PHMSA Implications – Fugitive Methane Reduction

Key Message:

The subject and national focus of reducing fugitive methane, which are measures to calculate/ prevent/capture emissions of gases or vapors from pressurized equipment due to leaks and other unintended or irregular releases of gases, is rapidly growing. PHMSA leadership outreach, investigative/statistical studies and policy/regulatory measures may be required due to the current Administration and Congressional focus on fugitive methane reduction and from recent related actions by the Environmental Protection Agency (EPA). However, policy or regulatory measures may be problematic since there is an absence of environmental statutory authority for PHMSA's natural gas pipeline mission*.

Governmental or Other Drivers:

- Obama Administration – Strong interest in reducing Greenhouse Gas (GHG) emissions.
  - New "Social Cost of Carbon/Methane" OMB Requirements on Data/Rulemaking
    - Quantifying the amount of escaped gas from reportable incidents
    - Determining the gas composition to calculate Global Warming Potential
    - Calculating Savings/Increases as part of any Regulatory Impact Analysis*
- Related EPA Actions:
  - 1993-2011 Gas STAR Program – Voluntary O&G Industry reporting of fugitive methane emissions http://www.epa.gov/gasstar/index.html .
  - 2009 Endangerment Finding (tied to Clean Air Act authorities) identified methane as a GHG that can "threaten the public health and welfare of current and future generations" http://www.epa.gov/climatechange/endangerment/ .
  - Greenhouse Gas Reporting Program - Mandatory methane/GHG reporting beginning after 2011 but tied to the 2009 Endangerment Finding. http://www.epa.gov/ghgreporting/index.html
- Congressional:
  - US Senate (Committee on Environment & Public Works) Subcommittee on Oversight held Nov 5, 2013 hearing entitled, "Fugitive Methane Emissions from Oil and Gas Operations" to bring attention to the subject and canvass available mitigative solutions.
  - Ed Markey (D-MA) Nov 21, 2013 - Proposed Senate Bills that "directly target PHMSA" to partially design/implement significant new emission reduction programs with the States on natural gas distribution pipelines.
    - Pipeline Modernization and Consumer Protection Act (Program with the States)
    - Pipeline Revolving Fund and Job Creation Act (Trust Fund for program with the States)
- The Environmental Defense Fund (EDF) in 2012 began a program of several funded studies to investigate natural gas transmission and distribution fugitive methane releases. Program Goal: To find and measure the leaks and releases that can occur across the entire natural gas supply chain. The program currently involves 85 academic researchers and natural gas industry companies. http://www.edf.org/methaneleakage

* Executive Order 12866 – May provide PHMSA some basis to conduct rulemaking by quantifying benefit to reduce burdens of related methane reduction actions.

Possible PHMSA Actions:

- Issue a FR Notice identifying PHMSA related actions in support and to date (IM Programs-Repaired Leaks/Revised Leak Data Reporting Requirements/EFVs/Research Technology Successes), propose areas of future focus on fugitive methane emission reduction and request proposals on how PHMSA could design/implement such programs.
- Conduct a Regulatory Roundtable to establish a Fed/State Government leadership hierarchy of programs to reduce emissions and to identify any gaps of programs on trans/dist infrastructure.
- Create PHMSA Action Plan from Regulatory Roundtable output on trans/dist infrastructure.
- Consider MOU with Feds(EPA?)/States to implement action plan.
- PART 192 Natural Gas Regulation – Various suggested changes for consideration…
  - Split definition of leaks into "Hazardous Leaks" and "Non-Hazardous Leaks"
  - Definition Consistency - Include these definitions in more Subparts (currently "Hazardous Leaks" only defined within Subpart P Gas Dist)
  - Require surveys to identify/measure leak flow rate and then require repair of "Non-Hazardous Leaks" along with "Hazardous Leaks" in all maintenance requirements described in any Subpart for valves, compressors, flanges, pressure relief devices and vaults.
  - Require the capture of or incineration of blow down natural gas resulting from any Subpart Requirement (i.e. ILI launcher/receiver installations, pipeline repairs or testing of pressure relief equipment)
  - Require the capture of or incineration of natural gas as part of any Subpart Requirement on vaults/ventilation
  - Specify under what circumstances when an operator can deviate from any requirement addressing "Non-Hazardous Leaks" (i.e. when these strategies lessen safety protections).
  - New Pipelines/Facilities - Establish design requirements for pressure relief devices, compressors and vaults in support of removing leak paths/capture/incineration.

Pipeline Industry Actions:

INGAA for Transmission

- Long participating with member voluntary reporting under EPA Gas Star Program
- Now members mandatory reporting emissions under EPA GHG Reporting Program
- Petitioning FERC/NARUC to not utilize lost and unaccounted for (LAUF) gas policy as the measure for addressing the EPA's policy on fugitive methane emissions since it does not accurately reflect actual gas lost.

AGA for Distribution

- Same as the actions shown above for INGAA
- Challenged the EPA's calculation of fugitive methane for Dist pipelines. EPA revised their numbers down as a result.
- Funded GTI to develop flow rate method of determining fugitive methane emissions taken from actual field measurements. EPA utilized laser based fly over measurements to calculate rate from methane concentrations.
- Funded GTI to work with the EDF Study of Dist Pipelines to make actual field measurements in support of more accurate emissions picture.
- Emissions data shows dropping rates and credits PUC-approved accelerated programs to replace cast iron and bare steel pipe with PE plastic. Some member companies such as National Grid have incentive programs for employees to report non-hazardous leaks to company leadership.