UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN - 8 2009

MEMORANDUM

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

SUBJECT: Revised Assessment Guidance for Perchlorate

FROM: Susan Parker Bodine
Assistant Administrator

TO: Regional Administrators

On January 26, 2006, guidance was issued regarding perchlorate and the cleanup of sites under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Contingency Plan (National Contingency Plan (NCP)), 40 CFR Part 300; the January 2006 guidance recommended that Regions use a preliminary remediation goal (PRG) for perchlorate of 24.5 parts per billion (ppb or micrograms per liter [µg/L]) in water when making site-specific cleanup decisions.[1] The PRG was defined as a Drinking Water Equivalent Level based on EPA's reference dose (RfD) of 0.7 micrograms per kilogram body weight per day (µg/kg-day**)**; the RfD remains an appropriate "to be considered" (TBC) value in accordance with the NCP. However, since the NCP provides that "preliminary remediation goals should be modified, as necessary, as more information becomes available during the RI/FS (remedial investigation/feasibility study)," the January 2006 guidance also made clear that the PRG at any site should be evaluated on a case-by-case basis, and modified accordingly, based on site-specific information, including actual and potential exposure routes, including contributions from non-water sources.

The Agency has now issued an Interim Drinking Water Health Advisory (Interim Health Advisory) for exposure to perchlorate of 15 µg/L in water, a copy of which can be obtained at http://www.epa.gov/safewater/contaminants/unregulated/perchlorate.html. (A health advisory provides technical guidance to federal, state, and other public health officials on health effects, analytical methods and treatment technologies associated with drinking water contamination.) The Interim Health Advisory for perchlorate was developed using EPA's RfD and representative body weight, as well as 90th percentile drinking water and national food exposure data for pregnant women in order to protect the most sensitive population identified by the National Research Council (NRC) (i.e., the fetuses of pregnant women who might have hypothyroidism or iodide deficiency). See "Health Implications of Perchlorate Ingestion."[2] The interim health advisory level of

[1] PRGs are specific statements of desired endpoint concentrations of risk levels (55 FR 8713, March 8, 1990) that are conservative, default endpoint concentrations used in screening and initial development of remedial alternatives before consideration of information from site-specific risk assessments.

[2] NRC 2005. Health Implications of Perchlorate Ingestion, National Research Council of the National Academy of Sciences, National Academies Press, Washington D.C.

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15 ug/L is thus different from the earlier DWEL of 24.5 ug/L in that it incorporates exposure from food. Infants and developing children were also identified as sensitive sub-populations by the NRC. Therefore, the Agency also evaluated these other sub-populations and concluded that the Interim Health Advisory of 15 µg/L derived for pregnant women is also an appropriate interim Health Advisory for these other sub-populations.

The NCP (40 CFR 300.430(e)(2)(A)(1)) provides that when establishing acceptable exposure levels for use as remediation goals, consideration must be given to concentration levels to which the human population, including sensitive subgroups, may be exposed without adverse effects over a lifetime or part of a lifetime, incorporating an adequate margin of safety. As a result of the publication of the Interim Health Advisory for perchlorate, I am formally withdrawing the January 26, 2006 guidance recommending a PRG of 24.5 ppb for perchlorate. In its place, this memorandum now recommends that where no federal or state applicable or relevant and appropriate (ARAR) requirements exist under federal or state laws, 15 µg/L (or 15 ppb) is recommended as the PRG for perchlorate when making CERCLA site-specific cleanup decisions where there is an actual or potential drinking water exposure pathway. However, where State regulations qualify as ARARs for perchlorate, the remediation goals established shall be developed considering the State regulations that qualify as ARARs, as well as other factors cited in the NCP (see 40 CFR 300.430(e)(2)(i)(ff)).

Final remediation goals and remedy decisions are made in accordance with 40 CFR300.430 (e) and (f) and associated provisions.

If you have further questions regarding the applicability of this memorandum please contact Jayne Michaud at (703) 603-8847.

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