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

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Agenda

Introductions
General changes

- **New category for uses at limited access properties that are equal to or less than 2' deep**
- **Minimum statewide standards**
- **Protection of groundwater calculations**
- **Shortened list of parameters**

Rule Language

Definitions:

- **Clean soil/sediment**
- **Due diligence**

- **Engineered soil**
- **Impacted soils/sediment**
- **Limited access properties**
- **Release**

Applicability

Permit exemption language

- **Notification**
- **Sampling and testing**
- **Uses**
- **LAP sites < 2' deep**
- **LAP sites > 2' deep**
- **Other uses**
- **Records**

Table 235-A

The SSLs

- **Metals**
- **Petroleum**
- **pH**
- **cPAH**

Meeting ended here and remaining items werepostponed.

- **Dioxins/Furans**
- **PCB**
- **Pesticides**
- **Missing parameters? Salinity/EC**

Miscellaneous

Close

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

Introductions

- We completed introductions due to replacements on the workgroup. Rob Bonnett replaced Mike Shaw as the Association of General Contractor representative and Dale Arnold, who was not able to make the meeting, replaced Lynn Schmidt for City of Spokane Stormwater.

General changes

<2' at Limited Access Properties:
Marni added another category of use and that allows higher soil screening limits (SSLs) for placement of soil/sediment less than 2 feet deep at limited access properties. This was based on eliminating a protection of groundwater standard since calculations for that are based on larger sources as fill. Marni also elimintated 10' separation from groundwater. The SSLs are based on only Model Toxics Control Act

Cleanup Regulation (MTCA) Method A Industrial (or Method B when no Method A exists). This new category was primarily considered for uses such as street waste applied along roads or as road base.

- The group liked the new category.
- Need to clarify in rule language that an "Oreo" would not be allowed, whereby a 2' SSL layer would be placed, followed by SSLs for over 2' applications, followed by additional 2' SSL layer, etc. Allow one-time application at the upper surface, or similar.

Minimum statewide standards:
In setting SSLs, Marni considered the fact that our RCW directs Ecology to write "minimum" standards. This influences background limits, which Marni set at those found highest found in state. This means there are some SSLs that may not be protective in all cases. However, setting a lower SSL would eliminate uses that would be fine in certain areas. This may lead to some jurisdictions adopting more stringent standards, though soils/sediments don't typically get moved vast distances from their source.

Protection of groundwater:
Marni completed protection of groundwater calculations for parameters in MTCA that would need to do this calc, and provided there was a groundwater quality standard associated with it. Henry's Law Constant, K_{oc}, and K_d values to go into the equation came from 2015 EPA Soil Screening Guidance. Marni thought the SSL in several cases was influenced by this standard, though after the meeting Marni looked to see how many parameters of focus for the workgroup would change if the standard was altered or removed altogether. She found that none would change due to other standards still under consideration.

Parameter list:
Marni shortened the list of of 700+ parameters down to about 220: removed any parameter with a zero value; kept parameters commonly listed in other standards – volatile organic compounds, metals, dangerous waste criteria, surface water quality standards, sediment benthic, dredged material management program contaminants of concern, etc. As you review the list, please be sure any parameter that may be a concern is present.

- There is concern by some that the workgroup focusing on only a few SSLs out of the list of 220, and worry that because others are not getting as much scrutiny, the SSL may be too restrictive.

Rule Language

Definitions

Clean soil/sediment: Now tied to release, not suspicion of contaminants present. This means there is no more accounting for natural/background highs. Clean soil/sediment can be those where there is no release, or if there was a release but below unrestricted SSL, can still be managed as clean.

- Like that now tied to release.
- Need to clarify that determination that something is clean can be done based on "either" due diligence or testing.

Due diligence: Added addition examples of things one can due to meet due diligence. These additions were based on CERCLA Phase I "all appropriate inquiries". Language will be altered to clarify that what is listed are examples of things one can do, not that one must do all things listed.

- The group discussed the need to document that due diligence took place. Instead, will alter language to clarify that one needs to be able to demonstrate due diligence through some means.

Engineered soil: Marni kept the term engineered soil over soil with cementitious material as debated at previous meetings, but listed soil with cementitious materials as an example. Felt broader concept for looking at soils with intentional addition of materials was better than specifying only one type.

