Abstract

HCA Pipeline Segment Identification: Buffer Analysis and Terrestrial Spill Modeling
Track: Pipeline Transmission
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The USDOT's Pipeline Integrity Management Rules require pipeline operators to identify which segments of their pipelines could affect High Consequence Areas. Intersection and Buffer Analysis, when used in conjunction with dynamic segmentation, can locate and quantify pipeline segments which are either physically located in, or within a given distance of an HCA. Terrestrial spill modeling is required to determine where pipeline releases have the potential to affect HCAs through overland and hydrographic transport mechanisms. This paper discusses data requirements, spatial analysis techniques, and application results for both methods of HCA pipeline segment identification.

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