

**ADVISORY COMMITTEE ON PUBLIC SAFETY AND SOUR GAS
EVALUATION OF KEY DEVELOPMENTS IN THE EUB'S
IMPLEMENTATION PROGRESS
NOVEMBER 2005**

1 INTRODUCTION

The Alberta Energy and Utilities Board (EUB) formed the Advisory Committee on Public Safety and Sour Gas (the Advisory Committee on PSSG) in January 2000 to review and make recommendations respecting the sour gas regulatory system as it relates to public health and safety. The Advisory Committee included representation from a broad spectrum of stakeholder groups.

In December 2000, the Advisory Committee issued a *Findings and Recommendations Final Report* that provided a set of 87 recommendations to the EUB. The EUB accepted all of the recommendations and established the Public Safety Implementation Team (PSIT) to develop a plan of action and co-ordinate ongoing recommendation implementation work.

2 IMPLEMENTATION

As implementation work progressed, the PSIT issued progress reports. Quarterly reports were issued during the first two years of the program with *Annual Progress Reports* issued in April 2002 and April 2003. In October 2003 a *Public Safety and Sour Gas Semi-Annual Progress Report 2003* was issued. In June 2004 the *PSSG Project Status, Completion, Implementation, Sustainability and Performance Measure Tables* (Status Tables) were issued, followed by another progress status report - issued July 2005. All of these reports and tables are available on the EUB website at www.eub.gov.ab.ca.

3 EVALUATION OF EUB'S IMPLEMENTATION PROGRESS

Since the *Findings and Recommendations Final Report* was issued in December 2000, the Advisory Committee has convened several times to discuss and evaluate implementation progress on the 87 recommendations. Its observations and subsequent comments to the EUB are contained in four reports: *Advisory Committee on Public Safety and Sour Gas Evaluation of EUB's Implementation Progress* (issued July 2002), *Advisory Committee on Public Safety and Sour Gas Evaluation of EUB's Implementation Progress to April 2003* (issued July 2003), *Advisory Committee on Public Safety and Sour Gas Evaluation of EUB's Implementation Progress to October 2003* (issued December 2003) and *Advisory Committee on Public Safety and Sour Gas Evaluation of EUB's Implementation Progress to September 2004* (issued October 2004). These reports are available on the EUB website at www.eub.gov.ab.ca, and on the Advisory Committee website at www.publicsafetyandsourgas.org

The Advisory Committee convened on September 16, 2005 to receive presentations from EUB and Alberta Health and Wellness (AH&W) staff on key developments and high priority areas in the ongoing implementation work. Following the presentations, Advisory Committee members met privately for discussions and determined that a few items called for a brief report to the EUB. This document is that report.

3.1 Overall Evaluation

Most of the implementation work has either been completed or is now nearing completion. The Advisory Committee was informed that by the fiscal year-end of 2005/06, 74 of the 87 recommendations would be complete. Of the remaining 13, 12 are underway and are anticipated to reach completion by the end of calendar year 2006, or fiscal year-end 2006/07. The one remaining recommendation, awaiting outcomes of other recommendations still underway, is expected to have an implementation plan by the end of 2005, with work ongoing throughout 2006.

The Advisory Committee is impressed with the overall work achievements of the EUB and AH&W staff in this monumental enterprise, and express their appreciation to all staff involved. In looking at the overall progress, the Advisory Committee sees substantial improvements made with respect to public safety, commenting: “while there are still some humps and bumps in the road, much has been achieved”. The Advisory Committee’s impression is that this work isn’t a “one shot deal” for the EUB; that continuous evaluation and improvement of its role in protecting public safety (with respect to sour gas) must be a “built-in process” even after completing implementation of the 87 recommendations.

Presentations made at the September 16, 2005 meeting from both EUB and AH&W staffs were succinct, covering key issues for the difficult and complex implementation work now remaining. The presenters were well prepared, demonstrating an easy familiarity with their topics through their handling of the spontaneous questions raised by members of the Advisory Committee. Many useful discussions ensued in this informal manner. Committee members later expressed that in many cases, this openness and flexibility made the daunting task of implementation a mutually rewarding endeavour for all parties involved, resulting in many creative and satisfactory results.

The ongoing commitment of the EUB Board and its staff, AH&W staff, stakeholder groups and the many Advisory Committee members involved in implementation work (through feedback, consultation and direct project participation), continues to advance the remaining difficult implementation work. The complex nature and/or broad scope of many of the remaining recommendations equates, in some cases, to slow progress.

