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Submitted to: <https://tcp.ecology.commentinput.com/?id=uJVx2>

Re: Comments on Chapter 173-340 WAC, Model Toxics Control Act (MTCA) Cleanup Regulations - Proposed Rule Amendments

Thank you for the opportunity to comment on the Washington State Department of Ecology's (Ecology's) proposed rule amendments to Chapter 173-340 WAC - Model Toxics Control Act (MTCA). Specific comments on the proposed rule amendments, by MTCA section, are provided below.

MTCA Section: 173-340-200. Definitions.

Comment: Definitions should include terminology commonly used under the MTCA cleanup process that are not currently included in the regulation. Suggested additional definitions include:

- **"Contaminant of concern"** means a hazardous substance that has been identified in soil, groundwater, surface water, or air during a remedial investigation at a concentration above an applicable preliminary cleanup level developed during the FS or a final cleanup level identified in a cleanup action plan.
- **"Contaminant of potential concern"** means a hazardous substance that has been identified in soil, groundwater, surface water, or air during an initial investigation or remedial investigation at a concentration above an applicable screening level.
- **"Proposed cleanup level"** means the applicable cleanup levels determined to be protective of human health and the environment during the remedial investigation or feasibility study by evaluating the site-specific receptors and exposure pathways for current and future site uses, but that have not been accepted by the Department as final within the cleanup action plan.
- **"Screening levels"** means the initial concentration levels for known or suspected hazardous substances at a facility or site that will be used evaluate the nature and extent potential contaminants of concern in soil, groundwater, surface water, or air during the initial investigation or remedial investigation; these are generally the most conservative values found in or derived from Sections 173-340-720 through 173-340- 750 and other applicable other applicable state and federal laws without consideration for site-specific exposure scenarios.

MTCA Section: 173-340-350. Remedial Investigation.

Comment: In Section 173-340-350(5)(b)(i)(B), "target concentration" is not defined. Replace with "screening level" (see suggested additional definition for "screening level" proposed above for Section 173-340-200) or define "target concentration" in this section and in section –200).

MTCA Section: 173-340-355. Development of cleanup action alternatives that include remediation levels.

Comment: Section 173-340-355(2) - Applicability, states "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 an environmental medium." This statement is not necessarily true as different cleanup components may be used to clean up different contaminants in the same media, but each component is still cleaning the contaminant up to the cleanup level/cleanup standard. This section should be revised accordingly. (See also subsection -355[5][b].)

Comment: Section 173-340-355(4) - Development states "Remediation levels must be developed and evaluated as part of a cleanup action alternative during the feasibility study conducted under WAC 173-340-351." While evaluation of remediation levels is generally most appropriate in the feasibility study, the regulation should not restrict remediation level development to the feasibility study only and should allow flexibility to develop remediation levels at other later stages if needed, such as in the cleanup action plan or in the engineering design report (e.g., additional information may come or be available at a later time from pilot studies or specific design elements that would necessitate the need for new or altered RLs).

MTCA Section: 173-340-370(4) Determining whether a cleanup action provides for a reasonable restoration time frame.

Comment: Section 173-340-370(4)(c)(ii) states that "A restoration time frame is not reasonable if an active remedial measure with a shorter restoration time frame is practicable." This evaluation criterion leads to a circular logic loop with determination of practicability of a shorter restoration timeframe. I.e.,:

1. this criterion indicates that if a practicable alternative exists with a shorter restoration timeframe, that the restoration timeframe of the alternative being evaluated would not be reasonable; however
2. the definition of "practicable" in Section 173-340-200 "means capable of being designed, constructed and implemented in a reliable and effective manner including consideration of cost. When considering cost under this analysis, an alternative shall not be considered practicable if the incremental costs of the alternative are disproportionate to the incremental degree of benefits provided by the alternative over other lower cost alternatives" (i.e., this definition summarizes the disproportionate cost analysis [DCA] process in Section -370); therefore, the DCA must be used to determine whether an alternative is practicable; but
3. in order to determine whether an alternative may be evaluated under the DCA process, it must first meet the requirement of being able to be completed in a reasonable restoration timeframe.

Due to this circular logic loop, this statement should be removed from the list of evaluation criteria for reasonable restoration timeframe for a given remedial alternative.

Comment: Section 173-340-370(4)(d) - Cleanup levels below technically possible concentrations states that "At sites where cleanup levels determined under Method C in WAC 173-340-706 are below concentrations that are technically possible to achieve..." Why is this condition restricted to only cleanup levels determined under Method C? Method B cleanup levels are often significantly lower than Method C cleanup levels and, therefore, more often or more likely to be technically unachievable. This section should be expanded to include Method B.

MTCA Section: 173-340-370(5) Determining whether a cleanup action uses permanent solutions to the maximum extent practicable.

Comment: Section 173-340-370(5)(XXX)(vi)(B)(II) - Future Costs states that "Future costs **may be** [emphasis added] discounted using present worth analysis." It was understood from the current version of the MTCA regulations that a present worth analysis was a required element of the cost evaluation based on Section 173-340-360(3)(f)(iii) that states that the cost to implement the alternative includes "**the net present value** [emphasis added] of any long-term costs..." With the new proposed "may be discounted" language, is it Ecology's intention that present worth analysis is optional? Please clarify if this is optional under all circumstances, or under what specific situations present worth analysis would or would not be required. For example, maybe present worth analysis would not be required for alternatives that are anticipated to achieve cleanup levels based on short term remedial actions (e.g., remedial excavation); and present worth analysis would be required for alternatives that include long-term (e.g., longer than 10-year) performance monitoring.

Comment: Section 173-340-370(5)(XXX)(vi)(B)(II) - Future Costs states that "When discounting future costs, do the following:

- Estimate future costs using an appropriate construction cost index; and
- Discount future costs using the current U.S. Treasury nominal interest rate for bonds of comparable maturity to the period of analysis. If project costs exceed thirty years, use the current U.S. Treasury thirty-year nominal interest rate."

Under the current inflationary economic environment in the United States, this proposed process would prove to be inappropriate for a long-term present worth evaluation. E.g., the Turner Construction Cost Index value for 2022 is 8% (www.turnerconstruction.com/cost-index) and 2022 U.S. Treasury 30-year nominal interest rate is 4.2% (December 12, 2022 OMB App. C Circular No. A-94). Following these proposed procedures, a present worth analysis for an alternative with an estimated 30-year implementation (operations and maintenance) period would result in a negative discount rate (i.e., inflation would outpace interest rates by 3.8%) resulting in increasing year over year long-term estimated costs for the duration of cleanup. Using this current date is unlikely to yield a realistic present worth analysis of costs over the next 30 years. Based on the average construction cost index values and nominal interest rates over the past 25 years (as far back as Turner values are available online), the nominal interest rates have averaged values of 0.5% higher than the cost index. I.e., historically, more often than not, interest rates have outpaced inflation resulting in a positive discount rate that would be used in a present value analysis, thereby yielding reducing O&M costs year after year, which is what would generally be expected from this type of analysis under more typical economic conditions. Therefore, the proposed Future Cost approach should include other options or allow for more flexibility, such as providing businesses with the option of using a discount rate more realistic to their business practices, or using an average cost index values/interest rates over a longer period of time (e.g., last 20 years) to mask anomalous economic conditions such as those available for 2022.

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We appreciate the opportunity to review Ecology's proposed rule amendments to WAC 173-340. We hope that you will consider these comments for inclusion and revision of MTCA.

LANDAU ASSOCIATES, INC.



Piper Roelen, PE
Principal