June 10, 2014
WAC 173-350 Revision - Earthen Materials/Soils Workgroup Face-to-Face Mtg.

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Agenda

9:00-9:15 Brief recap of last meeting
9:15-9:30 Title for section
9:30-10:30 Definitions
Break
10:40-11:10 Tier 2 exclusions (contains contaminants, but certain amounts/uses okay)
11:10-11:30 Representative Sampling/Soil Characterization
11:30-11:50 Review, Approval, Documentation
11:50-12:00 Close, next meeting

Marni's notes for leading agenda item in italics, group notes not italicized.

Brief recap of last meeting (9-915)

- *Brainstormed how to differentiate between soil and inert waste. Allow certain amount of materials in soil while still managed under the soil section. Talked about allowing certain % other materials or a certain % up to a max tonnage. Base on visual inspection, not lab test.*
- *Tiered approach for use/disposal – clean; contains contaminants but some uses okay; too contaminated to go anywhere but permitted landfill.*
- *Base use options on out-the-door characterization of soils.*
- *Use existing guidance where it exists for certain materials as a start for allowable contaminant limits and uses – street wastes, petroleum-contaminated soil, dredged materials.*

Title for section (915-930)

Earthen Materials, Earthen Materials Criteria, Earthen Materials Characterization, Soils, Soil Criteria and Use, Soil Standards, Clean and Contaminated Soil, Contaminated Soil Use and Disposal, Soil Characterization and Use.

- Group consensus leaned toward titles such as Soils and Sediments Management and Reuse, Criteria for Soils and Sediment, and Soils and Sediment Criteria, ultimately favoring Soils and Sediment Characterization and Reuse.
- Earthen Material is a term we have been using, but it does not necessarily make one think of "soil" or "dirt" only. Trees, bushes, and other vegetation come to mind too. Could be confusing to someone when looking at the rule for standards for their soil handling-operation.

Definitions (930-1030)

Current Definitions in WAC 173-350:

- *"Clean soils and clean dredged material" means soils and dredged material which are not dangerous wastes, contaminated soils, or contaminated dredged material as defined in this section.*
- *"Contaminant" means any chemical, physical, biological, or radiological substance that does not occur naturally in the environment or that occurs at concentrations greater than natural background levels.*
- *"Contaminated dredged material" means dredged material resulting from the dredging of surface waters of the state where contaminants are present in the dredged material at concentrations not suitable for open water disposal and the dredged material is not dangerous waste and is not regulated by section 404 of the Federal Clean Water Act (P.L. 95-217).*
- *"Contaminated soils" means soils removed during the cleanup of a hazardous waste site, or a dangerous waste facility closure, corrective actions or other clean-up activities and which contain harmful substances but are not designated dangerous wastes.*

Ignoring dredged material for now, problem with current definitions says that any soil not tied to a cleanup site is "clean". That is how we come to be in the situation now where soils that contain non-soils that are not from a cleanup sites are stuck regulated as "solid waste".

How to approach definitions:

1. *Change back to originally adopted definitions of 2003. Only two definitions differ. Originally-adopted definitions allowed soils with contaminants to be used at sites where they would not negatively affect receiving site. These soils were "clean" as defined and excluded outright from the rule.*
   - *"Clean soils and clean dredged material" means soils and dredged material that do not contain contaminants at concentrations which could negatively impact the existing quality of air, waters of the state, soils, or sediments; or pose a threat to the health of humans or other living organisms.*
   - *"Contaminated soils and contaminated dredged material" means soils and dredged material that contain contaminants at concentrations which could negatively impact the existing quality of air, waters of the state, soils or sediments, or pose a threat to the health of humans or other living organisms.*

   Would still plan to provide options we have discussed for use of contaminated materials. Still need contaminant limits. Changing back to these definitions would simply remove the tie to cleanup sites and clarify that soils be characterized in the soils section.

2. *Someone suggested after our last meeting that we differentiate between soil that has been untouched by man, from soil that we know contain other materials. This would clearly distinguish what is not subject to this rule from what is. Suggested the following:*
   - *"Soil" = <u>ONLY</u> natural, native material that contains incidental amounts of organic material.*
   - *"Natural" = Containing NO manmade materials or contaminants.*
   - *"Native" = Material deposited in place by natural means (does NOT include fill).*
   - *"Incidental amounts" = Likely a small percentage, like 1-5%, consisting of organic materials, such as branches and leaves, left on the ground after clearing, grading, and subsequent clean-up.*

   Soils could be used anywhere without restriction and would not be subject to the rule in any way. Everything else would be an "earthen material", to include contaminated soil, soil containing any man-made material (e.g., jet grout, soil stabilizers, drilling fluids, etc.), natural soils outside the 6.5 – 8.5 pH range, and others TBD by the workgroup. Stick with tiered approach.

