

**ADVISORY COMMITTEE ON PUBLIC SAFETY AND SOUR GAS
EVALUATION OF KEY DEVELOPMENTS IN THE EUB'S
IMPLEMENTATION PROGRESS
SEPTEMBER 2004**

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 then 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 at a frequency proportionate to the volume of implementation work underway. 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.

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

Following publication of the two *Annual Progress Reports* and the *Semi-Annual Progress Report*, the Advisory Committee convened to discuss and evaluate implementation progress on the 87 recommendations. Its observations and subsequent comments to the EUB are contained in three 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) and *Advisory Committee on Public Safety and Sour Gas Evaluation of EUB's Implementation Progress to October 2003* (issued December 2003). These reports are also available on the EUB website at www.eub.gov.ab.ca.

The Advisory Committee convened on September 7, 2004 to receive several detailed presentations from EUB and Alberta Health and Wellness (AH&W) staff on key developments and high priority areas. Following the presentations, Advisory Committee members met privately for discussions and determined that certain items merited a brief report to the EUB. This document is that report.

3.1 Overall Evaluation

With implementation progress at such an advanced stage, the Advisory Committee's September 2004 meeting evaluated specific work on only a few important recommendations. The Committee is generally satisfied with the overall implementation progress as summarized in the Status Tables.

Presentations made to the Advisory Committee by both EUB and AH&W staff were well prepared, comprehensive and focused on those matters considered by the Advisory Committee to be key developments and/or high priority issues. The ongoing commitment of the EUB Board and its staff, AH&W staff, the stakeholder groups and the many Advisory Committee members involved in implementation work (through feedback, consultation and direct project participation) continues to advance the implementation work. As would be expected, progress on implementation of the remaining recommendations is slower than some earlier undertakings due to the complex nature of these recommendations, their reliance on completion of earlier (or ongoing) work, and/or their broad scope.

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, as the Committee is generally positive about the overall progress.

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, and on its website at www.eub.gov.ab.ca.)

3.2.1 Health Effects and Sour Gas Research

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:

The Advisory Committee continues its strong support for establishing an Air Research Chair at an Alberta university as suggested by the stakeholder workshops held in March 2003. The Advisory Committee believes that many of the current debates over public (and animal) health issues related to H₂S, SO₂ and related airborne substances could be more successfully addressed were such a chair in place. The Advisory Committee believes that the \$10 million required for the chair, although a substantial amount to be found within the budget of any particular government department, would be a wise investment in the province's future. The Advisory Committee understands that the money required for the position includes needs beyond simply the salary, and that H₂S would be only one of the issues examined. The importance of this initiative should be brought to the attention of the Government at senior levels.

Recommendation 12 and 13

12. *Alberta Health and Wellness work with regional health authorities and physicians, through the Alberta Medical Association, to ensure a consistent, appropriate, and coordinated response to individuals exposed to major H₂S releases.*
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:

The Advisory Committee urges the EUB to do all it can to secure the funding necessary for the ‘Human Health and Air Quality Monitoring System’ software development. The Advisory Committee understands that some funding partners have already been secured and only a few more are needed.

With respect to Recommendation 13, establishment of a knockdown registry, the Advisory Committee understands work towards such a registry is not being pursued due to ‘privacy’ concerns. While the Advisory Committee recognizes that such concerns must be respected, it believes there may be methods by which a registry could be developed that would not make confidential or private information available. It is the Advisory Committee’s view that some further effort is warranted to determine if such methods are available.

3.2.2 Sour Gas 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 Advisory Committee continues to recognize the complexity of this recommendation and notes that work plans are advancing, albeit slowly. The presentation made to the Advisory Committee showed the action plan segmented into three activities based on objectives; the first two to be tested through a pilot project(s), and the third to be an investigation into possible changes in the mineral leasing system and other relevant policy matters. The Advisory Committee would like to see the evaluation of potential policy changes (Objective 3) go forward simultaneously with development of the pilot project(s) (Objectives 1 and 2). It believes there is a possibility that this particular action could proceed to some early conclusions without waiting for results from the pilot projects since these could take many years. The Advisory Committee also believes this action (Objective 3) should be given a higher profile.

In addition, the Advisory Committee wishes to ensure there has been inclusion of Aboriginal Affairs and Northern Development into the Senior Steering Committee and Technical Working Committee. The Advisory Committee notes that neither the planning provisions in the Municipal Government Act nor the setback requirements in the Subdivision and Development Regulation apply to First Nations lands, Metis Settlements or Crown land. If a framework is to be developed to address surface and subsurface planning, it should consider **all** lands and recognize that there is different legislation in place for a significant portion of the province.

