



Testimony of
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Pennsylvania Department of Environmental Protection
Before the Senate Majority Policy Committee on
the Management of Fill Policy
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Good morning, Senator Argall, Senator Scavello and members of the Committee. My name is George Hartenstein, Deputy Secretary for Waste, Air, Radiation and Remediation for the Department of Environmental Protection (DEP). I would like to thank you for the opportunity to appear before you today to explain DEP's approach to managing the use of fill in Pennsylvania and for your interest in ensuring that fill standards are protective of public health and the environment.

DEP recognizes the importance of regulatory oversight relating to the use of fill, particularly the use of fill from off-site sources in large construction projects. DEP's oversight role is primarily set by the Solid Waste Management Act, the Clean Streams Law, and the Land Recycling and Environmental Remediation Standards Act (known as the Land Recycling Act or Act 2). It is important to walk you through how the regulations, policies, and permits authorized by these statutes govern the use of fill in Pennsylvania.

Pennsylvania residual waste regulations define Clean Fill and establish that this material can be used to level or bring an area to grade without a permit if it is not placed in or on the waters of the Commonwealth or mixed with other wastes.

DEP has further clarified Clean Fill in the Management of Fill Guidance first issued in 2004 (258-2182-773 August 7, 2010). The guidance specifies that uncontaminated soil, rock, stone, dredged material, used asphalt, and brick, block or concrete from construction and demolition activities that is separated from other waste is Clean Fill. It further defines what is meant by the term “uncontaminated”, which I will explain later in this testimony.

The Management of Fill Guidance also establishes another category of fill – Regulated Fill. Regulated Fill is limited to soil, rock, stone, dredged material, historic fill, used asphalt, and brick, block or concrete from construction and demolition activities that is separated from other wastes. Regulated fill can be beneficially used as a construction material under a general permit issued pursuant to the residual waste regulations. Regulated Fill can be used for improvements that are a part of the construction project, such as to construct berms or embankments, for landscaping, and for building foundations or sub-bases for roads and parking facilities, provided that the material meets chemical concentration limits established in the permit. The permit requires that each new source of fill be sampled and analyzed for compliance with the permit before it can be used. The permit also prohibits the use of Regulated Fill for residential applications and includes siting limitations to ensure that the placement of Regulated Fill occurs within a defined distance from streams, water sources, homes, and wetlands.

The Management of Fill Guidance applies to all areas of the Commonwealth *except* to reclamation activities at non-coal mine sites that have an approved mining permit and reclamation plan.

Because soil contains various chemical elements and substances from natural weathering of geologic formations, spills of wastes and chemical products, applications of fertilizers and pesticides or emissions from vehicles and manufacturing operations, the term “uncontaminated” and “contaminated” are not easily distinguishable. DEP uses the Land Recycling Act as a basis for determining the levels of various inorganic and organic chemical substances that can be present in Clean Fill and Regulated Fill and remain protective of human health.

For material to qualify as Clean Fill, it must not be impacted by a release of a regulated substance as that term is defined in Act 2, or, if it has, the soil must be tested to determine whether it meets levels that would be protective of human health under a residential exposure scenario as applied under the Act 2

Statewide Health Standard. Cleanup of releases of regulated substances in soil for residential exposure is the most stringent application of the Statewide Health Standard as it allows for the unrestricted use of the property; therefore, it follows that such soil can be used in an unrestricted manner under the solid waste regulations as Clean Fill.

To qualify as Regulated Fill, concentration limits of inorganic and organic regulated substances must not exceed levels that would be protective of human health under a non-residential exposure scenario as applied under the Act 2 Statewide Health Standard.

The Land Recycling Act, passed in 1995, establishes a risk-based approach to developing remediation standards for soil and groundwater. The act establishes a framework under which risk is calculated and fate and transport of substances in the environment is estimated. Specific Act 2 regulations (25 Pa. Code Chapter 250) include among other requirements, formulas that are used to calculate contaminant concentrations in soil and groundwater that meet the risk framework established in the act. Since 1995, the Act 2 cleanup standards have been applied to about 6,500 cleanups in Pennsylvania.

The risk formulas contained in the Act 2 regulations include many variables to estimate risk, including exposure assumptions such as intake, frequency and duration factors, fate and transport assumptions such as organic carbon partitioning coefficients, as well as toxicity factors such as cancer slope values and reference dose thresholds. The Department worked with the Cleanup Standards Scientific Advisory Board established by Act 2 in developing the regulations and applying them in the Management of Fill Guidance.

Many nearby states utilize a similar framework for risk-based cleanups of soil and the beneficial use of soil as fill; however, each state applies the many exposure, fate and transport and toxicity factors, target risk levels, and applicability differently. Pennsylvania's Management of Fill Guidance contains values for almost 400 organic and inorganic chemical compounds and elements. A comparison with other states would show that various compounds have levels that are lower and some that are higher than those calculated under the Act 2 framework in Pennsylvania. A comparison would also show that fill in other states is limited to certain uses or areas differently than how the Management of Fill guidance applies in Pennsylvania.

Under Act 2, DEP updates toxicity values and the Statewide Health Standards every three years so that the most recent science is available. Also, DEP plans to propose updates to its existing Management of Fill guidance in the coming months. The revisions are expected to be published in the *Pennsylvania Bulletin* for public comment later this year. The Department will consider all comments on the proposed revisions before issuing a final revised guidance.

DEP is available to collaborate with the Committee as we continue to work on the updates to the Management of Fill guidance. We would be happy to answer any questions you may have at this time.