

Bokan Mountain Mine Talking Points



Bayan Obo Rare Earth Element mine, China

- + **The** rare earth elements (REE) are fifteen elements with atomic numbers 57 through 71, from lanthanum to lutetium (“lanthanides”), plus yttrium (39), which is chemically similar to the lanthanide elements and thus typically included with the rare earth elements.
- + **REE’s** are considered critical to new technologies such as communications, electric cars and for national defense.
- + **China** controls 96% of the world’s production of REE’s and is becoming the largest consumer.
- + **90%** of REE’s are produced as by-products from other mineral mining such as iron and zinc mines.
- + **Bokan** is almost one-third Yttrium, the second most common REE. It is, however, higher in the more desirable heavy REE’s than other domestic deposits.
- + **Historically** Bokan was an open-pit uranium mine.
- + **Japan**, the only country that has been restricted from Chinese exports because of a diplomatic spat, has started a recycling program. It is estimated that there are 300,000 tons of REE’s in Japan’s electronic waste dumps. This is called “Urban Mining.” Germany is also starting a recycling program.
- + **Alternatives** exist for almost all technological uses of REE’s.
- + **REE’s** are very hard to process. Each deposit is chemically unique and requires a custom separation and upgrading process. The Mountain Pass deposit in California requires 34 separate industrial processes to separate the REE’s.
- + **The** U.S. imports 100% of its REE’s, but it also imports 100% of its bauxite (aluminum).
- + **The** 2010 USGS report classifies Bokan Mountain as an unclassified resource. This category is described as “a mixed bag of known resources that are unlikely to be exploited (and deposits)”

where extensive study has found that REE are not economic to recover even as a byproduct. Other deposits in this category have been little explored and the resources are inferred from surface exposures and limited sampling.”



+ **It is** estimated that Bokan Mountain contains 164,000 tones of REE’s compared with 9,700,000 tones at Iron Hill, Colorado. Internationally there are proven deposits of over 2,000,000,000 tons in Brazil and Australia.

+ **Bokan’s** ore is mixed with uranium; it is “uraniferous.” Development could further contaminate the area’s ground and surface water. The amount of Uranium decreases the further away from the main ore body one goes.

+ **April** 2010 the Alaska House passed HR 16 calling for “expedited permitting and production” of HREE’s at Bokan Mountain.

+ **One** vein (dike) being explored at Bokan runs across and presumably under the west arm of Kendrick Bay.

+ **In** June 2010 Lisa Murkowski supported the Rare Earth Supply-Chain Technology and Resource Transformation (RESTART) Act of 2010 (both Senate and House versions) that would reestablish competitive domestic rare earths mineral production, specifically mentioning Bokan Mountain.

+ **This** mine area is drained by Kendrick Creek and borders Kendrick Bay. Kendrick Creek is listed as an important stream for the rearing and spawning of salmon by Alaska Fish and Game. Kendrick Bay is a significant commercial salmon fishery and is also heavily used for subsistence fish and shellfish gathering.

+ **SEACC** has requested that Kendrick Bay be included as an “Impaired Water” for section 303d protection. This will require the State of Alaska to set maximum daily contamination limits for Kendrick Bay to stop further deterioration.