

**WAC 173-340-355 Development of cleanup action alternatives that include remediation levels.** (1) **Purpose.** A cleanup action often relies on a combination of cleanup action components to remediate an environmental medium. For example, to remediate soil, a cleanup action may rely on treatment of some soil contamination and containment of the remainder. The purpose of a remediation level is to specify when the various components are used as part of a cleanup action.

(2) **Applicability.** Remediation levels must be established as part of a cleanup action if the cleanup action relies on a combination of cleanup action components to remediate a hazardous substance in an environmental medium.

(3) **Types.** Remediation levels may be based on a concentration (e.g., all soil above a specified concentration will be treated), or other method of identification, such as the physical appearance or location of the contamination (e.g., all of the green sludge will be removed from the northwest quadrant of the site).

(4) **Development.** Remediation levels must be developed and evaluated as part of a cleanup action alternative during the feasibility study conducted under WAC 173-340-351. Quantitative or qualitative methods may be used to develop remediation levels. The methods may include a human health or ecological risk assessment. The methods may also consider fate and transport issues. The methods may be simple or complex, as appropriate to the site. Where a quantitative risk assessment is used, see WAC 173-340-357.

(5) **Selection.** The remediation levels selected as part of a cleanup action must be specified in the cleanup action plan under WAC 173-340-380(5).

(6) **Relationship to cleanup levels and cleanup standards.** Remediation levels are not the same as cleanup levels or cleanup standards.

(a) A cleanup level defines the concentration of a hazardous substance above which a contaminated environmental medium (such as soil) must be remediated in some manner (such as treatment, containment, or institutional controls). A remediation level, on the other hand, defines the concentration (or other method of identification) of a hazardous substance in an environmental medium at which a particular cleanup action component (such as soil treatment versus containment) will be used. Remediation levels, by definition, exceed cleanup levels.

(b) Cleanup levels must be established for every site. Remediation levels, on the other hand, must be established only if a cleanup action relies on a combination of cleanup action components to remediate an environmental medium.

(c) Cleanup actions, including those relying on a combination of cleanup action components to remediate an environmental medium, must meet each of the requirements in WAC 173-340-360, including compliance with cleanup standards. If a remedial action does not comply with cleanup standards, the remedial action is an interim action, not a cleanup action.

(7) **Examples.** The following examples of cleanup actions that use remediation levels are for illustrative purposes only. All cleanup action alternatives in a feasibility study, including those using remediation levels, must be evaluated to determine whether they meet each of the requirements in WAC 173-340-360.

(a) **Example of a site meeting soil cleanup levels at the point of compliance.** Assume the soil cleanup level for a hazardous substance at a site is 20 ppm. This means any soil exceeding 20 ppm at the applica-

ble point of compliance must be remediated. Further assume the cleanup action consists of treating soil above 100 ppm and removing to an off-site landfill soil between 100 and 20 ppm. In this case, 100 ppm is a remediation level that defines which soil will be treated and which soil will be removed from the site. The cleanup action may be determined to comply with the cleanup standard because the 20 ppm soil cleanup level is met at the applicable point of compliance.

(b) **Example of a site not meeting soil cleanup levels at the point of compliance.** Assume the soil cleanup level for a hazardous substance at a site is 20 ppm. This means any soil exceeding 20 ppm at the applicable point of compliance must be remediated. Further assume the cleanup action consists of treating soil above 100 ppm and containing soil between 100 and 20 ppm. The 100 ppm concentration is a remediation level that defines which soil will be treated and which soil will be contained at the site. Even though contamination above the 20 ppm cleanup level remains at the site, if the cleanup action meets the requirements specified in WAC 173-340-740 (6)(f) for soil containment actions, the cleanup action may be determined to comply with cleanup standards.

(c) **Example of site meeting groundwater cleanup levels at the point of compliance.** Assume the groundwater cleanup level for a hazardous substance at a site is 500 ug/l and a conditional point of compliance is established at the property boundary. This means any groundwater exceeding 500 ug/l at the point of compliance must be remediated. Further assume the cleanup action consists of: Removing the source of the groundwater contamination (such as removing a leaking tank and associated soil contamination above the water table); extracting free product and any groundwater exceeding a concentration of 2,000 ug/l; and utilizing natural attenuation to restore the groundwater to 500 ug/l before it arrives at the property boundary. The 2,000 ug/l concentration is a remediation level that defines which groundwater will be actively treated and which groundwater will be naturally attenuated at the site. As long as the groundwater meets the 500 ug/l cleanup level at the conditional point of compliance, the cleanup action may be determined to comply with cleanup standards.

(d) **Example of a site not meeting groundwater cleanup levels at the point of compliance.** Assume the groundwater cleanup level at a site is 5 ug/l and a conditional point of compliance is established at the property boundary. This means any groundwater exceeding 5 ug/l at the point of compliance must be remediated. Further assume the remedial action selected for the site consists of: Vapor extraction of the soil to nondetectable concentrations (to prevent further groundwater contamination); extraction and treatment of groundwater with concentrations in excess of 100 ug/l; and installation of an air stripping system to treat groundwater at a water supply well beyond the property boundary to less than 5 ug/l. Further assume the groundwater cleanup level will not be met at the conditional point of compliance (the property boundary). The concentration of 100 ug/l is a remediation level that defines which groundwater will be treated on site. In this example, the remedial action is an interim action, not a cleanup action, because it does not comply with cleanup standards (that is, it does not achieve the 5 ug/l cleanup level at the conditional point of compliance).

[Statutory Authority: Chapters 70A.305 and 70A.355 RCW. WSR 23-17-159 (Order 18-09), § 173-340-355, filed 8/23/23, effective 1/1/24. Statu-

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