Association of the Chemical Profession of Alberta

ACPA Public Lecture in Chemistry

7 – 9 pm Lecture and Reception

Guest Speaker: Graham Thomson

"Burying Carbon Dioxide in Underground Saline Aquifers: Political folly or climate change fix?"

Please register for this free ACPA event by phone: (780) 413-0004 or by email: acpaoffice@pchem.ca

April 7, 2010 – Edmonton Lecture

CN Theatre, Room 5-142, Grant MacEwan University

Sponsored by: Grant MacEwan University
CIC Edmonton Section

April 14, 2010 – Calgary Lecture

Tom Oliver Lecture Theatre, Earth Sciences 162, University of Calgary

Sponsored by: Applied Geochemistry Group, Department of Geoscience
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University of Calgary, Faculty of Science
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University of Calgary Faculty of Science

Guest Speaker – Graham Thomson

Graham Thomson is a political columnist for The Edmonton Journal (in Alberta, Canada).

A graduate of the University of Waterloo's English co-op program, Thomson has worked in radio, television and print as a reporter, producer and political writer. Since starting work with The Journal in 1995, he has worked on assignments in various parts of the world including Russia and Mexico — and has been on two tours with Canadian soldiers in Afghanistan. Thomson has won a National Newspaper Award and national B'nai Brith award for human rights reporting.

In 2008, he was awarded a Canadian Journalism Fellowship at the University of Toronto's Massey College where he spent the 2008-09 school year studying, among other things, environmental law and climate change.

Burying Carbon Dioxide in Underground Saline Aquifers: Political folly or climate change fix?

Abstract

Carbon capture and storage (CCS), now being tested in Canada, is considered by many to be a solution to the problem of greenhouse gas emissions from major industrial sectors such as coal-fired power plants and Alberta's Athabasca oil sands. The Alberta government has committed $2 billion to investing in CCS research and products, in addition to funds already committed by the federal government. Alberta has stated confidently that CCS projects will be able to sequester 140 million tonnes a year of carbon dioxide by 2050.

However, the large-scale programs backed by the Alberta and Canadian governments to bury carbon dioxide emissions deep underground may cause environmental damage while doing little to fight climate change. Capturing carbon dioxide and disposing of it underground raises many critical issues such as the potential for leaks as well as questions regarding public policy issues such as liability.

Graham Thomson's presentation, based on a paper presented to the University of Toronto's Munk Centre for International Studies ("Burying Carbon Dioxide in Underground Saline Aquifers: Political folly or climate change fix?") addresses several of these questions: Could CO2 eventually leak and find its way into underground sources of drinking water? What would happen if sequestered carbon dioxide were to leak into the atmosphere or creep into an underground source of drinking water 50 years from now? Who would be responsible? Who would monitor the carbon dioxide underground for centuries? What would happen if carbon dioxide injected in one jurisdiction migrated into a neighbouring jurisdiction?

CCS technology is expensive, would require large amounts of fresh water and energy, and is untested on an industrial level at the scale necessary to achieve significant climate change results. The challenges are enormous.