Posting type: Historical – applies to Zn downloads before May 2015

Subject: Temporary contamination of Columbia River A-module samples

Module/Species: A/ Zn, MF

Sites: CORI

Period: 5 November 2011 – 14 July 2012

Recommendation: Exclude Zn from analysis and consider possible impacts on MF

Submitters: Warren White (whwhite@ucdavis.edu), Nicole Hyslop (nmhyslop@ucdavis.edu), Jose Mojica (jwmojica@ucdavis.edu)

Supporting information

During annual or biannual site maintenance, each stack that carries air from an outside inlet to a sampler module is temporarily displaced to permit inspection and cleaning. The 5 November 2011 visit to the CORI sampling shed found that caulk had been used to seal around the stacks where they passed through holes in the roof. Samples in subsequent months exhibited high zinc levels, corresponding to air concentrations reaching 1 ug/m$^3$ Zn. The anomalous Zn may reflect contamination by debris dislodged from the caulk during maintenance, and disappeared after follow-up maintenance early the next summer. No other measured species were identified as affected, but the total contaminant mass likely included additional contributions from oxygen and other unmeasured elements.