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 notes that concerns continue to exist on the part of major stakeholders respecting certain input parameters in the Emergency Planning Zone (EPZ) model, notwithstanding considerable efforts by the implementation team to reach stakeholder consensus for these parameters. One such parameter is the toxic load EPZ endpoint, an item whose importance - in the Advisory Committee's opinion - cannot be overstated. The Advisory Committee understands that while the endpoint chosen by the EUB was based on careful consideration of expert input and advice, there wasn't agreement amongst members of major stakeholder groups - leaving some unresolved concerns from the Regional Health Authorities (RHAs). To ensure there has been no misunderstanding in this area, it is the Advisory Committee's view that, prior to the EUB finalizing its decision on this matter, senior EUB decision makers should meet with the RHAs and AH&W representatives to discuss the concerns. While the Advisory Committee understands that additional discussion will delay release of the new EPZ model and that stakeholder consensus may be unlikely, it believes the EUB would better understand and recognize the concerns in this matter.

The Advisory Committee stresses the need for the methodology and outcomes used in the EPZ model to be as clear and **scientifically** defensible as is reasonably possible. During Advisory Committee discussions, a number of questions arose respecting the safety factors built into the EUB model, and the role of ignition in terms of determining an EPZ. These matters and how they are handled in the model should be more clearly explained and fully documented.

With respect to the new EPZ model, the Advisory Committee suggests the EUB establish a 'continuous improvement' process for reviewing alternative modeling methods – a process that would, to the extent possible, operate outside the process for individual applications.

In situations where applicants wish to vary the EUB's EPZ model base case, the Advisory Committee encourages the EUB to allow, on an optional basis, the applicant to have its proposed variations reviewed by EUB technical staff in a non-application environment. The Advisory Committee believes that the proposed variations could be

evaluated and endorsed as scientifically sound by EUB technical staff, prior to any public consultation occurring, in order that the public can be reassured that the parameters used in the EPZ calculation meet EUB standards. The EUB staff would only concern itself with the scientific validity of the variations, not with the application of the model or other aspects of the proposed application. The Advisory Committee offers the suggestion of a flow chart - indicating at what point(s), prior to an application being filed, it would be acceptable for variations on the EPZ model's base case to be put forward for consideration by EUB staff.

Finally, the Advisory Committee urges the EUB to give consideration to not accepting EPZ models other than the one that has been developed by the EUB. Opening the door to other models will perpetuate the current situation where the size of an EPZ can be disputed by the use of more than one EPZ model; a situation that Recommendation 17 was intended to rectify. As a minimum, the Advisory Committee believes the EUB, if it decides to accept the use of other models, should also require an evaluation using the EUB model so that any differences in results can be clearly seen.

3.2.3 Information, Communication and Consultation

Recommendation 16

16. *The EUB review and organize its existing large quantity of sour gas data on well, pipeline, and facility leaks, ruptures, flares, and venting to provide a historical database that is accurate and complete, and, in conjunction with other stakeholders, urgently develop and maintain new databases that deal specifically with sour gas, and make such databases available to the industry and the public.*

Comments and Concerns:

The Advisory Committee is pleased to learn of the significant strides made in implementing this recommendation. With the GIS website now completed and awaiting deployment, it's disappointing to see the security issue dragging on. The Advisory Committee suggests these issues be addressed as soon as reasonably possible.

4 CONTENT, FREQUENCY AND UTILITY OF REPORTING BY THE EUB

The Advisory Committee finds the EUB's new 'Project Status' tables a satisfactory method of reviewing the ongoing implementation progress. At this time, no further refinement of the EUB's reporting protocol is suggested.

5 FUTURE EVALUATION REPORTS FROM THE ADVISORY COMMITTEE

Most members of the Advisory Committee believe it might be useful to meet, at least one more time, to receive EUB (and possibly AH&W) staff presentations and discuss ongoing work with respect to significant key developments in the implementation

progress. It was noted that many individual members of the Committee are involved in ongoing work on specific recommendations, and that all members will receive up-to-date Status Tables summarizing the ongoing implementation progress.

The Advisory Committee Chair will contact all members when future updates to the Status Tables are issued, and depending on their views, may arrange a further meeting to be attended by those Committee members who wish to do so.

October 15, 2004