

Dirt and Gravel Road Maintenance Program

Summary of Product Submittal Requirements

This document is a summary and guide only, for full information on submittal requirements see: “PA Dirt, Gravel, & Low-Volume Road Maintenance Program Product Approval Instructions” (http://www.dirtandgravel.psu.edu/PA_Program/Products/products.html)

I. REQUIRED ADMINISTRATIVE APPLICATION COMPONENTS:

1. Prior to submission the applicant must notify the Center of their intent to submit a product for review.
2. A completed Contact Submittal form must be included.
3. Point of use instructions and a Safety Data Sheet shall accompany the submittal.
4. A complete set of all laboratory analyses and aquatic testing results.
5. A signed summary data sheet completed by and authorized company representative certifying that the product submitted for testing is representative of the product sold and that established testing limits were not exceeded.

II. ENVIRONMENTAL TESTING PROTOCOLS

All products should be tested as the undiluted product. If the product is intended to be diluted, the dilution rate should be clearly stated.

1. **Inorganic Bulk Analysis:** Quantifies the inorganic components of the product.

a. **Required Submissions:**

- i. Complete “**Table 1. Bulk Inorganic Analysis**”.
- ii. Complete set of laboratory analyses.

b. **Approval Guidance:**

- i. This test is used as information for the reviewers and can help explain why a particular chemical is or is not present in the SPLP leachate and any exceedances in the SPLP and/or aquatic testing. With the exception of PCBs, a reported concentration higher than the comparison value is NOT used to determine acceptability of the product into the Program. For PCB guidance please see the full instruction document.

c. **Procedure Reference:**

- i. Testing method EPA SW-846, Series 6000/7000

2. **LEACHATE ANALYSIS:** All products shall have their leachate characterized based upon the Synthetic Precipitation Leaching Procedure (SPLP) EPA Test Method 1312.

a. **Required Submissions:**

- i. Complete “**Table 3: SPLP Inorganic Leachate Analysis**”
- ii. Complete “**Table 4: SPLP Organic Leachate Analysis**”
- iii. Complete set of laboratory analyses.

b. **Approval Guidance:**

- i. If the product does not exceed any of the MSC limits of the SPLP test listed in the tables, then the product is deemed to have **passed** the SPLP testing requirements and the applicant should proceed with aquatic testing. If any MSC is exceeded, a second sample of the material shall be tested, and chemical analyses attached. If upon retesting the MSC limit is again exceeded the product will be **rejected** for use in the Program.

c. **Procedure reference:**

- i. EPA Method 1312: *Synthetic Precipitation Leaching Procedure*
- ii. EPA Methods 6000/7000 and 8260/8270

3. **AQUATIC TESTS:** Aquatic testing is required on both Rainbow Trout and Daphnia.

a. Required Submissions:

- i. Rainbow Trout Test: Full Results of 96-hour Rainbow Trout test as outlined in EPA 850.1075.
 1. Rainbow Trout (*Oncorhynchus mykiss*) shall be used.
 2. Results shall report: No Observable Effect Concentration [NOEC], Lowest Observable Effect Concentration [LOEC], and Mean Lethal Concentration [LC50].
- ii. Daphnid Test: Full Results of 48-hour Daphnid test as outlined in EPA 850.1010 and results of 7-day reproduction test as outlined in EPA-821-R-02-013.
 1. Results shall report: No Observable Effect Concentration [NOEC], Lowest Observable Effect Concentration [LOEC], Mean Lethal Concentration [LC50] and Inhibition Concentration [IC50].
- iii. List results summary for both Trout and Daphnid test in **Tables 1 and 2**.
- iv. Complete set of aquatic analyses.

b. Approval Guidance:

- i. If the (LC50) is greater than 100 ppm for both the Rainbow Trout and Daphnia survival test AND the NOEC of the product is greater than 1.0 ppm for the Daphnia reproduction Test, then it is determined to be practically nontoxic to aquatic life and is deemed to have **passed** the test and is acceptable to the Program.
- ii. If the product fails any of the direct exposure tests to the trout or daphnids, then the product will be **rejected** for use in the Program.

c. Procedure reference:

- i. EPA Office of Chemical Safety and Pollution Prevention (OPPTS): Series 850: *Ecological Effects Test Guidelines*
 1. **Trout**: EPA OPPTS 850.1075: *Fish Acute Toxicity Test, Freshwater and Marine*
 2. **Daphnids**: EPA OPPTS 850.1010: *Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids*; and EPA-821-R-02-013 - *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*

Non-soluble Products

Aquatic testing for non-water soluble products should be done according to US EPA protocols for fish and daphnids [see EPA references listed above for Acute and Chronic testing]. These methods allow for the use of a solvent as a carrier or dispersant to dissolve or suspend the product in test dilution. If the product to be test cannot be solubilized with the use of solvents, then please contact the Center for guidance on appropriate testing methodologies.

Radionuclide exemption: If there is “no reasonable expectation” that the product contains radionuclides, or that they could be present in a product, the claim can be justified in writing and the constituent(s) omitted from the analyses on Table 1.

Organic Compound Disclosure: In **Table 2** provide a disclosure of all organic compounds contained in a product at concentrations greater than 0.1%. If this disclosure contains Confidential Business Information [CBI], as defined by the US EPA, the claim shall be justified in writing. In addition, the information shall be clearly designated as CBI in the application and submitted separately so the Program can accommodate its protection.

III. PERFORMANCE REQUIREMENTS

It is incumbent upon the Applicant requesting inclusion of their product into the Program to make a ‘*clear statement of the intended function of their product*’ and to supply sufficient data in the application to support their statement [i.e. product XYZ will suppress *all* dust during spring and summers in Pennsylvania with one application of 1 gallon per square yard]. Please see “Performance Requirements” section in full document for details.