



Drayton Valley Area
Hydrogen Sulphide Odours
January 14, 2007

Odour Complaints Investigation

ALBERTA ENERGY AND UTILITIES BOARD
Incident Summary Report: Drayton Valley Area Odour Complaints, January 14, 2007

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Odour Complaints

On January 14, 2007, at 10:30 p.m. the Alberta Energy and Utilities Board (EUB) Drayton Valley Field Centre (DVFC) received a complaint of hydrogen sulphide (H₂S) odours west of Drayton Valley and north of Lodgepole at Section 34, Township 49, Range 9, West of the 5th Meridian. At the time, the weather was cloudy, light winds from the SE and an inversion was present that lasted for the following four days. There were 20 more complaints received over the next six hours, with no source located on investigation by the EUB or area operators. The sporadic odours were detected from the Lodgepole area, west-southwest of Drayton Valley, and along Highway 621, northwest of Drayton Valley.

The DVFC continued to receive odour complaints until late morning on January 15, 2007. There were 49 complaints received in regard to this incident, which encompassed an area of about 48 square kilometres.

EUB and Industry Response

The on-call field inspector, upon receipt of the initial complaint on January 14, 2007, responded immediately to the call and also notified area operators of the complaint. The inspector confirmed the odours in the area but was unable to identify the source. The area operators, unable to locate the source of the odours, initiated an aerial search of the area on the morning of January 15, 2007. The DVFC continued to respond to complaints throughout the day, while the area operators continued their ground and aerial search but were unable to locate the source.

On January 15, 2007, at 12:40 a.m. the DVFC notified the EUB Emergency Response Group (ERG) of the incident. The ERG dispatched staff from the Field Surveillance Management Team, Communications, and Air Monitoring, and the incident investigator from the Calgary office. The EUB established communication links for notification and status updates, when information became available with Emergency Management Alberta, Alberta Environment, Town of Drayton Valley, Drayton Valley Hospital, David Thompson Health Region, Capital Health, West Central Air Shed, Parkland County, Yellowhead County, Brazeau County, local and provincial media, the animal health investigator, and each member of the public who registered a complaint or concern with the DVFC.

On January 15, 2007, following a review of the situation, (area involved, number of odour complaints, and ground and aerial search success), the DVFC enacted a plan to identify the source of the odours. To facilitate this plan, the DVFC communicated with local authorities and held a meeting on January 16, 2007, with the sour area operators. At the meeting, a plan to initiate a coordinated sweep of the area to locate the release site was advanced. All personnel involved in oil and gas activities that were not considered immediately necessary were identified by both the EUB and the local industry, and these personnel were subsequently directed to locating the source of the odours. A Remote Emergency Operations Centre (REOC) was established at the Highpine Oil & Gas Limited office to coordinate the search, with staff from the EUB and Bissett Resource Consultants Ltd.

Over the next two days all the available manpower of the EUB, Fairborne Energy Ltd., ATCO Midstream, Highpine Oil & Gas Limited, West Energy Ltd., Keyera Energy Management Ltd., Dominion Exploration Canada Ltd., Blaze Energy Ltd., ConocoPhillips Canada, Spectra Energy Corp., Canetic Resources Trust, including operational staff from the Brazeau Gas Plant, West Pembina Gas Plant, and Bigoray Gas Plant, were used in the ground search. The EUB continued to investigate specific areas identified by the complaints received.

In addition to the manpower, resources made available for the search included three helicopters (equipped for emission detection), a fixed-wing aircraft, stationary air monitoring units (AMUs), five mobile AMUs (two belonging to the EUB and three to HSE), snow machines, and a portable meteorological tower.

The highest peak reading (the highest reading detected over a 15-minute period) of H₂S recorded by an EUB AMU during the incident was 170 parts per billion or 0.17 parts per million at 2:45 a.m. on January 15, 2007. This reading was taken while the AMU was stationary and occurred at the corner of Highway 621 and Range Road 94. The odours dissipated shortly thereafter and the AMU could no longer get readings at that location; therefore, the operator resumed a mobile search for fugitive emissions. In Alberta, the established Occupational Exposure Limit is 10 parts per million for eight hours.

The initial search area was defined by the location of the received complaints. The area was expanded when the search did not identify a source of the release. Meetings were held on the mornings of January 16, 17, and 18, 2007, at the DVFC with industry representatives to review progress and coordinate the search activities for the day.

During the incident, all sour facilities in the search area (see attached map) were inspected either by ground or by air, with some areas being inspected by both methods. A few minor maintenance issues were identified at remote locations during the area search and promptly addressed.

There were no further complaints received in regard to this incident after January 15, 2007. The EUB and industry representatives met on January 18, 2007, and after a thorough review of the search activities and findings, they decided to cease the intensive ground and air search at 11:00 a.m. At no time during the incident was the public adversely affected.

EUB Record Search

Upon cessation of the search, the EUB investigation turned to a comprehensive records review of sour facility operations and air monitoring data and field inspections of sour facilities with flare systems. Letters were sent to all companies with sour facilities in the search corridor requesting production records trends, flare logs, information on operational issues, and any other anomalies that may have resulted in a sour gas release on January 14, 2007. Information on air monitoring from both mobile and stationary units was also requested. The DVFC began a review of the information, which upon completion did not identify the source.

Conclusion

Although there was a very thorough, concerted, coordinated, and cooperative ground and aerial search conducted over three days and a subsequent comprehensive records review, the EUB is disappointed that the source of the emissions was never found. The EUB is appreciative of all the support received from the public, other government officials, the local authorities, and industry.

On a go-forward basis, the EUB has made plans to intensify monitoring and inspections in the general area south and west of the Town of Drayton Valley and will continue to watch for anomalies while carrying out its regular duties.

