

NOTES:

All references to sour wells in this Interim Directive have been superseded by Interim Directive [ID 97-06](#).

1996-04-09: Interim Directive [ID 96-2](#) identified the following change to ID 81-03:

"Appendix 3 is replaced by the requirements identified in Guide 56."

This Interim Directive predates the amalgamation of the Energy Resources Conservation Board (ERCB) and the Public Utilities Board (PUB) in 1995. The Alberta Energy and Utilities Board (EUB) takes the place of any references to the ERCB, PUB, or their full names.

The current contact for this document is the Facilities Applications help line (403) 297-4369.



Interim Directive ID 81-3

TO: ALL WELL, PIPELINE AND GAS PLANT OPERATORS

MINIMUM DISTANCE REQUIREMENTS SEPARATING NEW SOUR GAS FACILITIES FROM RESIDENTIAL AND OTHER DEVELOPMENTS

This directive replaces Interim Directive ID 79-2 issued 22 February 1979. [Appendices 1](#) and [2](#) are identical to those in ID 79-2 with the exception that the "Applications" section of Appendix 1 has been deleted. A new [Appendix 3](#) sets out requirements for applications for well licences and pipeline permits and includes a section dealing with concurrent applications for these facilities.

The separation distances described in this directive were developed by Alberta Environment and the Board and have been applied since early 1979 in granting approvals for sour gas facilities near areas of public use. These distances increase as the potential sour gas release volumes increase and with increasing population density.

With regard to encroachment of occupied buildings on existing sour gas facilities, the Subdivision Regulations of The Planning Act, 1977, were amended by Order in Council 382/79 to require setbacks similar to the Board's separation distances.

Interim Directive ID 79-2 is hereby rescinded.

ISSUED at Calgary, Alberta, on 16 December 1981.

ENERGY RESOURCES CONSERVATION BOARD

<signed by>

V.E. Bohme
Board Member

APPENDIX 1 TO ID 81-3 MINIMUM DISTANCE REQUIREMENTS SEPARATING NEW SOUR GAS FACILITIES FROM RESIDENTIAL AND OTHER DEVELOPMENTS

Definitions:

For the purpose of this Directive:

1. **sour gas** is natural gas having an H₂S content of 10 moles per kilomole or greater, or such lesser or greater H₂S content that the Board may stipulate in a particular case;
2. **a sour gas facility** is any facility which produces, processes, or transports sour gas including:
 - o a) gas wells producing or capable of producing sour gas,
 - o b) gas lines or secondary lines that transport sour gas,
 - o c) gas plants, and
 - o d) any other installations that the Board may designate;
3. **unrestricted country development** is defined as any collection of permanent dwellings situated out of urban centres and having more than eight permanent dwellings per quarter section; and for the purpose of this Directive includes any similar development the Board may designate as an unrestricted country development;
4. **a public facility** is defined as a recreational area such as a campground, or a public building such as a rural school or hospital, situated out of urban centres; and for the purpose of this Directive includes any similar development the Board may designate as a public facility;
5. **an urban centre** is defined as a city, town, village, or other incorporated centre, and for the purpose of this Directive includes any similar development the Board may

designate as an urban centre;

6. **separation distance** is the required distance between a sour gas facility and developments such as individual permanent dwellings, unrestricted country development, public facilities, and urban centres;
7. **the calculated flow rate of potential H₂S release** from a sour gas well shall be established using the maximum wellhead deliverability that can be attained at any time through the tubing against zero wellhead pressure, and shall be expressed in the unit m³/s at standard conditions;
8. **the calculated volume of potential H₂S release** from a sour gas facility, other than a sour gas well, shall be established using the maximum operating pressure, shall be expressed in the unit m³ at standard conditions, and for the purposes of this calculation shall assume that any automatic block valves close instantaneously upon failure of the facility.

Policy:

For the purpose of the policy, sour gas facilities shall be grouped into levels in accordance with their capability to release sour gas.

