

FINAL REPORT – OUTCOMES AND RECOMMENDATIONS

From the Oversight Committee

Monitoring

Recommended Practices for

**Sour Gas Development Planning and
Proliferation Assessment**

Date of Report,
February 15 2007

FOREWORD

This report results from a two-year trial of Recommended Practices 2004-0003 for Sour Gas Development Planning and Proliferation Assessment for applications involving sour gas in the immediate vicinity of residents. The trial, conducted by the Alberta Energy and Utilities Board, was monitored and evaluated by an Oversight Committee with the following membership,

Sector	Committee Member	Representation and / or Role
Public	Judith Bugg, public-at-large	Member of the PAC (Provincial Advisory Committee) on PS&SG (Public Safety and Sour Gas)
Land Development Industry	Robert Ollerenshaw, land development industry	Member of the PAC (Provincial Advisory Committee) on PS&SG (Public Safety and Sour Gas)
Industry	John Kerkhoven, PetroCanada	Representing CAPP (Canadian Association of Petroleum Producers); Member of the PAC (Provincial Advisory Committee) on PS&SG (Public Safety and Sour Gas)
	Nelson Lord, Canadian Natural Resources	Representing CAPP (Canadian Association of Petroleum Producers)
	Adrian Haggis, ATCO Midstream	Representing SEPAC (Small Explorers and Producers Association of Canada)
EUB (Energy and Utilities Board)	Christine Macken, lead as of Fall 2006; Richard Houlihan, lead until Fall 2006	Advisor, Business Operations and Development, Applications Branch
	Martin Vandenberg – Current Lead as of Winter 2007	Advisor, Business Operations and Development
	Jim Benum	Technical Specialist, Field Surveillance Branch
Research and Consulting Support	Maureen Payne Joanne O'Connell	MPA Communications

Questions or comments concerning the report should be addressed to Martin Vandenberg, (403) 297 – 4614.

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY	4
2. CONTEXT	8
PS&SG Report, December 2000	8
EUB Bulletin 2004-08 and Recommended Practices Publication 2004-0003	8
EUB Bulletin 2006-02.....	10
Current Report	10
Summary, Chronology of Project Milestones.....	10
3. EXPERIENCE DURING THE TRIAL.....	11
Scope of Trial.....	11
Quick Summary of Recommended Practices 2004-0003.....	11
Communications to Industry and Public Stakeholders	11
Research Program.....	12
Special Event – Industry Training Workshop.....	15
4. PERSPECTIVES AND CONCLUSIONS OF THE OVERSIGHT COMMITTEE.....	16
Sources of Committee Information	16
Use of Recommended Practices 2004-0003	16
Effectiveness of Recommended Practices 2004-0003	18
Consequences of Not Using Recommended Practices 2004-0003	19
Regulatory Requirement	19
Special Topic – Proliferation Assessment.....	20
5. RECOMMENDATIONS.....	22
General Recommendations	22
Actions for EUB.....	22
Actions for Industry	23
Actions for the Community Groups, Synergy Groups and other Public stakeholders	23
6. APPENDICES.....	24
Appendix 1. Excerpts, PS&SG report (December 2000)	24
Appendix 2. Bulletin 2004-08	27
Appendix 3. Bulletin 2006-02	30
Appendix 4. Communications To Industry and Public Stakeholders During Trial	32
Appendix 5. Population of Cases Fitting Criteria for Recommended Practices (IAR)	35
Appendix 6. Application Monitoring.....	36
Appendix 7. Public Survey Findings	44

1. EXECUTIVE SUMMARY

In December 2000, the Provincial Advisory Committee on Public Safety and Sour Gas produced recommendations which addressed (amongst many other issues) planning and proliferation of projects involving sour gas. The Energy and Utilities Board (EUB) and industry began soon after to work together to find ways to implement Public Safety and Sour Gas Recommendations 7, 32 and 33. In June 2004, the EUB issued *Bulletin 2004-08* which introduced Recommended Practices for Sour Gas Development Planning and Proliferation Assessment, prepared by the Canadian Association of Petroleum Producers (CAPP), Small Explorers and Producers Association of Canada (SEPAC), and Canadian Association of Petroleum Landmen (CAPL). With the introduction of the Bulletin and the Recommended Practices document, a two-year trial was begun.

The underlying objective of Recommendations 7, 32 and 33, and of the Recommended Practices is twofold:

1. Firstly, to effectively minimize the extent to which the public is impacted by the unnecessary proliferation of sour gas related facilities, and to mitigate the potential for such unnecessary proliferation, and
2. to provide a broader range of information to appropriate stakeholders, the EUB and other area oil and gas operators on a company's prospective development plans beyond the drilling of a given well or wells. Such plans would include information on the applicant's longer term drilling strategy and infrastructure development plans.

The intent of the two-year trial was to determine if the Recommended Practices would be used voluntarily by industry, and would satisfy the intents of Public Safety and Sour Gas Recommendations 7, 32 and 33.

The trial, which was monitored by a multi-stakeholder Oversight Committee, concluded in June 2006. Its scope included a two-year review of applications involving sour gas near people. Sour gas near people was defined as:

- applications with at least one resident in the EPZ
- Sour gas applications with objections from landowners or residents close to, but outside of, the EPZ

Sour gas applications in areas with no people nearby, such as on recreational or environmentally-sensitive land, were not included.

Two-year Monitoring Program

The monitoring program had three components,

1. Administrative Data - Population Size

Internal data from the EUB's Integrated Application Registry (IAR) revealed that about 450 applications for wells fitting the criteria of sour gas near people had been filed across the two-year trial. The volume therefore of well applications to which the Recommended Practices would apply was about 225 per year.

2. Applications Data – Monitoring Use of Recommended Practices

A sample of 80 applications fitting the criteria of sour gas near people was reviewed in detail by EUB Staff and the Oversight Committee. Most were well applications with a few pipelines and facilities included. Rather than being a random selection of projects, the 80 cases deliberately included a large majority of non-routine (contentious or challenging) projects. The rationale for selecting a sample with a high proportion of non-routine applications was that, if the Recommended Practices was shown to be effective for non-routine, potentially contentious applications, it could be assumed to be effective for routine, less contentious applications. In other words, whatever was effective for a harder case should be effective for an easier case. Materials supplied at the time of application, or later in response to direct requests from the EUB, were used to classify the project as having followed or not followed the Recommended Practices.

Based on the 80 monitored cases, the use of the Recommended Practices was identified over the trial as 32% in Year One and 46% in Year Two.

3. Public Survey

Residents of the Emergency Planning Zones around some of the monitored sour gas projects were surveyed after applications were disposed and asked about their awareness of four components of the Recommended Practices – Sour Gas Project Descriptions, Sour Gas Plans, Broader Area Development Plans, and Proliferation Assessments. Residents were also asked about the effectiveness of the components and their general satisfaction with information overall provided during the consultation.

The survey indicated that awareness of the Recommended Practices components was variable. Findings showed a high majority awareness of Sour Gas Project Descriptions and Sour Gas Plans, a bare majority awareness of Broader Plans of the entire area, and a minority awareness of Proliferation Assessments. When residents were aware of them, all components were said to have been very useful.

Ratings of the public consultation overall were generally positive, with some soft spots identified. The soft spots concerned too much information in some cases (mostly repetitive “form” material or technical overload beyond the ability of many residents to grasp), too little information in other cases (mostly wanting area planning or “proliferation” types of material), and only minorities saying that alternatives were offered or changes made in response to concerns.

Conclusions

The Committee has concluded that,

- The Recommended Practices are an effective approach to disclosing information about sour gas development and for building good relations with the community. The public finds the outcomes of the Recommended Practices beneficial.
- When the Recommended Practices are used, they have an effect consistent with the intent of PS&SG Recommendations 7, 32 and 33.
- The number of applicants that have adopted Recommended Practices 2004-0003 is low despite promotion by the EUB and industry. Further increase to the degree required to achieve a level playing field between those using the approaches advocated and those adhering to the minimum application requirements would require continual promotion by the EUB and industry. The Committee concludes that further increase is uncertain unless a regulatory requirement is introduced.
- Without a regulatory requirement, the intent of PS&SG Recommendations 7, 32 and 33 would not be met because not all companies will act according to the intent of the Recommended Practices.
- The solution lies in the introduction of a requirement in EUB Directive 56 to require applicants to meet the intent of PS&SG Recommendations 7, 32 and 33 through the use of the Recommended Practices.
- The Recommended Practices concerning proliferation assessment requires clarification with more detail and / or examples provided.

