

**NOPR – PIPELINE INTEGRITY MANAGEMENT
NATURAL GAS TRANSMISSION PIPELINES**

**HIGH CONSEQUENCE AREA
IDENTIFICATION**

February 20, 2003

Columbia Gas Transmission Corporation

NOPR - Pipeline Integrity Management High Consequence Area Identification

HCA Definition – Part 192.761 (September 5, 2002)

Any of the following areas:

- Class 3 Locations
- Class 4 Locations
- Corridor Areas for Identified Sites
 - 300 ft for Pipe $D \leq 12''$ & MAOP ≤ 1200 psi
 - 1000 ft for Pipe $D > 30''$ & MAOP > 1000 psi
 - 660 ft for all other Pipelines

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HCA Definition – Identified Sites (continued)

Building or Outside Area that is:

- Visibly marked
- Licensed or registered by Federal, State, or local agency
- Known by public officials
- On a list or map from Federal, State, or local agency or in a publicly or commercially available database
and is
- Occupied by persons confined, of impaired mobility, or difficult to evacuate, or there is
- Evidence of use by 20 people or more, at least 50 days in any 12 month period

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NOPR – Modifications to HCA Definition

- Potential Impact Radius (PIR) – C-FER calculation
- Threshold Radius associated with PIR
 - 300ft/660ft/1000ft/ PIR + 15%
- Potential Impact Circle (PIC)
 - Radius = Threshold Radius
 - Contains any of the following:
 - 20 or More buildings for Threshold Radius 1000 ft or larger
 - Facility occupied by persons hard to evacuate
 - Places where people congregate

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NOPR – Modifications to HCA Definition

- Potential Impact Zone (PIZ)
 - Rectangular Area
 - Determined by sliding PIC along pipeline
 - Determine Moderate Risk Areas – Class 3 & 4
- Provide Means of Calculating Longitudinal distances and actual area of impact in an HCA

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Columbia Transmission Companies – HCA Actions to Date

- Based on Final Rule
- Trained Engineering Support and Operations Personnel on Identified Site definition
- Routine Population Density Surveys for Class Verification
 - Updated Class 3 and 4 Locations
 - Looked for Identified Sites across system
- Operation Personnel - Local knowledge of sites
- Contacts with Local Safety Officials
- Limited search to date of publicly available internet databases
- Anticipate Refinement in 2003/2004

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Significant HCA Issues

- Requirement to search all publicly or commercially available databases is impractical.
 - Volume of information is unknown
 - Some databases are extremely expensive to use
 - Searching databases can be labor intensive
- Rural Churches and other gathering places
 - Overly Broad
 - Difficult to determine what qualifies
 - little guidance on how to interpret 20 or more people/50 days/ 12 month period

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Significant HCA Issues

- Moderate Risk areas – Extension of Baseline Assessment periods vs. exclusion from assessment requirements or utilization of enhanced preventative/mitigative measures
- Lower stress pipelines fail differently than those at higher stress levels – should program be focused on pipelines that would have higher consequences?