

**Presentation to  
Lethbridge City Council  
on  
Oil & Gas Development  
February 24<sup>th</sup>, 2014  
Lethbridge**

## Overview of Presentation

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- Roles of Alberta Health and Alberta Health Services in oil & gas development
- Description of response to health concerns related to oil & gas development
- Response to questions from Lethbridge City Council

## Role of Alberta Health

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- 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 (CMOH) ability to get important public health messages to Albertans.
- The CMOH is responsible for monitoring the health of Albertans and making recommendations to the Minister of Health and AHS on measures to protect and promote health and prevent disease and injury.
- Investigates health concerns related to oil & gas development.
- Reviews and evaluates the health component of Environmental Impact Assessments.

## Role of Alberta Health Services

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- 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

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- Specialized scientific and medical expertise
- Environmental Public Health Inspectors/Advisors familiar with emergency response planning, ambient air quality, water quality, soil contamination, and noise (zone and centralized)
- Health has limited internal capacity for ambient & contaminant monitoring & laboratory analysis
- Rely on Alberta Environment and Sustainable Resource Development (AESRD) for collection and analysis of ambient air, soil and 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

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- 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
- Potential role for Health Impact Assessments to identify potential health and social impacts that development plans will need to address

## Example of a Follow up of Oil & Gas Health Concerns in Alberta

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- Individual or group of local residents express concern to AHS that there are health concerns related to oil & gas development
- Follow up to identify specific health issues and if they fall within AHS mandate
- Individual Health assessment – work with residents' physicians with regard to type of investigations including potential referral to specialists including if indicated toxicologists
- Review of health services utilization data and cancer registry data for the population/geographical area that is being impacted
- Engagement with other government agencies (Health, Environment, Energy and AER)

## Response to Council Questions

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### What are the health effects of flaring, H<sub>2</sub>S and SO<sub>2</sub> on humans and animals?

- **Flaring** or combustion products depend on the efficiency of the incinerator, composition of what is going into the incinerator and the volume of material being burned
  - Health risks depend on amount and duration of exposure and if thresholds are exceeded
  - Risks can be immediate or long term if thresholds are exceeded
    - Volatile organic compounds (VOCs)
    - Fine Particulate Matter (PM<sub>2.5</sub>)
    - Polycyclic Aromatic Hydrocarbons (PAHs)

## Response to Council Questions (cont.)

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- **H<sub>2</sub>S** – low odour threshold, respiratory irritation at higher levels with central nervous system effects including loss of consciousness
- **SO<sub>2</sub>** – respiratory irritant – sensitive individuals, may impact further away as plume cools and falls to ground
- Alberta Energy Regulator requires applicants to model H<sub>2</sub>S and SO<sub>2</sub> exposures in development of their emergency response plans

[www.health.alberta.ca/documents/Health-HS2-Exposure-2002.pdf](http://www.health.alberta.ca/documents/Health-HS2-Exposure-2002.pdf)

[www.health.alberta.ca/documents/Health-SO2-Exposure-2006.pdf](http://www.health.alberta.ca/documents/Health-SO2-Exposure-2006.pdf)

[www.atsdr.cdc.gov/toxguides/toxguide-114.pdf](http://www.atsdr.cdc.gov/toxguides/toxguide-114.pdf)

[www.carexcanada.ca/en/polycyclic\\_aromatic\\_hydrocarbons](http://www.carexcanada.ca/en/polycyclic_aromatic_hydrocarbons)

## Response to Council Questions (cont.)

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### How do cancer rates in Alberta compare to other provinces?

- Alberta's rates are lower than Canada as a whole but higher than BC which has lowest rates
- All Cancers per 100,000 Population
- **Males**            Alberta **442**    Canada **456**    BC **413**
- **Females**        Alberta **335**    Canada **368**    BC **324**

<https://www.cancer.ca/~media/cancer.ca/CW/cancer%20information/cancer%2010/1/Canadian%20cancer%20statistics/Canadian-Cancer-Statistics-2012---English.pdf>

# Questions?

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