Recommendations

Five recommendations are proposed to support the continued use of the Recommended Practices as a positive tool to enhance the public consultation and application processes. The Committee recommends that meeting the intent of PS&SG Recommendations 7, 32 and 33 through the use of the Recommended Practices become a regulatory requirement of the Directive 56 application process. In addition, the Committee recommends that awareness building,

education concerning the intent of the Recommended Practices and support of the Recommended Practices continue. In this latter case, supporting recommendations are directed to the EUB, to industry and to communities/Synergy Groups and other public stakeholders.

For the full text of Recommendations, refer to page 22.

2. CONTEXT

PS&SG Report, December 2000

In December 2000, the Provincial Advisory Committee (PAC) on Public Safety and Sour Gas (PS&SG) produced its final report. Three recommendations were relevant to the matters addressed in this report, namely, Recommendations 7, 32 and 33. (See Appendix 1, page 24).

Recommendation 7 addressed **proliferation** of surface facilities. Its aims were to minimize proliferation and to have proliferation assessments disclosed in applications.

7

Revisions to EUB guides to require operators to include in their applications for critical sour wells, pipelines, and facilities a review and discussion of options to utilize existing sour gas infrastructure in the area in order to minimize the extent to which the public is impacted by additional sour gas development. (partial copy of recommendation, underlining added).

Recommendations 32 and 33 addressed **planning in situations of multiple facilities** at the present time and into the future. The aim was to require applicants to disclose information on development plans and some level of area plans, and to encourage bundled applications.

32

The EUB support area planning among operators and require well applications to include at least general information regarding existing and possible future area plans where sour gas is involved near people. (underlining added).

33

For sour gas near people, the EUB require project plans as part of well applications where a well is part of a larger project of the applicant and encourage applications for more than one well and facility at one time where feasible. (underlining added).

EUB Bulletin 2004-08 and Recommended Practices Publication 2004-0003

Starting in 2001, many parties debated the most appropriate ways to implement PS&SG Recommendations 7, 32 and 33. The decision was eventually made that Industry would publish an Recommended Practices document advocating early disclosure of pertinent planning information and proliferation data for projects involving sour gas in areas near people. The EUB was tasked with managing a two-year trial of the Recommended Practices.

EUB Bulletin 2004-08, dated 17 May 2004, announced the two-year trial starting 1 June 2004. (See Appendix 2, page 27). At the same time, the publication describing the Recommended Practices which had been developed by an industry committee in consultation with the Oversight Committee and other public stakeholders was released under the auspices of the Canadian Association of Petroleum Producers (CAPP), the Canadian Association of Petroleum Landmen (CAPL) and the Small Explorers and Producers Association of Canada (SEPAC) and made available on the CAPP website as Recommended Practices number 2004-0003.

The purposes of the trial were to determine if the Recommended Practices would be effective in responding to PS&SG Recommendations 7, 32 and 33. “Effective” is understood as covering two distinct meanings.

- First, “effective” referred to the use of the Recommended Practices. PS&SG recommendations 7, 32 and 33 all contain an expectation that operators perform certain actions. If operators voluntarily adopt the Recommended Practices, a requirement would not be necessary to ensure that the actions are carried out.
- Second, “effective” in its more common meaning refers to the influence of the Recommended Practices in reducing the impact of sour gas developments on people and their communities by positively affecting the consultation around the application and the long-term relationship between the operator and the community.

In the balance of this report, the terms “use of the Recommended Practices” and “effectiveness of the Recommended Practices” will distinguish between the first and second meaning.

There was one exception between PS&SG recommendations 7, 32 and 33 and Recommended Practices 2004-0003. The Recommended Practices do not focus on issues particular to applications for multiple wells and/or facilities at one time, which are addressed in PS&SG recommendation 33 and sometimes referred to as “bundled applications”. The EUB does provide for and encourages the use of bundled applications in Directive 56, and on occasion will require applications for related facilities to be filed and considered together. Therefore, bundled applications are not addressed further in this report.

The EUB took the position that Recommended Practices 2004-0003 could be an appropriate response to the PS&SG recommendations, and established a two-year trial to see if the Recommended Practices would in fact satisfy the intentions of the PS&SG recommendations. EUB staff were tasked with putting an Oversight Committee in place, running the trial and working with the Oversight Committee to bring back a report. The Oversight Committee, consisting of representatives from industry, the public, land developers and the Board, developed its own Terms of Reference which included purposes of raising awareness and determining use and effectiveness of the Recommended Practices.

EUB Bulletin 2006-02

In January 2006, EUB Bulletin 2006-02 announced interim trial results for the period June 2004 to September 2005 (See Appendix 3, page 30). As of September 2005, fourteen months into the trial, industry use of the Recommended Practices was relatively low despite considerable promotion by the EUB and industry. Proliferation was identified as needing more attention as very few applications were showing evidence of adequate proliferation assessment. Based on these interim findings, the EUB and industry stepped up their efforts to encourage use of the Recommended Practices.

Current Report

This report presents the final outcomes of the two-year trial of the Recommended Practices, together with interpretation and recommendations.

Summary, Chronology of Project Milestones

Source	Title	Date	Explain Milestone
Provincial Advisory Committee on Public Safety and Sour Gas	Findings and Recommendations: Final Report	December 2000	Formal publication of PS&SG Recommendations 7, 32 and 33
EUB	Bulletin 2004-08	May 2004	Introduces the Recommended Practices and announces launch of trial to start 1 st June 2004
CAPP (with CAPL and SEPAC)	Recommended Practices for Sour Gas Development Planning and Proliferation Assessment 2004-0003	May 2004	Release of publication on Recommended Practices 2004-0003
EUB	Bulletin 2006-02	January 2006	Interim findings of Two-Year Trial
EUB	Report of Oversight Committee – Outcomes and Recommendations	February 2007	Outcomes and Recommendations from Two-Year Trial

3. EXPERIENCE DURING THE TRIAL

Scope of Trial

The trial was a two-year monitoring and evaluation of applications involving “sour gas near people”, defined as applications for sour gas with at least 1 resident in the EPZ (emergency planning zone), or similar applications with objections from nearby residents. Sour gas applications in areas with no people near by, such as recreational or environmentally-sensitive land, were not included.

Quick Summary of Recommended Practices 2004-0003

The Recommended Practices advise applicants to disclose a Plan at the outset of the consultation process. The Plan would normally include four components with content and depth of each component variable according to particular circumstances. The four components are,

- Project¹ Description– describing the interconnected system of well/s, pipelines and other facilities necessary to produce sour gas that is intended to be constructed as an integrated undertaking.
- Sour Gas Development Plan – describing as best as possible wells, facilities or pipelines expected to deplete the pool.
- Area Plan – plan of one or more operators to work in an area where there are significant common issues over the whole area regarding sour gas development.
- Proliferation Assessment – describing how existing sour gas infrastructure can be used or not used, in order to minimize the potential installation of additional sour gas infrastructure where existing infrastructure may be appropriate. This may involve contact with other operators in the area.

Communications to Industry and Public Stakeholders

During the two-year trial, extensive attempts were made to make industry aware of the Recommended Practices. Companies were asked to volunteer cases for monitoring to EUB so that the effectiveness of the Recommended Practices could be assessed, and industry was

¹ From Industry Recommended Practices 2004-0003. SOUR GAS PROJECT: An interconnected system of well/s, pipelines and other facilities necessary to produce sour gas from a zone, pool or pools that is intended to be constructed as an integrated undertaking. This includes all elements from drilling through production, transporting and field processing. A project is usually one of a number of stages in a Sour Gas Development Plan, for which application is being made.

informed that regulatory requirements likely would follow if the Recommended Practices did not become standard practice among sour gas applicants.

In the two years of the trial, EUB staff, often jointly with industry representatives delivered about 14 presentations to industry associations and synergy groups. Industry associations and synergy groups leveraged the message to larger audiences by raising awareness independently of the EUB. The Practices and the two year-trial were highlighted in EUB communications such as the Weekly Bulletin and were referenced on EUB and industry websites. Many presentations were given within the EUB to Field Surveillance and Applications Branch staff, so that companies fitting the criteria and approaching the Board could be informed about the Recommended Practices at any of the pre-application, application or post-application stage. The applicants of projects selected as cases for monitoring (see page 12) were contacted directly. More recently, EUB decision reports have referenced the Recommended Practices.

In summary, industry was given good opportunity to learn about and use the Recommended Practices (see Appendix 4, page 32).

Research Program

Three sets of data provided quantitative support for conclusions to be drawn from the trial.

