum amount of gas that must be present in the gas-air mixture to make it explosive. The LEL of natural gas in air varies with the composition of the gas, but for Company purposes the LEL is approximately 5% gas in air. At concentrations less than this, the gas-air mixture is too lean to burn or explode. The Upper Explosive Level (UEL) is the maximum amount of gas that can be present to make the gas-air mixture explosive. For Company purposes, the UEL is approximately 15% gas in air.

Under normal working conditions, natural gas should not be present. However, during upset conditions, gas facility blow downs, purging operations or construction, the presence or build up of gas may create conditions that are a fire or explosion hazard. Planned work on gas facilities should incorporate procedures to reduce and minimize the escape of gas into the atmosphere.

3.1. Smoking and Open Flames

Smoking is prohibited in and around a structure or area containing gas facilities where the possibility of leakage or the presence of gas may constitute a hazard of fire or

explosion. For additional information regarding the Company Policy on Smoking, refer to Plan 110.02.08, Smoking Regulations.

3.2. Hot Work Permits

Operations including, but not limited to, welding, cutting, grinding, brazing, chipping, abrasive blast, or any other operation in a potential hazardous atmosphere that can create flames, sparks, or hot surfaces from friction must follow the procedures in Plan 110.01.17, Hot Work Permit.

3.3. Accidental Arcing

To prevent accidental ignition by arcing, all electrically powered tools such as flashlights, portable floodlights, extension cords, or hand tools should be of a type approved for use in hazardous atmospheres as defined in ANSI/NFPA 70, National Electrical Code.

Prior to venting gas, the location of nearby sources of ignition such as overhead electric transmission lines should be noted. Additional precautions and monitoring may need to be taken for these possible sources of ignition.

Vehicles, compressors, generators, and other equipment powered by internal combustion engines should not be operated in a suspected or known hazardous atmosphere.

Electronic equipment such as pagers, cell phones, laptop computers or digital cameras should not be operated in a suspected or known hazardous atmosphere unless the equipment is distinctly labeled "suitable for hazardous locations" or "suitable for Class 1 Div 2 areas", or the area has been tested (See section 3.4 below) prior to use of the equipment.

Provisions should be considered to dissipate, reduce, or prevent the accumulation of a static electric charge. Grounding as appropriate should be used to prevent static electricity build up. For cathodically protected facilities, bonding across appurtances should be considered during installation or remocal of appurtances. See OEP – 106, Polyethylene Plastic Pipe Installation Manual and the Company Welding Manual for additional grounding information.

3.4. Testing/Monitoring Work Area

The atmosphere of unmanned gas bearing structures or buildings without gas detection equipment should be checked for the presence of natural gas or other hazards prior to entry. If a hazardous atmosphere is encountered, personnel should not enter the building without taking the appropriate precautions.

The atmosphere should be monitored periodically for the presence of natural gas or other hazards during any prolonged occupancy of unmonitored buildings. The use of a continuous monitoring device should be considered.

Monitoring of the atmosphere is required during purging operations. See Plan 220.04.02, Isolation, Blow Down, and Purging of Gas Handling Facilities and Equipment for guidelines.

3.5 Additional Safety Precautions

Additional safety precautions should be taken if escaping gas in the work area is possible. A fire extinguisher should be available upwind and adjacent to the work area. Warning signs may be posted as appropriate. Natural gas monitoring equipment should be available.

Changes in the atmospheric conditons and wind direction that would affect work activities should be monitored, and the activities adjusted accordingly.

Additional precautions for blowdown and purging operations can be found in Plan 220.04.02, Isolation, Blow Down, and Purging of Gas Handling Facilities and Equipment. Additional precautions for hot work can be found in Plan 110.01.17, Hot Work Permit. Additional information regarding lockout/tag out can be found in Plan 110.01.10, Lockout/Tag Out.

4 RESPONSIBILITIES

4.1. Operations

Operations personnel are responsible for ensuring that all sources of ignition are removed or minimized from hazardous atmospheric locations, and ensure that all equipment used in potentially hazardous locations is suitable and appropriate.

4.2. Support Staff

Engineering Services will provide assistance with designs and specifications to reduce the likelihood of accidental ignition.

5 RECORDS

5.1. Company Forms/Database

Not Applicable.

5.2. Records Retention

Not Applicable.

NOTE: Electronic data collection and retention in lieu of the above forms is allowed.

6 DEFINITIONS

Not Applicable.

7 REFERENCES

7.1 Related Plan Documents

Plan Number:	Title:
110.02.08	Smoking Regulations
110.01.17	Hot Work Permit
110.01.10	Lockout/Tag Out
220.04.02	Isolation, Blow Down and Purging of Gas Handling Facilities and Equipment
	Company Operator Qualification Plan
	Welding Manual

7.2 Related Procedure Documents

Procedure Number:	Title:
OEP – 106	Polyethylene Plastic Pipe Installation Manual

7.3 Operator Qualification Tasks

This list of Operator Qualification Tasks indicates the tasks that may be associated with this plan:

Task Number:	Title:
PLOQ.0030	Operate Portable Gas Detectors – Presence of Gas
PLOQ.0031	Operate Portable Gas Detector – % of Gas

7.4 Other References or Related Specifications

- ANSI/NFPA 70, National Electrical Code.

8 REGULATORY CITATIONS AND EXCEPTIONS

8.1 Federal Requirements

Citation Number:	Title:
49 CFR 192.651	Prevention of Accidental Ignition
49 CFR 192, Subpart N	Qualification of Pipeline Personnel

8.2 State Requirements

Not Applicable.