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Metal potentially hazardous

City seeks to reduce cadmium flow in sludge

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Portland city officials are increasing efforts to reduce the flow of a potentially hazardous metal, cadmium, into the city's wastewater treatment systems, according to Harry Edmonds, the city's senior wastewater management engineer.

The amount of cadmium in Portland's sludge has been at the center of controversy over Portland's efforts to barge its sludge up the Columbia River for possible cropland application in Morrow County.

Cadmium can cause kidney problems in humans if it enters the food chain through excessive cropland application. Morrow County residents want assurances that long-term pollution of their land would not occur if they used Portland's sludge as a fertilizer and soil conditioner.

The electroplating industries in Portland have been identified by city engineers as the source of part of the cadmium entering the city's wastewater treatment system, Edmonds said. Other sources are unknown.

"We can account for about 60 percent of the cadmium sources," Edmonds said. "This year we're going to be monitoring several points in the sewer system to try to locate the other sources."

When the industrial sources are located, they will be required to treat their wastes to prevent cadmium and other metals from entering the sewage system, Edmonds said.

Mike Heitzman, official of Columbia American Plating Co., which uses considerable amounts of cadmium in its plating operation, said the company is improving its waste treatment facility because of increasingly strict federal Environmental Protection Agency regulations.

City officials monitor his plant closely to detect metals in the waste, he said.

"The city comes out about once a week to take samples from our sumps, to check for metals," Heitzman said. "We're putting in a new treatment system now. It shouldn't be any problem to make Portland's sludge cleaner."

Portland's sludge averages about 50 parts per million cadmium, while other

Oregon municipal sludges have only 10 parts per million or less.

State Department of Environmental Quality officials, although aware of the potential hazards of cadmium, say that the amount of the metal in the sludge is not as important as the total amounts of the sludge applied to the land.

"Portland's sludge could be put on cropland at rates up to 25 tons per acre before the cadmium limit of two pounds per acre was reached," said Ed Lynd of the DEQ. "Only about 10 tons of sludge per acre is needed to reach the nitrogen requirement of most crops."

The cadmium limit per acre will be lowered by 1987 to a half pound, which is one reason for the city's increasing emphasis on removing cadmium at the industrial site before it enters the sewerage system, Lynd said.

New, stricter federal regulations limiting the amounts of cadmium and other metals in industrial wastes are tough enough to worry the industries' lobbying associations in Washington, D.C.

W. Patric Gregory, membership chairman of the American Hot Dip Gal-

vanizers Association, Inc., in a recent letter to City Galvanizers Co., of Portland, spelled out the anxiety the galvanizing and electroplating industries have about the impending regulations.

"Between 30 percent and 40 percent of the hot dip galvanizers now operating in the United States could be forced out of business with the implementation of effluent waste disposal regulations now being developed by the EPA," the letter said.

The letter continued, "In order to remain viable, every galvanizing operation will be required to make extremely substantial expenditures to conform to regulations."

"Regulations were recently imposed on the membership of (the National Association of Metal Finishers), which is made up primarily of electroplating operations. An hour spent reading about their plight will give you nightmares for months," the letter said.

City Galvanizing Co. is not currently hooked into Portland's sewer system. A company spokesman said its wastes are hauled to the hazardous waste site in Arlington.