



CLASS V UIC STUDY FACT SHEET NONCONTACT COOLING WATER WELLS

What is a noncontact cooling water well?

Noncontact cooling water wells are Class V underground injection control (UIC) wells that are used to inject noncontact cooling water that contains no additives and has not been chemically altered. Wells that inject contact cooling water or noncontact cooling water that contains additives (e.g., corrosion inhibitors, biocides) or is contaminated compared to the original source water are considered “industrial wells.”

What types of fluids are injected into noncontact cooling water wells?

Only noncontact cooling water that contains no additives and has not been chemically altered. Noncontact cooling water is water used in a cooling system designed to maintain constant separation of the water with process chemicals.

Do injectate constituents exceed drinking water standards at the point of injection?

No sampling data are available. Thus, at this time, it is not possible to characterize the quality of fluids injected into noncontact cooling water wells. However, given the very narrow way that such wells and noncontact cooling water are defined, it is reasonable to expect that the quality of the fluids will not threaten underground sources of drinking water.

What are the characteristics of the injection zone of a noncontact cooling water well?

Available information suggests that these wells are commonly used in situations in which cooling water is withdrawn from an aquifer and then injected back into the same formation.

Are there any contamination incidents associated with noncontact cooling water wells?

No contamination incidents associated with noncontact cooling water wells have been reported. The only scenario in which noncontact cooling water wells could be contaminated would involve pipe leaks that allow process chemicals or other contaminants to commingle with the cooling water.

Are noncontact cooling water wells vulnerable to spills or illicit discharges?

Spills or illicit discharges into noncontact cooling water wells appear extremely unlikely, since noncontact cooling water systems are operated as closed systems that are virtually inaccessible for “midnight dumping.” No incidents of this or any other kind have been reported.

How many noncontact cooling water wells exist in the United States?

EPA estimates that there are 7,780 noncontact cooling water wells in the United States. However, it was not possible to distinguish noncontact cooling water wells from other kinds of commercial or industrial wells in the survey. Therefore, the estimated number of noncontact cooling water wells includes some carwash wells, laundromat wells, and food processing waste disposal wells (i.e., the true number of noncontact cooling water wells is smaller).

Where are noncontact cooling water wells located within the United States?

Noncontact cooling water wells may exist in as many as 22 states, although most appear to be concentrated in AK (212), WA (3,900), and TN (1,000). Ninety-eight percent of the documented and estimated noncontact cooling water wells in the United States are found in ten states: OH, NY, WV, AL, TN, IA, MT, CA, AK, and WA.

How are noncontact cooling water wells regulated in states with the largest number of this type of well?

Permit by rule: TN, WV, OH, IA, MT, CA

Individual permit: AK, WA (existing), AL, NY

Ban: WA (new)

Where can I obtain additional information on noncontact cooling water wells?

For general information, contact the Safe Drinking Water Hotline, toll-free 800-426-4791. The Safe Drinking Water Hotline is open Monday through Friday, excluding federal holidays, from 9:00 a.m. to 5:30 p.m. Eastern Standard Time. For technical inquiries, contact Amber Moreen, Underground Injection Control Program, Office of Ground Water and Drinking Water (mail code 4606), EPA, 401 M Street, SW, Washington, D.C., 20460. Phone: 202-260-4891. E-mail: moreen.amber@epa.gov. The complete Class V UIC Study (EPA/816-R-99-014, September 1999), which includes a volume addressing noncontact cooling water wells (Volume 22), can be found at <http://www.epa.gov/OGWDW/uic/cl5study.html>.
