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HEADLINE: Cancer Outbreak Found at 2 Texas Plants;
Study of 2 Petrochemical Plants Finds Twice the Normal Rate of Brain Cancer

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BODY:

A serious outbreak of brain cancer has been discovered in two Texas petrochemical plants, and federal officials fear they may find a high incidence of brain cancer elsewhere in the huge industry that makes chemicals from oil.

In a probe that started in early 1979, 25 brain-tumor cases -- 24 of them fatal so far -- have been discovered among recent and past workers at a Dow Chemical plant in Freeport, Tex. Eighteen other fatal cases turned up at a Union Carbide plant in Texas City, Tex.

Both plants are in the Houston-Galveston area, which is thickly dotted with plants that make or process petrochemicals. But so far, federal investigators have not been able to pinpoint a guilty chemical -- or, more likely, a group of chemicals or a process -- though there are several under suspicion.

The brain-cancer incidence among workers in the plants in the last 24 years in twice the normal level in the general population, Dr. Richard Waxweiler of the National Institute of Occupational Safety and Health (NIOSH) said yesterday.

All of the victims are men. Few women work in the plants.

Investigators from the two federal agencies involved -- the Labor Department's Occupational Safety and Health Administration (OSHA) and the Department of Health and Human Services' NIOSH -- have not yet been able to look in detail at other plants, though they have started some investigations.

They have reports, they said, of possible concentrations of similar brain cancers in plants at Beaumont and Port Arthur, Tex.; Charleston, W.Va.; Louisville, and San Francisco as well as one in Canada.

"There's no reason to suspect all petrochemical plants," Waxweiler said. But Dr. Victor Alexander of OSHA said there may be "five or six others" at least, and J. William Lloyd, OSHA epidemiologist, said, "There may be any number of chemical plants involved."

Spokesmen for Dow and Union Carbide noted that the results so far are inconclusive. "We see no common thread that would suggest [that] exposure to any particular material or location in the plant" is involved, said James Hansen

for Dow. "There is nothing so far to connect the workplace to the brain cancer."

Damon Engle, manager of Union Carbide's Texas City plant, agreed that the cancer incidence may be higher than the national average but has not yet been proved higher than incidence in the area. "If it is, we're just as anxious as anybody to get to the bottom of it," he said.

When the study began in 1979, researchers suspected that the cause of the cancers might be vinyl chloride, which is associated with the glioblastoma multiforma type of cancer that is the predominant one being found. But some of the victims had no exposure to vinyl chloride, the NIOSH researchers said.

Tony Mazzochi of the Oil, Chemical and Atomic Workers Union said preliminary reports from other studies found higher-than-normal rates of brain and stomach cancers among petrochemical workers along the Texas Gulf Coast, and as a result the union and the National Cancer Institute are studying the entire industry. Eventually 60,000 workers will be checked, he said.

"There is a cancer epidemic among American workers and certainly among the workers we represent," Mazzochi said.

Petrochemicals involve more than 30,000 workers in Texas alone and bring in about $3 billion annually, according to state figures. The Houston Chamber of Commerce reported last year that six of every 10 pounds or gallons of U.s. petrochemical production come from the Texas Gulf Coast. Dow's Freeport plant, which covers 4,500 acres and employes 7,000 persons, is the biggest one there.

OSHA and NIOSH officials are planning a joint conference on the problem, possibly in October, involving government industry and the scientific and medical worlds. The situation "is something we didn't know about before," said Dr. Irving Selikoff of Mount Sinai Medical Center in New York.

He is editor of the American Journal of Industrial Medicine, which will soon publish the first scientific report on the outbreak, written by a group headed by Dr. Alexander of OSHA.

"We just don't know how widespread this problem is," said Sheldon Samuels, AFL-CIO director of occupational health and safety. There has been no industrywide study of it, just as "there is no systematic epidemiology yet of the American worke force," he said.

But he said the fact that Dr. Eulah Bingham, OSHA director, "put together OSHA's first medical and scientific team" meant OSHA had a skilled team to go to the Union Carbide plant early last year and begin to study the brain tumors.

Alexander headed that first investigation, which was triggered by a complaint in late 1978 from a brain cancer victim at Union Carbide.

Ironically, that victim's cancer had spread from another part of his body. So he is not officially considered one of the victims.

But it's important for workers to speak up, Waxweiler said. "If we hadn't heard from that worker," he said. "we wouldn't have known about Union Carbide. We wouldn't have known about Dow or any of it."

Working with Texas doctors and health officials and with Union Carbide -- a company that has been "highly and unusually cooperative," Alexander said -- Alexander found 18 tumors among 9,000 people who had worked at the Texas City plant since 1956, when the first victim died.

He then investigated "a second plant" -- which he would not name -- and found five brain tumor deaths. But two of these people had also worked at Union Carbide.

Statisticians at the famed M.D. Anderson Hospital and Tumor Institute in Houston then combed their computerized Texas death record for lists of brain cancer victims and their work records.

This led the investigators to the Dow plant, the site of 25 tumors among more than 30,000 workers since the early 1960s. Studies now are focusing on company records to determine where the men worked and what chemicals they were exposed to in the vast complex, which makes 200 different products, including antifreeze, chlorine, latex, ethylene, vinyl chloride and other industrial chemical building blocks.

Workers at Union Carbide's plant had jobs "all over the place," Waxweiler said. One of the few common denominators was that 13 of the 18 victims had worked there more than 15 years.

The Texas plant studies, and the studies of workers' backgrounds, are still not complete, federal investigators said.

But "we strongly suspect," said Alexander, that the cause of the tumors may be not a single chemical but "a chemical process" -- exposure to all or some of the many steps that lead to a single chemical product. Or, he said it may be more than one process involving the 300 or so chemicals commonly found in a modern petrochemical factory.

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