Population Size - Number of Projects Fitting Criteria for Recommended Practices 2004-0003

Queries to the IAR (Integrated Application Registry) of EUB revealed about 450 applications for wells fitting the criteria for “sour gas near people” during the two-year trial. Of the 450 applications, about 30% were non-routine and 70% were routine (See Appendix 5, page 35). The well applications were widely-distributed across fields from northwest-central Alberta through to south-central Alberta. Applications for pipelines and facilities were not included in the monitoring program, based on the perspective that the information required to comply with the Recommended Practices would apply primarily at the well application stage, and would apply equally well to the pipelines and / or other facilities to follow.

Administrative Data - Monitoring of Sample of Applications

A sample of 80 applications for projects fitting the criteria of “sour gas near people” was monitored in detail. Of these 80 cases, 7 were received by the EUB from voluntary submission from industry; the remaining 73 were identified by EUB staff. (See Appendix 6, page 36).

The 80 cases were selected to have a majority of non-routine (contentious or challenging) projects. Most were well applications with a few pipelines and facilities included. The rationale for

selecting this non-random sample was that if the Recommended Practices were shown to be effective for non-routine, potentially contentious applications, they could be assumed to be effective for routine, less contentious applications.

Monitoring involved compiling the data into a single database. The data fields included in the monitoring database were of two types. First, they included basic descriptive data lifted directly from the application such as name of field, type of application, geographic area and so on. Second, they included a determination of presence or absence of components of the Recommended Practices. The determination of presence or absence of the Recommended Practices was made based on materials presented at the time of application.

Based on the data,

- 32% (or 15 applications) of cases identified in Year One were deemed to have met the intent of the Recommended Practices,
- 46% (also 15 applications) of cases identified in Year Two were deemed to have met the intent of the Recommended Practices.

Variations in use of the Recommended Practices were observed. Within the sample of 80 monitored cases,

- Rates of use of the Recommended Practices were slightly higher for wells in Delineation or Development stages rather than at Exploratory stages.
- However, the rates of use of the Recommended Practices were about the same for Routine and for Non-Routine applications.

Because some companies were active in more than one project, the number of companies identified in the monitoring program was less than the number of cases. 51 companies were involved in the 80 cases.

Based on the data,

- 27% of companies always used the Recommended Practices,
- 69% of companies never used the Recommended Practices,
- 4% of companies both used and did not use the Recommended Practices, when they filed more than one application.

Public Survey

Residents of the Emergency Planning Zones around some of the monitored sour gas projects were surveyed after applications were dispositioned. The purposes of the survey were to determine if the residents were aware of having received the Recommended Practices component materials, if they had found the materials useful, and if the materials had satisfied their information needs (See Appendix 7, page 44).

The cases selected for survey included both those which were deemed to have submitted and not submitted component materials at the time of application. Residents were asked to answer the survey with respect to a specific application affecting the EPZ in which they resided.

Because respondents may not have been aware of the Recommended Practices under that name, they were asked indirectly about awareness of the Recommended Practices by a query about recall of the four components included in the Recommended Practices.

Awareness of the components varied.

- 85% were aware of having seen a Sour Gas Project Description.
- 71% were aware of having seen a Sour Gas Development Plan.
- 54% were aware of having seen a Broader Plan of the entire area.
- 37% were aware of having seen a Proliferation Assessment.

Concerning effectiveness of the Recommended Practices components, all were rated positively.

For those who provided a rating,

- 72% rated the Sour Gas Project Description as “highly beneficial”, with an additional 21% rating it as “useful but could have done without”.
- 69% rated the Sour Gas Development Plan as “highly beneficial”, with an additional 25% rating it as “useful but could have done without”.
- 63% rated the Broader Plan of the entire area as “highly beneficial”, with an additional 27% rating it as “useful but could have done without”.
- 62% rated the Proliferation Assessment as “highly beneficial”, with an additional 28% rating it as “useful but could have done without”.

Ratings of general satisfaction with the overall planning and proliferation information were also obtained. Results show that,

- The information provided by applicants was generally understandable to residents.
- Most found the information acceptable in terms of depth and amount of detail. There were some who found it “too little”; they tended to be looking for “area development” or “proliferation” types of material. Others found it “too much”; they were often referring

- either to EUB literature which they found repetitive and unnecessary, or to overwhelming technical detail.
- There were mixed views on whether choices or alternatives had been offered to the community and / or action had been taken on the basis of consultation. Many could not comment on this aspect. Of those who could, the “yes” and “no” answers were about half and half.

Special Event – Industry Training Workshop

On 04 May 2006, CAPP, SEPAC, CAPL and the EUB co-sponsored an awareness and training workshop for industry members wanting to learn about the Recommended Practices. Invitations were sent to 95 companies who had submitted sour gas applications with more than 2 people in EPZs in the previous two years. 84 people attended the workshop, representing 29 petroleum companies and 6 consultants.

4. PERSPECTIVES AND CONCLUSIONS OF THE OVERSIGHT COMMITTEE

Sources of Committee Information

The Oversight Committee's discussions are based on quantitative and qualitative input and analysis.

The quantitative data were obtained from the IAR data which quantified the population size, the monitor data which classified cases according to use or non-use of the Recommended Practices, and the public survey which picked up information on use and effectiveness of the Recommended Practices.

Quantitative data alone were not sufficient to arrive at conclusions and recommendations. Personal qualitative judgments based on the knowledge and experience of the Oversight Committee members placed the quantitative data into context and provided interpretation.

In long discussion to find the synthesis of many sources of input and analysis, the Oversight Committee articulated its main points of view and conclusions as follows.

Use of Recommended Practices 2004-0003

The issue is ... how many used the Recommended Practices?

Perspective

- The figures on use of the Industry Recommended Practices in this study are based on materials supplied with applications and / or supplied in response to an early written request from the EUB. If, for example, a proponent had provided planning and proliferation assessment information to residents after its Application had been submitted to the EUB, that company is deemed to have not met the intent of PSSG 32, 33 & 7, as the objective is to disclose the information early in the company's consultation program so that residents are aware of the company's plan for any subsequent facilities associated with the application, as well as options to minimize the impact of additional sour gas development.
- This point is relevant since late disclosure of the Recommended Practices components does not satisfy the intent of PS&SG recommendations 7, 32 and 33 which was to replace piecemeal, sequential disclosure with planned disclosure early in the process.

- Quantitative data on how many of the deemed non-users would be classified as users under less stringent guidelines are not available. The Oversight Committee is making a working assumption that the figures identified in the study may be slightly low due to the classification methodology but are still within a range of magnitude such that the study conclusions remain valid.
- Use of the Recommended Practices among the 80 cases selected for monitoring was 32% in Year One and 46% in Year Two. Only 7 cases were voluntarily entered into the program for monitoring. Public awareness of area plans was 54%, and of Proliferation Assessments was 37%. Data from the monitoring program supports the view that when extrapolated to all 461 applications for sour gas that were received during the two year trial, industry use was slightly less than half of all possible applications.
- The questions immediately arise: why is industry use of the Recommended Practices at about half of the cases where there is sour gas near people? Over time, would industry use likely rise close to the 100% level which is the desired intent of the Provincial Advisory Committee. One perspective is that low use results from lack of awareness. It is correct that use of the Recommended Practices did increase from the first to the second year, and the approach did become better known from the first to the second year. However, the EUB and industry both communicated extensively to raise awareness and promote use of the Recommended Practices.
- The Oversight Committee believes that greater awareness of the Recommended Practices will not necessarily lead to its widespread adoption.
- There are barriers to use of the Recommended Practices which are not affected by increased awareness. Committee members have heard the following examples from industry colleagues,
 - If the Recommended Practices are to be used as a matter of company policy, senior management and industry project managers must support it. It appears that only some and not all oil and gas firms have bought into the process. The monitoring data confirm the informal belief that some companies virtually always use the Recommended Practices and others do not.
 - Industry resistance may be based on fear that disclosing sour gas plans or proliferation analysis will result in objections where none would have been raised before, which would cost the applicant time and resources, or result in loss of competitive advantage due to loss of confidentiality.
 - Some companies have a policy of complying only with minimum requirements and will not extend themselves beyond the minimum.
- The Committee predicts that use of the Recommended Practices will not increase significantly in the absence of other changes. In fact, because the EUB and industry have

promoted the Recommended Practices heavily during the trial period, if the trial stops and no other changes are introduced; use of the Recommended Practices may decrease.

Conclusion(s)

- **The Committee finds that after the two-year trial, the Recommended Practices 2004-0003 was used in slightly less than 50% of relevant applications despite promotion by EUB and industry. Further increase to the degree required to achieve a level playing field, would require continual promotion by EUB and industry, and is uncertain unless a regulatory requirement is introduced.**
- **Without a regulatory requirement, the intent of PS&SG Recommendations 7, 32 and 33 may not be met because only some companies will act according to the Recommended Practices guidelines.**

Effectiveness of Recommended Practices 2004-0003

The issue is: what effect did the Recommended Practices have, when they were used?

