

Analysis for High Consequence Areas

Description	This procedure describes the process of analysis and consideration of possible HCA's along the pipeline.
Frequency	As needed.
Reference	49 CFR 192.905 How Does An Operator Identify a High Consequence Area?
	LA Title 43 Part XIII 3305 How Does An Operator Identify a High Consequence Area?
Forms / Record Retention	None
Related Procedures	None
OQ Covered Task	None



*Gas Operations and Maintenance Manual* 

## **Procedure Steps**

## Identification of High Consequence Areas

West Texas Gas (WTG) may elect to use Method 1 or Method 2 or a combination of the two to identify HCAs. The method selected for each Covered Segment is to be noted in the stand alone document showing the analysis for High Consequence Areas and a listing of any such areas.

## Method 1

West Texas Gas may utilize Method 1 from the definition of High Consequence Areas in §192.903 to identify HCA's. In that case WTG will follow the procedure below.

- 1. The Pipeline Engineer will utilize WTG's most recent class location study to identify all Class 3 and Class 4 locations. All Class 3 and Class 4 locations are deemed to be HCAs.
- 2. For flammable gases, the Pipeline Engineer will utilize the formula found in the definition of Potential Impact Radius (PIR) located in §192.903 to calculate a PIR for each of West Texas Gas's pipelines.
- 3. For Class 1 and 2 locations, the Pipeline Engineer will create potential HCA maps by overlaying each pipeline's centerline onto recent aerial photographs of the Class 1 and Class 2 locations. The Pipeline Engineer will then create a potential HCA Buffer by placing a buffer equal to the Potential Impact Circle centered on the pipeline centerline and extending along the entire length of each Class 1 and Class 2 location.
- 4. The Pipeline Engineer will locate potential HCAs by identifying all potential Identified Sites and twenty or more buildings intended for human occupancy clusters within the HCA Buffer. The potential HCA will extend axially along the length of the pipeline from the outermost edge of the first potential impact circle<sup>1</sup> that contains either an Identified Site or twenty or more buildings intended for human occupancy to the outermost edge of the last contiguous potential impact circle containing either an Identified Site or twenty or more buildings intended for human occupancy.
- 5. The Pipeline Engineer will document the locations of potential HCAs on the aerial photo maps and have field personnel verify. Field personnel will verify each potential HCA location as shown on the maps by determining occupancy and use of structures and identified sites within the potential HCA. Then, where necessary, will use GPS equipment, electronic distance measuring equipment, or other equivalent means to map the Identified Site or structure.
- 6. Field personnel will also identify locations of additional Identified Sites or of twenty or more buildings intended for human occupancy not noted on the maps.

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<sup>&</sup>lt;sup>1</sup> As defined in <u>§192.903</u>.



7. Field personnel will document their findings on the maps and return the maps to the Pipeline Engineer. Documentation must include the type of Identified Site, such as retail store, playground, school, etc. and the verification date.

## Method 2

West Texas Gas may utilize Method 2 from the definition of High Consequence Areas in §192.903 to identify HCA's. In that case WTG will follow the procedure below.

- 1. For flammable gases, the Pipeline Engineer will utilize the formula found in the definition of PIR located in §192.903 to calculate the PIR for each of West Texas Gas's pipelines.
- The Pipeline Engineer will create potential HCA maps by overlaying each pipeline's centerline onto recent aerial photographs showing the pipeline's centerlines. The Pipeline Engineer will then create a potential HCA Buffer by placing a buffer equal to the Potential Impact Circle centered on the pipeline centerline and extending along the entire length of the line.
- 3. The Pipeline Engineer will locate potential HCAs by identifying all potential Identified Sites and twenty or more buildings intended for human occupancy clusters within the HCA Buffer. The potential HCA will extend axially along the length of the pipeline from the outermost edge of the first potential impact circle<sup>2</sup> that contains either an Identified Site or twenty or more buildings intended for human occupancy to the outermost edge of the last contiguous potential impact circle containing either an Identified Site or twenty or more buildings intended for human occupancy.
- 4. The Pipeline Engineer will document the locations of potential HCAs on the aerial photo maps and forward to the field for verification. Field personnel will verify each potential HCA location as shown on the maps by determining occupancy and use of structures and identified sites within the potential HCA. Then, where necessary, will use GPS equipment, electronic distance measuring equipment, or other equivalent means to map the Identified Site or structure.
- 5. Field personnel will also identify locations of additional Identified Sites or of twenty or more buildings intended for human occupancy not noted on the maps.
- 6. Field personnel will document their findings on the maps and return the maps to the ALIMT. Documentation must include the type of Identified Site, such as retail store, playground, school, etc. and the verification date.

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<sup>&</sup>lt;sup>2</sup> As defined in <u>§192.903</u>.



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