

Q&A on Proposed Changes to Alaska's Cleanup Regulations for Contaminated Sites

Public comment period ended November 30, 2007

February 2008

Alaska's cleanup regulations, contained in 18AAC75, Article 3, govern cleanup of contamination in the soil and in groundwater. They also cover closure after cleanup and possible restrictions placed on land use.

In September 2007, DEC proposed changes to these regulations and invited public comment until October 22, 2007. The comment period was extended until November 30 based on stakeholder requests. The proposed changes are now being prepared for adoption by the Department and referral to the Department of Law for legal review. The final changes will take effect thirty days after filing with the Lt. Governor's Office.

Q Why make the changes?

These rules have had no substantive revision since 1999.

THIS PROPOSAL tightens and updates several important parameters, better protecting human health and the environment. The proposed changes:

- Update the standards to reflect new findings in toxicology.
- Establish cleanup levels for additional chemicals not previously listed in regulation.
- Modify the way site-specific groundwater cleanup levels are established.

Q Why are the rules so complicated?

Alaska's rules for cleanup of oil and hazardous substances allow our decisions to be protective of public health and also flexible. The rules provide for a great variety of specific circumstances at any given site, depending on:

- What's affected — soil, air, surface water, or groundwater.
- The compounds present.
- Land uses — current and future.
- Various ways people can be exposed.

Q Why are some soil cleanup levels stricter than others?

Strictest soil cleanup levels: "Migration to groundwater" levels protect the use of groundwater for drinking. We don't want "dirty dirt" leaching contaminants to the groundwater. Migration to

groundwater levels are generally the most restrictive (lowest).

Risk-based soil levels: These levels are devised to protect people from the risk of harmful health effects through exposure to contamination by eating, drinking or breathing.

Inhalation-based levels: Volatile contaminants may present a health risk when inhaled. Soil cleanup levels which protect for inhalation exposure ensure the air is safe to breathe.

Ingestion-based levels: Soil must be cleaned up to protect against chronic exposure through oral intake (for example, children playing in dirt and putting hands to their mouths) or absorption through skin.

THIS PROPOSAL renames the Ingestion category "Direct Contact," and proposes new levels to protect people from exposure through both ingestion and skin contact. The soil cleanup levels set for ingestion were once considered protective of exposure through the skin. New science shows that this isn't always so for some chemicals.

Q What's different with groundwater cleanup?

Groundwater: In current regulation, the responsible person may request a level 10 times the established groundwater cleanup level for any chemical if groundwater is neither used nor

expected to be used as a drinking water source. The soil “migration to groundwater” cleanup level may also be raised by 10 times in these circumstances.

THIS PROPOSAL would repeal the arbitrary “10 times” rule. Residual groundwater concentrations allowed to remain will be based on more technically sound, site-specific conditions.

Q *What about petroleum hydrocarbons?*

Based on comments received, DEC is placing a moratorium on all proposed changes to petroleum soil and groundwater cleanup levels at this time. DEC, like many states, looks at petroleum toxicity using certain "indicator" compounds, such as benzene. We also apply a "surrogate" approach, in which the unknown toxicity of a mixture is extrapolated from the known toxicity of a particular individual chemical.

Establishing scientifically defensible cleanup levels is challenging due to the complex nature of petroleum chemistry and the many unknowns. DEC has initiated a critical review of the "indicator-surrogate approach" to determine if the current human health cleanup levels should be revised. We are also looking at how petroleum compounds migrate from the soil to groundwater. This work may lead to revisions of the very conservative migration to groundwater cleanup levels that are in current regulation.

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