- No objections to this.

Impacted soils/sediment: Tied to release, not suspicion. Added example list back for clarity.

- Like that now tied to release.
- Do not like that soil/sediment that can be used at limited access properties are "impacted".
- In part because of this definition, there is confusion when outsiders read the rule about what soil/sediment can be used and where.
- Marni will try to add a definition or alter rule language to be more readable/understandable.

Limited access properties (LAP):
- *Removed control of surface water since other regulations govern surface water discharges.*
- *Added lands that would be inappropriate for LAP to try to limit handling of LAP soils by those unaccustomed to risk, who see a revenue potential as opposed to legitimate use, where future land use unlikely to be restricted, and more difficult to oversee. For example, parks, farms, residences, etc. cannot be LAPs.*
- *Can we change the term LAP to simplify? Marni suggested limited land use to better mesh with unrestricted land use.*

- Like the addition of properties that should not be allowed to accept LAP soil/sediment.
- DNR asked for removal of reference to DNR reclamation sites to avoid implication/interpretation that all reclamation sites are receiving LAP soil/sediment.
- WSDOT liked keeping the reference to lands along highways and freeways as it makes it clear LAP soil/sediment can be used there.
- Would like language added to clarify that once 15' clean soil/sediment is placed over the top, which is currently proposed as a condition for limited access properties, that the site is no longer limited to any access or related restrictions. It is no longer and LAP.
- Group felt changing both "limited access property" and "unrestricted land use" terms would be improvements. "Unrestricted" should be changed to remove confusion with MTCA cleanup levels at cleanup sites. Decided to use "clean soil and clean sediment" for unrestricted instead, and "limited use soil and limited use sediment" instead of limited access properties.

Petroleum contaminated soil:

- Need to alter to clarify that this should not be confused with street waste.

Release: New definition based mostly on Dangerous Waste Regulation, WAC 173-303.

- Release is tied to "contaminant", which is broadly defined. Need changes that clarify that placement of soil/sediment itself is not a release if it is clean. Perhaps language referencing something that changes background conditions where release occurred.

Soil/Sediment Section not Applicable to:

- *Added removal to a landfill, processing facility, or use that has a beneficial use determination to be clear that entities handling soils that way would not be subject to the section.*
- *For reclamation sites, added DNR permit deferral if at some point they adopt the substantive requirements of this section into their reclamation permit. Merely referencing this rule would not be enough. Marni anticipate that if DNR were to add this to their permit, they would coordinate with Ecology.*
- *Would like to add reuse of spent foundry sand when done in accordnce with recent EPA Risk Assessment*

- DNR had concerns that the DNR permit-deferral puts DNR on the hook to enforce this rule. Marni clarified the intent was to build in a permit-deferral on the chance that DNR would incorporate these standards into their reclamantion permits at some point. If they did, this would alleviate operators from the redundancy of meeting two sets of requirements for the same thing.
- Most on the workgroup were unfamiliar with spent foundry sand and EPA Risk Assessment. Marni will send the assessment around after the meeting. Metal foundries use sand to cast metal. The spent sand ends up containing bits of metal. EPA completed a risk assessment for reuse of the spent sound for specific types of metal and specific uses (potting soil as an example). It determined what would be appropriate uses for the specific types of spent foundry sand. These materials would be subject to this rule unless we exclude them in the applicability section. No one objected to excluding these materials.
- There is an exclusion for impacted soil placed "back" at the location of generation. In thinking the soils will also have intermediate storage near that location, should remove the term "back" to ensure the intermediate storage is also excluded.

<u>Permit exemption language</u>

Notification: The person proposing to use impacted soil/sediment (street waste operator, reclamation site owner) would need to submit notification since the section is really about allowable uses of impacted soils/sediment.

- One person thinks the one-time submittal of this notification is excessive.
- Street waste is used in multiple locations on an ongoing basis. Would one have to submit notification continuously for these applications? That is not the intent. Those handling street waste typically have permitted sites already for pile storage/treatment and the reuse would be covered by the permit and notification would not apply in the first place. Marni would expect the new soil standards to be incorporated into such permits. When not permitted and notification is needed, the intent would be for a one-time submittal with a description of the types of uses and general location to ensure placement would be at limited access properties. Since Marni will be creating the notification form, she will try and ensure this is clear.
- The rule allows 30 days to provide notification. For existing operations, the rule will come with effective dates which will ensure this timeline can be met.
- Will the form ask for total capacity of receiving sites? This would really apply only to fill sites and since they will receive a combination of clean and impacted soil/sediment, the metric wouldn't be very useful and could be misinterpreted.