3.2 Specific Comments and Concerns

This report is intended to be a constructive critique of specific areas the Advisory Committee believes would benefit from such comment. The fact that it only comments where the Advisory Committee has concerns should not leave the reader with a negative impression. The Advisory Committee is positive about the overall progress of implementation.

For convenience, the relevant recommendations are also included. It should be noted that the complete text of some recommendations is not shown. The complete text may be found in the *Public Safety and Sour Gas Findings and Recommendations Final Report December 2000*. (This report is available at the EUB's Calgary Office and Field Centers, on the EUB website at www.eub.gov.ab.ca, and on the Advisory Committee website at www.publicsafetyandsourgas.org).

3.2.1 Health Effects and Sour Gas Research

The Advisory Committee sees a high level of dedication from those people tasked with the complex implementation work in this area. The Committee is pleased with the advances made to date, and encourage the staff in their continued efforts.

Recommendations 10 and 11

- 10 *The EUB, Alberta Health and Wellness, Alberta Environment, Alberta Agriculture Food and Rural Development, Alberta Research Council, regional health authorities, industry, and other interested parties including Alberta universities, jointly establish an independent Scientific Review and Advisory Committee to provide recommendations on required research programs related to sour gas and health.*
- 11 *The EUB work with the Alberta Government to ensure financial support is available to address gaps in research respecting the health effects of sour gas. Such research should complement the multi-government *Western Canada Study on Animal and Human Health Effects Associated with Exposure to Flare Emissions*. This research study should review the current gaps in human health research to ensure the proposed study plan addresses the relevant issues.*

Comments and Concerns:

Given the long-term implications of establishing an Air Research Chair – answering many technical questions concerning certain air borne contaminants - the Advisory Committee remains convinced that the research is vital to the province's future air quality work. The Advisory Committee acknowledges that the \$10 million needed to secure the Chair is more than can be expected to come from the budget of any one particular government department. However, the Advisory Committee points out that during this period of provincial fiscal wealth, the time is ripe for a dogged pursuit of the funding

needed for such an investment in the province's future. The Advisory Committee also encourages AH&W to explore possible alternate means of securing the position (e.g. adding another chair to either the Markin Institute of Public Health at the University of Calgary or CNRL Natural Resources Engineering Facility (NREF) at the University of Alberta).

The importance of this initiative should be brought to the attention of the Government at senior levels.

Recommendation 13

13 The EUB work with Alberta Health and Wellness and Alberta Human Resources to establish a high-level exposure registry to track individuals who have been knocked down or had other substantial exposures to sour gas.

Comments and Concerns:

Implementation of this recommendation has encountered significant difficulties due to privacy concerns. Together with complications arising from the information linkage between agencies (due in part to differing business protocols and again, privacy concerns) – work has been deferred. The Advisory Committee notes that the ‘gold standard’ goal of the current plan (currently deferred) is an excellent one. However, the Committee suggests that perhaps something less electronically vulnerable (to privacy invasion) should be considered. The Advisory Committee believes this recommendation's outcome remains important over the long term, and alternative solutions to the privacy ‘roadblock’ should be considered - even if it means compromising the current standard. The Committee notes that one of its members, with particular expertise in this matter, plans to contact AH&W for further discussion of possible solutions.

Recommendation 67

67 *The EUB, with the assistance of industry and researchers, promote and support the development of exposure monitors that can be used to measure personal exposure of the public to sour gas-related substances in a practical manner.*

Comments and Concerns:

The Advisory Committee is pleased that a personal H₂S monitor prototype has been developed. While not as small as originally envisioned, the Committee sees the new prototype as a considerable improvement over the (currently used) trailer size one - both in terms of allowing for air monitoring in locations previously inaccessible by trailer, and in terms of economical practicality. Even though the Advisory Committee was informed that there might be a new technology with the potential to supercede implementation work to date, it believes there may be merit in moving the implementation work to the next step - field-testing where there are exposure problems. As such, the Advisory Committee would recommend that the development of a further miniaturized prototype be explored.

3.2.2 Surface/Subsurface Development, Planning and Approval

Recommendation 5

5 *The immediate formation of a task force of senior decision makers that would investigate the possibility of improving coordination between subsurface and surface planning and development.*

Comments and Concerns:

The matter of ‘coordinated planning’ generated much discussion at the Advisory Committee’s meeting, reflecting its focus in this area. The Advisory Committee sees this recommendation as the one with the greatest potential to lower risks over the long term by separating people and sour gas.

