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Crandall Canyon- Residual Polymer Testing of Mine Effluent

Steve Christensen <stevechristensen@utah.gov> Thu, Dec 4, 2014 at 5:28 PM
To: "Odendahl, Karin" <kodendahl@coalsource.com>
Cc: Jay Marshall <jmarshall@coalsource.com>, Amanda Daniels <amandadaniels@utah.gov>, OGMCOAL DNR <ogmcoal@utah.gov>

Hi Karin,

After speaking with Amanda earlier, I thought I'd write you and give some background/context on this residual polymer testing business.

There was much consternation about the polyacrylamide (floc) when the treatment system was being constructed. We had a lot of meetings. I learned that NSF 60 (see link below) is a standard that sets health effect criteria for water treatment chemicals relative to drinking water supplies. In the case of Crandall, Huntington Creek is considered a potential drinking water supply.

The flocculent used at Crandall is a polyacrylamide, a "known neurotoxin". Nalco 7763 has an NSF certification that identifies a "*maximum product application dosage*" of 1 mg/L (See page 8 of 10 on the MSDS Sheet for the product in Appendix 7-65 of the Crandall MRP).

To get over the hurdle of using this product during the meetings/talks with the Forest and others, it was agreed that a residual polymer test would be required every month if the product was injected above the NSF 60 level (i.e. above 1 mg/L). Based on the residual polymer testing that's done every month, the company would be demonstrating that elevated dosage rates are acceptable (i.e. less than 1 mg/L is leaving the treatment basin).

There's more information about it in Appendix 7-65 under the INSTALLATION OF CHEMICAL INJECTION SYSTEM section. I'd give you the page number, but there isn't one.

Bottom line, if you're injecting the flocculent above 1 mg/L, monthly residual polymer tests are required. You can send the results in with the other monthly mine-water data.

Hopefully that all made sense. If you have questions, feel free to call me.

Regards,
Steve

http://www.nsf.org/services/by-industry/water-wastewater/water-treatment-chemicals/nsf-ansi-standard-60/

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