Sampling and testing: Simplified. No more sampling frequency table. Removed language trying to differentiate between ongoing receiving site vs. one-time project site.

- Discussed removal of the publication list of representative sampling guides. Since these are examples only to answer the question about what is meant by representative sampling, they will remain, though language will clarify they are examples only.
- For test methods, need to broaden the test method references to those that will detect to the SSL.

Uses:

- *Many are redundant but first thought it was better for flow (ends up being clean, going to treatment facility, going to landfill). I think now that we should remove (i), (ii), and (v) since they are already excluded in the applicability section, and listing them here implies they are subject to notification, etc.*
- *LAP sites < 2' deep: Protection of groundwater thought unecessary because so much attenuation typically takes place in light applications. Very limited conditions. Concerns about erosion, other? Most uses would be under pavement or along roads that are vegetated. Should we require that since SSLs are quite high in some cases?*
- *LAP sites > 2' deep: 10' separation from groundwater – not new. 15' clean cover added in order to ensure no restrictions on future use in the form of property covenants would be required, and assuage any concerns about vapor intrusion.*

- Group agreed we should remove (i), (ii), and (v).
- LAP sites < 2' deep:
    - Clarify that placement "above the seasonal high level of groundwater" is specific to where soil/sediment is placed, as opposed to being interpreted as the whole site/facility must be above seasonal high.
    - Should there be requirement to vegetate or cover soils to prevent erosion to stormwater? Consensus was no. Stormwater controls are already governed by other rules.
- LAP sites > 2':
    - Clarify that placement "above the seasonal high level of groundwater" is specific to where soil/sediment is placed, as opposed to being interpreted as the whole site/facility must be above seasonal high.
    - Is 10' separation from groundwater needed now that SSLs account for groundwater protection? The calculations for groundwater protection were for only a few parameters so 10' is a level of protection considering not all parameters are accounted for. Also, the calculation itself includes inputs based on soil placed above the water table, though not sure how deep a separation. Water Quality thought 5' separation might work. Marni will look into flexibility here.
    - WSDOT expressed a desire to allow more than 2' for roadside applications without 15' clean cover since no development likely. This would get complicated. It would change the SSL, it would need to have 10' separation from GW (unless we change that), and there would be no guarantee of change in use.
    - Some have concerns that 15' of clean soil/sediment over impacted would eliminate use of a site that is not deep enough to accommodate both separation of groundwater and 15' of clean soil/sediment.
    - Some asked about the science behind 15' clean cap, which stems from MTCA. In MTCA for cleanup sites, the point of compliance for cleanup of contaminated soils is when contaminanted soils are less than 15' from the ground surface; when there is 15' separation between contaminated soil and the ground service, there is no need for institutional controls

to restrict future land use at a cleanup site (e.g. environmental covenants); and in Marni's meeting with cleanup program staff, 15' would also reduce vapor intrusion concerns.
    - There is a reclamation site in the area of the Tacoma Asarco Smelter plume. Ecology's Toxics Cleanup Program allowed the removal of surface soil layers at that site with elevated levels of arsenic (20 ppm) to go into the reclamation pit without requiring 15' cover or institutional controls on use of the property. That may be inconsistent with the thoughts behind requiring 15' now.
    - Marni will see if the science behind 15' can be found, and also consider whether lesser clean soil/sediment thickness or other conditions could satisfy concerns, such as placement under impervious surfaces.

Records: Much simplified from before. No distinction between ongoing receiver and project site. Requiring records likley gathered already. Need to add retention of 5 years, as is used throughout the rule.

- Annual reporting is currently not a condition of permit-exemption and some thought the information gathered in annual reports could be useful. With receiving sites likely taking in both clean soil/sediment and impacted soil/sediment, this would lead to the need for separate tracking. Also, Marni was not sure Ecology would do anything with the gathered data. Marni is inclined to leave annual reporting out right now, but reconsider if this is an issue based on input during informal and formal comment periods.