Perspective

- The situations involving sour gas near people are varied and some are complex. The Recommended Practices allow for an approach appropriate to the situation. The two-year trial has provided information on the effectiveness of the Recommended Practices in overview, without drilling down into detail for each case.
- The results from the public survey show that residents find the Recommended Practices material very useful, when they are aware of them. This refers to all four components referenced in the survey, namely, the Project Description, the Sour Gas Development Plan, the Broader Plan of the entire area, and the Proliferation Assessment. About 60% to 70% said each of these components were "Highly Beneficial". When the numbers saying the components were "Useful although could have done without" are added in, the percentages reach 90% and more.
- The Recommended Practices approach is producing benefits now and informal evidence says that its full impact will continue to increase following the two-year trial. A likely effect is that the community develops trust in the company and the second and third and following applications become much easier. In other words, a positive outcome now is likely to become even more positive over time.

Conclusion(s)

- **The public finds the outcomes of the Recommended Practices 2004-0003 beneficial. All evidence says that the Recommended Practices are an effective approach to providing planning and proliferation information and developing good relations with the community, for the long-term benefit of both industry and the community.**
- **When the Recommended Practices are used, that is, when component materials are disclosed early in the process, the effect is consistent with the intents of PS&SG Recommendations 7, 32 and 33.**

Consequences of Not Using Recommended Practices 2004-0003

The issue is: what are the consequences if the Recommended Practices are not used?

Perspective

- The Committee believes that substantive disclosure of project and sour gas development plans, with the goal of full disclosure as stated in the Recommended Practices, is required to inform residents near sour gas of the best development options.
- If some applicants use the Recommended Practices and others do not, a level playing field for projects involving sour gas near people will not exist.

Conclusion(s)

- **When the Recommended Practices are not used, the intent of PS&SG Recommendations 7, 32 and 33 is not met.**

Regulatory Requirement

The issue is: if a requirement is introduced what type of approach is appropriate when the situations encountered in sour gas applications near people are so variable?

Perspective

- The Committee has given careful thought to the many considerations of introducing a regulatory requirement.

- When companies and communities work together to identify and resolve issues, better solutions emerge. The ultimate aim of the Recommended Practices is to reduce the impact of sour gas development on people by bringing about better information, consultation and problem-solving between industry and communities. Disclosure of planning and proliferation information by the applicant is a means to that end. Because planning and development options are complex and situations are variable, the precise materials to be provided under the Recommended Practices approach cannot be prescribed. Each situation is different and calls for some discretion in applying the basic principles and guidelines outlined in the Recommended Practices.
- On the other hand, the Committee believes that without some level of requirement, the Recommended Practices will not be observed in many cases.

Conclusion(s)

- **The Committee finds that the solution lies in a regulatory requirement to meet the intent of PS&SG Recommendations 7, 32 and 33 through the use of the Recommended Practices.**

Special Topic – Proliferation Assessment

The issue is: how should the apparent low awareness of proliferation analyses be addressed?

Perspective

- According to the public survey, of all the Recommended Practices components, a Proliferation Analysis was least likely to be recalled. Only 37% were aware of having seen a Proliferation Analysis, contrasted with over 80% who recalled seeing the sour gas project description. Even though some companies may have disclosed proliferation material without calling it a "Proliferation Analysis", and therefore the 37% figures may be low, the committee believes that the disclosure of proliferation-related material is less than intended by the PS&SG Recommendations 7, 32 and 33 or by the Recommended Practices.
- The Committee is sensitive to the business issues surrounding disclosure of proliferation analysis. Proliferation is a complex issue, affected by competition, the pace of development, confidentiality issues, and many other management drivers. Companies may object to revealing financial data, or may not wish to disclose other, non-financial reasons for not wanting to collaborate with other companies in the area.

- Currently, the description of Proliferation Assessment in the Recommended Practices document is brief and non-specific. The concept of “proliferation analysis” was intended to refer not only to economics of the proponent but also to a public and environmental footprint. If the Proliferation Assessment is to play the role intended for it, guidelines should be enhanced and clarified and more detail and / or examples provided to ensure that the proponent has reviewed a reasonable choice of options, has done a sufficiently detailed economic and environmental analysis, and has properly disclosed the options with stakeholders.

Conclusion(s)

- **The Committee believes that the Recommended Practices guidelines concerning proliferation analysis require enhancement and clarification with more detail and / or examples provided.**

5. RECOMMENDATIONS

Based on the Perspectives and Conclusions, the Oversight Committee recommends the following with reference to Recommended Practices 2004-0003, ***“Recommended Practices for Sour Gas Development Planning and Proliferation Assessment”***,

General Recommendations

1. That continued use of the Recommended Practices as a positive tool to enhance the public consultation and application processes be endorsed by industry and the EUB.
2. That the Recommended Practices be endorsed as an appropriate response to Public Safety & Sour Gas (PS&SG) Recommendations 7, 32 and 33.
3. That meeting the intent of PS&SG Recommendations 7, 32 and 33 through the use of the Recommended Practices become a regulatory requirement of the Directive 56 application process.
4. That awareness-building, education, and support for the Recommended Practices be continued by all parties
5. That the Recommended Practices be enhanced to clarify and provide more detail and / or examples concerning “Proliferation Assessment”.

Actions for EUB

That the Alberta Energy and Utilities Board be advised to,

6. Respond to the recommendations of the Oversight Committee.
7. Enhance Directive 56 by including a requirement for sour gas applicants to meet the intent of PS&SG Recommendations 7, 32 and 33 through the use of the Recommended Practices.
8. Inform stakeholders of the new requirement to use the Recommended Practices through appropriate EUB Bulletins / Directives.
9. Continue to build awareness and support the Recommended Practices with industry associations and synergy groups.

Actions for Industry

That the Canadian Association of Petroleum Producers (CAPP), the Canadian Association of Petroleum Landmen (CAPL) and the Small Explorers and Producers Association of Canada (SEPAC) be advised to,

10. Enhance the Recommended Practices to clarify and provide more detail and / or examples concerning "Proliferation Assessment".
11. Continue to build awareness, educate member companies, and support the Recommended Practices through such means as holding workshops and / or industry training for companies developing projects involving sour gas near people.
12. Build awareness of the principles of the Recommended Practices in areas of sour gas not near people, such as environmentally sensitive areas².

Actions for the Community Groups, Synergy Groups and other Public stakeholders

That major community groups, synergy groups and other public stakeholders be advised to,

13. Continue to build awareness, educate the public, and support the Recommended Practices through such means as creating a platform for the Recommended Practices at upcoming Synergy Conferences, and to encourage constituents to participate in consultations on sour gas development planning and proliferation assessments.

² While the Oversight Committee was not mandated to review sour gas planning and proliferation assessment in areas not in the immediate vicinity of residents, Recommendation #12 is consistent with PS&SG deliberations. The October 2003 Semi-Annual Progress Report, PS&SG, page 20, paragraph 2, reads "Another issue currently being discussed, which remains to be resolved, is whether the proposal should be limited to applications where sour gas is being developed adjacent to communities or apply to all sour gas developments (i.e., even in remote areas where there are no people residing in the EPZ).

6. APPENDICES

Appendix 1. Excerpts, PS&SG report (December 2000)

From PS&SG Final Report, PS&SG Advisory Committee, December 2000. Available on the Internet at <http://publicsafetyandsourgas.org>.

.....

4.2.3 *Subsurface Resource Development Planning*

Current Situation

With respect to the coordination of subsurface resource development, EUB Applications *Guide 56: Energy Development Application Guide* requires sour gas operators to conduct an assessment of nearby facilities that have the capability of handling and processing new resources in an area. In doing so, operators must attempt a reasonable degree of discussion with adjacent operators to investigate the possibility of using existing facilities and infrastructure. In addition, the EUB has a Gas Plant Proliferation Policy designed to achieve some level of coordination of subsurface planning.

While the EUB does encourage sour gas operators to look at innovative ways of mitigating a proliferation of surface facilities, there are no regulations, other than those stated above, compelling industry to use accepted techniques, such as directional drilling or pipeline corridors, to reduce proliferation. Furthermore, it appears that the EUB proliferation policy is primarily applied when there are objections to a new facility in an area.

Findings of the Committee

Many outreach participants raised public health and safety concerns respecting the number or density (proliferation) of sour gas facilities in any one area and questioned whether these were all necessary to recover the resources. There was a general view that only the minimum amount of facilities necessary to recover the resource should be allowed.

The Advisory Committee indicated in its *Directions* document that greater effort was needed to reduce the proliferation of sour gas facilities near people. This received general support in the second round of outreach.

