

**Contaminated Sites Program
 Summary of Proposed Modifications
 Compound-specific Cleanup Levels in Tables B1 (soil) and C (groundwater)
 Alaska Administrative Code Title 18, Chapter 75, Article 3**

October 20, 2015

The proposed revisions to the Oil and Other Hazardous Substances Pollution Control regulations consist primarily of an update to the cleanup levels for soil and groundwater based on the latest toxicity data and other chemical specific information (values and inputs such as solubility, volatilization factors, and others that are used to predict the behavior and availability of contaminants in soil, air, and water). In addition, language pertaining to how cleanup levels are calculated for both soil and groundwater on a site-specific basis for both listed and unlisted compounds is clarified, expanded, and made consistent. Further, two adopted-by-reference documents are being updated. Petroleum cleanup levels remain unchanged; revision of these numbers will be considered for a later regulations revision package.

A detailed summary of the proposed revisions is provided in the table below.

Section	Discussion	Reason for Change
18 AAC 75.325(g and h)	An adopted-by-reference document is updated to a new version and the name is changed from <i>Cumulative Risk Guidance</i> to <i>Procedures for Calculating Cumulative Risk</i> .	Incorporates updated procedures for calculating cumulative risk that includes exposure factors used in the updated cleanup levels.
18 AAC 75.340(a)	Adds “through one or more exposure or migration pathways” to how cleanup levels shall based on an estimate of the reasonable maximum exposure expected to occur at a site	Clarifying language.
18 AAC 75.340(d)	Language added to this section that specifies the application of the most stringent cleanup level between Table B1 or B2 and a site-specific calculated level.	Housekeeping. Consolidates language in subsequent paragraphs into this section.
18 AAC 75.340(e and f)	Consolidates language to remove repetition, updates terms (no longer direct contact and inhalation, now human health pathway) and clarifies the process for proposing an alternate cleanup level under Method 3.	Provides clearer language and a more logical explanation of the criteria associated with the conditions under which a Method 3 alternative cleanup may be proposed to and approved by the department. Text is also now consistent with proposed changes to Table B1 criteria names.

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	<p>Revised process for determining a cleanup level for a contaminant that is not listed.</p> <p>Updates text references to Table B1 and a revised adopted by reference document (<i>Procedures for Calculating Cleanup Levels</i>)</p> <p>Language added to strengthen requirements for institutional controls by all affected landowners.</p>	<p>Process for determining a cleanup level not listed now references the Risk Assessment Procedures Manual.</p> <p>Process for developing a site specific cleanup level for a contaminant not listed references an updated, renamed adopted by reference document.</p> <p>Addition of institutional control language addresses plainly the need for consent of landowners affected by contamination on a source property for establishment and maintenance of institutional controls.</p>
18 AAC 75.340(g)	Modifies procedures by which the department develops site-specific cleanup levels for hazardous substances not listed in Table B1	Requires the use of the process set forth in the department's <i>Risk Assessment Procedures Manual</i> which is adopted by reference, rather than the equations in the cleanup levels guidance to ensure that the most current toxicity information is used for unlisted chemicals.
18 AAC 75.340(i)	Language modified to remove requirement for a site-specific analysis of fugitive dust, and to add that sensitive subpopulations may require a site-specific analysis (also defined at 18 AAC 75.990).	Fugitive dust is now accounted for in our cleanup levels, therefore no site-specific analysis is needed; certain sensitive subpopulations such as pregnant women and the elderly may not be adequately protected by our default cleanup levels.
18 AAC 75.340(j)(2)	Revises language to identify what exposure pathways comprise the single "human health" value in Table B1.	Accurately reflects which exposure routes are accounted for in the cleanup levels.
18 AAC 75.341(a) and (b)	Language added to clarify that tables A1 and A2 are for petroleum hydrocarbons and make consistent with language in the introductory language (c) and (d).	Housekeeping.
18 AAC 75.341(c)	Repealed and readopted to provide revised Table B1 soil cleanup levels for hazardous substances. Changes include adding 18 compounds and removing one compound (carbazole) from the list. The revised table consolidates the two columns for "Direct	Update calculated values and added compounds reflect updated scientific information on exposure and toxicity and chemical behavior. The new cleanup criteria in each climate zone incorporate conservative toxicity data and consolidate cumulative exposures from ingestion, inhalation and dermal pathways.