Table 235-A

- *Added basic soil screening. Parameters okay? Too little, too much? VOCs? BTEX?*
- *Expand benzene to diesel?*
- *Add cadmium to petroleum list as see it with spills?*
- *Add naphthalenes to street waste?*

- For basic soil screening, eliminate PCBs, cPAHs, and pH from automatic testing.
- Footnote 4 for the requirements to test benzene if TPH gasoline is identified needs to be adjusted to acknowledge that a lab may detect gasoline, but still find that "no gasoline pattern is present." This language may be in the petroleum contaminated soil guidance.
- For PCBs under petroleum contaminated soil, footnote 5 applies which states that testing needed only if heavy oil or mineral oil is present. PCBs with this footnote should be added to basic screening and street waste.
- Add to footnote 5 "…and product release is unkown."
- For cPAHs under petroleum contaminated soil, footnote 6 applies which states that testing needed only if diesel or heavy oil is present. cPAHs with this footnote should be added to basic screening and street waste.
- Add to footnote 6 "…and product release is unkown."
- For footnote 5 and 6, need to clarify what is meant by the parameter being "present." As detection limits improve, very small concentrations found could trigger their presence, and lead to testing for cPAHs and PCBs, which may not be warranted.
- As for comments provided prior to the meeting about adding benzene when diesel is found, cadmium to petroleum soil, and naphthalene to street waste, those who regularly test these materials have not found an association between the parameters.

The SSLs

Metals

- Some say the following clean/unrestricted SSLs and a couple LAP >2' SSL are not realistic:
    - Arsenic is commonly found at 10 instead of 9 ppm
    - Copper is commonly found at 47 instead of 36 ppm
    - Lead found in the 40s instead of 24
    - Selenium in soils accepted at CalPortland was higher than SSL, even though they describe taking only clean soils where no release has occurred (though also stated that sometimes foaming agents are used to help soil flow from excavation/drill site). Only 23% of all soils accepted would have met the clean/unrestricted limit, and 69% of the time it was due to selenium failures.
    - Zinc – no suggestion was given as to why the limit of clean/unrestricted limit of 96 was too low.

Petroleum

- The TPH-diesel clean/unrestricted SSL of 200 is problematic due to lab reporting. A lab often assigns diesel to anything below C24, and anything above to lube oil, when in reality only lube oil is present. There is crossover between the two and one needs a good chromatograph analyst to interpret accurately. Perhaps combining diesel and lube oil and an SSL of 2,000 would alleviate this problem.
- Look at making a note to gasoline limits above 30 where the lab notes "no gasoline pattern found."
- Marni pointed out that the higher SSLs for limited access properties already have internal staff concerned, though she could not find jusification to lower the SSLs in those cases.

pH

- At CalPortland, failing pH was the second largest reason that 67% of soil currently accepted would have been rejected. This was mostly due to pH above 9 (~9.5).
- Marni had looked more closely at pH prior to the meeting and is comfortable with changing pH from 5-9 (based on industrial stormwater discharge limits) to 4.5-9.5. Few impacts at 9.5 in soils were found in basic research into pH in soils and soil profiles in the state found several soil profiles between 4.5 and 5.

cPAH

- Marni set the SSL for unrestricted and LAP >2' at a background limit of 0.4 ppm based on a 2011 study of urban Seattle soils, which has an Ecology publication number. This is higher than current cleanup limits, which have not adopted the 2011 data as background. Marni plans to discuss this issue with cleanup program staff to see what, if any, implications setting the SSL at 0.4 might have.

The meeting ended here with postponement of remaining agenda items until next meeting.

- John Bromley offered to provide geotechnical report data DNR has been gathering on native fill soils to compare mostly to the clean/unrestricted SSLs.
- Jimmy Blais offered to provide test results from his company's sampling of clean fill soils.
- Jake Finlinson has soil test data on forest soils they sampled prior to use for biosolids applications that he will provide.

- Marni will continue to adjust rule language and look into SSLs. She will also try and meet with cleanup program staff to further discuss 15’ clean soil cover at LAP >2’ sites, as well as some other issues.
- Marni will send around a Doodle Poll to schedule a next meeting.