

November 21, 2014

WAC 173-350-325, Soil and Sediment Criteria and Use - Workgroup Face-to-Face

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Agenda

Bulleted items that are not italicized are comments from the meeting. *Italicized wording represent the issues discussed.*

- Exclusion for use of impacted soil back on project site
 - Engineered soil used for engineering properties
 - Soils with cementitious materials
 - Contaminant limits – methodology
 - Rule language
 - Specific parameters:
 - TPH
 - Chromium III v VI
 - PAH
 - Asbestos
 - Dioxin
 - pH
 - Salinity
 - Nitrogen, other nutrients
 - Pathogens
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Exclusion for use of impacted soil back on project site

After the October meeting, it became clear through email traffic that the exclusion the workgroup discussed was not understood by all. The exclusion primarily pertains to soils with cementitious materials where pH is the main concern. Adding cementitious materials to soils for road projects is common. It is acceptable to leave these soils in place, so the workgroup felt it was reasonable to exclude soils that are temporarily excavated and put back in place. Some understood this exclusion to allow only residual amounts to be put back in place and is not sure a larger exclusion is appropriate from a water quality perspective. The exclusion as drafted now provides some protection as it requires placement above groundwater and runoff controls.

- If it comes out and presents risks, it should stay out.
 - If it goes back into the exact place it was removed (e.g. within the now-engineered walls or shaft), that may be okay.
 - May need to clarify project site vs. site of origin.
 - The group will continue to discuss this issue.
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Engineered soil used for engineering properties

Instead of referencing “soils with cementitious materials”, Marni got feedback from the group via email prior to this meeting on whether “engineered soils” might be a better term. Feedback was 50/50 for/against it. Marni did draft a definition for “engineered soil” and drafted an exclusion for “engineered soil when used at another location for those engineering properties”. We would need to tighten up language on what would be legitimate engineering properties if the group decided it liked “engineered soil” vs. “soil with cementitious materials”.

- The group did not reach consensus on a preference. Some liked “engineered soil” as it would broaden the classification, and would not target only cementitious materials. Others did not like it

because it was too ambiguous, too broad and might capture too much. Others liked “soils with cementitious materials” since that is a specific type of material needing regulatory clarity now and would not preclude the need characterize any other soils thought to be impacted. Others do not like it specified because they feel problems with cementitious materials have been exaggerated.

- Perhaps the two definitions could be combined. E.g. reference “cementitious materials” in the “engineered soil” definition.
 - Marni reminded the group the only reason “soils with cementitious materials” is defined is to provide clarity on test parameters to characterize such soils. Likewise that is the only reason street waste, petroleum-contaminated soil, and manufactured topsoil are defined.
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Soils with cementitious materials

The type and amount of cementitious material added to a soil can result in materials that look like soil, or lumpy gray material, or something resembling broken cement or concrete. Ecology internally met to discuss whether all these should be handled under the soil section of the rule (WAC 173-350-235), or whether other sections might be more appropriate depending on the type/amount of cementitious material added. For regulatory clarity, Ecology recommends keeping all under the soil section and asked for the group’s feedback.

- There were no arguments against this approach.
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Contaminant limits – methodology

At the last meeting, Marni touched on her approach to initially draft contaminant limits. She plans to review several regulatory and guidance documents (MTCA cleanup levels, EPA Soil Screening Levels, EPA Ecological Soil Screening Levels, natural background, PQLs, etc.) to come up with contaminant limits for unrestricted land use and limited use properties. At least one Ecology staff is suggesting a risk-based approach, where the rule would not provide numerical limits, but instead provide formulas for assessing risk for proposed uses of impacted soils - calculations vs. numerical limits or some combination. Suggested hiring a consultant to assess risk for specific cases (e.g. street waste used along roadways, as fill, in parks, etc.). Marni asked for the group’s thoughts.

- All felt that numerical values were needed to provide regulatory consistency, clarity, and usefulness of any rule language. Formula-based language was not favored.
 - Assessing risk for individual impacted soil types and the potential variety of uses for each seemed too daunting and the group did not recommend that Ecology pursue this right now in coming up with initial contaminant limits.
 - Limits need to be realistic. Look at compost limits. Consult with soil experts such as Sally Brown (UW), Robert Harrison (UW), Andy Bary (WSU).
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Rule language

General thoughts on rule:

- Marni asked for the group’s feedback on whether the rule was becoming too detailed. Consensus is that yes, it has become too complex and not workable in the field. It needs to be simplified/streamlined.

