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PROVINCIAL SURVEILLANCE

Public Safety/Field Surveillance: A Commitment to Public Safety

The ERCB is committed to ensuring that energy development in Alberta occurs in a manner that is efficient, in the public interest, and, above all, carried out in a way that is safe for Albertans and the environment. To help fulfill this commitment, the ERCB Public Safety/Field Surveillance (PS/FS) Branch has assembled a team of highly trained field inspectors who undertake thousands of inspections each year. The Community and Aboriginal Relations (CAR) team engages stakeholders about the ERCB, and Emergency Planning and Assessment staff ensure that requirements in *Directive 071: Emergency Preparedness and Response Requirements for the Petroleum Industry* are being met.

Operating out of nine ERCB Field Centres throughout Alberta, field staff inspect construction, operation, and abandonment activities at oil, gas, and in situ oil sands facilities (including pipelines, compressors, and processing plants). The ERCB is responsible for overseeing an inventory of more than 244 000 wells, 22 358 oil batteries and associated satellites, 797 gas plants, 14 764 gas batteries, 4613 compressor stations, and the 412 555 kilometre (km) pipeline network operated by energy companies in our province.

In addition, field staff respond to incidents, emergencies, and public complaints on a 24-hour basis.

Inspections and Enforcement

Total field inspections, which include well site inspections, increased to 18 667 in 2008 from 16 408 in 2007. The ERCB was able to increase the number of inspections due to several factors: a large increase in well site inspections, additional inspection staff, fewer well control incidents, which resulted in less time spent on the investigation of these events, and the inclusion of air monitoring inspections.

The percentage of High Risk noncompliances decreased to 2.0 per cent in 2008 from 2.5 per cent in 2007, due in part to staff focusing on conducting operator awareness sessions across Alberta to increase industry's awareness and understanding of ERCB requirements.

Drilling and Servicing

Drilling activity decreased in 2008 compared to recent years. Despite this, more than 90 000 wells have been drilled in Alberta since 2004.

In 2008, 9 blowouts occurred during the drilling of 15 417 wells, compared to 14 in 2007, when 16 662 wells were drilled. Eight of these blowouts were freshwater artesian flows (one well had a sweet gas flow associated with the fresh water flow) and were a result of inadequate well design. All blowouts were of a relatively short duration (one to two days) and none significantly affected the public or the environment.

Fifty-two kicks were reported in 2008, which equates to an occurrence rate of about 3.4 kicks per 1000 wells drilled. This rate is lower than the average kick rate of 5 per 1000 recorded over the last five years.

Five blowouts occurred during well servicing operations in 2008, all of which were of a short duration, with minimal environmental impact.

Fifteen blowouts were registered in the “other” category during 2008, one less than in 2007. All of the 2008 incidents were of a short duration and had minimal impact on the public or the environment.

Of the 61 drilling operations not in compliance in 2008, 36 were found to be Low Risk noncompliant and 25 High Risk noncompliant (this includes critical wells, noncritical wells, and investigations).

The ERCB suspended drilling operations at all rigs with High Risk noncompliant items until these items were corrected. The total shutdown time was about 77 hours in 2008, compared to 420 hours in 2007.

In 2009, the ERCB will continue to focus on conducting operator awareness sessions to increase industry’s understanding of requirements and improve compliance levels.

Oil Facilities

Field staff conducted 3782 oil facility inspections in 2008. Of these, 2809 facilities were found to be in compliance with ERCB requirements. Where compliance issues were identified, 907 facilities were issued Low Risk noncompliance enforcement and 66 were issued High Risk noncompliance enforcement. Appropriate enforcement action was taken on all facilities to bring them into compliance.

Pipelines

The pipeline failure rate was 2.1 per 1000 km of pipeline in 2008, a substantial improvement over the 1988 benchmark of 5 per 1000 km.

All pipeline failures are inspected and an investigation may be conducted into the failure mechanism. In 2008, staff conducted 376 inspections and investigated 598 incidents. The total inspections and investigations include the 109 contact damage incidents that occurred.

Inspections revealed 835 operations in compliance with ERCB requirements, while 47 were found to be Low Risk noncompliant and 92 High Risk noncompliant. All noncompliant items were addressed in accordance with *Directive 019: ERCB Compliance Assurance—Enforcement*. Although corrosion continues to be the main cause of pipeline failures, 2008 saw fewer internal corrosion failures compared to historical data.

Field staff undertook 437 pipeline construction and pressure test inspections in 2008, of which 390 complied with ERCB requirements, 34 had Low Risk noncompliant items, and 13 had High Risk noncompliant items. All noncompliant items were brought into compliance. This compares to 443 pipeline construction and pressure test inspections conducted in 2007, of which 393 were found to be in compliance with ERCB requirements, 36 had Low Risk noncompliant items, and 14 had High Risk noncompliant items.

ERCB Field Surveillance staff will continue to carry out additional inspections on construction in 2009 to educate licensees and identify noncompliant items.

Sulphur Recovery

Sulphur recovery efficiencies at gas plants recovering saleable sulphur is at 99.1 per cent. Overall, sulphur emissions have decreased by 49 per cent since 2000, from 78 000 to 39 500 tonnes.

