From: Buteyn, Douglas J (DEC)
To: Lyons, Ellen H CIV USARMY CEPOA (US)
Subject: [Non-DoD Source] RE: WQ sampling
Date: Wednesday, July 12, 2017 2:46:16 PM

Ellen:

We don't have a fixed set of components as yet but, since the only constituents of concern in coal ash are metals, that is all you need to test for. The EPA did a risk assessment in support of the federal coal ash disposal regulations and summarized its findings as follows:

> "Risks to ecological receptors were identified from exposures to aluminum, arsenic, barium, beryllium, boron, cadmium, chloride, chromium, selenium and vanadium through direct exposure to impoundment wastewater. Risks to residential receptors were identified primarily from exposures to arsenic and molybdenum in ground water used as a source of drinking water, but additional risks from boron, cadmium, cobalt, fluoride, mercury and thallium were identified for specific subsets of national disposal practices."

In keeping with that, those regulations require groundwater monitoring for some or all of the following at different stages of the monitoring program: antimony, arsenic, barium, beryllium, boron, cadmium, calcium chloride, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, radium (226 and 228 combined), and sulfate. The only non-metal components of the monitoring program are pH and total dissolved solids.

Much of that list is comprised of metals that are only included when there's a known impact to groundwater. Initially, sampling is required for only boron, calcium, chloride, fluoride, and sulfate (plus pH and TDS). To be a little more comprehensive, you might want to test for the eight RCRA metals: arsenic, barium cadmium, chromium, lead, mercury, selenium, and silver.

I hope this is the information you wanted; if not, let me know.

Doug Buteyn
ADEC Solid Waste Program

-----Original Message-----
From: Lyons, Ellen H CIV USARMY CEPOA (US) [mailto:Ellen.H.Lyons@usace.army.mil]
Sent: Wednesday, July 12, 2017 2:26 PM
To: Buteyn, Douglas J (DEC) <doug.buteyn@alaska.gov>
Subject: WQ sampling

Doug, I know you have provided this information to me before (again I blame the great computer crash of 2017), but I was wondering what consituents you recommend to be tested for when water may have been impacted by coal ash. Also, any particular type of test?

Thank you!

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