ENVIRONMENTAL PROTECTION AGENCY

WATER QUALITY OFFICE
ALASKA OPERATIONS
RM 9, FEDERAL BUILDING
605 FOURTH AVENUE
ANCHORAGE, ALASKA 99501

October 20, 1971

MEMORANDUM

TO: Acting Director, Air & Water Programs Division
Region X, Seattle

THROUGH: Director, Alaska Operations Office
Anchorage, Alaska

FROM: Physical Scientist, Alaska Operations Office

SUBJECT: Mercury in the Kuskokwim River System

Based on a reconnaissance field survey of the Kuskokwim River System and a more detailed study at the Red Devil Mine located on the Kuskokwim River we feel the mercury mining activities in the State of Alaska are having a negligible effect on the receiving watercourses. Activities at the Red Devil Mine, the largest mercury operation in the state, have ceased until the economic picture for mercury improves. Other mercury mines located in the region are small operations with no milling of ore at the site. While these operations have not been inspected it is expected that mercury pollution from these mines would be negligible.

Analyses of samples collected in May at the Red Devil Mine showed very high, levels of arsenic to be present in the effluent from the mill, in groundwater taken from the mine shaft and in a stream draining an adjacent open-pit mine. In addition, background arsenic values in the Kuskokwim River at Red Devil were from three to almost six times greater than the drinking water standards for arsenic. With the high background levels of arsenic in the Kuskokwim River there was no detectable increase in arsenic concentrations from the mining operations.

The Community Health Service of the Alaska Department of Health & Social Services has been conducting and coordinating studies to determine the mercury levels in foods utilized by natives in the Kuskokwim River System and also to determine mercury levels in the natives them-

selves. While these studies are not yet complete, it is our feeling that if there is a high level of mercury in the diets of natives living in the Kuskokwim River System it is most likely to be caused from natural sources of mercury entering into their food chain. The Alaska Operations Office is working closely with the Alaska Department of Health & Social Services which has just completed a sampling program in the Kuskokwim region. Water samples were collected for mercury and arsenic analyses by EPA.

While Alaska Mines & Minerals should be required to provide adequate treatment for wastes from the Red Devil Mine prior to resumption of mining operations, we feel mining is not resulting in any public health problems in the Kuskokwim River System. EPA is involved with the State's program to the extent of analyzing water samples for mercury and arsenic, and we feel a more extensive field survey by EPA is not necessary.

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