Spills

In 2008, 1461 spills were reported to the ERCB, a decrease from 1508 in 2007. Of the 1461 spills,

- 73 priority 1 (pose the most serious potential environmental and public impact),
- 265 priority 2 (the impact on the environment is a concern), and
- 1123 priority 3 (low-volume spills contained on site).

In 2008, more than 75 per cent of all spills were low volume and were contained on lease. Inspections were conducted on the cleanup of 847 spills, of which 709 were in compliance with ERCB regulations, 80 had Low Risk noncompliances, and 58 had High Risk noncompliances.

The spill volumes of produced water and liquid hydrocarbon were 26 211 cubic metres (m³) and 3927 m³ respectively in 2008. Produced water spill volumes increased, while liquid hydrocarbon spill volumes decreased slightly. The area affected and impacts on the environment were minimal.

In 2009, ERCB field staff will continue to work with industry to improve operating practices through increased staff training, equipment monitoring, and reviewing of corrosion mitigation programs.

Waste Management

Field staff carried out 90 waste management inspections in 2008, which revealed that 46 waste management programs were in compliance with ERCB regulations, while 38 were issued Low Risk noncompliance enforcement and 6 were issued High Risk noncompliance enforcement.

Responding to Public Concerns

In 2008, the number of public complaints decreased by 5 per cent from 2007. As some complaints identified more than one issue, the ERCB recorded 891 issues associated with 744 complaints.

Responding to and effectively addressing these concerns remain a top priority for the ERCB. Each month, a random complaint call-back survey is conducted in an effort to improve the level of satisfaction with both ERCB and industry responses. Staff analyze the information to ensure that appropriate complaint response procedures are being used and that all questions and concerns are addressed. Results of the 2008 survey indicate that

- 83 per cent of the individuals surveyed said their concerns were satisfactorily resolved, and
- 97 per cent of the individuals surveyed were satisfied with the response from the ERCB.

The ERCB Field Centres will continue to be on call 24 hours a day to ensure an appropriate response to all complaints.

Community and Aboriginal Relations Activities

In 2008, Community and Aboriginal Relations (CAR) staff engaged 167 key stakeholders to discuss the ERCB's roles and responsibilities. In addition, CAR conducted 172 presentations to communities, industry, and government, and staff attended 209 synergy group meetings in 2008. The ERCB strongly endorses this effective and cooperative approach, and in 2008 CAR staff contributed to the formation of 9 new synergy groups. Staff also participated in 47 community/industry open houses in 2008. Such forums allow the ERCB to interact with all stakeholders.

CAR staff lent support to ERCB hearings throughout 2008, which included providing the public and other stakeholders with assistance, clarification, and information regarding the hearing process and information on the ERCB. The CAR team was present at 12 hearings in 2008.

Staff also conducted 104 aboriginal community contacts in 2008, which represents a 55 per cent increase from 2007. These contacts typically involve meetings between aboriginal leadership, the band oil and gas liaison, and ERCB personnel.

Emergency Planning and Assessment

The Emergency Planning and Assessment (EPA) team is responsible for ensuring that industry meets the requirements set out in *Directive 071*. In April 2008, a revised edition of *Directive 071* was issued, introducing some new requirements. In conjunction with this release, EPA created new processes that became effective in September 2008.

Also in 2008, the ERCB reviewed and approved

- 251 drilling and/or completion emergency response plans (ERPs),
- 41 production facility plans,
- 75 ERP supplements, and
- 8 high vapour pressure plans.

EPA no longer accepts requests for reduced emergency planning zones.

Because all ERPs must be technically complete prior to receiving approval, 33 applications were closed by the EPA team and an additional 10 were withdrawn by the licensees.

In addition, since fall 2008 the ERCB conducted 16 full ERP assessments and 28 partial assessments. Any issues of noncompliance were addressed through additional training and exercises, and no enforcement action was issued during this time. Staff also attended 8 ERP exercises.

Field Incident Response Team (FIRST)

The PS/FS Branch created the Field Incident Response Support Team (FIRST) to lead the ERCB in preparing for and responding to significant oil and gas emergency events. The basic premise is for FIRST to assist ERCB Field Centres in the event of a complex oil and gas emergency.

Some of the team's goals for 2009 are to streamline internal reporting and communication protocols, develop better systems to communicate with the ERCB's Government of Alberta emergency response partners, enhance working relationships with the ERCB EPA team and field staff, build relationships with the CAR team, explore external communication protocols, and review internal response and protocols and the approval process.

These goals will ensure that FIRST meets its objectives of high standards for public safety, environmental protection, and resource conservation.

Setback Review

In response to a recommendation by the Provincial Advisory Committee on Public Safety and Sour Gas, the PS/FS Branch initiated a study in spring 2008 to review current sour gas setbacks.

The development of a new model, ERCBRISK, is expected to be completed in 2009. It will be used in combination with the ERCBH2S dispersion model to estimate the risk to the public associated with sour gas facilities and to assess whether the current ERCB setback distances are adequate.

For more information see *ST57-2009: Public Safety/Field Surveillance Provincial Summary 2008*. ↗