Description

The purpose of this procedure is to establish a pipeline's class locations and its boundaries.

Regulatory Applicability

- ☒ Regulated Transmission Pipelines
- ☒ Regulated Gathering Pipelines (Type A)
- ☒ Regulated Gathering Pipelines (Type B)
- ☒ Unregulated Gathering
- ☐ Distribution Pipelines

Frequency

Upon construction and as needed thereafter due to changes in population density surrounding the pipeline as indicated by the continuing surveillance program and not to exceed two calendar years.

Reference

49 CFR 192.5	*Class Locations*
49 CFR 192.609	*Change in Class Location: Required Study*
49 CFR 192.611	*Change in Class Location: Confirmation of Maximum Operating Pressure.*
LA Title 43 Part XIII 2705	*Class Locations*
LA Title 43 Part XIII 2709	*Change in Class Location: Required Study*
LA Title 43 Part XIII 2711	*Change in Class Location: Confirmation of Maximum Operating Pressure.*
49 CFR 192.613	*Continuing Surveillance*

Forms / Record Retention

F-192.5	*Class Location Survey / 2 years or until next review whichever is longer*
F-192.619	*MAOP Determination / Life of Pipeline System*

Related Specifications

None

OQ Covered Task

None

Procedure Steps

1. Utilize previous class location(s) forms and imagery of the potentially affected segment(s). Use the attached diagrams to determine class location. Final determination of actual class location of each pipeline or pipeline segment is cooperative effort of the compliance department and district management. Electronic imagery will be reviewed annually and physical inspections will be done bi-annually.
2. Survey the area(s) to determine the current class location(s). Document the new class location on form F-192.5 or equivalent.
3. In the event of a class location change (increase), the following procedures are required:
   a) If the pipe hoop stress is not commensurate with the current class location or if the segment operates above 40% of SMYS, obtain additional information as described in 49 CFR 192.609 including:
      i) Present class location
      ii) Design, construction, and testing procedures followed in the original construction, and a comparison of these procedures with those required for the present class location;
      iii) The physical condition of the segment to the extent it can be ascertained from available records;
      iv) The operating and maintenance history of the segment;
      v) The MAOP and the corresponding operating hoop stress, taking pressure gradient into account, for the segment of pipeline involved; and
      vi) The actual area affected by the population density increase, and physical barriers or other factors which may limit further expansion of the more densely populated area.
4. Determine if the pipe MAOP and corresponding pipe hoop stress is acceptable for the current class location. Refer to procedure P-192.619.
5. If the hoop stress corresponding to the established MAOP of the segment does not commensurate with the present class location, but the segment is in satisfactory condition, the MAOP will be confirmed or revised as follows:
   a) If the segment has been previously tested in place for at least 8 hours, the MAOP is the pressure obtained by multiplying the test pressure by the following factors:
      i) 0.8 in Class 2 locations,
      ii) 0.667 in Class 3 locations
      iii) 0.555 in Class 4 locations.

      Note the hoop stress cannot exceed”

      - 72% of SMYS in Class 2 locations
      - 60% of SMYS in Class 3 locations; or
      - 50% of SMYS in Class 4 locations.

b) Reduce the MAOP so that the hoop stress is not more than that allowed for new segments of pipelines in the class location

c) Test the segment involved in accordance with 49 CFR Subpart J; and establish the MAOP according to the following material:

i) Multiply the test pressure times the following factors:

(1) 0.8 in Class 2 locations,

(2) 0.667 in Class 3 locations

(3) 0.555 in Class 4 locations.

ii) The hoop stress may not exceed:

(1) 72% of SMYS in Class 2 locations

(2) 60% of SMYS in Class 3 locations; or

(3) 50% of SMYS in Class 4 locations.

NOTE: The confirmed or revised MAOP, may not exceed the previous MAOP.

NOTE: 24 months are available to make revisions to the MAOP.

NOTE: Additional pressure testing of the segment may be desirable to raise the MAOP of the pipeline to a higher level. Schedule and conduct the pressure testing as desirable.

Class Location Determination

Gas pipelines are placed in class locations as described below. These classifications help determine some of the regulated activities that must be performed on the pipeline and the frequency of the activity. The Class Location Unit is an area extending six hundred and sixty feet (660) on either side of the centerline of any continuous one (1) mile length of pipeline.