1. **A level 1 facility** is a sour gas well with a potential H₂S release rate of 0.3 m³/s or less, or any other sour gas facility with a potential to release 300 m³ of H₂S or less. A new Level 1 facility, other than a sour gas well shall have no separation distance requirement other than that associated with the easement for the right of way. All wells remain subject to Section 2.110 of the Oil and Gas Conservation Regulations which requires a separation distance of 0.1 km. Notwithstanding this clause, the Board may specify some other separation distance for a Level 1 facility should the circumstances warrant such action.
2. **A Level 2 facility** is a sour gas well with a potential H₂S release rate of more than 0.3 m³/s and less than 2.0 m³ /s, or any other sour gas facility with a potential to release more than 300 m³ and less than 2000 m³ of H₂S. A new Level 2 facility shall be situated to provide 0.1 km separation distance between it and any permanent dwelling, and 0.5 km separation distance between it and any urban centre or public facility.
3. **A Level 3 facility** is a sour gas well with a potential H₂S release rate of more than 2.0 m³/s and less than 6.0 m³ /s, or any other sour gas facility with a potential to release more than 2000 m³ and less than 6000 m³ of H₂S. A new Level 3 facility shall be situated to provide 0.1 km separation distance between it and any permanent dwelling, 0.5 km separation distance between it and any unrestricted country development, and 1.5 km separation distance between it and any urban centre or public facility.
4. **A Level 4 facility** is a sour gas well with a potential H₂S release rate of more than 6.0 m³/s, or any other sour gas facility with a potential to release more than 6000 m³ of H₂ S. A new Level 4 facility shall be so situated that as a minimum, it shall meet the

requirements set out for a Level 3 facility. However, the Board may require greater separation distances or set out other such requirements it deems necessary.

5. For ease of reference a summary of the foregoing policy is presented in [Appendix 2](#).
6. The Board recognizes that notwithstanding the level into which an application for a sour gas facility may fall, under some special circumstances a detailed review may indicate that another H₂S release level is more applicable.

APPENDIX 2 TO ID 81-3

SUMMARY OF MINIMUM DISTANCE REQUIREMENTS SEPARATING NEW SOUR GAS FACILITIES FROM RESIDENTIAL AND OTHER DEVELOPMENTS

Potential H₂S Releases

Level of Sour Gas Facility	Sour Gas Well Release Rate m ³ /s	Other Sour Gas Facility Release Volume m ³	Minimum Distance to Various Developments
1	<0.3	<300	<ul style="list-style-type: none"> - Minimum distance for wells 0.1 km as stated in Section 2.110 of the Oil and Gas Conservation Regulations - No minimum distance for other sour gas facilities except that associated with easement for right of way, unless otherwise specified by the Board
2	0.3 - 2.0	300 - 2000	<ul style="list-style-type: none"> - 0.1 km to individual permanent dwellings and unrestricted country development - 0.5 km to urban centre or public facility
3	2.0 - 6.0	2000 - 6000	<ul style="list-style-type: none"> - 0.1 km to individual permanent dwellings up to 8 dwellings per quarter section - 0.5 km to an unrestricted country development
4	>6.0	>6000	<ul style="list-style-type: none"> - 1.5 km to an urban centre or public facility - As specified by the Board, but not less than Level 3.

APPENDIX 3 TO ID 81-3 APPLICATION FOR A WELL LICENCE APPLICATION FOR A PIPELINE PERMIT

Where an application is to be made to the Board for:

- a licence for a well to be drilled into a formation known or expected to contain sour gas, or
- a permit for a pipeline to transport sour gas,
- the applicant, in addition to any other requirement for the licence or permit, shall submit
 1. the calculated flow rate or volume of potential H₂S release as defined in Appendix 1,
 2. the method of calculating the rate or volume and a statement of known and assumed parameters used,
 3. a plan or map showing:
 - 3.1 the location of individual permanent dwellings, unrestricted country development or public facilities within the separation distances set out in Appendix 1, and
 - 3.2 the location of any urban centres within:
 - 1.5 km of a Level 1 facility,
 - 2.0 km of a Level 2 facility,
 - 3.0 km of a Level 3 or 4 facility, and a statement that the applicant has advised the municipal administration of its intent to apply for a licence to drill the well, or
 - 3.3 a statement where appropriate, on the survey plan or elsewhere, that there are no dwellings, unrestricted country development, public facilities, or urban centres within the distances specified in sections 3.1 and 3.2 above.
 4. a list showing names, addresses, and land descriptions of all rural owners and occupants whose property is, in whole or in part, within:
 - 0.1 km of a Level 1 facility,
 - 0.5 km of a Level 2 facility,
 - 1.5 km of a Level 3 or 4 facility,
 5. such other information as the Board may require in the circumstances.

Where an application is to be made to the Board for a licence for a well drilled to a formation known or expected to contain sour gas, the applicant shall submit either:

- a) an application for a permit for a pipeline to transport the sour gas to a processing plant or gathering system, or
- b) a plan showing a proposed or possible pipeline route or alternative routes which would conform with the separation distances set forth in Appendix 1.

Questions with regard to these procedures should be directed to the Board's Development or Pipeline Departments.