Group did not decide on any specific definition, but relayed the following concepts:

- Use of term "contaminated" has negative implications, especially if the soil meets all contaminant limits we come up with, or is thought of as beneficial like topsoil. Need a new term. Brainstormed the following terms to differentiate clean from contaminated:
  - Clean soil, soil, manufactured soil
  - Native vs. non-native
  - Marginally-contaminated soil
  - Low-level soil
  - Developed soil
  - Impacted soil
  - Disturbed soil
  - Earthen material

- Not everyone agreed that current definitions put "contaminated soils" as coming only from cleanup sites and all other soils therefore were "clean". Did agree that removing tie to cleanup sites is appropriate.
- After understanding that originally-adopted definitions would have defined contaminated soil when used on sites with equal to or higher contamination levels (AKA antidegradation) as a "clean soil", did not think definitions were bad. Still likely need changes to them though.
- The proposed definition in #2 above for "natural" is not realistic. There will always be something introduced by man, be it via emissions in the air or rainwater.

How does the group want to deal with soils containing naturally-occurring levels of concern – pH, asbestos, lead, arsenic, etc.? Do we want contaminants to be only those things added by man?

- Group decided we needed to include naturally-occurring contaminants in rule.
- Somehow differentiate between naturally-occurring from introduced materials.
- For asbestos, only friable asbestos is a concern so should be only type the rule will address.

Is the material "soil"? We talked before about some % of non-soil to separate its handling under the soils section vs. other solid waste mgmt sections.

- *"Soil" means ~~unconsolidated earth material composing the superficial~~ geologic strata (material overlying bedrock)~~,~~ consisting of clay, silt, sand, or gravel size particles as classified by the U.S. Natural Resources Conservation Service, or a mixture of such materials with liquids, sludges or solids which is inseparable by simple mechanical removal processes and is made up primarily of soil by volume based on visual inspection. ~~Any deliberate mixing of prohibited hazardous waste with soil that changes its treatment classification (i.e., from waste to contaminated soil) is not allowed under the dilution prohibition in § 268.3~~ (40 CFR 268.2 Solid Waste, Land Disposal Restrictions).*
- *"Soil" means a mixture of organic and inorganic solids, air, water, and biota that exists on the earth's surface above bedrock, including materials of anthropogenic sources such as slag, sludge, etc. [Does not acknowledge a limited amount of non-soils]*
- *"Soil biota" means invertebrate multicellular animals that live in the soil or in close contact with the soil. (WAC 173-340 MTCA)*

- Did not make any decisions about soil definition, but will need to be careful about unintended consequences. For example, first definition above could be interpreted as needing removal of any non-soils if possible. Much removal is possible, but running all soils through a screen, or other means of mechanical removal, is unrealistic.

To address purposeful additives for manufactured topsoil, may need a couple other terms – value-added ingredients (wood ash for pH) vs. tip fee/no benefit from material/potential harm (asphalt roofing)

- Acknowledged that many topsoil manufactures add only products like compost and fertilizer to their soil. They add no solid wastes at all.

Tier 2 exclusions (contains contaminants, but certain amounts/uses okay) (1040-1110)

Uses that will be excluded from the need to obtain a solid waste permit.

- *Manufactured topsoil when used for purposes of promoting plant growth, such as in establishing a lawn or garden.*
  - *Definition of manf. topsoil will exclude additives that do not improve the topsoil, but will allow additives that improve quality of it. Good – compost. Bad – ground asphalt roofing shingles.*
  - *Would not allow use as fill.*
- *Street waste meeting contaminant limits and used in a manner that corresponds to those contaminant limits in Appendix XXX.*
- *PCS meeting contaminant limits and used in a manner that corresponds to those contaminant limits in Appendix XXX.*
- *Soils used on sites containing contaminant limits of equal or greater levels.*
  - *Would not allow use on sites that need to undergo cleanup.*
- *Soils used/placed back at the site of generation, provided materials were not added to soils during the project.*
- *Soils used for engineering properties as certified by an individual licensed to practice engineering licensed in the state of WA*
- *Soils under XXX cubic yards????*
- *Soils not known or suspected to contain contaminants????*

