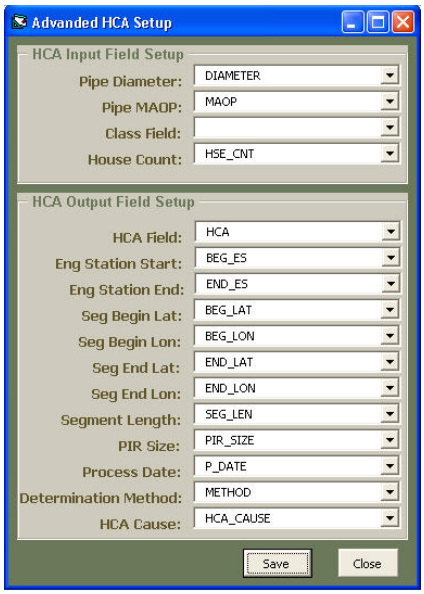
PetrisWINDS® HCA Tool
Product Data Sheet

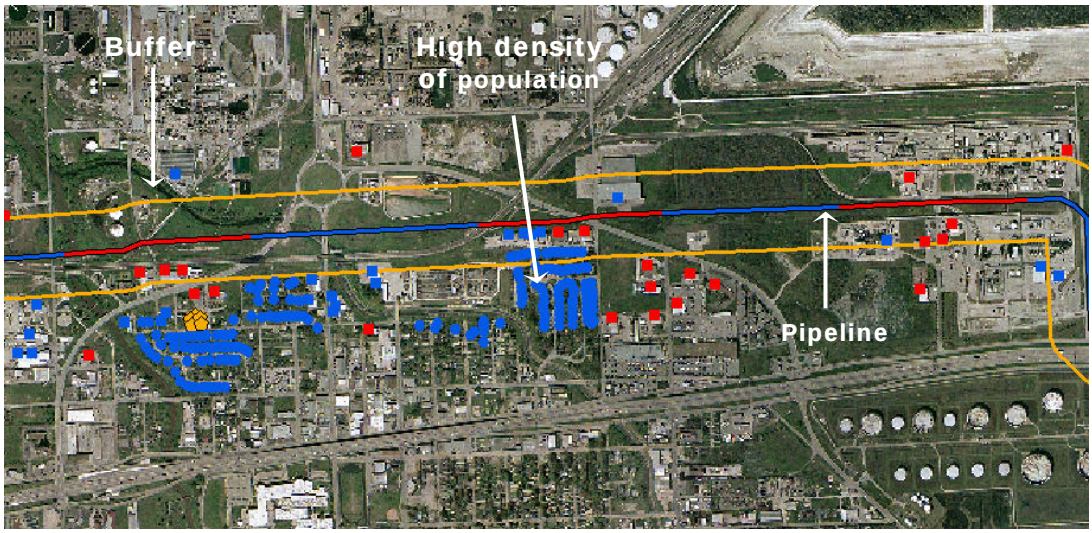
Identifying High Consequence Areas in Gas Transmission Pipelines

The HCA tool identifies segments in your pipeline network that meet the criteria for high consequence areas (HCA) as defined by the DOT HCA Rule (49 CFR Part 192, §192.761). Each segment identified as a high consequence area represents an area where evacuation plans should be available for each different type of HCA structure (e.g. school, church, hospital, etc.) and defines the potential impact zone. The HCA tool uses the Potential Impact Radius (PIR) equation to calculate the radius of effect, taking the gas factor, diameter, and Maximum Allowable Operating Pressure (MAOP) into account. After the HCA tool determines the PIR, it calculates the buffer: an area defined by the tangents between different potential impact circles (circles drawn from the pipeline centerline to the PIR). The HCA tool will identify a segment of the pipeline as a high consequence area if there are a large number of residences, an HCA structure (e.g. schools, prisons, religious facilities, etc.), or an outdoor gathering area within the buffer.