The Committee continues to believe that efforts should be made to improve the coordination of subsurface sour gas resource development with the aim of minimizing proliferation of the number of sour gas facilities to the extent practical. In particular, the Committee's view is that there should be a shift in onus towards the applicants to review proliferation issues and away from landowners, who under the current system are expected to raise concerns regarding proliferation of facilities.

Recommendations

7. *Revisions to EUB guides to require operators to include in their applications for critical sour wells, pipelines, and facilities a review and discussion of options to utilize existing sour gas infrastructure in the area in order to minimize the extent to which the public is impacted by additional sour gas development. This would include both the applicant's facilities as well as other operators' facilities in an effort to reduce proliferation of well sites and sour gas pipeline infrastructure. Options may include consideration of directional drilling, target flexibility, and the establishment of pipeline corridors.*

4.5.3 Applications and Decisions

Findings of the Committee

Many concerns were raised during the first outreach sessions respecting the application and decision processes of the EUB. The Advisory Committee, as a result, indicated a direction towards an increased focus on the contents and review of sour gas applications, a less formal hearing process, and more emphasis on public issues. The suggested directions were generally supported in the second outreach process.

A commonly expressed concern respecting applications was that each well, and even its flow line, is usually dealt with as a separate application and that the decision-makers do not consider the facilities that will follow. The Committee accepts that there are many constraints, such as legal requirements, lack of geological knowledge, and different owners of minerals, that push in the direction of single facility applications. It believes, however, that some changes can be made.

Recommendations

Regarding the Content of Applications and Their Processing

32. *The EUB support area planning among operators and require well applications to include at least general information regarding existing and possible future area plans where sour gas is involved near people.*
33. *For sour gas near people, the EUB require project plans as part of well applications where a well is part of a larger project of the applicant and encourage applications for more than one well and facility at one time where feasible.*

Appendix 2. Bulletin 2004-08

Bulletin 2004-08

May 17, 2004

Sour Gas Development Planning and Proliferation Assessment

This bulletin introduces industry Recommended Practices for Sour Gas Development Planning and Proliferation Assessment, in response to the Public Safety and Sour Gas (PS&SG) recommendations 7, 32, and 33. The Alberta Energy and Utilities Board (EUB) believes that the recommended practices address the intent of these recommendations.

Recommendation 7 called for the EUB to require developers to conduct proliferation assessments for critical sour wells, pipelines, and facilities. The intent is to reduce impact on people by using existing facilities where possible and ensuring that there is no unnecessary proliferation of facilities.

Recommendations 32 and 33 called for disclosure of existing and future development plans where sour gas is involved near people and encouraged applications for wells and related facilities to be filed together. The intent of these recommendations is to reduce impacts through improved planning and coordination of sour gas development and more effective communication between developers and landowners.

Recommended practices were proposed for consideration following a lengthy consultation process on options for addressing recommendations 7, 32, and 33. Stakeholders included representatives of the Provincial Advisory Committee on Public Safety and Sour Gas, people in sour gas areas, sour gas developers, and local government representatives. An industry task group with representation from the Canadian Association of Petroleum Producers, the Small Explorers and Producers Association of Canada, and the Canadian Association of Petroleum Landmen worked with the EUB to document the recommended practices.

The recommended practices apply to all new sour gas well, pipeline, and facility developments where there are people in the emergency planning zone or adjacent to it who desire planning information and an assessment of proliferation to understand potential impacts. The recommended practices document provides examples of development situations ranging from basic to complex to illustrate the level of planning information that should be prepared to address public interests and issues.

The EUB has found that having applicants share planning information with the public increases public knowledge of a specific application and makes subsequent consultation more effective. Disclosure of proliferation assessments allows people to understand the options considered, their potential impacts, and the opportunities to integrate new facilities with existing sour gas infrastructure.

The EUB expects that

- applicants for sour gas wells that are part of a larger project will disclose the project and, to the extent possible, the full development;
- applicants within a common area will evaluate and implement feasible alternatives to minimize sour gas development impacts³ by sharing information, pooling efforts and resources, and using common roads, pipelines, utility rights-of-way, processing facilities, and other general infrastructure;
- existing operators will cooperate with applicants for new facilities to minimize the impacts of sour gas development on people; and
- applicants will consider changes to their development plans in response to public input.

These recommended practices are in keeping with the EUB's desire to see continuous improvement in the following areas:

- public consultation and understanding of the broad implications of proposed sour gas development near people;
- understanding of potential impacts of sour gas development on individual landowners and communities;
- communication with local authorities; and
- integration of proposed sour gas projects with existing production, transportation, and processing infrastructure in a way that minimizes the impact on the public.

The implementation of recommended practices requires an effective communication and awareness program. The EUB will promote awareness with staff, industry, and public stakeholders and participate in opportune public and industry forums for communication and awareness purposes. The EUB expects industry associations and individual companies to communicate the recommended practices to their members, employees, and contractors and to work with the EUB to monitor and evaluate its use and effectiveness.

The use of the recommended practices will be monitored for a two-year trial period commencing June 1, 2004. The EUB envisages a monitoring process involving representatives of the Provincial Advisory Committee on Public Safety and Sour Gas, industry, public, and EUB staff to evaluate the effectiveness of the recommended practices in addressing the Provincial Advisory Committee's recommendations. Once the trial is complete, recommendations from the monitoring process will be considered by the EUB and may result in changes to EUB policy and/or regulation.

³ The EUB's objective of minimizing the overall impacts of sour gas development does not necessarily mean that use of existing infrastructure over constructing new facilities is preferred in all circumstances. There are situations where new sour gas facilities may have lower emissions, result in less surface disturbance, and/or affect fewer residents than use of existing infrastructure.

The EUB encourages sour gas developers to use the recommended practices. EUB staff will support trial implementation by providing clarification of EUB expectations with respect to planning and proliferation assessments when requested by applicants or the public and by facilitating consultation and resolution of issues.

The EUB believes that compliance with existing requirements, coupled with the use of the industry *Recommended Practices on Sour Gas Development Planning and Proliferation Assessment*, will facilitate greater understanding and collaboration among proponents and the public where sour gas development is proposed near people. Recommended Practices for Sour Gas Development Planning and Proliferation Assessment is available on the Web at http://www.capp.ca/default.asp?V_DOC_ID=763&PubID=74373

For further information, contact Richard Houlihan, Applications Branch, at (403) 297-3510.

Earle Shirley, P.Geol.
Executive Manager
Applications Branch

Appendix 3. Bulletin 2006-02

Bulletin 2006-02

January 10, 2006

Interim Report on EUB Monitoring of Industry Recommended Practices for Sour Gas Development Planning and Proliferation Assessment

In June 2004, the Alberta Energy and Utilities Board (EUB) issued Bulletin 2004-08, which introduced Industry Recommended Practices (IRPs) for Sour Gas Development Planning and Proliferation Assessment. The bulletin stated that the EUB would monitor the use and effectiveness of IRPs during the trial with the aid of an Oversight Committee having representation from the Provincial Advisory Committee on Public Safety and Sour Gas, industry associations, and the EUB. The Oversight Committee recently prepared an interim report on the trial to June 2005, and this bulletin provides a summary of that report.

The IRPs apply to all new sour gas well, pipeline, and facility developments where there are people living in the emergency planning zone (EPZ) or adjacent to it who desire planning information and/or an assessment of proliferation to understand potential impacts.

Presentations about IRPs and the trial were made jointly to industry and community groups by the EUB and industry to raise awareness. Reminders about the trial were also put on the EUB, Synergy Alberta, and several industry Web sites and in newsletters. Use of IRPs is expected to increase as industry and public awareness grows and companies include IRPs in their application and consultation processes.

The monitoring process involves scrutiny of application files for development planning and proliferation assessment material and then comparing the findings with IRPs. If development planning information is not found in an application file, the EUB contacts the applicant for any additional information it has on use of IRPs.

In the first year of the trial, 47 cases of sour gas development near people were monitored. Most cases were nonroutine applications, either for critical sour gas wells or for a sour gas well, pipeline, or facility having objections. As well, 9 routine sour gas applications were monitored. The 47 cases represent a high proportion of all sour gas developments.

In June 2005 a survey component was added to get public input on the use and effectiveness of IRPs. A questionnaire was developed and tested on 6 of the 47 cases monitored. Questionnaires were sent to residents in the EPZ of each case and the responses were evaluated. Results show that the questionnaire was well received and answered. The EUB intends to survey those who reside in EPZs in all future cases to be monitored.

The trial has also showed that, for the most part, industry has not adopted the use of IRPs in its

operating areas and industry awareness of IRPs remains low, despite considerable promotion by the EUB and industry associations.