The Advisory Committee notes that the pilot project and the rules for the pilot project are proceeding in tandem. Also, this work is proceeding without all stakeholders being involved. This raised concerns on the part of the Committee, but it now understands that such work is of a preliminary nature and is being done only to determine whether or not a pilot approach is worth pursuing. The Committee accepts that this strategy is to ensure steady movement forward – something that has been a major problem with implementing this recommendation from the beginning. In light of the unconventional approach, the Advisory Committee does suggest that the terms of reference be re-visited to ensure they’re being followed.

In summary, the approach being taken with the pilot project is a preliminary step to examine/expose any possible ‘deal breakers’ down the road. This strategy provides opportunity to return to the drawing board for creation of ‘Plan B’ should a major roadblock arise. As to the selection of NE Calgary as the pilot, the steering committee determined that ‘testing the waters’ would be more easily explored where all the players are already in place. In connection with ongoing developments in this pilot project, it should be noted that the Department of Energy is currently finalizing a discussion paper outlining its position regarding certain accommodations (e.g. Royalty Holidays) to encourage accelerated depletion of sour gas reserves.

The Advisory Committee sees the possibility of a link of the work being done on this recommendation to that of a recently announced Canada West Study on a land use framework for Alberta. The Committee Chair will follow up on this matter, as will EUB staff.

The Advisory Committee recognizes that this recommendation goes beyond the EUB, affecting many jurisdictions. The Committee cannot overstate the importance of all parties, including major decision makers, to continue to be involved and to work to resolve any conflicts that may arise.

3.2.3 Dispersion Modeling and Other Related Technical Work

Recommendations 17, 18 and 19

- 17 *The EUB, in cooperation with stakeholders, develop a framework and methodology for standardizing dispersion modelling and probabilistic risk assessment that will provide clarity to the industry and the public.*
- 18 *The EUB require that users of sour gas hazard and probabilistic risk assessment techniques clearly state their methods and assumptions.*
- 19 *The EUB be responsible for reviewing and updating its standard models and methods regularly.*

Comments and Concerns:

The Advisory Committee recognizes that stakeholder consensus on the toxic load Emergency Planning Zone (EPZ) endpoint has not been reached. There continues to be differences in the assessment of the seriousness of the health effects for different toxic loads. It now urges the EUB to consider all views before it and assign this value **as soon as possible** in order that the new dispersion model may be implemented. The Advisory Committee believes that implementation of the new dispersion model should be pursued as a **high priority**, and any delay in implementing it for new Emergency Response Plans (ERPs) should be avoided. This may mean separating the implementation into two schemes whereby the complex matters involved in implementation for existing ERPs won’t create delays for new ERPs.

4 FUTURE PLANS AND CHALLENGES

4.1 Public Awareness

Members of the Advisory Committee note that public awareness of the EUB and its role in protecting public safety through its policies and processes for sour gas, might still not be at a satisfactory level in all sour gas areas. The Advisory Committee suggests that the EUB conduct a random poll in sour gas areas, to sample public awareness of:

- EUB services available,
- how to access said services,
- whom to contact if they experience a problem with, or have questions about, sour gas.

Subsequent to the results, the Advisory Committee suggests that the EUB consider means/programs to make any improvements needed.

4.2 Performance Measures

The EUB has committed to sustaining the programs and processes created as a result of the PSSG initiative, and will continue to measure and assess their effectiveness - making changes as needed. As part of their focus on public safety, the EUB plans to publicly report all measurement results and keep abreast of the changing needs of stakeholders.

The Advisory Committee sees performance measurement as a critical tool in ensuring continuous application and improvement of the implementation actions. The Committee believes that performance measures need to continue to be administered, tracked, and made available to members of the public on an ongoing basis. The Advisory Committee holds that performance measuring can also quickly alert the EUB to any developing problems – the ‘early warning’ vehicle.

5 FUTURE EVALUATION BY THE ADVISORY COMMITTEE

The Advisory Committee will not schedule further meetings but will continue to observe implementation progress. Advisory Committee members involved in implementation work will continue their involvement, with other members following implementation actions on an informal basis. If concerns arise, the Advisory Committee chair will be notified, and if the concerns cannot be resolved via telephone or e-mail, an Advisory Committee meeting will be scheduled. While implementation work appears to be nearing an end, the few remaining tasks are complex and require considerable effort. The Advisory Committee will continue its watch until all recommendations have been executed or acted upon.

November 10, 2005