**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**Bureau of Waste Management**

**DOCUMENT NUMBER:** 254-2153-723

**TITLE:** Leak Detection Tests for Installed Liners

**EFFECTIVE DATE:** Upon publication as final in the *Pennsylvania Bulletin*

**AUTHORITY:** This documentis established in accordance with Act 97 of 1980, the Solid Waste Management Act, as amended , and the Environmental Statutes administered by the Department of Environmental Protection (DEP).

**POLICY:** This directive requires the quality control and assurance plan for the installation of liners in a landfill or impoundment to contain specifications for a leak-detection test at sump areas.

**PURPOSE:** The purpose of this policy is to provide guidance on leak detection tests for installed liners, specifically at sump areas.

**APPLICABILITY:** This guidance is applicable to operators of landfills.

**DISCLAIMER:** The policies and procedures outlined in this guidance are intended to supplement existing requirements. Nothing in the policies or procedures shall affect regulatory requirements.

The policies and procedures herein are not an adjudication or a regulation. DEP does not intend to give this guidance that weight or deference. This document establishes the framework, within which DEP will exercise its administrative discretion in the future. DEP reserves the discretion to deviate from this policy statement if circumstances warrant.

**PAGE LENGTH:** 2 pages

The quality control and assurance plan for the installation of liners in a landfill or impoundment should require specifications for leak-detection test, such as the hydrostatic leak-detection test, at the sump areas.

The applicant should be able to demonstrate that the facility is liquid-tight in the sump areas and that the leak detection and drainage systems perform satisfactorily. Also, any pipe penetrations of the geomembrane should also be tested or submerged. Before protective cover is placed on the liner, the lined unit can be partially filled with water and observations made as to whether losses exceed evaporative losses. Several leak detection methods may be used; however, the hydrostatic test is the simplest. Therefore, the hydrostatic test (with liner penetrations submerged) should be performed as the minimum requirement for leak-detection testing. Dye testing may also be p performed to check for leakage in the liner.

**PROCEDURES**

In order to maintain uniformity in implementing this requirement, the proposed sump leak testing procedures should be included in the application or if the application is near permitting at the time of the effective date of this policy, the following condition can be included in the permit:

“The sump areas of all landfill cells will be tested to determine the integrity of the sump areas prior to certification or start of waste disposal operations, as approved by the Department.”