The study also found that

- IRP use is most effective when managers incorporate them as a necessary part of their public consultation processes for applications.
- The assessment of proliferation is an important component of IRPs and needs more attention. Consideration of the use of existing facilities and collaboration with other companies are evident in only a small number of cases monitored.
- Seven development plans resulting from industry use of IRPs were provided directly to the EUB, in addition to plans filed with the applications or provided on request. The IRP expectation is that development plans are provided to the EUB.
- The use of IRPs varies throughout the province. IRPs are generally followed in sour gas areas south and west of Red Deer. This is consistent with the development planning required by EUB *Informational Letter 93-9* in the southeastern slopes and with the activities of synergy groups, which foster greater disclosure and consultation. In contrast, IRPs are not widely used farther north, although there are a few examples of effective use in these areas.

As a result of these findings,

- the EUB and industry will continue their efforts to increase awareness and use of IRPs through joint presentations on [Bulletin 2004-08](#) and IRPs to industry and public groups.
- the EUB and industry associations (Canadian Association of Petroleum Producers, Small Explorers and Producers Association of Canada, and Canadian Association of Petroleum Landmen) will consider establishing an industry training course.

The EUB trial will continue until May 2006, by which time about 50 cases are expected to be added to the monitoring database for a total close to 100. The Oversight Committee will issue a final report after the trial. If the use of IRPs does not improve significantly over the course of the trial, the committee may recommend changes to IRPs and regulations to support them. As noted in [Bulletin 2004-08](#), "recommendations from the monitoring process will be considered by the EUB and may result in changes to EUB policy and/or regulation."

If you have any questions, please contact Richard Houlihan by telephone at (403) 297-3510 or by e-mail at richard.houlihan@gov.ab.ca.

E. A. Shirley, P.Geol, Executive Manager, Applications Branch

Appendix 4. Communications To Industry and Public Stakeholders During Trial

This appendix provides partial detail on communications activity around the Recommended Practices.

Presentations to Industry and Synergy and Community Groups (indicates joint presentations with industry).**

To Industry

- EUB Information Meeting, May 3, 2004, Westin, Calgary, **, >100 attendees from industry mainly but public also (one of 5 presentations on different PS&SG issues).
- IAP2 Luncheon meeting, Nov 30, 2004, Palliser, **, about 50 attendees, communications consultants
- CAPL Lunch meeting, Jan 13, 2005, **, Landmen, >100 attendees
- SEPAC Board of Directors, April 13, 2005, Calgary, about 12 attendees; subsequently article in SEPAC, May 2005 Newsletter to its members
- Devon Sponsored Community Relations Practitioners, May 12, 2005, Calgary, **, about 30 attendees
- Gas Processors Association of Canada, Lunch meeting, Dec 8, 2005, **, about 35 attendees
- Industry Training Workshop May 4, 2006, Met Centre, Calgary, **, about 90 attendees (see separate mention in report, page 15)

To Synergy and Community Groups

- Synergy Alberta Conference, Feb 5, 2005, Edmonton, **, about 40 attendees (conference ran four concurrent sessions). Article published earlier in Synergy Alberta Newsletter, November 2004
- Calgary Real Estate Board, Okotoks Section luncheon meeting, June 16, 2005, **, about 50 attendees
- Sundre Petroleum Operators Group (SPOG), separate presentations pre bulletin and trial - on October 8 and November 18, 2002 to about 50 attendees each time
- SPOG presentation/workshop on March 9, 2005, about 20 attendees.
- Saddle Hills Awareness Committee (SHAC), **, Sexsmith, Nov 18, 2004, about 15 attendees

- Southern Alberta Sustainable Community Initiative (SASCI), Cowley, March 10, 2005, **, about 50 attendees, (one of three presentations – other two presentations were given by EUR Applications and Field Surveillance staff)
- Edson Creative Solutions Synergy Group, Edson, October 27, 2005, **, about 20 attendees

Other EUB Multistakeholder Committees

- PS&SG Recommendation 53/Setbacks, Dec 9/04, about 20 people
- ILOR, Jan 13/04, about 10 people
- PS&SG Provincial Advisory Committee and PSIT, various status reports and presentations 2002 to date.

The format of a typical presentation was as below,

- EUB presenter - information on the PS&SG Recommendations; EUB expectations of industry applicants; EUB response to the recommendations (acceptance of Recommended Practices subject to trial monitoring - with Oversight Committee to report back to EUB); description of EUB monitoring and survey/questionnaire.
- Industry presenter - described the Recommended Practices and industry's endorsement; components of Recommended Practices (project description, sour gas development plan, proliferation assessment as part of development plan, and area plan); examples of different cases (i.e. exploration, delineation, development); who should receive the information (primarily residents in EPZ, objectors and EUB); benefits of Recommended Practices use; caution that, if the Recommended Practices were not used voluntarily, regulation could result; request to send development plans to EUB; and requests were made to industry to volunteer cases for EUB monitoring.

Presentations by Industry and Synergy and Community Groups

Mr. John Kerkhoven made many presentations to industry. Synergy and community groups may have made presentations.

EUB Routine Communications

EUB publicized the trial through Bulletins 2004-08 and 2006-06, put a note on Directive 56 web site about the PS&SG Recs 7/32/33 and the trial in 2004 and added a web page on development planning and the CAPP industry workshop in May 2006.

EUB Contact with Companies – before, during and after application

EUB staff conducting the two-year trial ensured that EUB field and surveillance staff were familiar with the Recommended Practices by presenting to EUB groups directly involved with field issues, including,

- Field Surveillance Management and Staff,
- Appropriate Dispute Resolution Facilitators,
- Facilities Applications Coordinators,

EUB Field Surveillance and Applications staff raised awareness of the Recommended Practices at several levels and at different times, namely: in pre application discussions between Applications branch and industry, staff would note Bulletin 2004-08 and refer to Recommended Practices 2004-0003 when sour gas was near people and/or objections were anticipated; Field Surveillance generally, and Community and Aboriginal committee members in particular (one staff member from each EUB Field Centre), who were dealing with development issues would note and promote Bulletin 2004-08 and Recommended Practices 2004-0003 when development planning or proliferation raised issues; post application filing, generally in response to objections, non routine applications coordinators and senior staff dealing with applicants would note and promote use of the Recommended Practices; ADR facilitators, a special group in Applications Branch tasked with facilitation dispute resolution and mediation, would note EUB expectations, Bulletin 2004-08 and Recommended Practices 2004-0003.

More generally, many presentations were made to management in the context of developing plans, bulletins, reports, and so on.

In parallel with ongoing EUB applications and surveillance processes, EUB was conducting the trial. Companies whose applications became cases in the trial were made aware of the trial and asked for information, initially by verbal contact and later by letter notifying companies of monitoring, and requesting information.

Finally, when contentious applications went to hearing and sour gas development planning near people or proliferation were issues, the Board, in its decisions, made comments implicating the need for the Recommended Practices. Ketch Decision 2005-129 and Advantage Decision 2006-007 are examples of cases where applications were denied and for which consultation on development planning and proliferation issues was lacking; in both cases, applicants were expected to do more and consult further on planning and proliferation.

Appendix 5. Population of Cases Fitting Criteria for Recommended Practices (IAR)

The IAR (Integrated Application Registry) query reported in this Appendix was current as of 26 June 2006, virtually at the end of the two-year trial.

Purpose

To provide the best estimate of the size and characteristics of the population of applications that fit the definition of 'sour gas near people', in order to,

- Assist in determining the credibility of the monitored applications (which are only a sampled subset of the whole) in representing the impacts on the universe of Sour Gas Near People.
- Provide data concerning potential impact on applicants if use of the Recommended Practices 2004-0003 becomes an EUB Directive 56 requirement.

Source

EUB staff ran queries on the IAR to identify all applications approved and fitting the criteria of Sour Gas Near People from 01 September 2004 to 26 June 2006.

IAR logs only well applications, not applications for pipelines or facilities. It was believed these data were sufficient as pipeline and facility applications were derived from wells in the beginning, and it was reasonable to assume that any Recommended Practices analysis prepared for a well application would reference pipeline or facility applications associated with the initial well application.

The query was defined using the two criteria of involvement, namely , involving sour gas and having at least one dwelling in the EPZ. Because the IAR data does not distinguish dwellings with residents and dwelling which have no residents, a manual review of the first set of results from the query was done to delete projects with uninhabited dwellings.

Findings from Query

The end result was identification of 461 applications for wells across the two years of the Recommended Practices trial. Of these, 133 (29%) were non-routine and 328 (71%) were routine. See accompanying map for plot of all locations, distributed widely across Alberta.

