**SPOKANE RIVER REGIONAL TOXICS TASK FORCE**

**HYDROSEED PILOT PROJECT WORKPLAN**

**SRRTTF Hydroseed Project Team:**

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**Objective:** to verify elevated PCB concentrations in Hydroseed products, identify components of Hydroseed products that may be contributing to elevated PCB concentrations, and develop product specifications with reduced levels of PCBs for distribution in WA State.

**Background: t**he purpose of the Spokane River Regional Toxics Task Force (SRRTTF) is to “work collaboratively to characterize the sources of toxics in the Spokane River and identify and implement appropriate actions needed to make measurable progress towards meeting applicable water quality standards for the State of Washington, State of Idaho, and the Spokane Tribe of Indians and in the interests of public and environmental health.”

In addition, the 2014 legislature adopted Senate Bill 6086 that requires State agencies to establish a purchasing and procurement policy that provides a preference for products that do not contain PCBs (<http://apps.leg.wa.gov/billinfo/summary.aspx?bill=6086&year=2013>). Spokane County and the City of Spokane adopted similar ordinances in response to concerns with PCB impairment of the Spokane River (<https://my.spokanecity.org/smc/?Section=07.06.172>). The City of Spokane’s ordinance requires City departments to purchase PCB-free items (defined as less than the practical quantification limit using EPA Method 1668) if a feasible alternative is available at less than a 25% cost increase. To implement the ordinance, the City is gathering more information about products known to contain PCBs. In 2014, the City sampled Nature’s Own Hydroseed manufactured by Hamilton Manufacturing, Inc. and discovered elevated levels of PCBs exceeding 2,500 parts per billion (ppb).

The Washington State Department of Transportation (WSDOT) has a list of qualified suppliers (attached) of Hydraulically Applied Erosion Control Products (HECPs) that a contractor can select off the list depending on price and their preference for use.  WSDOT also has a 2014 Specification Book for material specifications (attached).  The City of Spokane also uses the WSDOT Specification Book plus a General Special Provisions to supplement the WSDOT specifications as needed ([https://static.spokanecity.org/documents/business/designstandards/general-special-provisions.pdf](https://iep.iepco.com/owa/redir.aspx?C=2507a85e597a404f85005d613ffe7c4a&URL=https%3a%2f%2fstatic.spokanecity.org%2fdocuments%2fbusiness%2fdesignstandards%2fgeneral-special-provisions.pdf)). Unlike the WSDOT, the City currently does not have an approved supplier list for Hydroseed or HECP. The City uses WSDOT policies and procedures for State and Federal funded projects. After contracts go out to bid for City funded projects, the contractor can select anyone they like who meets the project requirements.

The SRRTTF Advisory Committee approved the Hydroseed Analysis and Reformulation PCB Removal Pilot Project during the February, 2015 meeting. This project is designed to assist manufacturers of Hydroseed in the analysis of their products and to develop specifications/reformulations with reduced levels of PCBs. This demonstration project will provide an example of how the State, City and County PCB Products Purchasing Referendums may be implemented towards removal of PCBs from the Spokane River watershed and ultimately for state-wide use. This process may then be applied to other purchased products that have been identified with elevated levels of PCBs (Deicer’s, road paints, etc.).

**Project Description:**

HMI Hamilton Manufacturing, Inc., Rainier, Tensar International Corporation and Terra Novo have agreed to participate in this pilot project to examine the specific components that may be contributing to elevated levels of PCBs in their end product. The study focused on these particular suppliers due to the widespread distribution of their products into WA State. This project will also be conducted in collaboration with the City of Spokane on their continued studies of other Hydroseed products used by City Departments (see “City of Spokane Continued Study” below for more details). This pilot project may be expanded to other manufacturers of Hydroseed should elevated levels of PCBs be discovered by the City on these products.

The four suppliers that have agreed to participate in this study have differing base materials and components used in the manufacture of their final product. In general, the Hydroseed products are comprised of a base material, dye, surfactant and tackifier or some combination of the above. The analysis of these four suppliers will provide a good cross section of the differing materials and components of Hydroseed products that are distributed throughout the State and confirm if there are variations in PCB content.

