Acrylamide and Epichlorohydrin Certification Form

PWS ID # **Reporting Period/Year**

Public Water System (PWS) Name

Treatment Plant Name

Date (form was filled out)

Name of person submitting form

Phone Number **Email**

Signature

"I certify that a polymer { ☐ was ☐ was not} used for the treatment of drinking water during the reporting period."

If a polymer was used, there may have been free acrylamide or epichlorohydrin monomers present. According to IDAPA 58.01.08.451 that incorporates 40 CFR 141.111, Idaho public water systems using polymers must certify in writing to the Idaho Department of Environmental Quality that the dose and monomer level does not exceed: 0.05% of free acrylamide dosed at 1 ppm and 0.01% of free epichlorohydrin dosed at 20 ppm.

"I certify that the product identification, listing, and maximum dosages applied during the reporting period were as follows."

Name of Polymer

Manufacturer

Certification organization listing this product in compliance with ANSI/NSF Standard 60 (check one).

☐ **NSF** ☐ **UL** ☐ **Other (Name)** ☐ **None**

Allowable maximum use level in product listing (ppm)

Actual maximum dosage applied at plant during reporting period (ppm)

Complete one form for each polymer used and submit certification within 10 days following the end of the reporting period (usually January 10). Locate your compliance officer contact details at Drinking Water Compliance Officer Lookup.

Acrylamide (A) and epichlorohydrin (E) are monomers (long-chained molecules) commonly used to create polymers. These polymers are normally used in water treatment for flocculation and in some cases coagulation. Not all flocculants or coagulants will contain A or E.

When creating the polymers, a certain percentage of the monomer is not combined and is called free or residual acrylamides or epichlorohydrin. These monomers are very small and can commonly pass through various filtration processes. A and E are classified as probable carcinogens. Currently, no acceptable testing methods can detect A or E in finished drinking water. As a result, the United States Environmental Protection Agency did not develop a maximum contaminant level but created a treatment technique requirement. Controls are set up through manufacturer requirements, and the highest allowable dosage of product in water is delineated.

Polymer manufacturers are required to have no more than 0.05% acrylamide monomers and 0.01% epichlorohydrin monomers in their final product. NSF certification supports these percentages. Manufacturers are required to supply public water systems (PWSs) with the monomer levels, along with the maximum allowed dosage.

If you are having difficulty locating the percent monomer or allowable dosage in the manufacturer's technical data sheets, and the product is certified ANSI/NSF Standard 60, the levels will not exceed the following:

- Acrylamide = 0.05% free/residual monomer; dosage no more than 1 ppm
- Epichlorohydrin = 0.01% free/residual monomer; dosage no more than 20 ppm

If the manufacturer can certify the percent monomer is less than the above levels, the dosage can be adjusted to ensure the monomer levels would not exceed 0.0005 ppm of acrylamide or 0.002 ppm of epichlorohydrin in the finished water.

A violation with public notice requirements should be issued under these circumstances:

- A PWS that uses polymers in flocculation/coagulation processes does not send in an annual certificate detailing the polymer(s) used.
- The polymer(s) used are not certified as ANSI/NSF Standard 60.
- The actual maximum dose applied in the plant during the reporting period exceeds the allowable maximum dose in the manufacturer's product listing.

A and E violations are Tier 2 public notice requirements. Under this requirement, the PWS must provide public notice as soon as practicable, but no later than 30 days after the system learns of the violation. The standard health language for acrylamide is "Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood and may have an increased risk of cancer." The standard health language for epichlorohydrin is "Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems and may have an increased risk of cancer."