Missouri Coalition for the Environment
EFFECTIVE CITIZEN ACTION SINCE 1969

Impacts of Cobalt Mining

Cobalt is a mineral that is not mined directly from cobalt ores but is a by-product of existing nickel and/or copper mines.

Location in Missouri and Primary Use

Location: SEMO Lead District, Boss Iron-Copper Deposit: Dent and Iron Counties, Pea-Ridge Iron Deposit: Washington County.
Uses: Several commercial, industrial, and military uses. Recent increased demand for batteries for electric vehicles.

MoDNR. Cobalt - PUB2893, Oct. 7, 2020. https://dnr.mo.gov/document-search/cobalt-pub2893/pub2893 .

Internat'l Institute for Env. and Dev., 12/09/2020, https://www.flickr.com/photos/iied/51539146105/.

Health Effects

- When inhaled, cobalt dust can produce an asthma-like allergy leading to an increased propensity for **asthma attacks, chest tightness, lung scarring (fibrosis), and skin rashing.**
- Cobalt is a carcinogen and highly flammable
- Exposure to cobalt is cited as having a damaging impact on the male reproductive system-reducing sperm count
- Cobalt mining consists of **cancer-causing particles** that can lead to "vision problems, vomiting and nausea, heart problems, and Thyroid damage."

Environmental Effects

- Cobalt particles pose serious consequences to ecosystems when accumulated in fruit or plant seeds grown on contaminated soil.
- **Once cobalt enters an environment, it becomes almost impossible to destroy the residue.**
- Cobalt particles from mining activities enter surface water, leading to damaging water quality levels and heightened levels of eutrophication.
- Cobalt mining requires an immense amount of electrical power, further posing environmental consequences.

"Cobalt Mining: The Dark Side of the Renewable Energy Transition," by Aphra Murray, 27 September 2022. Earth.org, https://earth.org/cobalt-mining/.

Sources:

- Missouri Department of Natural Resources. (2020) Cobalt - PUB2893. https://dnr.mo.gov/document-search/cobalt-pub2893/pub2893
- ScienceDirect. (2019). Life Assessment of Cobalt Extraction Process. https://www.sciencedirect.com/science/article/pii/S2300396018301836#
- Pedigo NG, George WJ, Anderson MB. Effects of acute and chronic exposure to cobalt on male reproduction in mice. Reprod Toxicol. 1988;2(1):45-53, https://pubmed.ncbi.nlm.nih.gov/2980401.
- Cobalt Statistics and Information, U.S.G.S., https://www.usgs.gov/centers/national-minerals-information-center/cobalt-statistics-and-information.

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