Sampling and analysis will be performed in accordance with the QAPP used by the City of Spokane, supplemented with the PCB Product Sampling QAPP Addendum for Supplemental Product Sampling: SRRTTF (attached). The QAPP addendum reflects the samples identified in this work plan. For sake of expediency and consistency, AXYS Analytical Services will be used to perform the laboratory testing of the samples, since AXYS is already under contract with the SRRTTF. Initial testing will be performed using a modification of EPA Method 8082, GS/MS using an isotope dilution method, AXYS in-house method MLA-007, since the PCB contamination levels within the Hydroseed indicated by the City’s results are relatively high. This method will provide a practical quantification limit (PQL) of 0.2 ppb, well below the 2,500 ppb levels detected in the sample analyzed by the City. The following provides an example of the estimated costs for each supplier using this test method (note that each supplier has different combinations of components, so the example below represents the highest cost scenario):

|  |  |  |  |
| --- | --- | --- | --- |
| **Sample Description** | **Analysis Cost** | **Level 4 Data Package** | **Total** |
| Composite Sample | $425.00 | $35.00 | $460.00 |
| Base Material | $425.00 | $35.00 | $460.00 |
| Dye | $425.00 | $35.00 | $460.00 |
| Surfactant | $425.00 | $35.00 | $460.00 |
| Tackifier/Other | $425.00 | $35.00 | $460.00 |
| **Subtotal** | $2,125.00 | $175.00 | **$2,300.00** |

**Project Execution and Reporting:**

HMI Hamilton Manufacturing, Inc., Rainier, Tensar International Corporation and Terra Novo have agreed to participate in this study on the basis that the results will be protected due to the proprietary nature of their various products and blends. Therefore, the project shall be executed in accordance with the following agreement with the suppliers:

1. HMI Hamilton Manufacturing, Inc., Tensar International Corporation, Rainier and Terra Novo have agreed to participate in this study and are agreeable with the use of their company names in any reports resulting from this study.  However, finished product and component analyses will remain anonymous and not be linked to any specific supplier.
2. AXYS is authorized to provide individual data packages to each Hydroseed supplier for their specific product and component analyses, as a benefit for participating in this study.
3. AXYS will provide a data package to the SRRTTF in accordance with the following format:

**Product #1          Product #2          Product #3          Product #4**

Finished Product

Base Material

Dye

Surfactant

Tackifier

Other

1. Any reports resulting from this study will be presented in the above format.
2. After receipt and evaluation of the laboratory analyses, the SRRTTF Hydroseed team and the Hydroseed suppliers will work together to identify any significant contributors of PCBs in their products and to develop alternative formulations to reduce or eliminate any PCB containing components.
3. It is understood that further testing may be needed to confirm the results of the above study and that additional studies may be needed based on the findings.

**City of Spokane Continued Study:**

As mentioned above, this Hydroseed pilot project will be performed in collaboration with continued studies being performed by the City on other Hydroseed manufacturers and products. The City of Spokane intends to analyze finished Hydroseed products using EPA Method 1668 as was done previously for the Hamilton Nature’s Own. If elevated levels of PCBs are detected in any of the finish samples tested, this SRRTTF pilot project may be extended to these products as described above, assuming that the Supplier desires to participate in this project. The City of Spokane’s continued study of additional Hydroseed manufacturers and products is described below.

Three additional Hydroseed samples were collected by the City in March 2015, consisting of the full Hydroseed product including mulch, dye, and binder, as applicable. Samples were analyzed using EPA Method 1668 at Pacific Rim Laboratories. Procedures in the City’s QAPP (attached) for PCB Product Sampling were followed. Samples include:

* Sample 201 - dye free straw mulch available for sampling at Wilbur-Ellis, 12001 Empire Avenue, Spokane Valley, WA. The product manufacturer is HydroStraw, LLC out of Rockford, WA
* Sample 202 - dyed wood fiber mulch available for sampling at FMI Equipment Sales & Rental, LLC, 11111 E. Trent Ave, Spokane Valley, WA. The product is manufactured on the West side by Rainier Veneer
* Sample 203 - dye free wood fiber mulch with details the same as Sample 202.