

arguing that "There is no level of exposure without risk." The proposal is subject to public comment and is expected to take effect in a year. No other country has proposed such a sweeping ban on asbestos.

According to the proposal, EPA would immediately halt the use of asbestos in roofing, floor tiles, cement piping, and clothing, which account for the major portion of asbestos production. Substances such as fiberglass and other synthetic materials can be substituted for asbestos in these products.

Other products, for which there are no asbestos substitutes available or for which manufacturers need more time to retool, would be phased out over 10 years. These products include primarily brake and clutch linings. According to John Moore, assistant administrator at EPA for pesticides and toxic substances, there are reasonable substitutes for asbestos brake and clutch linings in passenger cars, but the industry needs more time to retool. For heavier vehicles and machinery, good substitutes are still being developed.

A ban on asbestos has been controversial within the Reagan Administration. EPA made a similar proposal 2 years ago, but backed off after the Office of Management and Budget (OMB) raised objections and said that two other government agencies should regulate asbestos. Several federal legislators took OMB to task, including John Dingell (D-MI), chairman of the House Energy and Commerce Committee. Thomas said that OMB has now approved the proposed regulation.

Representatives of the asbestos industry



Lee Thomas

EPA administrator says, "There is no level of exposure [to asbestos] without risk."

immediately protested the EPA proposal, saying that their products could be safely used. But Lester Breslow, a professor of public health at the University of California at Los Angeles who chaired a 1982 committee on asbestos and cancer risk at the National Academy of Sciences, said that, in his opinion, "It's appropriate for EPA to take action. It's quite clear that we're exposed to quantities of asbestos in ambient air that are excessive."

Between 1900 and 1980, 30 million tons of asbestos were used in the United States. In 1984 alone, 240,000 tons were used domestically. EPA estimates that exposure to asbestos causes 3,000 to 12,000 cancer cases annually, almost all of which are fatal. About 65,000 people in the United States currently suffer from asbestosis. ■

MARJORIE SUN

Smelter Pollution Provides Chance for Acid Rain Study

A new giant copper smelter in Mexico close to the U.S. border is in the process of starting up. The plant, which is located at Nacozari de García, has no pollution controls in place as yet, much to the dismay of several Western states that are upwind.

Mexico pledged last year to install equipment and says it will do so with revenue generated from the plant. The smelter began testing its equipment in January and is expected to be operating at full capacity in 6 to 8 months.

The United States and Mexico have been negotiating the installation of pollution controls on the plant. Officials at the Environmental Protection Agency report that progress is being made. According to David Howekamp, director of air management at EPA's regional office in San Francisco, Mexico has solicited bids for pollution controls and is expected to award the contract in March. Howekamp said that Mexico has asked the World Bank for financial assistance.

While the start-up of the plant without pollution controls has raised concerns among western states, it also provides a rare opportunity to conduct transport studies of sulfur emissions, according to Michael Oppenheimer, a scientist at the Environmental Defense Fund.

Tracking emissions in the United States is difficult because there are too many sources to monitor on the East Coast. As a result, researchers have been trying to develop computer models to study the fate of emis-

sions. In September, Oppenheimer and colleagues reported in *Science** that smelter emissions from the Southwest were linked to acid rain hundreds of miles away. Oppenheimer asserts that the impending start-up of the Nacozari de García plant offers a chance to confirm his study and to gather a wealth of empirical data to compare with computer models.

Members of the Senate Environment and Public Works Committee have urged EPA to take advantage of the circumstances. In an 18 December letter to EPA administrator Lee Thomas, 12 senators said that this "is an absolutely invaluable opportunity to add enormously to our store of knowledge on the critical questions of transport and transformation of sulfur dioxide."

Howekamp of EPA said, however, that enough monitors are already in place in Arizona to measure emissions. "We don't have anything [additional] planned right now." ■ **MARJORIE SUN**

*M. Oppenheimer, C. B. Epstein, R. E. Yuhnke, *Science* 229, 859 (1985)

Who Should Have Rights to a Patient's Cells?

The commercial promise of biotechnology and an unusual lawsuit are generating continued discussion about the rights of patients and the responsibilities of researchers. The issues were taken up most recently at a meeting on 17 January of leading medical ethicists, lawyers, and researchers that was sponsored by the Office of Technology Assessment.

In 1984, the University of California was sued by a patient, John Moore, who asserts that researchers at the Los Angeles campus took advantage of him by developing a cell line from his tissue without his permission. The case is still in litigation (*Science*, 16 November 1984, p. 813).

In 1982, in another case, a professor at the University of California at San Diego and a postdoctoral fellow there became embroiled over rightful ownership of a cell line developed from tissue derived from the postdoc's mother. After lengthy negotiations, a relatively amicable agreement was reached (*Science*, 22 April 1983, p. 393).

The lawsuit and the San Diego case prompted participants at the OTA meeting to ponder a thicket of ethical and legal issues. By the end of the day, they had raised many questions but reached few conclusions. Participants included LeRoy Walters, a bioethicist at Georgetown University; Pa-