- For street waste, recommended again that we look at removing BTEX and altering the cPAH limits. Also recommended that rule not be so rigid in allowable uses that it offers no flexibility for other options.
- 'Soils used on sites containing contaminant limits of equal or greater levels' needs lots of clarification. See this exclusion for use with big projects since receiving site characterization would be needed. It is meant as an antidegradation use. Remove reference to cleanup sites. Sites may have been inappropriately managed to begin with and not be cleanup sites, but still would not want to allow as a use site.
- Consider adding another exclusion: 'Soils with jet grout reused back at site of origin.' Justification is that jet grout would be allowed to stay on the site if undisturbed. That should not change simply because it was dug up.
- 'Soils under XXX cubic yards' brought a lot of discussion.
  - There are many small projects and it is unrealistic to expect the generator to test the material. PTI takes soils from primarily small projects without testing and wants to continue to do so. They test the end material prior to it being sold and the rule should make allowances for that.
  - Could focus on the aggregate accumulation of small loads. Put testing on the receiving site. Require they have a screening/acceptance policy to help ensure "hot loads" are rejected. Concern that once accepted for fill, would be difficult to require removal of soils if found later to be above "clean" standards.
  - Perhaps exclude the one-time, small load, disposal site.
  - Have not come up with a quantity exclusion.
  - Small projects could/would use the 'Soils not known or suspected to contain contaminants.'

Representative Sampling/Soil Characterization

Stormwater Manuals (street waste):

Cubic Yards	*Samples*
0-100	*3*
101-500	*5*
501-1000	*7*
1001-2000	*10*
>2000	*10+1 for each added 500 cy*

PCS Guidance:

Cubic Yards	*Samples*
0-100	*2*
101-1000	*3*
1001-50,000	*5*
50,001-100,000	*10*
>100,000	*10+1 for each added 50,000 cy*

Tacoma-Pierce County Health (used for any type of solid waste, not just soils):

Cubic Yards	*Samples*
0-25	*2*
26-100	*3*
101-500	*5*
501-1000	*7*
1001-2000	*10*
>2000	*10+1 for each added 500 cy*

Dredged Material User Manual: Complicated, but much less sampling than above.

Composting and biosolids are different because end uses are far more limited and we know a lot about both materials. Compost sample each 5,000 cy. For biosolids, frequency (not # samples) of sampling increase as annual amount produced increases.

- No decisions made on sampling frequency.
- 500 cubic yard minimum before requiring test.
- Based amount of testing on the risk of materials – could be too subjective.
- CalPortland requires testing depending on site risk after inspecting soils at the point of generation. One example they gave was 1 test for first 1,000 cy, another for 1,500, 2,500, then 5,000.
- Differentiate between large quantity vs. small.
- For smaller loads going to aggregate sites, require testing only by receiving site.
- For all soil, require at least one sample.
- Street waste should not sample coming in, but after treatment. Topsoil the same. Gets to "aggregate" site issue with small loads accumulating at one site. May only work for reuse of soils. Fill sites could be a problem as there is no incentive to test once accepted.

Review, Approval, Documentation (1130-1150)

How review currently works:

-Topsoil has been ignored in both storage and use, but some problems reported, concerns expressed. No solid waste permitting typically.

-Street waste decant needs permit, but end uses in accordance with guidance has been allowed without permit. Want to officially exclude such uses.

-PCS treatment sites subject to permit, but end uses in accordance with guidance have been allowed without permit. Want to officially exclude such uses.

-Other materials, like dredged materials and drilling materials, may submit lab results for review. Health agencies, sometimes in consultation with Ecology, review and decide how materials should be handled or if a facility can accept it.

-Some materials taken to inert landfills, gravel pits, reclamation sites, with/without characterizing or review.

Other than with permitted sites, there is no administrative process to address review responsibilities or record of decisions.

- *No authority in solid waste statute for health agencies to charge for anything other than permit review fees. Our task is to characterize soils and specify appropriate reuse/disposal and no permitting will be involved in that. Health agencies typically have broader authorities to charge fees.*
- *Virginia has self-implementing mechanism for generators and owner/operators to properly manage "contaminated media". Submits form to DEQ addressing the following: Generator tests and determines what sites are appropriate (Tier 1-sensitive, Tier 2-residential, Tier 3-industrial). Says how much and where it will go. Requires signature of property owner. Pennsylvania has similar mechanism for recording analysis and use with the state.*
- *Tacoma-Pierce County Health has disposal authorization application to determine if disposal in several area landfills is appropriate. Is used for any type of solid waste, not just soil.*

- Operators like Cal Portland deal with large quantity materials and they have their own testing requirements, primarily metals and petroleum. Those bringing in materials must submit a questionnaire and sign a clean soil contract.
- Operators like PTI deal with small quantity materials. They do not require testing, but do look at generating site to see if soils might be problematic.
- DNR reclamation sites have been a problem because of DNR's list of allowable materials, much of which is solid waste under WAC 173-350. DNR has little authority to deny many materials used for fill. Wants clear standards to come out of this rule for "clean" soils so that they could possibly be the enforcement agency since they have oversight.
- No decision made on review or documentation.

Close

- Decided to have monthly conference calls as Marni drafts rule language. No plan for face-to-face until there is a need.