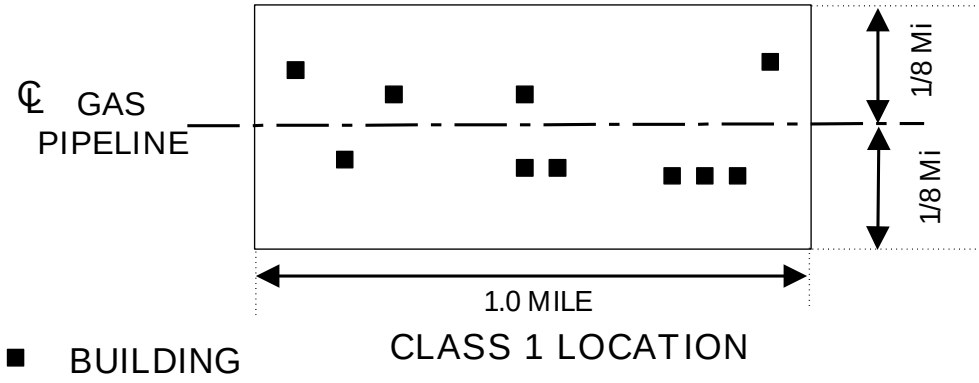
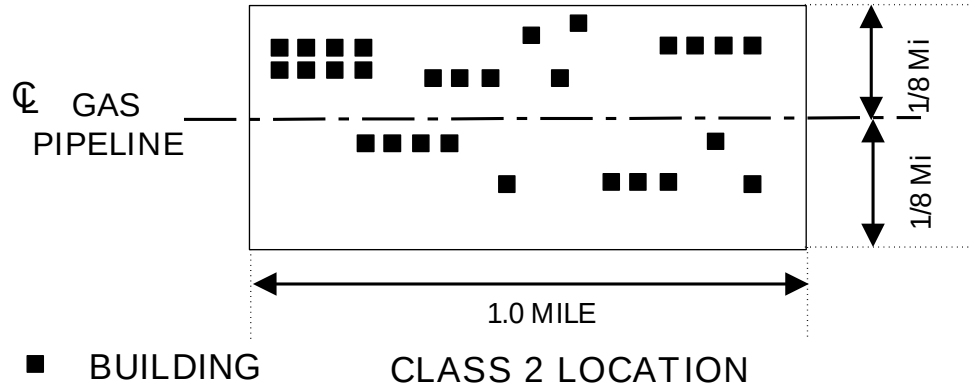
Class location studies will be conducted:

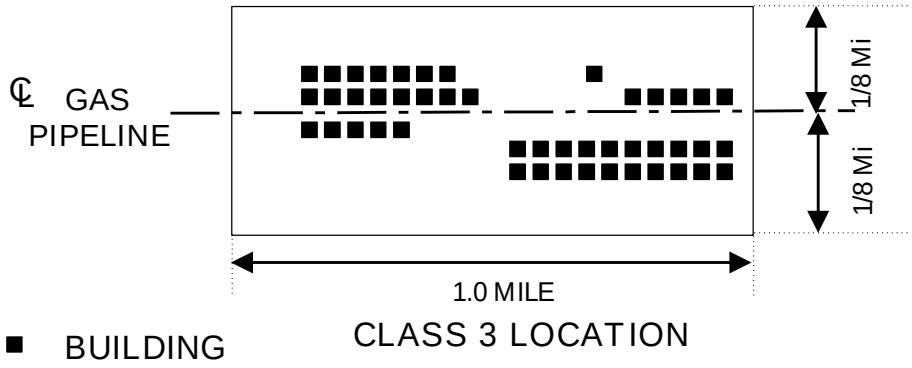
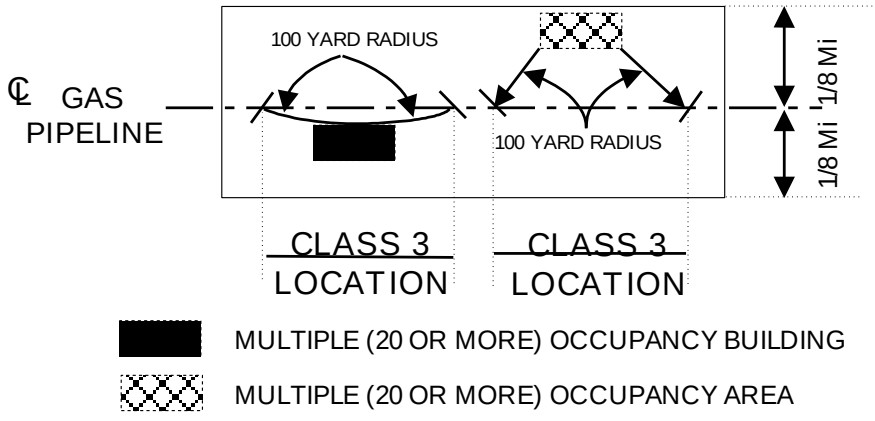
a) For each existing pipeline or pipeline segment

b) For each new pipeline or pipeline segment being constructed, and prior to testing. The class location determines in part, the maximum allowable operating pressure of the pipeline or pipeline segment.

