

Dow says leaks actually stack emissions

by Deborah Richmond

What have been described as 357 "leaks" from Dow Chemical's Fort Saskatchewan vinyl chloride monomer (VCM) plant since its start-up in November, 1979, would be more accurately termed excessive stack emissions, claim company officials.

Dow's superintendent of industrial hygiene and environmental control, Bob Lutz, clarified that a true leak would occur if a gasket or valve in the plant broke or malfunctioned, allowing release of straight VCM. This has happened twice since the plant began operating, he said.

Lutz admitted, however, that Dow had had difficulty meeting the

two parts per million (ppm) VCM standard the province had set for the company's licence. At that standard, the company met the requirements 96.6 per cent of the time, he said. Last August, Dow's standard was revised to 10 ppm, the federal guideline for safety levels of VCM, giving the plant a 99.6 per cent success rate. "The

government has been involved in our problems from day one," said Lutz. "The record shows we have improved a lot."

The "leaks" referred to in recent news stories are described by Lutz as "excursions", which occur when waste gases are not completely burned off in the plant's incinerator and are released to the at-

mosphere through the stack.

A number of waste gases, in varying compositions, are continually fed to the high-temperature combustion chamber, explained Lutz. Because of varying oxygen and other chemical ratios, 100 per cent combustion is not always achieved. In addition, Dow has found that burner materials within the incinerator have not withstood the rigorous service, and gaskets inside the chamber have been known to break.

Air samples are taken manually from the stack every eight hours, said Lutz, and testing occasionally reveals a level of VCM at or above the

plant's licenced standard. The highest recorded level thus far has been 147 ppm, he added.

Dow experts are presently working on the design of a new style of incinerator which will incorporate changes recommended through operating experience, said Lutz. In the meantime, the company continues to take corrective action at the plant. Better monitoring devices on feed streams to the incinerator are necessary, he said, as is better monitoring of the whole system itself. Improved temperature maintenance and harder construction materials would also help, he added.

Fort Record
Page 3
August 5, 1981

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