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	<p>Contact” and “Outdoor Inhalation” into a single column labeled “Human Health” for each climate zone.</p> <p>The accompanying notes to Table B1 have been updated to reflect changes concerning calculations and other information relevant to the table.</p>	<p>The revision to the notes provides consistent use of new terminology found in other sections of the regulations. Due to renumbering, endnote numbers in Table B2 were revised to conform to the new numbering.</p>
18 AAC 75. 345	<p>This entire section is repealed and readopted. The description of the changes are discussed section by section below.</p>	
18 AAC 75.345(b)(1)	<p>Provides updated values in Table C (Groundwater Cleanup Levels). The values are derived from risk-based calculations using EPA’s updated equations which account for exposure through ingestion, inhalation of volatiles, and dermal contact with drinking water.</p> <p>The accompanying notes to Table C have been updated to reflect changes concerning calculations and other information relevant to the table.</p>	<p>Provides consistent cleanup level methodology for both soil and groundwater contamination that is up-to-date with emerging science regarding the toxic effects and risk posed by hazardous substances.</p> <p>Adopts risk-based values throughout the table rather than deferring to MCLs where available.</p>
18 AAC 75.345(b)(3) and (4)	<p>Two new subsections added concerning the process for how a site-specific groundwater cleanup level for a hazardous substance not listed in Table C is developed by a responsible party or set by the department.</p>	<p>Provides consistency with similar provision at 18 AAC 75.341 for soil compounds, using the process outlined in the <i>Risk Assessment Procedures Manual</i>, adopted by reference.</p>
18 AAC 75.345(c)	<p>Modifications to this section provide the department the flexibility necessary to establish more stringent groundwater cleanup levels than those identified in Table C if necessary to ensure protection of human health, safety, welfare, or the environment.</p>	<p>Is protective of human health for situations in which the department is in the process of acquiring appropriate toxicity data that may support a more stringent regulatory cleanup level, to protect sensitive subpopulations, or to comply with more stringent primary maximum contaminant levels (MCLs) (in addition to secondary MCLs).</p>

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18 AAC 75.345(d)	New subsection authorizes the department to require a responsible party provide an alternative drinking water source or implement other institutional controls for situations in which the department has determined that toxicity data is insufficient to establish a cleanup level in accordance with AS 46.03.900(20).	Provides interim protection of human health protection where a dearth of scientific information is available on a pollutant that has impacted groundwater serving as a drinking water source.
18 AAC 75.345(f)(2)	Includes cleanup levels established under (c) as well as (b) of this section be met at the property boundary and adds language to require concurrence from affected neighboring property owners for the establishment of institutional controls.	Strengthens requirements for engagement of affected landowners where groundwater contamination from a source property impacts other properties and the responsible party seeks institutional controls to manage exposure.
18 AAC 75.370(a)(2)	Text revised to reflect correct reference in chapter 18 AAC 70 and correct terms identified in 18 AAC 80.	Housekeeping.
18 AAC 75.990	New definitions added for “mutagen”, “mutagenic” and “sensitive subpopulation.”	Comports with new terminology used in the site cleanup rules.
<i>Cumulative Risk Guidance</i>	The adopted by reference version of this department document is updated to a 2015 version and retitled, <i>Procedures for Calculating Cumulative Risk</i> .	The current version of the <i>Cumulative Risk Guidance</i> adopted by reference dates back to 2008. Revisions to this document include updated toxicity information for the purposes of calculating cumulative risk.
<i>Cleanup Levels Guidance</i>	The adopted by reference version of this department document is updated to a 2015 version and retitled, <i>Procedures for Calculating Cleanup Levels</i> .	The current version of the <i>Cleanup Levels Guidance</i> adopted by reference dates back to 2008. Revisions to this document are necessary because we are revising and updating equations for calculating compound-specific cleanup levels. The new equations include updated toxicity information and improved exposure pathway evaluation for the approximately 180 compounds we regulate in Tables B1 and C.