

## **HydroQuest**



August 10, 2016

## Key Points to Consider When Purchasing a Home or Business Proximal to a Pipeline

(Reasons why it is not wise to purchase a home or business within 2,000 feet of a combustible gas pipeline) by: Paul A. Rubin

- The simple fact that on a minute to minute and daily basis, either a slow or catastrophic gas leak that enters a building can asphyxiate a family, leading to their rapid mortality. Examples of heavier-than-air pipeline material capable of causing rapid death include: Natural Gas Liquids, Liquified Natural Gas and Liquified Petroleum Gas. They may accumulate in confined spaces, particularly at or below ground level. Accumulation in home basements may lead to asphyxiation, explosions and death. Components of these pipeline materials (methane, propane, butane, ethane, pentane), including those materials lighter-than-air (Natural Gas, Compressed Natural Gas), are highly flammable and explosive. ALL contain high percentages of extremely flammable and explosive chemicals making accidents along hydrocarbon transmission pipelines dangerous and life-threatening. Pipeline failure and hydrocarbon excursions close to homes pose a real risk to public health and safety.
- Pipeline failure and accidents along pipelines are well-documented. Sunoco, for example, has been cited as a gas company having numerous hazardous liquids leaks. Causes of documented pipeline failure mechanisms and accidents include: External interference or third party activity (e.g., excavator or auger encounters pipeline); Corrosion; Construction defect and mechanical or material failure (e.g., cracked & ruptured pipes, pipe joint failure); Ground movement or generally natural hazards; and Other or unknown causes. (Sklavounos & Rigas, 2006)
- Liquefied, flammable, gas clouds have been documented as having drifted up to 5 miles before exploding in a "wall of fire" some 1 mile wide (Siberia, Russia June 4, 1989).
- Multiple pipelines with nearly intersecting pathways or placed in close proximity to each other increase health & safety risk. Pipeline explosions have caused huge craters that may easily disrupt the integrity of nearby pipelines, thus increasing accident area and impact extent. The San Bruno pipeline explosion in 2010 resulted in a 30-inch diameter steel natural gas pipeline exploding into flames, inclusive of a wall of fire more than 1,000 feet high. Eight people died and 35 houses were leveled. The resulting shock wave registered as a magnitude 1.1 earthquake. The explosion excavated an asymmetric crater 167 feet long, 26 feet wide, and 40 feet deep (Wikipedia).

- Community character has substantially changed over time. In some areas, when early pipeline easements were obtained, few dwellings were present. Now, some areas are densely populated. Placement of hydrocarbon-bearing pipelines within feet of houses in such settings unnecessarily jeopardizes public health and safety.
- In situations like pipeline failures, emergency response experts have testified that there is not sufficient time to evacuate the public. If catastrophic pipeline failure occurred, it is unlikely that a sufficient number of personnel trained to handle the situation would be available in a short time period, especially in response to multiple calls at the same time. Evacuation plans work when sufficient warning time is given (e.g., hurricanes, rising flood waters). Toxic gas clouds can travel and kill within minutes of pipeline rupture, especially in densely populated areas.
- Homes proximal to pipelines have difficulties selling, thereby resulting in devaluation. As more and more people are adversely impacted by pipeline failures, insurance carriers will no longer be able to provide insurance. This is already happening in Delaware County, PA. This message speaks volumes.
- As more and more people are burned, injured and killed due to pipeline ruptures, there is a need to provide physical, mental, legal and financial support to survivors. To fill this growing void, a "Survivors' Network" is now being formed through the Pipeline Safety Coalition under the Mayor's Council. The United States Declaration of Independence provides for the unalienable rights of life, liberty and the pursuit of happiness. Forcing dangerous pipelines within feet of children's bedrooms is not in their best interest and deprives them of their human rights. Governments were created to protect these rights.



