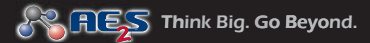


The Update

September 2009



Reevaluating Perchlorate

The US Environmental Protection Agency (USEPA) is reevaluating its decision not to regulate perchlorate in drinking water. Perchlorate is both a naturally occurring and a man-made chemical. It is used in the production of fireworks, flares, and rocket fuel. There is a current Interim Drinking Water Health Advisory level of 15 micrograms per liter ($\mu\text{g/l}$) for perchlorate. On August 19th, 2009, the USEPA released a Supplemental Request for Comments in the Federal Register seeking additional ways to analyze data related to the regulatory determination of perchlorate.

The new evaluation will focus on the impact to more sensitive populations, particularly infants and children. This step will take into consideration that infants and children consume more water per body weight than adults. The USEPA will take into consideration a broader range of alternatives for interpreting the available data on the level of health concern, the frequency of occurrence of perchlorate in drinking water, and the opportunity for health risk reduction through a national primary drinking water standard. These alternative interpretations may impact the agency's final regulatory determination for perchlorate. The USEPA will consider comments received in response to the 2008 determination not to regulate perchlorate, as well as those received during the 30-day comment period under the current notice.

For more information on commenting on this topic, please visit <http://www.epa.gov/safewater/contaminants/unregulated/perchlorate.html> or contact AE2S. ■

With the growing concern of global climate change being linked to carbon dioxide (CO_2) emissions, more research is being done on carbon capture and storage (CCS) technologies. One of the solutions being evaluated is Geological Sequestration (GS), which involves injecting CO_2 into underground reservoirs that have the ability to securely contain it. Current research focuses on five types of geological formations: oil and gas reservoirs, deep saline formations, unmineable

Geological Sequestration

coal seams, oil-rich and gas-rich organic shales, and basalts. In many cases, injection of CO_2 into a geological formation can enhance the recovery of hydrocarbons, providing value-added by-products that can offset the cost of CO_2 capture and sequestration.

A well-established regulatory program to protect underground sources of drinking water (USDW) already exists under the Safe Drinking Water Act (SDWA). The USEPA currently regulates the underground injection of such things as industrial wastewater and hazardous waste. The United States has abundant sources of underground formations for such injections. Certain properties of CO_2 , however, present specific challenges with respect to underground injection. Issues unique to the underground injection of CO_2 include CO_2 's buoyancy and its potential mobility in geological formations, potential impurities in captured CO_2 , its corrosivity in water, and the large volumes of CO_2 that potentially may be required to be captured and sequestered underground.

On July 15, 2008, the USEPA proposed a regulation under the SDWA governing carbon sequestration. The proposed regulation establishes a new class of Underground Injection Control (UIC) wells (Class VI) for carbon sequestration. The proposed rule also provides procedures for states that desire to obtain primacy over the Class VI UIC wells in their states and establishes technical criteria for: geologic site characterization; area of review and corrective action; well construction and operation; mechanical integrity testing and monitoring; well plugging; post-injection site care; and site closure for the purposes of protecting USDW. The proposed regulation's comment period ended in December of 2008; however, the USEPA received comments, data, and additional information that warrants supplemental information prior to the finalization of the GS regulation.

On August 24th, 2009, the USEPA released the supplemental information through a Notice of Data Availability (NODA) regarding the proposed requirements for GS. This supplemental information includes:

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Airport Deicing Effluent

The USEPA is proposing technology-based effluent standards for discharges from airport deicing operations. The requirements would generally apply to wastewater associated with the deicing of aircraft and airfield pavement at primary commercial airports. Airports that conduct aircraft deicing operations, have 1,000 or more annual jet departures, and 10,000 or more total annual departures, would be required to collect used aircraft deicing fluid and treat the wastewater. The wastewater may either be treated on-site or sent to an off-site treatment contractor or publicly owned treatment works. As a result of the regulation, some airports could be required to reduce the amount of ammonia discharged from urea-based airfield pavement deicers or use more environmentally-friendly airfield deicers that do not contain urea.

The notice has been signed by the USEPA Administrator and has been submitted for publication in the Federal Register. The pre-publication version can be found at <http://www.epa.gov/guide/airport/>, and the official ruling will be out soon. For more information on this topics please visit the website above or contact AE2S. ■

(Geological Sequestration from first page)

- New data and research received from the Department of Energy's (DOE) National Energy Technology Laboratory and Lawrence Berkeley National Laboratory concerning both GS projects and modeling to predict the potential impacts on ground water from GS activities.
- Injection depth for GS wells and a discussion of a waiver process to address comments about the proposed regulation's requirement that Class VI wells inject below the lowermost USDW.

The NODA is for informational purposes and does not require any facilities to capture, sequester, or otherwise comply with requirements related to GS. Owners and operators, states, tribes, and state and tribal co-regulators involved in GS activities may wish to comment on this publication. Additionally, individuals interested in the two primary subject areas of the NODA may wish to review and comment. The Agency is seeking comments on the supplemental NODA for 45 days and does not anticipate extending the length of the comment period.

For more information on this topic, please visit http://www.epa.gov/OGWDW/uic/wells_sequestration.html or contact AE2S. ■

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