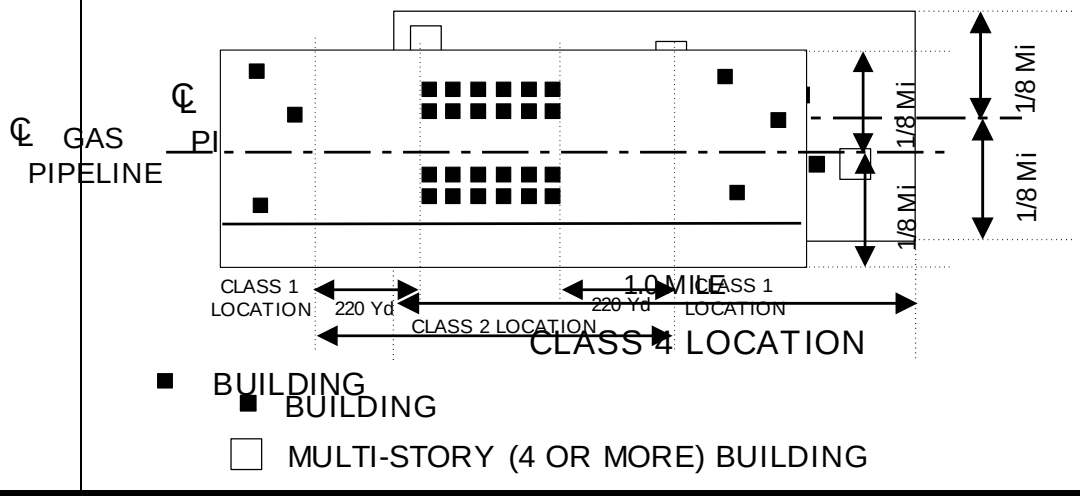
c) Whenever patrols or surveillance indicate changes in population density along the pipeline route.

The class location of onshore pipelines is broken up as follows:

Class Location	Criteria (Class Location Unit contains)
1	Has ten (10) or fewer buildings intended for human occupancy. 
2	Has more than ten (10) and fewer than forty-six (46) buildings intended for human occupancy. 

Class Location	Criteria (Class Location Unit contains)
3	Has forty-six (46) or more buildings intended for human occupancy; or 
3	An area where the pipeline lies within 300 feet of either a building or a small well-defined outside area (i.e., playground, recreation area, outdoor theater, or other place of public assembly that is occupied by twenty (20) or more people at least five (5) days per week for ten (10) weeks per twelve (12) month period. The days and weeks do not need to be consecutive. 

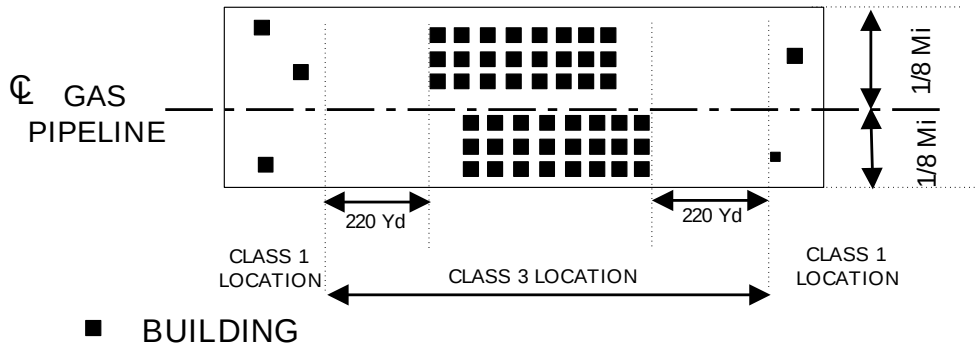
Class Location	Criteria (Class Location Unit contains)
4	Dwellings with four (4) or more stories above ground are prevalent.



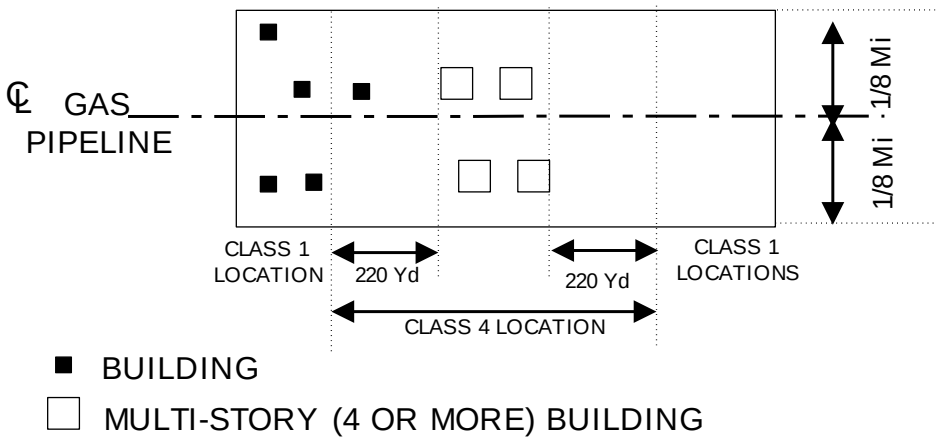
Class Location Unit Boundaries

The boundaries of the class location unit are adjusted as follows:

1. Class 2 and 3 locations end 660 feet from the nearest building in the cluster of buildings that require the class location.



2. Class 4 location ends 660 feet from the nearest building with four (4) or more stories above ground.



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