

Lack of Alta. 'sour' gas knowledge must be addressed: study

By DARCY HENTON

EDMONTON - Since her family was exposed to hydrogen sulphide gas that leaked from a nearby oilfield facility, Trish Evans has had more questions about the effects than there have been answers.

She worries about the effect the exposure had on her breast milk, on her menstrual cycle and, consequently, on her four children.

Since the incident in 2001, they have all developed extreme sensitivities to diesel fuel and other chemical compounds.

It has forced them to leave their farm, near Rocky Mountain House in central Alberta, and relocate to British Columbia.

Doctors, meanwhile, have not been much help.

"There just wasn't a lot of information available for those doctors on hydrogen sulphide poisoning," said Evans, 32.

"Unless your symptoms were red eyes and laboured breathing, they couldn't connect the dots."

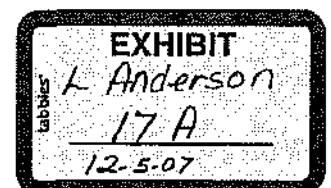
A new study prepared with funding from Alberta Environment suggests there is a lot that even scientists don't know about the toxic effects of sour gas.

The study - an examination of scientific literature, media reports, personal accounts and reports from various institutions and research boards - says closing that knowledge gap should be a priority.

"There are many examples that hydrogen sulphide should be regarded as a broad-spectrum toxicant and that repeated exposure may result in cumulative effects on many organ systems such as brain, lung and heart," says the report, prepared by University of Calgary researchers Sheldon Roth and Verona Goodwin.

"There is evidence that cumulative health effects of repeated low-level hydrogen sulphide exposure exist, which does not support earlier claims that hydrogen sulphide is only an acute intoxicant.

"It still remains a challenge to conclude what levels of exposure to hydrogen sulphide pose a health risk to the general population and to the sensitive individual."



Anderson Exhibit # 17a

The danger posed by low levels of sour gas has been a thorny issue in Alberta for decades, but it is expected to become much more controversial as the province becomes more reliant on its production to finance government programs and fuel the economy.

About 30 per cent of the province's natural gas production is sour and that number is expected to increase over the next decade.

The sweet gas wells - the ones that don't contain hydrogen sulphide gas - are running out, so oil and gas companies are now turning to the sour gas fields, which are more expensive to produce because there is a more stringent approval process and a need for emergency planning.

It has been well established in the oilpatch that in high concentrations sour gas is deadly. But gas producers say low level exposure is not harmful.

Alberta Environment sponsored the recent study but doesn't necessarily agree with everything it says, said spokesman David May.

"This report is not what a scientist would call a critical scientific study," he said. "We know it contains anecdotal information. It cannot withstand scientific attack."

But **Robert Coppock**, a member of the American Board of Toxicology, said he agreed with the finding of the report that there is a need to know more.

He noted there are more than 6,000 chemicals in sour gas, making it much different from pure hydrogen sulphide.

"The logical conclusion is that the interactive toxic effects of the chemicals in sour gas are more than if the animals or person was just exposed to hydrogen sulphide," he said.

Coppock said very little is known about the interactions of hydrogen sulphide with some of these other chemicals, but he noted that carbon sulphide, which has been found in sour gas, is well known for its effects on reproduction and the endocrine system.

Alberta and some other provinces are currently involved in a long-term study of the effects on cattle, but the human component of that study has been shelved.

Anyone travelling in the province is more than likely to encounter the rotten egg smell that has come to symbolize Alberta's prosperity.

Environmentalists say it is folly that the government and industry have

not invested more money into research into the effects of sour gas.

"I find it to be a very sad situation and a scary situation," said Martha Kostuch, a veterinarian from Rocky Mountain House.

"Strange? Perhaps not. I don't think the government or industry in this province want to know the answers to those questions. I think they are scared to find out the answers."

Andrew Nikiforuk, an author and journalist who edits a newsletter called Land Advocate for landowners living with oil and gas production, is even more accusatory.

"The government shut down all funding for hydrogen sulphide research in the province," he said. "For the last decade or so, research on sour gas practically dried up. Most of the key hydrogen sulphide researchers left the province."

He said Alberta was a leader in such research and there is no logical explanation for that to stop.

"Every rural Albertan who lives close to a sour gas facility will tell you there are serious problems and there are serious effects," he said.

May rejected the accusation that Alberta is sitting on its hands on the sour gas issue.

"If the government didn't want to know, they wouldn't be doing the careful work they are doing to establish the data they are working on," he said.

He said the Alberta government, through several departments, is examining the impacts of sour gas and will continue to conduct research into it.

"This study will help us be able to design our own research projects," he said. "That's the value of this particular study."

Alberta's oilpatch regulator, the Energy and Utilities Board, is also working to curtail the release of natural gas - both sweet and sour - from oilfield facilities through processes known as flaring and venting.

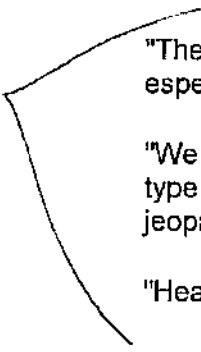
A recent report shows it has cut the levels of those emissions by 44 per cent since 1996. But the EUB said it still has more work to do.

Nikiforuk, who wrote the award-winning book Saboteur about Alberta oilpatch vandal Wiebo Ludwig, said there will be increasing conflict between gas producers and ranchers in the years ahead because many of the sour gas zones are in the foothills where cattle graze.

Already there have been pitched battles between gas producers and acreage owners who have opposed the drilling of sour gas wells outside the cities of Calgary and Edmonton and other communities. One producer has withdrawn a plan to drill for sour gas on the eastern outskirts of Edmonton after residents took up the fight. A confrontation also looms in Calgary.

"You have huge political battles on the horizon," said Nikiforuk.
"Wherever sour gas goes, politics will follow."

Evans contends it is a battle worth fighting.



"The most important thing is that you put your health above all else—especially if children are involved," she said.

"We walked away from a new home, a profitable business, an opulent type of lifestyle because our lives and the lives of our children were in jeopardy.

"Health is something you can't replace."