



# FACT SHEET

California Environmental Protection Agency



**Air Resources Board**

## NICKEL

### **What Is Nickel?**

Nickel is a silvery metal that is very resistant to corrosion, is highly malleable and has good thermal and electrical conductivity.

### **What Are The Sources Of Nickel Emissions?**

Nickel air emissions are generated by a variety of sources including: thermal spraying; tobacco smoke; electroplating; smelting, incineration; cement manufacturing; motor vehicle exhaust; mining; milling; and oil refining. Nickel also occurs naturally in soils, sea spray, forest fires and vegetation. Nickel is carried in the air, in water and soil by weather, erosion, runoff and water flow. Some of the industries that use nickel are: aerospace; automotive; computers; electronics; machine shops; military; refineries; and power plants.

### **Is Nickel A Toxic Air Contaminant?**

Yes. In June 1991, the Air Resources Board (ARB/Board) published an "*Initial Statement of Reasons for Rulemaking – Proposed Identification of Nickel as a Toxic Air Contaminant*". This report evaluated scientific evidence regarding the presence of nickel in the atmosphere and its potential adverse effects on public health. ARB staff recommended that nickel be identified as a toxic air contaminant (TAC) based on the evidence that nickel is a carcinogen that presents a public health risk. The Board identified nickel as a TAC in 1991.

### **What Are The Possible Health Effects From Exposure To Nickel?**

There are three types of adverse health impacts that can occur as a result of exposure to nickel:

- (1) *Cancer*. Lung and nasal cancer can be caused by inhalation of nickel.
- (2) *Acute*. Health effects such as irritation and allergic sensitization can result from short-term, large dose exposures.
- (3) *Chronic*. Non-cancer health effects. Asthma and other respiratory ailments can result from long-term exposure to nickel.

### **What Is The ARB Doing About Nickel Emissions?**

ARB adopted an airborne toxic control measure for non-ferrous metal melting operations which is expected to reduce emissions of nickel from this process by 99%. From 1990 to 2000, the average ambient nickel concentration in California was reduced by approximately 30%. The ARB's Neighborhood Assessment Program monitors the impacts of nickel emission sources in communities. The data collected assists in developing guidelines for reducing air pollution impacts at the neighborhood scale (for additional information on this program please see our website at <http://www.arb.ca.gov/ch/ch.htm>.)

*For additional information regarding nickel or other toxic air contaminants and ARB's ongoing efforts and activities, please visit our website at <http://www.arb.ca.gov/homepage.htm> .*