ALASKA TOP HAZARDOUS AIR POLLUTANTS

PHOSPHORUS

#7	Non Cancer Endpoint

Reference Concentration (from the California Environmental Protection Agency)

- Phosphorus Compounds - 0.00007 mg/m^3 for reproductive effects - rats.

Inventory Estimates of Phosphorus

Community	Ranking by Mass	Total Emitted (tons per year)*	Top Sources
Anchorage	70 of 71	0.001	power generation
Fairbanks	39 of 58	0.431	power generation
Juneau	50 of 52	0.002	power generation
Total of 3 Communities		0.434	

* The mass emission rates are based on input data that may or may not be accurate. The reader should not consider the inventory accurate to three decimal places (one thousandth of a ton). The use of three decimal places allows us to acknowledge small quantities of pollutants rather than showing the emission rate as zero.

Phosphorus Sources Expected in Alaska

- power generation

Potential Occupational Exposure to Phosphorus

acetyl cellulose production	bronze alloy production	munitions manufacturing
rat poison production	fertilizer production	semiconductor work

Phosphorus Emission Inventory Improvements

- Update emission factors for area source and point source facilities

Phosphorus Health Effects

There is not enough data to ascertain specific effects from specific exposure concentrations. Some studies indicate the following: Short term inhalation of large amounts resulted in lung irritation and coughing in people. In animals, respiratory, liver, and kidney effects have been reported from exposures to phosphorus via inhalation. Chronic, or long-term, poisoning leads to destruction of bones, especially the jaw bone. This is called "phossy jaw" and is usually fatal. The condition also include includes fractures, anemia, and bone loss around the eye, leading to problems seeing.

Cancer ranking: EPA has classified phosphorus as a Group D, not classifiable as to carcinogenicity in humans.