Advanced HCA Setup

The HCA tool lets the user define the input fields for of the DOT rule: the MAOP and DIAMETER for Method B or CLASS (class location segments) for Method A.



Non HCA Segment

HCA Segment

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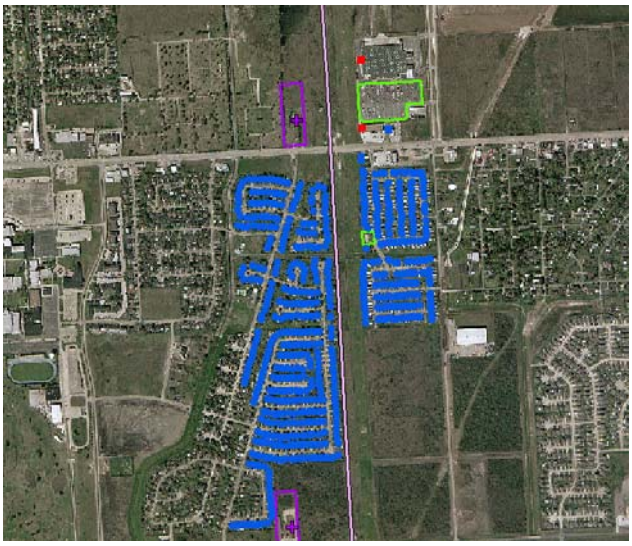
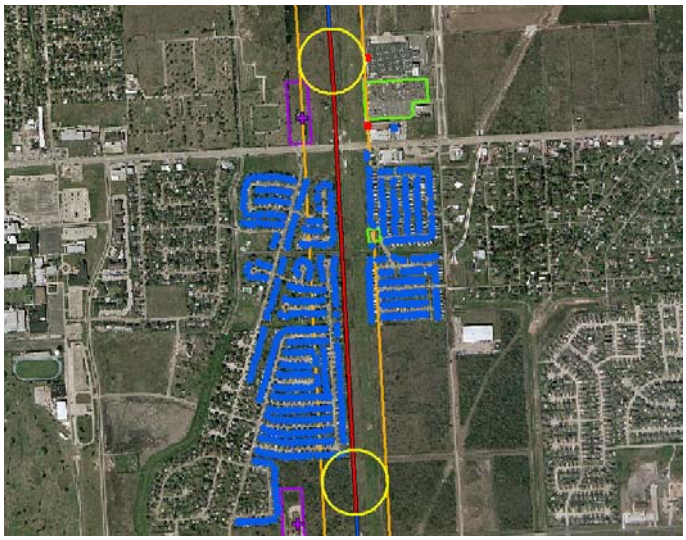
PetrisWINDS HCA Tool Features

- **Advanced ECM Systems**
- **Rule-based Tool –** Calculates high consequence areas according to the DOT Gas Integrity Management HCA Rule
- **HCA Definition Flexibility –** Allows the user to choose between Method A (a calculation that takes class locations into account) and Method B (a calculation based on high consequence structures and areas only)
- **Dual Output –** Generates a shapefile that includes attributes for accumulated footages and beginning/ending coordinates of HCA segments



Existing Centerline Mapping



After HCA Tool Use, showing high consequence areas

Unsurpassed Experience in Oil & Gas/Energy GIS

Petris has extensive GIS knowledge and experience in the Oil & Gas and Energy industries, coupling this with world-class tools and professional services. We're not just leaders in GIS Systems architecture, development, and implementation. We also know how these systems can be leveraged and integrated to get optimum results for Oil & Gas and Energy companies.

Let Petris' strong focus on GIS and unique blend of knowledge, experience, and existing capabilities to help you assume total mastery over your information resources. Whether your knowledge management problems are technological, organizational, or industry-specific in nature, Petris can help you. We'll bring our experience your situation and offer you a custom solution that will save you time and money. Let Petris bring an insider's touch to your geospatial data headaches – and let your organization focus on doing what it does best.

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