

FCG SAFE Program Continuation and Vintage Polymer Pipeline Replacement

Overview of the Proposed SAFE Program Continuation

Florida City Gas (“FCG” or “Company”) has approximately 1,200 miles main and associated services located in rear property easements within its distribution system. These mains present various operational and safety challenges which would be eliminated by relocation to the road right of way. FCG proposes to continue to relocate rear lot main with the highest risk main located in rear easements based on the annual DIP program and risk model.

Concerns of Rear Lot Mains and Service Taps

Due to the high population density through which FCG serves its natural gas customers, safe access and operation of our system is critical. Mains and service taps that are located in rear property easements present operational and safety concerns including:

- Fencing and landscaping and overgrowth of vegetation/trees prohibiting access to mains and services
- Age of rear easement facilities with varying installation standards
- Customer encroachments on easements (*e.g.*, construction of buildings, patios, pools, etc..) prohibiting access to mains and services
- Increased company expenditures for maintenance work, such as leak surveys and service connection work
- Increased opportunities for gas theft or diversion
- Increased opportunity for damages

The pictures below demonstrate the access challenges presented by rear lot main locations. Picture 1 shows FCG’s mains in yellow running at the rear of the lots throughout this neighborhood. The blue box shows the vantage point from which the two following pictures, Pictures 2 and 3 are taken. Picture 2 is the view looking east from the street and Picture 3 is the view to the west. It is clear that accessing the main used to serve the residences on either side of this street is very difficult.

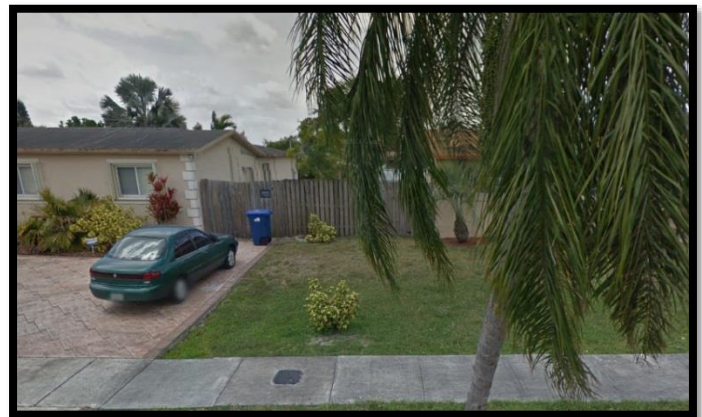
Picture 1 – Illustration of access issues



Picture 2 – veiw to east



Picture 3 – view to west



Concerns of Unprotected or Ineffectively Coated Steel Mains and Services

PHMSA recognized the threat of corrosion on steel pipe, and as a result amended Part 192.455, Code of Federal Regulations (CFR), to prohibit the installation of steel pipeline after July 31, 1971, unless the operator could demonstrate by tests, investigation, or experience in the area using, at a minimum, soil resistivity measurements and tests for corrosion accelerating bacteria, that a corrosive environment does not exist.

Steel pipeline installed after August 1, 1971, uses cathodic protection to help insulate the pipeline from the corrosive environment. Cathodic protection is required under the amended Part 192.455, CFR, to reduce corrosion. Cathodic protection consists of an electric current applied to the pipeline in such a manner as to cause metals to be deposited on the pipeline instead of being eroded from it.

Method of Determining the Order of Pipeline Replacement

Florida City Gas has developed a Distribution Integrity Management Program (“DIMP” or “DIM Program”). The Florida City Gas’s DIM Plan includes a spatial pipeline risk assessment that will provide guidance in determining which pipes should be replaced first based on the relative risk of the pipelines. PHMSA urged the states in an advisory regarding cast iron to consider replacing the highest risk pipes first. The Company believes a similar methodology should be carried out throughout the replacement of rear lot and inaccessible mains.

The Company will prioritize the replacement of these mains using the following factors:

1. The Spatial Risk Assessment for Rear Lot Mains and Services will prioritize pipeline based on the following factors:
 - a. Location of Pipeline
 - b. Material of Pipeline
 - c. Leak incident rates
 - d. Grouped Pipeline Based on Neighborhood Characteristics
 - e. Consequence for the rear lot mains will be weighted evenly based on factors including maintenance access complications, compliance difficulties, customer encroachments and other issues.

The spatial risk assessment combines distribution system materials data with geographic location information to analyze the historical performance data among connected mains of similar size and vintage and population proximity and density. The results of the spatial risk assessment will be reviewed by FCG’s Subject Matter Experts (“SME”) to make final determination and extent of projects. The inclusion of SMEs in the process, ensures that local knowledge of the unique operating conditions and access challenges are given due consideration. The SMEs input will be critical in assessing the degree to which a particular rear easement impedes overall access to facilities and will help identify situations in which above ground facilities (*e.g.*, meters and regulators) should be moved from the rear of a building to a side or front location. The DIMP process will be conducted annually to ensure all areas are being assessed and that the highest risk areas are being mitigated.

Vintage Polymer Pipe Replacement

Florida City Gas has approximately 540 miles main and associated services of vintage polymer that was used in the 1970s and 1980s that has been studied by the PHMSA and shown through industry research to exhibit premature failure in the form of cracking. The potentially compromised nature of the piping makes responding to leaks more hazardous since responders cannot safely squeeze the pipe without cracking. This represents a significant and serious safety risk to customers as well as first responders.

In order to address this safety risk Florida City Gas is proposing the replacement of approximate 160 miles of this pipe prioritizing base on the annual DIP program and risk models. The proposed replacement program would replace nearly 30% of the total vintage pipe.

Total Vintage Plastic from 1970s and 1980s By Service Center:

Miami –	219.6 miles
Brevard –	306.1 miles
PSL –	14.7 miles
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Total	540.4 miles