

**DISCLAIMER: The following document is in draft form and is being provided as supporting material for review of the DOEE Pavement Sealant Testing Protocol. Content is subject to change at DOEE's discretion before the final version is published.**

## DRAFT DOEE Pavement Sealant Testing and Low-PAH Product List Program Guide

### **I. BACKGROUND**

#### **Objective**

To support regulators, property owners, industry representatives, pavement sealant applicators, and other stakeholders in utilizing the accompanying **DOEE Pavement Sealant Testing Protocol (“testing protocol”)**. This document provides background information, details on the development of the protocol, how to utilize the protocol to test pavement sealants for Polycyclic Aromatic Hydrocarbon (PAH) concentrations, and the upcoming Pavement Sealant Certification lists made public and managed by the District Department of Energy and Environment (DOEE).

#### **Introduction**

The District of Columbia has banned the use or sale of coal tar pavement sealant products since 2009. The Department of Energy and Environment (DOEE) has implemented a pavement sealant program since 2010 that works to educate the regulated community on the requirements of the law and inspect District properties and businesses for compliance.

In 2019, the District [adopted legislation](#) that built upon the Coal Tar Ban by prohibiting the sale and use of new high-PAH sealant products that have entered the market since our coal tar ban was passed in 2009. The 2019 legislation bans sealants with a PAH concentration greater than 0.1% by weight or 1,000 parts per million (ppm) from being sold or used in the District.

#### **Developing a Testing Protocol**

PAH concentrations in pavement sealants are traditionally difficult to track. This data is not available on sealant Safety Data Sheets (SDS) or on product labels and are either not tested or are considered proprietary information by pavement sealant manufacturers.

In support of this law, the District pursued and received funding from the EPA Chesapeake Bay Program to hire a contractor to:

1. Develop a standardized testing protocol for testing PAH concentrations in pavement sealants. This program has developed the testing protocol to be publicly available for use by any regulator, lawmaker, stakeholder, or resident.
2. Use the protocol to test a wide range of products on the market to make a list of low-PAH pavement sealant products that meet 0.1%/ 1,000 ppm (Gold) or 1%/ 10,000 ppm (Silver) thresholds, again to be made publicly available. **DOEE will use the Gold list to determine which sealant products are permitted to be sold and used in the District.** The Silver list exists to assist other jurisdictions with PAH-Limit laws set at 10,000 ppm.

To develop this protocol DOEE worked with experts from industry and the EPA. The protocol has been designed for use by environmental laboratories with accreditation under the National Environmental Laboratory Accreditation Program, or NELAP, along with a sample of the pavement sealant to be tested. More information on the requirements for the laboratory analysis, and how to find accredited NELAP labs is included below.

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## **II. SAMPLE TESTING: QUALIFICATIONS AND INSTRUCTIONS**

### **What can be tested under this program?**

DOEE is only considering pavement sealant products, defined as a coating labeled and formulated for application to worn asphalt driveway and parking lot surfaces to seal the surface to provide protection, for the Gold and Silver Low-PAH Product Lists. Asphalt rejuvenators, crack fillers, or other similar products are not eligible for testing under this program.

### **What are products tested for?**

Product samples will be tested using EPA Method 8270D to determine concentrations of 17 priority PAHs as identified by the EPA alongside all required quality control tests. No other tests unrelated to the PAH testing will be required, reviewed, or reported.

### **Who can submit product samples for consideration?**

Pavement sealant manufacturers and producers of pavement sealant products are encouraged to submit samples for PAH analysis. Products submitted by sealant distributors, sellers, and applicators will not be accepted.

### **Submitting product samples for analysis:**

Manufacturers have two options for having product samples tested:

1. FREE ANALYSIS (minus shipping costs) through a DOEE-approved third-party. Samples must be prepared according to instructions below and will be sent to a NELAP-accredited lab with known sealant testing experience. Samples should be sent to:

Sitelab Corporation  
86 Coffin Street West Newbury, MA 01985  
Attn: Steve Greason, Laboratory Manager

Please call SiteLab at (978) 363-2299 prior to shipment and let them know when they can expect your shipment.

2. Submit samples to NELAP accredited lab of manufacturer's choice (paid in full by manufacturer). The selected lab must have experience analyzing solid waste according to EPA method 8270D<sup>1</sup>. Samples must be prepared according to instructions below and must follow the instructions of the testing protocol, including Chain of Custody form.

**SAMPLE PREPARATION INSTRUCTIONS:** Collect and submit samples in 8 oz or pint size containers (jars, cans) with a tight-fitting lid. Only collect "Ready to use" (RTU) samples of pavement sealant and not emulsions or concentrates. Include a copy of the product's SDS with your sample and share whether PAH concentrations of the submitted product are expected to be above or below 500 ppm or are

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<sup>1</sup> For an up-to-date list of NELAP-accredited labs with 8270D/ solid waste experience, search the NELAC site at: <https://lams.nelac-institute.org/Search>. Choose Solids/Chemical in the Matrix field and enter 8270D in the Method field.

