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EPA, Army Fight At Texas Site Tests 'Applicable' Perchlorate Cleanup Levels

The Army and EPA Region VI are battling over whether a state-promulgated standard in Texas or an EPA federal advisory level should govern the cleanup of perchlorate at a former Army ammunition plant in a potentially precedent setting decision over when federal or state regulatory standards should be applied at cleanup sites.

EPA and the Army have been in formal dispute at the Longhorn Army Ammunition Plant (LHAAP) near Caddo Lake in Karnack, TX, for several months over whether to use a Texas state perchlorate cleanup target, which is set at a level close to EPA's original health advisory of 24.5 parts per billion (ppb), or EPA's newer and stricter health advisory level of 15 ppb, when setting cleanup requirements in draft records of decision (RODs) expected to govern parts of the remedy at the site, according to sources.

The two agencies are also in dispute over EPA's plan to impose penalties during the dispute due to the Army's failure to incorporate changes EPA has sought in three draft RODs, according to one informed source.

Texas regulators have told the LHAAP restoration advisory board (RAB) that the remedies selected in the RODs are protective but that the "dispute issues are a matter of policy," according to RAB minutes from a meeting held last April.

The dispute is now at the level of the EPA Region VI administrator and the Army's deputy assistant secretary for environment, safety and occupational health, with Region VI Administrator Ron Curry expected to make the next move issuing a letter on his position on the perchlorate and stipulated penalties matters, according to the informed source.

An EPA Region VI spokesman says the agency is "hopeful to have a settlement in principal in the near future" in which the two sides can proceed. The spokesman says the two sides are close on a cleanup level for groundwater at the site, but did not give specifics.

If the issue, however, does not get resolved at that level, it will move up to the last tier of the dispute, where ultimately EPA Administrator Lisa Jackson will have the final say after discussing the issues with Army Assistant Secretary for Installations, Energy & Environment Katherine Hammack.

At issue are what applicable or relevant and appropriate requirements (ARARs), including state, federal and other "applicable" standards and cleanup levels, should apply at the site with regard to perchlorate.

Under Superfund law, ARARs are one of two threshold requirements that all cleanups must meet, though EPA's policy generally leaves regulators with significant discretion to identify ARARs on a site-specific basis.

Section 121(d) of Comprehensive Environmental Response, Compensation & Liability Act (CERCLA) requires cleanup remedies to meet federal environmental standards set under a variety of laws and to meet any state environmental standards that are more stringent if they are determined to be "legally applicable to the hazardous substance" at the site or "relevant and appropriate under the circumstances of the release" of the substance.

Under CERCLA, these state requirements must have been officially promulgated -- which means legally enforceable and generally applicable -- according to a 2007 Bureau of Land Management paper on ARARs. The National Contingency Plan, Superfund's regulatory blueprint, lists three types of ARARs: chemical-specific requirements that define acceptable exposure concentrations or water quality standards, location-specific requirements that may restrict remediation activities at sensitive locations and action-specific requirements that may control activities and technology.

Selecting Cleanup ARARs

But selecting ARARs for this cleanup is proving difficult in part because EPA has been struggling to craft an enforceable drinking water standard -- known as a maximum contaminant level (MCL) -- for the chemical under the Safe Drinking Water Act (SDWA) due to difficulties in determining the substances' risks and whether drinking water standards provide a suitable vehicle to reduce risks.

Ingestion of the chemical inhibits the normal human uptake of iodine. If the inhibition is extended and sufficiently severe, it can lead to changes in regular thyroid function, which can result in conditions such as hypothyroxinemia and developmental effects in fetuses and young children.

But drinking water utility officials say that due to uncertainties in calculating the risks, a better approach than crafting an MCL would be for policymakers to bolster iodine levels in pregnant women and children to ameliorate potential concerns.

In 2006, EPA set a non-binding preliminary remediation goal of 24.5 ppb but in 2009 set a health advisory level of 15 ppb. A memorandum from EPA's waste office [adopting the new limit](#) said it would be used by the agency "when making CERCLA site-specific cleanup decisions where there is an actual or potential drinking water exposure pathway."

Following EPA's issuance of its 24.5 ppb health advisory level, Texas embraced the level as its own standard, the informed source says. According to a Texas guidance document, the state established a human health screening level of 22 micrograms per liter for perchlorate. While not an MCL, the number is one the state uses to review both surface water and finished drinking water when assessing contamination for public water supply use, the document says. Texas' stance is unique among states, which have generally set their standards at more stringent levels than EPA's health advisory. For instance, California has set an MCL of 6 ppb.

In [a similar dispute](#) in California last year, the Air Force sought, but later dropped, a push to favor EPA risk values -- even when they are less conservative than state values -- when selecting cleanup levels in California at Edwards Air Force Base, an aircraft research and development

facility that has extensive perchlorate and industrial solvent groundwater contamination. Now the Army is seeking to use Texas' standard in its RODs, believing that trumps the EPA health advisory number as an ARAR.

But EPA says the state's less stringent level is inadequate and instead 15 ppb should be met, according to the informed source.

The informed source says that typically, when ARARs are considered, there is a hierarchy as to which types of regulations are considered for application at a site. Federally promulgated standards such as MCLs are considered highest priority, followed by state promulgated standards, federal health advisory levels and state health advisories, the source says.

It is unclear whether the hierarchy is written into any policies, but EPA guidance says that the determination of whether a requirement is "relevant and appropriate" for a site is whether "another requirement exists that more fully matches the circumstances at the site."

"For example, Federal Water Quality Criteria generally will not be relevant and appropriate and, therefore, not [an] ARAR when there is an applicable State Water Quality Standard promulgated specifically for the pollutant and water body, which therefore 'more fully matches' the situation," says the guidance, which is from 1991 but is listed as a current guidance on EPA's website.

Stipulated Penalties

The second issue in dispute at Longhorn that has broader repercussions is over stipulated penalties EPA is assessing against the Army during the course of the dispute due to the Army's decision not to modify the RODs to reflect the changes EPA has sought. While EPA suspended the penalties for a portion of that time, it reportedly lifted that suspension, and it is unclear how much of a fine has accrued. According to the RAB minutes, the penalty is \$5,000 per violation for the first week and \$10,000 per violation each week thereafter.

There were several other issues debated under the dispute resolution process, including how to manage land use controls and whether munitions should be treated as principal threat waste, but the parties have agreed on how to resolve those issues, the informed source says.