

Development Soils Factsheet

Purpose: To provide options for the reuse or disposal of soils contaminated with polycyclic aromatic hydrocarbons (PAHs), arsenic, or lead ONLY. If the soil contains any other hazardous material at concentrations above a standard, it is not considered Development Soil.

Applicable Rules: **Investigation and Remediation of Contaminated Properties Rule (IRule)** - Regulates releases of hazardous material, directs assessment and cleanup, and sets cleanup standards
Solid Waste Management Rule - Regulates management and disposal of solid waste

Due to the ubiquitous nature of PAHs, arsenic, and lead in soils in urban areas, and the challenges these compounds create during redevelopment, ACT 52 (2015) directed VTDEC to conduct a statewide background study of these compounds and develop more flexible disposal options to facilitate downtown redevelopment. Soil standards were established using the statewide background concentration for arsenic and the urban background concentration for PAHs, and a designated Urban Background Area was created. For more information on the background study, see: <https://dec.vermont.gov/waste-management/contaminated-sites/statewide-soil-report>.

Applicable Soil Standards*

Lead		Arsenic
<i>Residential</i>	<i>Non-residential</i>	<i>Statewide</i>
400 mg/kg	800 mg/kg	16 mg/kg

PAHs			
Non-urban Background Area		Urban Background Area	
<i>Residential</i>	<i>Non-residential</i>	<i>Urban Background</i>	<i>Non-residential</i>
0.076 mg/kg	1.54 mg/kg	0.58 mg/kg	1.54 mg/kg

*Soil concentrations in exceedance of one of the yellow highlighted values indicates a release to the environment and results must be reported to VTDEC. Soils containing PAHs, arsenic, or lead at concentrations below these values are not regulated.

An **Urban Background Area** is established on the **ANR Atlas** designating where the Urban Background Standard for PAHs is applicable: <http://anrmaps.vermont.gov/websites/anra5/>

Soils containing PAHs at concentrations at or below the Urban Background value (0.58 mg/kg) may be moved to any property within an Urban Background Area, or one of the three disposal options below. This includes moving soils from outside an Urban Background area into an Urban Background area, with pre-approval by DEC.

If concentrations of lead or arsenic in the soil exceed a soil standard, the soil can only be disposed of via one of the three disposal options below or another approved disposal facility.

Development Soil Disposal Options

- **Receiving Sites.** This allows for soils to be brought to a property that has concentrations of PAHs, arsenic, or lead at concentrations equal or greater to those found on the development site, and at concentrations above a soil standard. To be eligible as a receiving site, a request



must be submitted to the Agency of Natural Resources that demonstrates that the property meets the conditions for receiving sites as detailed in the IRule.

- **Categorical Certifications.** The Solid Waste Rules allow for the disposal of Development Soils at certified categorical disposal facilities. An application to have a certified categorical facility permitted must be submitted in accordance with Section 6-309 the Solid Waste Management Rules.
- **Alternative Daily Cover.** Development soils can be disposed of at permitted solid waste facilities as Alternate Daily Cover (ADC) upon approval by the facility. Written documentation from the Waste Management and Prevention Division may be required to document that the proposed ADC is Development Soil.

FAQs

When are non-residential soil standards applicable? Non-residential soil standards may be used to allow soils to be left on a property if there is a land use restriction through zoning or an environmental easement. Soils containing PAHs in exceedance of the Urban Background Standard but below the non-residential standard cannot be moved to other non-residential properties unless that property has been approved as a Receiving Site.

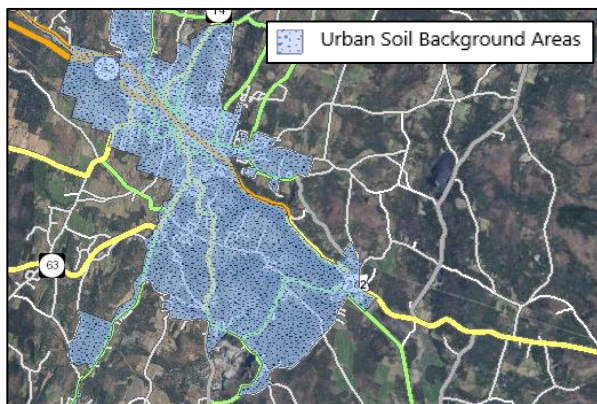
Am I required to sample soil prior to digging? No, the Sites Management Section (SMS) does not have jurisdiction over properties unless a release has been identified. If a property is enrolled in the Brownfields Reuse and Environmental Liability Limitation Act ([BRELLA Program](#)), the BRELLA applicant will need to work with the SMS to determine if testing is necessary.

Why should I sample soil? If you know that your construction project will generate excess soils, a disposal facility will most likely require testing before they accept the soil. An environmental professional should understand what the contaminants of concern are based on the property location and history, and what testing the disposal facility will require.

When is the best time to do this testing? It is a best management practice to collect soil samples for testing PRIOR TO excavation. If soils are sampled in place, and test results show an exceedance of a standard, it will be easier to evaluate the data, understand the source and extent of contamination, and determine if additional work is required. It will also be less likely that testing needs to be repeated if the SMS is involved in the process up front.

When is SPLP required? Prior to disposal at a receiving site or sometimes to determine if the soils qualify as Development Soils, soils must be analyzed by the Synthetic Precipitation Leaching Procedure (SPLP) to determine if there is a potential for contaminants to impact groundwater.

What other work is necessary at my site if an exceedance of a standard is identified? If any hazardous material is reported above a standard, this exceedance must be reported to the SMS. In addition, the degree, and extent of contamination must be characterized per §10 V.S.A. 6615b. If the material tested meets the criteria for **Historical Fill**, an exemption to conducting a full site investigation may be approved per §35-107 of the IRule.



Concentration of PAHs	Reuse/ Disposal Options
≤Residential Standard	Not regulated
>Residential Standard; ≤Urban Background	Regulated outside of Urban Soil Background Areas; can be moved anywhere within an Urban Background Area
>Urban Background; passes SPLP	Regulated; can move soil to receiving site, categorical facility, or use as ADC
>Urban Background; fails SPLP	Not considered Background Soil; must be managed as contaminated soil.
*If As or Pb are present at concentrations above a soil standard, the only options are a receiving site, categorical facility, or use as ADC	