7 Stakeholder Perspectives

This guidance has a focus on technology and detection as it relates to methane emission point sources. Stakeholders have additional concerns that pertain to the broad effects on human health and the environment from hazardous air pollutants that may be part of the natural gas stream. Regulators should be aware that stakeholders may raise these concerns during discussions of the development, implementation, and compliance with regulations and technology advancement.

ITRC has found that environmental regulators and other parties benefit from informed, constructive stakeholder involvement because it can help them to make better decisions, and reduce the likelihood of costly, time-consuming repeated work. It also allows those in affected communities to participate in decisions regarding the long-term use of land, water, and other resources. This section addresses the concerns of stakeholders who may be asked to participate or comment on evaluation methodologies or specific technologies with regards to methane detection and quantification.

Identifying affected public and tribal stakeholders early in the planning process and including the key stakeholders in the planning and implementation of the regulatory planning process is vital to the success of environmental regulators' decisions.

7.1 Stakeholder Concerns

The ITRC broadly defines "stakeholder" as members of environmental organizations, community advocacy groups, tribal entities or other groups that deal with environmental issues, or a concerned individual who is not a member of any organization or group. Public stakeholders, such as advocacy groups, often speak for the communities that are affected by environmental issues. In this document, a differentiation is made between public stakeholders and interested parties (e.g., oil and gas (O&G) companies, pipeline operators, and state regulators).

Many public stakeholders view climate change as an existential challenge that we, as a society, must confront head on. Because methane is a potent greenhouse gas that contributes to climate change, it is likely that many stakeholders will, in general, support programs and regulations that increase the use of and improve detection of methane releases. It is often important to explain in a reasonable, scientific way how using natural gas in place of other fossil fuels helps reduce carbon dioxide emissions, but that methane contributes to environmental degradation (e.g., climate change) and safety, and what can be done to reduce its impacts.

As was stated in Section 1. Introduction, stakeholders recognize that the purpose of this document is to provide an overview of existing and developing technologies as well as guidance regarding performance characteristics and parameters to consider in technology evaluation.

Stakeholders may have concerns if regulations or programs are limited to O&G production and distribution, thus requiring only a few sectors be evaluated for methane detection and quantification technology improvements. These concerns include:

7.1.1 Proximity to operating facilities with methane emissions

As evidenced by the 2017 Firestone Colorado explosion, citizens living close to operating facilities can be directly affected by methane leaks (Finley, Svaldi, and Osher 2017). Costly evacuations, adverse health issues, decreased property values, and lifestyle disruptions are a few concerns. Stakeholders may want to know that the detection methodology being evaluated will take into account the proximity of new and existing wells to facilities.

Firestone Explosion

On April 17, 2017, an explosion killed two people and destroyed a house in Firestone, Colorado, a community 25 miles north of Denver. An investigation conducted by the local fire department linked the explosion to an abandoned, uncapped flow line operated by Anadarko Petroleum Corporation.

7.1.2 Abandoned wells and/or lines

Abandoned wells and associated lines represent a large problem in terms of safety, land-use, and release of methane. Stakeholders will be concerned if there are no requirements to check for methane leaks from abandoned wells.

7.1.3 Oil and gas extraction

Stakeholders are concerned that hydraulic-fracturing ("fracking") will lead to additional methane releases, especially when this process is done in areas (primarily for oil) where there is no infrastructure to collect and transport natural gas. Stakeholders may have concerns that the management of waters and muds from fracking may release methane. Detection technologies may help determine the level of methane release and additional procedures addressing this concern may be needed.

San Bruno Pipeline Rupture

On September 9, 2010, a portion of an underground natural gas transmission system of Pacific Gas and Electric Company (PG&E) ruptured. The pipeline was located under a street intersection in a residential area of San Bruno, California. PG&E estimated that 47.6 million standard cubic feet of natural gas was released. The released natural gas ignited, resulting in a fire that destroyed 38 homes and damaged 70 more. Eight people were killed, many were injured, and many more were evacuated from the area.

7.1.4 Pipeline safety

Stakeholders are especially concerned about pipeline safety and will want to see any program include technologies that can be used to detect pipeline emissions and leaks, especially in more urbanized areas.

The 2010 pipeline accident in a residential neighborhood in San Bruno, California resulted in the destruction of 38 homes and eight fatalities and was significant in terms of loss of life and property (NTSB 2011). The 2014 East Harlem gas explosion resulted in the collapse of two apartment buildings, displacement of 100 families, and eight fatalities. Both of these incidents have contributed to increased stakeholder concern about leaking distribution pipelines (NTSB 2015).

East Harlem Apartment Explosion

On March 12, 2014, two adjacent, five-story multi-use buildings were destroyed by a natural gas explosion and subsequent structural fire on Park Street in East Harlem, New York City. This incident resulted in eight fatalities, 48 reported injuries, and displaced more than 100 families from their homes. Information gathered during the investigation suggests that intermittent natural gas odors were detected within the incident buildings, an adjacent building, and nearby outside areas in the days preceding the incident.

7.1.5 Adaptation of Detection Technologies

While it is understood this document deals with O&G production and distribution, it may not be clear to stakeholders why some of the technology innovations evaluated under a state program could not also be used or adapted for other types of large methane emitters, such as landfills and feedlots.

7.1.6 Oil Wells without Infrastructure to Capture Natural Gas

One of the largest incentives for the industry to reduce methane emissions into the atmosphere is that the gas, if kept inside a collection system, can be sold as a product. However, there are some instances where insufficient infrastructure exists to collect that gas. In these instances, methane is usually flared or released. In North Dakota, it is estimated that 30 percent of the O&G wells use flaring because of the lack of infrastructure,

Aliso Canyon Leak

On October 23, 2015, the largest known release of methane in U.S. history started when a well in the Aliso Canyon Natural Gas Storage facility in Los Angeles ruptured. Eight thousand residents fled the nearby Porter Ranch community due to the odor; complaints of headaches, nausea, nosebleeds, irritation

(although this percentage is dropping each year). When flaring is used, producers may have little economic incentive, except for safety concerns, to reduce methane emissions.

7.1.7 Underground Storage Facilities

National attention was drawn to the large volume methane release and significant community disruptions from an underground storage system in Aliso Canyon in southern California (CARB 2016). Stakeholders may expect that technologies be employed to detect hazardous methane emissions for these facilities to prevent similar situations in the future.

of nose and throat; and concern for their health. Approximately 100,000 metric tons of methane were released before the leak was plugged almost four months later. The value of the leaked natural gas is approximately $17 million, but as of the end of 2016, the total cost of the leak had risen to $780 million to cover costs associated with the resident relocation program, efforts to stop the leak, settlements, and litigation.

7.1.8 Offshore Wells

While it is understood by the stakeholders on this team that offshore drilling and production are outside of the scope of this document, some stakeholders may be concerned that this is overlooked, especially in coastal states. It is important to answer questions about why offshore production is excluded and if some of the detection technologies can be used in an offshore setting. As noted in the Introduction, “Although off-shore emissions are of equal concern, these facilities are difficult to access (e.g., production platforms) and may be located in marine or sub-marine environments (e.g., platform-to-shore pipelines), which will require a different approach to methane emission detection.” It will also be important to explain to stakeholders who has regulatory authority for these wells.

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