- If rule is too difficult to follow or seemingly captures all soils, many soil handlers may choose disposal over exploring “clean” or reuse options. This would not be in keeping with Ecology’s Beyond Waste Plan in encouraging appropriate use over disposal.
- Some feel this rule shifts regulation from DNR, land use, zoning to Ecology and finds this worrisome.
- JHDs have concerns that allowing limited use for impacted soils (solid waste) without permit muddy’s their responsibilities. JHDs are tasked with permitting solid waste handling, requiring reporting, etc. and allowing uses in the rule with no oversight/official exemption/etc. complicates this responsibility.

Rule language specifics:

- Suggested changing the term “impacted soil” to “modified soil” or something different. The group settled on “impacted soil” a few meetings back and decided to keep that term for now.
- Marni added “due diligence” language to try and clarify that owners/operators are allowed to decide whether a soil is “clean” based on a reasonable level of effort in assessing soils. Some owners/operators remain worried that all soils can be seen as suspected of being impacted and therefore all soils are subject to characterization and use under the rule.
- “Due diligence” definition: change the “and” in the example list to an “or”.
- “Petroleum contaminated soil” definition: add tie to a spill or release.
- Table 235-A has far too much testing. Small project sites unlikely to do the sampling and will likely dispose instead of look at reuse options. Large project sites do more testing at the beginning to initially characterize and then decrease as the project goes on.
- Assumption seems to be that testing is required in all cases. Only soils suspected/known to contain contaminants would be subject to any testing.
- Differentiate testing for suspected/known impacted soil from small project sites vs. large project sites.
- New language requiring storage of soil while awaiting test results is unrealistic. Larger project sites can produce many thousands of cubic yards a day and have no place to store materials. Initial characterization of large project sites before acceptance, then acceptance with test verification to ensure no quality changes should be okay. For topsoil manufacturers that sample regularly, results from lab come in long after materials have been distributed.
- Rather than test and hold language, could do something like with the food industry – record the “lot” that was sampled and do a recall if later found to be problematic. Would need to differentiate between processors and fill sites.

Specific parameters

- TPH: MTCA Method A has cleanup levels for diesel and heavy oil range set at 2,000 because that is considered saturated. Many felt this is inaccurate and that test results of materials with concentrations that high is not saturated, there is no visual indication that the constituents are present, and odors may be from decaying vegetation. Vegetation can highly influence test results and though test methods can eliminate some vegetative interferences, significant false positives can exist, regardless of quality of lab analysis. A level of 200 ppm would be too low, making all soils suspected of being impacted. 2,000 is reasonable and safe.
- Chromium III v VI: For Appendix I soils, does the group want separate tests/limits for Chromium (total), Cr III, and Cr VI? Cr VI is rare and likely to be associated mainly with plating shops. Cr III comprises most of a total Cr result. Group felt only Chromium (total) was needed for Appendix I.
- PAH: Will need to account for toxic equivalency values in calculating cPAH. 0.1 ppm is based on ingestion and may be too low. MDL often higher. 1 or 2 ppm suggested.
- Asbestos: Any problem with 1%, from NESHAPs? No. California Air Board has done lots of work with asbestos limits so look at their resources.

- Dioxin: \$2,000 lab costs for dioxin. Currently, the draft rule will not require dioxin tests for anything specifically.
 - pH: 8.5 and 10 are Marni's initial thoughts for unrestricted vs. limited use properties. 8.5 is based on water quality criteria. Group felt higher values might be appropriate anywhere. Many places in the state have naturally high or low pH. Compost was an example that allows up to 10. Group also felt we will likely need to establish a lower limit too.
 - Salinity (sodium chloride): For sediment from salt water particularly, do we need an upland disposal limit? Probably.
 - Nitrogen and other nutrients: Should we establish limits for nutrients? Consensus was no for nutrients, though we may need to revisit this as one person felt it might be appropriate.
 - Pathogens – Should we have a limit for pathogens? Consensus was a no.
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Close

- Next meeting to be scheduled sometime in February. Marni wants time to establish contaminant limits for discussion with the group.