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unknown<sup>2</sup>. Label the sample container with “Shake sample prior to use” and instruct the laboratory to store at room temperature and to not freeze the samples (including transit). The samples must be submitted to the laboratory under a Chain-of-Custody (COC). See an example of a COC document included below. Provide the laboratory with a copy of this program guide and the Pavement sealant PAH Testing Protocol.

NOTE: Manufacturers will be responsible for the costs of any future testing (see section IV below) required to remain on the Gold or Silver lists.

**III. CRITERIA FOR PRODUCT REVIEW AND ACCEPTANCE TO DOEE LOW-PAH PRODUCT LISTS**

**Criteria for product review and acceptance to DOEE Low-PAH Product Lists**

DOEE reviews applications on an as-needed basis and products may be submitted for consideration at any time. Application packages must include the following information and must be submitted to DOEE to be considered for the Gold or Silver lists<sup>3</sup>:

- Cover letter, including contact name, email address, and phone number
- Product SDS sheet
- DOEE Statement of Sample Accuracy, signed by manufacturer representative
- Proof of NELAP accreditation, 8270D method experience for lab that completed testing
- Summary data package generated by lab, as described on page 11 of the testing protocol (see Appendix A of testing protocol for example)

The package must either be emailed to [pavementsealant@dc.gov](mailto:pavementsealant@dc.gov) with the Subject “PRODUCT REVIEW REQUEST FOR LOW-PAH LISTS- [COMPANY AND PRODUCT NAME HERE]” or mailed to DOEE offices at the address below:

Department of Energy & Environment c/o Lillian Power  
1200 First St NE, 5<sup>th</sup> Floor  
Washington, DC 20002

Manufacturers choosing to mail packages must notify DOEE in advance by calling (202) 671-0080.

DOEE may request samples be sent to DOEE for additional testing at a laboratory of DOEE’s choice, or may purchase product for testing, for quality assurance purposes. All products accepted onto the list are subject to retesting by DOEE at any time.

DOEE may test products that have not been submitted for review by the manufacturer to expand the Low-PAH Product Lists and offer the regulated community a wider range of compliant options. DOEE will notify manufacturers of the results of any products tested before making changes to the Low-PAH Product Lists.

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<sup>2</sup> Rough estimate of PAH concentration will assist the lab in appropriate sample preparation and dilutions. Inaccurate reporting, particularly underestimates, could trigger delays in analysis and/or additional costs required of the manufacturer.

<sup>3</sup> Submitted application materials will be internally reviewed and recorded and are subject to the District of Columbia Freedom of Information Act of 1976, D.C. Official Code §§ 2-531 through 2-540. Only the Gold and Silver Lists will be published on DOEE’s website. All or portions of package may be shared with other regulators for sole purpose of implementation of PAH-Limit laws.

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*A product will be accepted if:*

1. All required components of the application package are included and determined to be valid; AND
2. The sum of reported PAH concentrations for the 17 priority PAHs is 1,000 ppm or below for the Gold list, or 10,000 ppm or below for the Silver list; AND
3. All quality control data falls within acceptance limits included in the testing protocol (see page 5) **OR** individual qualifiers fall below DOEE recovery limits but are still above 50% recovery **OR** individual qualifiers fall below 50% **BUT** the average % recovery calculated is still above 50%.

*A product will be rejected/ retest required if* qualifiers consistently fall below 50% recovery and the calculated average % recovery for one or more QC tests is below 50%.

**All products are reviewed on a pass/fail basis.** DOEE will notify manufacturers of all final decisions. Products failing Gold and Silver List requirements will not be published on DOEE's website.

If a product is accepted for the Gold or Silver Low-PAH Product Lists, it will be added to the publicly available versions of the lists found at [doee.dc.gov/coaltar](https://doee.dc.gov/coaltar). Both lists will be organized alphabetically by product name and will not include the reported PAH concentrations.

#### **IV. REQUIREMENTS FOR REMAINING ON THE GOLD AND SILVER LISTS**

Product Manufacturer Responsibilities: Beginning in 2023, manufacturers with products on Gold or Silver Low-PAH Product Lists are required to submit application packages as described in Section III to confirm continued compliance with PAH concentration requirements. Packages must be submitted with the Subject or Cover Page titled "PRODUCT REVIEW REQUEST FOR CONTINUED INCLUSION ON LOW-PAH LISTS- [COMPANY AND PRODUCT NAME HERE] by **July 1, 2023**. Packets must include laboratory PAH analysis completed within 60 days of date of resubmission, calculated from date of email submission or postmarked package. Manufacturers are responsible for paying for product re-analysis.

All products on the Gold and Silver lists without a submitted and approved application package will be removed.

DOEE Responsibilities: DOEE will make at least one attempt to remind all manufacturers with products on Gold and Silver lists of deadlines for package submissions. DOEE may purchase and test PAH concentrations of a randomly selected portion of products on Gold and Silver lists. Manufacturers will be alerted to DOEE plans to test particular products as well as the final results.