

Prevention of Accidental Ignition

Description	The purpose of this procedure is to establish safety practices that minimize the danger of accidental ignition of combustible gas mixtures in areas where the presence of gas constitutes a hazard of fire or explosion.
Regulatory Applicability	 Regulated Transmission Pipelines Regulated Gathering Pipelines (Type A) Regulated Gathering Pipelines (Type B) Regulated Distribution Pipelines
Frequency	Any time a hazardous amount of gas is being vented into open air or hot work is being performed.
Reference	49 CFR 192.751 Prevention of Accidental Ignition LA Title 43 Part XIII 2951 Prevention of Accidental Ignition
Forms / Record Retention	None
Related Specifications	None
OQ Covered Task	None



Procedure Steps

1. Create exclusion areas as applicable.

At some spill or leak sites, it may be necessary to affix boundaries to keep out curious sightseers, because of hazards created by the operation of heavy equipment, the possibility of exposure to hazardous concentrations, or the potential of an accidental ignition. The use of warning stripe tape, keep-out signs, barricades, and security guards may be necessary to establish an exclusion area. Determining if the exclusion area is needed is a decision that is made as part of the emergency response to a spill or leak.

- 2. Post "No Smoking" signs to serve warning in hazardous areas.
- 3. Post temporary "No Smoking" signs in construction and maintenance areas as applicable.
- 4. Locate and remove any possible sources of ignition in an area before a hazardous amount of gas is vented into the atmosphere or in the presence of flammable liquids.
- 5. Do not use open flame devices in hazardous areas.
- 6. Use explosion proof flashlights, lighting fixtures, extension cords, and other electrical devices in hazardous areas.
- 7. Man fire extinguishers at all times during venting, cutting, and welding operations.
- 8. Take precautions to minimize the mixing of air with gas when welding or cutting.
- 9. Do not weld or cut on pipe or pipeline components that contain combustible mixture of gas and air in the area of work.
- 10. Use wire jumpers to prevent arcing from cathodic protection or induced currents when cutting or rejoining pipelines.

Additional Precautions and Guidelines for Performing Hot Work

- 1. Verify a zero percent reading on the explosive substance meter in the presence of mechanic performing the work.
- 2. Any oil spills and all flammable materials in the area must be removed.
- 3. Equipment must be blinded and valves closed as close to the equipment as possible (first flange).
- 4. Sewers must be covered with plywood, sand, and/or burlap/plastic. Sand must be wet down periodically.
- 5. Approved ventilating equipment must be in place and operating, when required.
- 6. Firefighting equipment must be ready for use at the job site.
- 7. Provide means of emergency entry and exit to the work area.
- 8. Surrounding conditions must be inspected and the necessary precautions taken. Consideration must be given to wind direction, ground slope, housekeeping, etc.

Page 2 of 4



- 9. Emergency communication must be available for jobs requiring entry into confined spaces and work within 200 feet of a flare stack.
- 10. Equipment such as welding machines, gas bottles, hose, tools, etc., must be removed or located so as not to impede entry or exit.
- 11. Ensure that all rectifiers are turned off prior to starting maintenance work.
- 12. When maintenance work is performed on pipe, jumper cables must be used to prevent electrical arcing.
- 13. All burning and welding jobs must have a fire extinguisher and must be manned by a fireguard.
- 14. Welding machines must be located where there is no possibility for leaking hydrocarbons.
- 15. Welding machines must be located as close to the welding site as practical and must be properly grounded.
- 16. Appropriate signs shall be posted at each location or area where smoking and open flames are prohibited.
- 17. Any time it is necessary to use cutting tools, such as oxy-acetylene torch, or to weld in a compressor station, the work plan must be reviewed by the maintenance supervisor to ensure that the planned work is safe to perform.



Gas Operations and Maintenance Manual

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Page 4 of 4