

NATURALLY OCCURRING RADIOACTIVE MATERIALS (NORM) IN FLOWBACK AND PRODUCED WATER

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As unconventional drilling has emerged as a major industry in the U.S. and around the world, numerous environmental health and pollution risks have surfaced. One emerging concern is the risk of environmental contamination arising from flowback and produced water that contains naturally-occurring radioactive materials (NORM). In order to confront these concerns, recent enacted state regulations require flowback and produced water generated from these drilling techniques to be tested for radionuclides.

Predominantly, Environmental Protection Agency (EPA) testing methods have been used to quantify the activity of Radium-226 and Radium-228. One issue that has arisen with implementing these methods is matrix interferences associated with flowback and produced water. For example, sample matrices with a high concentration of ions often need to be diluted from the method recommended volume. However, these methods allow little-to-no direction to account for matrix interference associated with flowback and produced water.

This presentation will cover NORMs, highlight new challenges associated with flowback and produced water, and offer possible alternatives to current analytical method analysis.

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