



Options for Managing Petroleum Impacted Soil

By

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Controlling Authorities

- ☛ Solid Waste Management Law & Regs
- ☛ Clean Water Law & Regs
- ☛ Air Pollution Control Law & Regs
- ☛ Hazardous Waste Law & Regs

Solid Waste Management Law

- ☛ Solid Waste must be disposed of at a permitted processing facility or disposal site

Disposal Options

- ☛ Sanitary Landfill
- ☛ Landfarm
- ☛ Beneficial Reuse

Sanitary Landfills Can Not Accept

- ☛ Bulk Liquids
- ☛ Flammable Materials
- ☛ Hazardous Wastes

Landfill Acceptance Criteria

- ☛ Paint Filter Test
- ☛ Flash point Test
- ☛ Lead Test
- ☛ Benzene Exclusion

Definition of “Clean Fill”

“Clean fill” means uncontaminated soil rock, sand, gravel, concrete, asphaltic concrete, cinder blocks, brick, minimal amounts of wood, metal, and inert solids as approved by rule or policy of the department for fill, reclamation, or other beneficial use.

Clean fill

- ☛ Placement on your own property
- ☛ Placement on another person's property with their permission
- ☛ Can not be placed in waterways without a dredge/fill permit (401/404 permits)

Minimally Impacted Soil

☛ Old Guidance

- 50 ppm TPH, 0.5 ppm Benzene, 60 ppm MTBE, 1 ppm Total BTEX
“considered” clean fill (unrestricted use)

☛ MRBCA Guidance

- DTLs; 383 ppm TPH-GRO, 0.0561 ppm Benzene, 0.453 ppm MTBE (cannot contact surface water or groundwater and must be capped)

Technical Bulletin

“Beneficial Use of Petroleum Contaminated Soil”

<http://www.dnr.mo.gov/pubs/pub2177.pdf>

3 Categories based upon level of contamination

- ☛ Clean Fill < Detection Levels (RRLs)
- ☛ Minimal contamination < DTLs (or = background)
- ☛ Moderate - heavy contamination > DTLs - written site specific approval by SWMP required

Category	Petroleum Contaminant Concentration	Allowable Uses	Nuisance Limitations
1. Clean Fill	No detectable petroleum contamination	Unlimited use	None
2. Minimal Contamination	Below Missouri Risk Based Corrective Action (MRBCA) Default Target Levels for Petroleum Constituents*	PCS may be used as fill material without further approval of the department. The PCS may not be placed in contact with groundwater or surface water and must be capped with at least one foot of clean fill material, or with at least 2 inches of asphalt or concrete.	Although not a human health risk, the soil may exhibit odor, staining, oiliness or other characteristics that the end-user may find aesthetically objectionable (i.e., a nuisance). Not recommended for fill around homes, gardens, play areas or other areas where there may be a high aesthetic consideration.
3. Moderate Contamination	Greater than MRBCA Default Target Levels for Petroleum Constituents*	Beneficial use allowed with a written site-specific approval by the department's Solid Waste Management Program. This requires the submittal of a proposal addressing the regulatory requirements of 10 CSR 80-2.020(9)(B), as outlined in the <i>Beneficial Use Guidelines</i> (see page 3).	See above.

* See Table 3-1, Default Target Levels

Clean Water Law & Regulations

- ☛ Stormwater run off from a soil pile, fill area, or landfarm

Air Pollution Control Laws

- ☛ Local air permits for landfarms in non-attainment areas
- ☛ Local approvals needed for excavation during ozone season

Hazardous Waste Law & Petroleum Storage Tank Laws and Regulations

☛ Soils that fail flash point or lead tests

☛ MRBCA Guidance

- returning soil < target levels to excavation per the 2005 supplemental guidance

<http://www.dnr.mo.gov/env/hwp/tanks/docs/interim-guidance-3-18-05.pdf>

- covering temporary stockpiles of excavated soil

Questions?

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