

From: [Kathleen Everingham](#)
To: [Brown, Don](#)
Subject: [External] Coal Ash Rulemaking public comment
Date: Wednesday, August 19, 2020 2:41:04 PM
Attachments: [Brief History of carcinogenic Hexavalent Chromium Cr.docx](#)

Don,

Andrew Rehn recommended I email my comments to you.

I don't have good enough computer tech-skills to accomplish the hook-up for the online meetings. But I have some information I think is important to consider. I've attached it, plus given a link to an article that relates.

A few years ago while researching coal ash online to educate myself about the pollution the three coal ash pits adjacent to Kickapoo State Park were causing to the Middle Fork River, I stumbled across a **2006** EPRI report (Electric Power Research Institute), Titled "**Characterization of Field Leachates at Coal Combustion Product Management Sites**" **Report #1012578**

One of the leachate pollutants listed in the 2006 report was Hexavalent Chromium Cr(VI) It's the highly toxic cancer-causing carcinogenic element/mineral exposed in the movie "Erin Brockovich." It's a common leachate from coal ash pits and **should be added to the list of water contaminants** that should be required to be analyzed and should trigger *corrective action* if or when it measures at a dangerous ppb level (parts per billion). I haven't viewed the appendix, but I understand Boron has been put forward as an addition that should trigger corrective action too.

The EPA or IDNR needs to establish a groundwater protection "standard" for Hexavalent Chromium Cr(VI)

California is currently striving for .02 ppb (parts per billion.)

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EPA's Blind Spot: Hexavalent Chromium

<https://earthjustice.org/sites/default/files/CoalAshChromeReport.pdf>

As of 2012, "no federal or state laws restrict Hexavalent Chromium Cr(VI) presence in drinking water," according to the Natural Resources Defense Council (NRDC).

Previous analyses of Middle Fork water (by mining companies and IL Dept of Natural Resources) did NOT include hexavalent chromium Cr(VI) *because* it was lumped into "total chromium" which was defined as an **Inhaled** Contaminant. Since "Chromium" was *not* defined as an "INGESTED" contaminant, the IDNR and EPA were not required to test for it in water. **Miscategorized**, this nasty carcinogen has been hiding in plain sight – in the water– with no one required to test for it.

All Middle Fork water tests need to include analyses of levels of Hexavalent Chromium Cr(VI).

The current EPA standard in measuring chromium, is in reference to "*total chromium*", both trivalent and hexavalent. Often trivalent and hexavalent chromium are mentioned together, but in fact they are very different from each other. This is an issue because **hexavalent chromium is carcinogenic** and can cause cancer, whereas trivalent chromium is not and does not.

Before the EPA can adjust the policy on chromium levels in drinking water, they have to release a final human health assessment.

The first study the EPA mentioned that is under review is a 2008 study conducted by the Department of Health and Human Services National Toxicology Program. This study looks at chronic oral exposure of hexavalent chromium in rats, and its association with cancer. The other study mentioned is a human health assessment of chromium, titled Toxicological Review of Hexavalent Chromium. The final human health assessment is currently in the stage of draft development. This stage is the first of seven. The EPA gives no forecast to when the review will be finalized and if a decision will be made.

Since World War II the U.S. Army relied on hexavalent chromium compounds to protect its vehicles, equipment, aviation and missile systems from corrosion. The wash primer was sprayed as a pretreatment and protective layer on bare metal. From 2012–2015, Army Research Laboratory (ARL) conducted research on a wash primer replacement, as a part of the Dept of Defense's (DoD) effort to eliminate the use of toxic wash primers in the military. Studies indicated that the wash primers contained hazardous air pollutants and high levels of volatile organic compounds. The project resulted in ARL qualifying three wash primer alternatives in 2015 for use on Army depots, installations and repair facilities. The DoD research led to the removal of chromate products from Army facilities in 2017. ARL's researchers won the fiscal 2016 Secretary of the *Army Award for Environmental Excellence* in Weapon System Acquisition for their efforts on the wash primer replacement.

Currently the EPA limits "total chromium" in drinking water to 100 ppb (parts per billion) but **no limit has been established specifically for chromium(VI).**

In 2009 the [Office of Environmental Health Hazard Assessment](#) (OEHHA) of the California EPA, proposed a health goal of 0.06 ppb of chromium(VI) in drinking water. Currently California is striving for .02 ppb.

BELOW, an excerpt from The 2006 Electric Power Research Institute, Characterization of Field Leachates at Coal Combustion Product Management Sites, EPRI Report #1012578:

Name & Location of Coal Ash disposal site	Type of Dump Site	Level of Chromium (Highest level reported)	Level exceeds California Drinking Water Goal for Cr(IV) (hexavalent chromium)	above Federal Drinking Water Standard for <i>total chromium</i> 100ppb
6. Rocky Acres/Grays Siding Coal Combustion Byproduct Landfill Oakwood, Illinois	Unlined Fill	Above 100 ppb	Over 5,000 times higher	Above standard, but degree unknown

The public drinking supply of Oakwood comes from the Salt Fork River. It was already contaminated by 2006.