

US EPA ARCHIVE DOCUMENT

SCANDIUM

A. Commodity Summary

Although scandium was not mined domestically in 1993, scandium ore was intermittently recovered from tailings and concentrates as needed. By-product scandium concentrates previously produced in Utah and tailings previously generated by mining fluorite in Montana were available for processing to recover high purity scandium oxide. Although four processing companies, two in Colorado, one in Illinois, and one in New Jersey, produced refined scandium products in 1993, no domestic facility recovered scandium from uranium.¹ One company in Iowa had the technology to produce ultra-high purity (99.9999%) scandium oxide. Companies in Arizona, Illinois, and Iowa possessed capacity to produce ingot and distilled scandium metal products. Exhibit 1 presents the names and locations of facilities once involved in the production of scandium.

EXHIBIT 1

SUMMARY OF SCANDIUM FACILITIES

Facility Name	Location	Type of Operation
Baldwin Metals Processing Co.	Phoenix, AZ	Ingot and distilled scandium metal production.
Boulder Scientific Co.	Mead, CO	Refining. Processed scandium concentrates derived from thortveitite-bearing tailings from the mined-out Crystal Mountain fluorite mine near Darby, Montana.
Interpro (subsidiary of Concord Trading Corp.)	Golden, CO	Refining. Processed stocks of scandium concentrates previously generated by the Energy Fuels Nuclear uranium plant at Bingham Canyon, Utah.
Materials Preparation Center	Ames, IA	Scandium Oxide and Ingot Production (research organization).
Rhone Poulenc, Inc.	Phoenix, AZ	Ingot and distilled scandium metal production.
Kenne cott	Garfield, UT	Scandium is available for refining in the form of a byproduct generated during processing of uranium at the copper mine.
Climax Mine	Climax, CO	Scandium is available for refining from the tungsten byproduct generated during the molybdenum operation.
APL Engineered Materials	Urbana, IL	Refining. Ingot and distilled scandium metal production.
Sausville Chemical Co.	Garfield, NJ	Refining. Processed scandium concentrates to produce scandium oxide, fluoride, nitrate, chloride, and acetate.

¹ Personal communication between Jocelyn Spielman, ICF Incorporated and James B. Hedrick, Scandium Specialist, U.S. Bureau of Mines, October 20, 1994.