Highlights

The best estimate of the total number of well applications involving sour gas near people during the two-year pilot is about 450 with routine wells in the majority (about 70%).

Appendix 6. Application Monitoring

Purpose

To assess how many cases involving Sour Gas Near People, and the companies responsible for these cases, are using the Recommended Practices 2004-0003, and the characteristics of those that are.

Source – Cases Entering into Monitoring Database

Rather than monitor all cases which met the criteria for Recommended Practices 2004-0003, a sample of eligible cases was selected. A special database to hold the sample of monitored cases was created. 80 cases were entered into it during the two-year trial.

Methods for identifying cases to monitor have evolved over the life of the two-year trial.

In Year One, most cases were selected from EUB lists of non-routine, contentious applications, for wells, pipelines and facilities. Seven (7) of the cases were submitted by companies, and a few were identified by EUB staff working with synergy groups or on alternate dispute resolution. In Year Two, routine applications were added to the mix, with cases identified by EUB senior staff. As well, Year Two additions to the database were limited to wells and did not include pipelines or facilities.

Workload and resource considerations limited the number of cases selected. Therefore, care was taken to create a province-wide, geographically-balanced sample.

One final consideration influenced the selection of cases. The Pembina Nisku sour oil play, beginning in 2005, created a situation with multiple overlapping EPZs. Since there was an intent to survey residents near monitored cases (see Appendix 7, page 44), sending multiple surveys to the same resident was deemed to be negative, and the number of Pembina cases monitored was limited to a subset with non-overlapping EPZs.

It follows that the 80 monitored cases are not a random selection of all applications involving sour gas near people, but rather, contain a majority of more contentious applications. The rationale for this selection was that success with difficult cases would be deemed to be good evidence for the success of using the Recommended Practices approach for less contentious applications.

Source – Fields Describing Cases in Monitoring Database

Two kinds of information were entered into the database,

- Descriptive data were carried over from the application, including the location of the field, whether the application was routine or non-routine, the category of project, and others,
- Determination by EUB staff of presence/absence of the Recommended Practices components, based on material included with the application. While most cases were clear-cut, the determination sometimes involved subjective judgment concerning whether application materials fit the criteria or contain the depth required to be classified as having met the intent of the Recommended Practices. The EUB staff leaned towards leniency in their determination.

Findings

Cases Included in Monitoring Database

The list is current as of June 2006. Year 1 projects came into the database during or before August 2005; Year 2 projects came into the database during or after September 2005. Projects are spread around all regions of Alberta.

Year 1 Projects		
Case ID	Company	Area
1	Prospex	Garrington
2	West Asset Corporation	Lodgepole
3	Bow Valley Energy	Mlkwan
4	Galleon	Rycroft
5	Talisman	Sinclair
6	Intrepid	Sturgeon Lake
7	Shell	Waterton
8	Petrofund	West Edmonton
9	Suncor	Whiskey Creek
10	Shell	Tay River
11	Petro-Canada	Wildcat Hills
12	Highpine	Pembina
13	West Energy	Pembina
14	Duvernay	Pembina
16	Devon	NW Hinton
17	Conoco Phillips	Wembley
18	Kensington	Sexsmith
21	Cabrera	Bashaw
22	Cyries	Sinclair

Year 1 Projects		
Case ID	Company	Area
23	Husky	Knopcik
27	Suncor/ Shell	Panther
28	PennWest	Pembina
29	Highpine	Pembina
30	PennWest	Pembina
31	Dominion	Pembina
32	Shell	Burmis
33	Shell	Carbondale
34	PennWest	Pembina
35	Dominion	Pembina
36	Anadarko	Sinclair
39	Pivotal	Gordondale
41	CNRL	Wapiti
42	Shell	Carbondale
43	Fairborne	Clive
44	Devon	Elmworth
45	Esprit	Garrington
46	San Telmo	Gordondale
47	Grand Petroleum Inc.	Crystal
48	Esprit Exploration Ltd.	Garrington
49	Devon Arl Corporation	Elmworth
51	Energy 51 Inc.	Sylvan Lake
52	Kick Energy Corporation	Pembina
53	ConocoPhillips	Homeglen Rimbey
54	Paradym Energy Inc.	Aetna
55	Zargon Oil & Gas Ltd.	Wavy Lake
56	Conoco	Turner Valley
59	Petro-Canada	Savanna Creek

47

Year 2 Projects		
Case ID	Company	Area
61	Fairborne	Westerose
62	Dominion	Pembina
63	ARC	Pouce
64	Kick	Pembina
65	Rider	Pembina
66	Lightning	Pembina
67	Burlington	Pembina
70	White Fire	Pembina

Year 2 Projects		
Case ID	Company	Area
71	Valiant Energy Inc.	Grande Prairie
74	West Energy Ltd.	Pembina
75	West Energy Ltd.	Pembina
76	West Energy Ltd.	Pembina
82	Burlington Resources Canada Ltd.	Gregg Lake
83	Blue Mountain Energy Ltd.	Wembley Field
84	Shell Canada Ltd.	Grease Creek/Panther
85	Prime West Energy Inc.	Lone Pine Creek
86	Imperial Oil	Quirk Creek
89	EOG Resources Canada Inc.	Elmworth
92	Shell Canada Limited	Undefined - Nitchi
93	Greenbank Energy Ltd.	McLeod
94	Northrock Resources Ltd.	Westerose South
96	ConocoPhillips Canada Resources Corp.	Pembina
97	Ketch Resources Ltd.	Pembina
98	Fairborne	St. Albert
99	Titan Exploration Ltd.	Gordondale
100	Burmis Energy Inc.	Pembina
101	Gladius Energy Inc.	Strachan
110	Rockyview Energy Inc.	Leduc
111	Greenbank Energy Ltd.	McLeod
112	Midnight Oil Exploration Ltd.	Elmworth
113	Exalta Energy Inc	Culp
114	Kereco Energy Ltd.	Sturgeon Lake
115	Suncor Energy Inc.	Grande Prairie-Sexsmith

33

Use of Recommended Practices 2004-0003

EUB staff classified cases as having used Recommended Practices 2004-0003, yes or no, based on material provided with the application. Because the EUB rating of use of the Recommended Practices is based on material provided to residents at the time of application, it does not take account of cases where the relevant materials may have been provided to the residents, after the application had been submitted to the EUB..⁴

This table shows the number of cases classified as either “Deemed To Have Followed RP” or “Deemed Not To Have Followed RP”, as of time of application. Following the Recommended Practices was higher for Year 2 cases (46%) than for Year 1 cases (32%).

⁴ EUB staff initially attempted to supplement the ratings with information on use of Industry Recommended Practices as the consultations progressed but found this difficult to monitor consistently and the attempt was abandoned.

Cases	First Year of Trial	Second Year of Trial
Deemed to have used Recommended Practices	15 (32%)	15 (46%)
Deemed not to have used Recommended Practices	32 (68%)	18 (54%)
Total	47 (100%)	33 (100%)

Refer to the appended maps for a visual representation showing all 80 cases in the application monitor sample, with separate identification for those deemed to have used and those deemed not to have used the Recommended Practices (see Appendix 8, page **Error! Bookmark not defined.**).

Routine Versus Non-Routine Cases

Within the 80 monitored cases, 20 applications were Routine and 60 applications were Non-Routine. The proportions of Routine and Non-Routine cases deemed to have used the Recommended Practices vary slightly by years but are virtually identical within years when the small sample size is taken into account.

Year One Cases Only

Cases	Routine	Non-Routine	Total
Deemed to have used Recommended Practices	3 (30%)	12 (32%)	15 (32%)
Deemed not to have used Recommended Practices	7 (70%)	25 (68%)	32 (68%)
Total	10 (100%)	37 (100%)	47 (100%)

Year Two Cases Only

Cases	Routine	Non-Routine	Total
Deemed to have used Recommended Practices	5 (50%)	10 (43%)	15 (46%)
Deemed not to have used Recommended Practices	5 (50%)	13 (57%)	18 (54%)
Total	10 (100%)	23 (100%)	33 (100%)

Stage of Development

The applications in the database were mostly wells at either the Development or the Exploratory stage, with wells at the Delineation stage also well represented. Much smaller numbers were combinations of these and / or pipelines and / or facilities applications.

Well – Exploratory	26 (32%)
Well – Delineation	13 (16%)
Well – Development	31 (39%)
Well – Exploratory + Well - Delineation	1 (1%)
Well – Development + Pipeline	2 (2%)
Well – Delineation + Pipeline	1 (1%)
Well – Delineation + Pipeline + Facility	1 (1%)
Facility	2 (2%)
Pipeline	2 (2%)
Pipeline + Facility	1 (1%)

Wells at the Exploratory stage were less likely than wells at the Delineation or Development stages to have used the Recommended Practices.

