

ALASKA TOP HAZARDOUS AIR POLLUTANTS

ANTIMONY COMPOUNDS

#9	Non Cancer Endpoint
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Reference Concentration

- Antimony Trioxide - 0.0002 mg/m³ for respiratory effects - rats

Inventory Estimates of Antimony Compounds

Community	Ranking by Mass	Total Emitted (tons per year)*	Top Sources
Anchorage	57 of 71	0.031	incineration, military
Fairbanks	51 of 58	0.032	power generation
Juneau**	52 of 52	0.000	n/a
Total of 3 Communities		0.063	

* 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.

**Data indicates negligible emissions

Antimony Compound Sources Expected in Alaska

boats and ships	used oil combustion	airports
hospitals	wastewater facilities	military bases
power generators	mines	incineration

Potential Occupational Exposure to Antimony Compounds

antimony oxide production	lead smelter	rubber manufacturing

iron foundry	glass production	fire retardant for plastics, textiles, rubber, adhesives, pigments, and paper
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Antimony Compound Emission Inventory Improvements

- Update emission factors for used oil combustion
- Update emission factors for area source and point source facilities

Antimony Compound Health Effects

There is not enough data to ascertain specific effects from specific exposure concentrations. Some studies indicate the following: Short term, high concentration exposure leads to skin effects consisting of a condition known as antimony spots; a rash consisting of pustules around sweat and sebaceous glands. Effects on the eye include ocular conjunctivitis. Longer term, lower concentration exposures lead to respiratory effects including lung inflammation, alterations in pulmonary function, chronic bronchitis, chronic emphysema, inactive tuberculosis, and irritation. Hair loss, dry skin, weight loss, damage to heart nerves, liver, and kidneys may also occur.

Cancer ranking: EPA has not classified antimony for carcinogenicity.