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From the Los Angeles Times

Chromium Industry Hid Cancer Risks, Report Says

Researchers charge that businesses skewed data to weaken a proposed federal standard.

By Marla Cone

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As federal regulators are poised to announce a new standard for protecting workers, a team of scientists reported Thursday that the chromium industry and its consulting scientists withheld and skewed data that suggested workers exposed to low levels of chromium were dying from lung cancer.

David Michaels, a professor of environmental and occupational science at George Washington University, and two other researchers detailed what they called an orchestrated campaign by the chromium industry to manipulate scientific data to persuade the Occupational Safety and Health Administration to weaken a proposed workplace standard.

Chromium-producing corporations and metal-finishing companies have opposed stricter limits on workers' exposure to hexavalent chromium since 1976, when OSHA first proposed changes in the regulation. The agency faces a court order to announce its new standard by Tuesday.

About 380,000 U.S. workers are exposed to hexavalent chromium, which is widely used in metal-plating, aerospace production, stainless steel processing and dye manufacture, among other businesses. Chromium is considered one of the most dangerous toxic contaminants in California's air.

Classified as a human carcinogen, hexavalent chromium has been tied to lung cancer for about 50 years. But the debate over the new standard centers on whether low levels now found at modern plants increase workers' cancer rates.

Michaels' report faults the handling of a cancer study at four large chromium production plants in the U.S. and Germany.

"This was a 10-year campaign to shape the science to fit the industry's agenda rather than shape the regulation to fit the science," Michaels, director of the Project on Scientific Knowledge and Public Policy at George Washington University's school of public health, said in an interview Wednesday.

Michaels and the two other researchers, whose report was published in the online journal *Environmental Health*, obtained internal documents through an industry foundation's bankruptcy proceedings that showed the industry representatives were aware in 2002 of an elevated cancer risk reported among workers.

A representative of Elementis Chromium, the world's largest chromium producer, said there was no conspiracy. He said that during the period the study was conducted, the industry was in turmoil — with plants shutting down and changing owners — which led to delays and problems with the data's release.

"I would categorically say there was not an orchestrated effort to hide anything," said Joel Barnhart, vice president of technical issues at Elementis Chromium's plant in Corpus Christi, Texas. "What I can say is that it certainly may have not been handled well."

Kate McMahon, an attorney for the Chrome Coalition, an industry trade group, called the allegations "completely and utterly baseless and absolutely dead wrong."

OSHA officials declined to comment Thursday on the report, saying only that they expected to meet Tuesday's deadline for the chromium standard.

The agency has been reviewing whether to tighten its chromium standard, which was set 35 years ago. A federal appeals court, ruling in a case filed by a union and the Public Citizen Health Research Group, ordered OSHA to act by this year.

The workplace standard is 52 micrograms of chromium per cubic meter of air. In 2004, OSHA proposed 1 microgram. Michaels and others say the agency will probably adopt a standard of 5 micrograms.

Industry groups say the agency's 1-microgram proposal would bankrupt businesses and cost the metal-finishing industry \$380 million annually.

In the mid-1990s, a foundation working for the Chrome Coalition commissioned a study of workers at four production plants, "the results of which confirmed the elevated lung cancer risk," Michaels wrote.

The consultants who conducted the study reported their findings to the industry foundation in 2002. But the industry did not tell OSHA, according to Michaels. "Even when the agency specifically asked for precisely these sorts of data during its 2004-2005 rulemaking proceedings, the chromium industry and the authors remained silent," Michaels' report says.

Then, the industry consultants, employees of ENVIRON, an international environmental consulting firm, rewrote the findings to remove the elevated cancer data, Michaels said. They divided the study into two parts: one with data from the American plants and one with data from the German plants.

Originally, the study of the four plants found increased cancer at low chromium levels. But after the data from the U.S. and German plants were separated, the study at the U.S. plants, which was published in April in a peer-reviewed occupational medicine journal, reported no cancer link, and the German results reported elevated cancer only at high chromium levels.

Michaels said that splitting the workers into two groups disguised the cancer rate, and that industry groups used that misleading data to support their claim to OSHA that a strict standard was unwarranted.

The ENVIRON consultants, in a letter published in a medical journal in October, commended the industry for sponsoring research of its employees and said there was a valid scientific reason for dividing American and German workers: Their exposure was measured differently, monitoring air in the United States and urine in Germany.

But Michaels said data from all four plants needed to be combined to create a study large enough to be statistically sound — something the consultants emphasized in their original proposal. "It's not sound to look at your results and split them because you don't like the results," Michaels said. "The scientifically honest approach is to report the results using the method you said you would use."

The handling of the studies "raise troubling questions about the ability of government to effectively issue rules protecting public health when studies are conducted, controlled and selectively published ... by the regulated industry," Michaels and his co-authors said in their report.

The two U.S. plants, in Texas and North Carolina, are now owned by Elementis, a British company.

Barnhart, of Elementis Chromium, said the study data came at a time of "chaos." The foundation that funded the study, he said, went bankrupt, two German plants shut down and the North Carolina plant was purchased by the British corporation. He said the companies involved did not review the findings and did not tell the

consultants to change or withhold the cancer data.

"There certainly wasn't any conspiracy," Barnhart said. "It was as much ineptitude by me and maybe others who were aware of [the study] but didn't push to get it released in a form that was useful."

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