Year One Cases Only

Cases	Well - Exploratory	Well – Delineation	Well – Development	Other	Total
Deemed to have used Recommended Practices	3 (20%)	1 (25%)	7 (37%)	4 (44%)	15 (32%)
Deemed not to have used Recommended Practices	12 (80%)	3 (75%)	12 (63%)	5 (56%)	32 (68%)
Total	15 (100%)	4 (100%)	19 (100%)	9 (100%)	47 (100%)

Year Two Cases Only

Cases	Well - Exploratory	Well – Delineation	Well – Development	Other	Total
Deemed to have used Recommended Practices	4 (36%)	5 (56%)	6 (50%)	- (0%)	15 (46%)
Deemed not to have used Recommended Practices	7 (64%)	4 (44%)	6 (50%)	1 (100%)	18 (54%)
Total	11 (100%)	9 (100%)	12 (100%)	1 (100%)	33 (100%)

Companies and Use of the Recommended Practices

The 80 monitored cases were carried out by 51 different companies. Looking at companies that used the Recommended Practices (as contrasted to cases),

- 14 always used the Recommended Practices (whether they had filed one or more than one application),
- 35 never used the Recommended Practices (whether they had filed one or more than one application),

- 2 used the Recommended Practices and did not use the Recommended Practices for at least one of multiple applications.

Companies with more than one project were slightly more likely to have used the Recommended Practices, although the difference is small.

Year One and Year Two Cases

Companies	1 Project Only	More than 1 Project	Total
Deemed to have used Recommended Practices	9 (25%)	5 (33%)	14 (27%)
Deemed not to have used Recommended Practices	27 (75%)	8 (53%)	35 (69%)
Mixture – some with Recommended Practices and some without	-	2 (13%)	2 (4%)
Total	36 (100%)	15 (100%)	51 (100%)

Highlights

As of June 2006, 80 cases were selected for monitoring in the two-year trial. Seven (7) of them had been brought forward for monitoring on a voluntary basis by industry; the balance were identified by EUB using various methods. Because some companies submitted more than one project, there are fewer companies than cases. The 80 cases are being carried out by 51 companies. Of the 80 cases, 75 were wells, 2 were pipelines, 2 were facility operations and 1 was a combined pipeline-facility application.

The sample contained a majority of challenging applications. 60 (75%) of the monitored cases were non-routine.

The number of cases deemed to have used the Recommended Practices is higher in Year 2 (46%) than in Year 1 (32%) but is still less than 50% of the cases in the monitoring program. Use was about the same for Routine and Non-Routine applications, and was slightly higher for wells in Delineation or Development stages than at the Exploratory stage.

The number of companies deemed to have used the Recommended Practices across the two-year trial was 27% who always did and 4% who sometimes did. Sixty-nine percent (69%) of companies never used the Recommended Practices.

Appendix 7. Public Survey Findings

Purpose

To learn directly from members of the affected publics whether they were aware of receiving components which make up the Recommended Practices, and whether they were satisfied with the planning and proliferation information provided during the applicant's consultation program.

Source

In June and July 2005, a pilot survey was sent to residents of Emergency Planning Zones (EPZs) of some of the cases in the monitoring program. The pilot survey was deemed successful, and plans were laid to move to a full survey.

Starting in September 2005, residents within EPZs of monitored cases where approval had been granted were surveyed. Surveys were mailed following the 30-day period following disposition. Where cases had overlapping EPZs, only some were surveyed in the interests of preventing households from receiving multiple surveys.

Findings

Results from the Pilot survey as well as the full survey are included in the tables.

Cases For Which a Survey was Conducted

The tables below show the cases where a survey was conducted. The cases are a mixture of applications deemed to have used the Recommended Practices and those deemed not to have used the Recommended Practices.

Year 1 Projects		
Case ID	Company	Area
1	Prospex	Garrington
8	Petrofund	West Edmonton
9	Suncor	Whiskey Creek
42	Shell	Carbondale
5	Talisman	Sinclair
43	Fairborne	Clive
44	Devon	Elmworth
45	Esprit	Garrington
46	San Telmo	Gordondale
53	ConocoPhillips	Homeglen Rimbey

Year 1 Projects		
56	Conoco	Turner Valley

11

Year 2 Projects		
Case ID	Company	Area
61	Fairborne	Westerose
62	Dominion	Pembina
63	ARC	Pouce
64	Kick	Pembina
65	Rider	Pembina
66	White Fire	Pembina
67	Burlington	Pembina
71	Valiant Energy Inc.	Grande Prairie
75	West Energy Ltd.	Pembina
76	West Energy Ltd.	Pembina
84	Shell Canada Ltd.	Grease Creek/Panther
85	Prime West Energy Inc.	Lone Pine Creek
86	Imperial Oil	Quirk Creek
89	EOG Resources Canada Inc.	Elmworth
94	Northrock Resources Ltd.	Westerose South
96	ConocoPhillips	Pembina
97	Ketch Resources Ltd.	Pembina
98	Fairborne	St.Albert
99	Titan Exploration Ltd.	Gordondale
113	Exalta Energy Ltd.	Culp
114	Kereco Energy Ltd.	Sturgeon Lake

21

Response Rate

As of June 2006, for the 32 cases surveyed, 1,539 surveys have been mailed out and 304 returned, for an overall response rate of 20%.

Survey Results

Replies were received both from persons who said they knew about the particular application being surveyed and people who did not. About 70% of the respondents knew about the application and 30% did not.

Results summarized below are based on the 216 persons who returned a questionnaire and knew about the application.

Respondents were asked to show the number of applications they had been contacted about and to rate their level of involvement with the consultation for the case being surveyed. Answers show a wide range of experience, lending credibility to the findings,

- 14% said they were “actively involved” with the application, 48% said they “kept informed” about it, and 26% said they had little involvement with it.
- 40% had been contacted about none or one application, 22% about 2 or 3 applications, 10% about 4 or 5 applications. and 36% about more than 5 applications.

Awareness of the components of the Recommended Practices varied.

- 85% of the respondents were aware of having seen a Sour Gas Project Description.
- 71% were aware of having seen a Sour Gas Development Plan.
- 54% were aware of having seen a Broader Plan of the entire area.
- 37% were aware of having seen a Proliferation Assessment.

For the most part, all information pieces which were components of the Recommended Practices were rated as “Highly Beneficial”.

For those who provided a rating,

- 72% rated the Sour Gas Project Description as “highly beneficial”, and another 21% as “useful but could have done without”,
- 69% rated the Sour Gas Development Plan as “highly beneficial”, and another 25% as “useful but could have done without”,
- 63% rated the Broader Plan of the entire area as “highly beneficial”, and another 27% as “useful but could have done without”,
- 62% rated the Proliferation Assessment as “highly beneficial”, and another 28% as “useful but could have done without”.

Residents also said that,

- Material is generally being presented in a way that the landowners can understand it (83%).
- Applicants are most often listening to residents (75% yes, 9% no).
- In many but not all situations, all important facts and issues are being taken into account (68% yes, 20% no).
- However, choices or alternatives are not always offered (40% yes, 38% no), and
- Changes are not always made in response to concerns (26% yes, 28% no, 41% can't say).

Summing up,

- A majority but not all said the consultation was as thorough as it needed to be (61% yes, 18% no).
- About equal numbers said there was too much information as said there was too little (19% too much, 20% too little, 44% just right for a total of 83% having paid enough attention to be able to comment).

Only a minority of persons provided written comments on their questionnaires.

- Many comments came from persons who thought that "too little" information had been provided, and were explanations of what else they wanted. Many asked for material which could be classified as "area development" or "proliferation" plans. Others asked to have the material simplified so that the messages stood out more clearly.
- Where people said they had "too much" material, they often referred to repetitive delivery of the same EUB literature over and over, or to technical detail which was beyond the ability of lay people to grasp.

Highlights

Answers to the survey tell us that,

- Most applicants referenced in the survey sample were providing a Sour Gas Project Description, slightly fewer but still a majority were providing a Sour Gas Development Plan, a slim majority were providing a Broader Area Plan, and only a minority were addressing Proliferation issues.
- These materials were generally very useful to the residents.
- The information provided by applicants was generally understandable to residents.
- Most found the information acceptable in terms of depth and amount of detail. There were some who found it “too little”, and they tended to be looking for “area development” or “proliferation” types of material. Others found it “too much” and were often referring either to EUB literature which they found unnecessary, or to overwhelming technical detail.
- Views on whether choices or alternatives were offered and / or applied were mixed. Many could not comment on this aspect. Of those who could, the “yes” and “no” answers were about half and half.