Prevention of stray gas incidents: Ohio regulatory initiatives
Orphaned Well Leakage
Drilling Operations
(subsurface blowouts)

Controlled burn: Air Rotary Drilling
Controlled Burn
Air Rotary Drilling
Producing Operations

1. Deterioration of unsealed surface casing (cable tool operations)
2. Corrosion of cemented surface casing caused by un-isolated hydrogen sulfide-bearing zones
3. Annular over-pressurization due to un-isolated natural gas flow zones
Statutory Performance Objectives (SB-165)

• Protecting and isolating all USDWs with cement
• Isolating all hydrogen sulfide-bearing zones
• Preventing over-pressurization of the surface-production casing annulus
Annular Over-Pressurization Defined

• “Annular over-pressurization means the accumulation of fluids within an annulus with sufficient pressure to allow migration of annular fluids into underground sources of drinking water” (Section 1509.01(BB) ORC)
Well Construction Rules

- Defines “potential flow zone” consistent with API RP 65-2
- Defines “sustainable annular pressure” consistent with API RP 65-2
- Mandates cement isolation of flow zones behind intermediate or production casing string
- Requires at least 500 feet of cement above the uppermost flow zone
- Requires cement design consistent with API RP 65-2
- Require continuous annular pressure monitoring on an accessible valve to verify ongoing M.I.
- Requires properly functioning pressure relief valve set below hydrostatic pressure at the surface casing seat
- Requires notification of DOGRM upon valve release or observation of excessive pressure and mandates corrective action
Next Steps

• Continuing to develop guidance to promote due diligence and greater consistency in the identification of flow zones, cement design, and effective isolation during primary cementing operations