

Role of Health in Hydraulic Fracturing Activities in Alberta

Presentation to the Yukon Select
Committee on Hydraulic Fracturing

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Calgary

Introductions

- **Merry Turtiak M.Sc., Project Coordinator, Health Protection Branch, Alberta Health**
- **Karina Thomas Ph.D., Senior Science Advisor, Office of CMOH, Alberta Health**
- **Lynn Que M. Eng CPHI, Environmental Health Advisor , Safe & Healthy Environments, Alberta Health Services**
- **Richard Musto MD FRCPC Calgary Zone Lead MOH Alberta Health Services**
- **Brent Friesen MD FRCPC, MOH, Safe & Healthy Environments, Alberta Health Services**

Overview of Presentation

- Roles of Alberta Health and Alberta Health Services in oil & gas development
- Response to residents' concerns related to oil & gas development in the Cochrane area
- Challenges and opportunities related to greater health involvement in oil & gas development

Role of Alberta Health

- Develops and implements provincial policy on improving the wellness of Albertans by protecting and promoting health.
- Develops and implements environmental public health policies and actions on issues related to environmental contaminants and health.
- Supports the Chief Medical Officer of Health's ability to get important public health messages to Albertans.
- Investigates health concerns related to oil & gas development
- Reviews & evaluates the health component of EIAs

Role of Alberta Health Services

- Operational responsibility for the delivery of health services to the residents of Alberta
- Under the Regional Health Authorities Act there is a duty to protect and promote health while under the Public Health Act there is a duty to investigate potential threats to health
- Involved in reviewing the emergency response plans that oil & gas companies are required to do
- Involved in investigation of health concerns related to oil & gas development

Capacity of AH & AHS

- Specialized scientific & medical expertise
- Environmental Public Health Inspectors/Advisors familiar with emergency response planning, ambient air quality, water quality, soil contamination, and noise (zone & centralized)
- Health has limited internal capacity for ambient & contaminant monitoring & laboratory analysis
- Rely on Alberta Environment & Sustainable Resource Development (AESRD) for collection and analysis of ambient air, soil & water analysis(beyond basic bacterial & chemical analysis)
- Epidemiological capacity to review health services utilization data and cancer registry data
- Issue specific specialized studies

Areas Currently Evolving

- Relationship between the new Alberta Energy Regulator (AER) and Alberta Health & Alberta Health Services
- Updating of the Environmental Public Health Field Manual for Oil & Gas Activities in Alberta
- Health's role in “plays approvals” versus individual well applications
- Changing roles of AESRD
- Development of unconventional oil & gas regulation

Oil & Gas Health Concerns in Cochrane – Lochend Area

- Group of local residents wrote letter to CEO of AHS expressing concerns that there was a “public health disaster” as a result of oil & gas wells being developed with hydraulic fracturing
- Letter described health effects being experienced by residents as well as concerns about air and water quality
- AHS Public Health met with residents to identify their specific health concerns and issues

Oil & Gas Health Concerns in Cochrane – Lochend Area (cont.)

- Issues identified by residents in order of priority: health concerns; air emissions; effect on water quality; herd health and seismic activity
- Arrangements made for health assessments for interested residents
- Review of health services utilization data and cancer registry data for the population that residents felt was most impacted
- Engagement with other government agencies (ERB and AESRD)

Current Situation

- Health assessment – residents have gone for assessment, most recent action has been to link them to toxicology clinic to collate their information
- No significant concerns from health services utilization and cancer registry data reviews (small population)
- Concerns over air emissions have reduced as flaring has decreased with pipeline infrastructure being put in place
- Concerns remain with flaring of fracking fluid at time of well completion

Current Situation/Next Steps

- Concerns with increases in herd mortality – veterinarian did not see an unusual pattern
- Concerns with water quality and aquifer being affected by fracking fluids such biocides

Next Steps

- Multi stakeholder working group to identify air quality monitoring parameters
- Identification of recommended parameters for water quality monitoring

Potential Learning from Hydraulic Fracturing

- Importance of preventive approach
- Importance of open & transparent processes
 - Fracking fluids, equipment functioning & monitoring
 - Very difficult to rebuild trust once it has been lost
- Health involvement needs to be earlier rather than later
- Health Impact Assessments can be an effective way to identify potential health & social impacts that development plans will need to address
 - Issues of concern to Lochend residents could be predicted and interventions identified

Potential Learning from Hydraulic Fracturing

- Play approval approach needs to allow for effective health involvement in earlier stages of review and approvals
- Open access to monitoring and testing results to enable health to fulfill its responsibilities
- Timing of development in relationship to pipeline infrastructure to minimize flaring
- Rapid and clearly defined mechanism for response to complaints about process upsets or potential non compliance with regulations

Potential Learning from Hydraulic Fracturing

- Access to required expertise, equipment & laboratory support
- Access to required data for health impact assessments
 - May require specific collection in conjunction with proponent
- Intensity and frequency of activity has increased with accompanying increase in potential impacts
- Concept of health vs. illness – can help identify potential issues earlier
- Potential changes to legislation
 - Workplace Health & Safety (new processes – new exposures such as silica)
 - Foreign workers

Potential Learning from Oil and Gas Development Generally

- Potential impact on local human & physical infrastructure
 - Availability & cost of housing
 - Availability of health professionals (demand & diversion to industry position)
- Social disruption
 - Drugs, alcohol, gambling
 - Sexually transmitted diseases
 - Domestic violence & sexual assault
- Injuries
 - Workplace , Motor Vehicle

Questions?

