INDUSTRIAL WASTE AREA GROUP III ("IWAG")
FOR THE PASCO SANITARY LANDFILL NPL SITE

COMPRISED OF: 3M Company; Blount, Inc.; The Boeing Company; Crown Beverage Packaging, LLC; Daimler Trucks North America LLC; Georgia-Pacific LLC; Goodrich Corporation; Intalco Aluminum Corporation; PACCAR Inc.; PCC Structurals, Inc.; Pharmacia LLC; PPG Architectural Coatings Canada, Inc.; Simpson Timber Company; Union Oil Company of California; and Weyerhaeuser NR Company

BY IWAG STEERING COMMITTEE CO-CHAIRS:

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VIA EMAIL (PDF)

Mr. Chuck Gruenenfelder, LG, LHG
Project Manager, Toxics Cleanup Program
Washington Department of Ecology
Eastern Regional Office
4601 North Monroe Street
Spokane, WA 99205-1295

Re: **Pasco Sanitary Landfill NPL Site**
IWAG Comments on August 2019 Cleanup Action Plan

Dear Mr. Gruenenfelder:

This letter provides the Industrial Waste Area Generator Group III ("IWAG") response to the Washington Department of Ecology ("Ecology") invitation for public comment on the documents prepared for the Pasco Sanitary Landfill NPL Site (the "Site"), which describe the final remedial actions for the Site. The documents consist of the August 2019 Cleanup Action Plan, legal documents (Consent Decree and/or Enforcement Order), the accompanying Exhibit C: Pasco Sanitary Landfill NPL Site Scope of Work and Schedule, and other relevant information. On behalf of the IWAG, we provide the following comment pertaining to the Scope of Work.

I. IWAG Comment regarding laboratory testing of the, to be installed, Zone A geomembrane and the existing Zones C/D and E geomembranes.

Task A.8., Submitting a Zone A O&M Plan, item G, and Task B.1., Submitting a Zones C/D and E O&M Plan, item g, include the following requirement:

Performing laboratory testing of the cover system geomembrane at least once every 10 years to confirm long-term performance and compliance with design requirements. Specific testing methods will align with the 2015 Geosynthetic Institute White Paper #32, and/or other state-of-practice testing requirements recognized by EPA or other state agencies for evaluating the long-term integrity and functionality of cover system geomembranes.

This task requires laboratory testing of the cover system geomembranes for the Industrial Waste Areas (IWAs) at least once every 10 years to confirm long-term performance and compliance with design requirements. In support of this requirement, Ecology cites Geosynthetic Institute White Paper #32. The White Paper describes the rationale of selecting the relevant test methods and the background for establishing specified values for an HDPE liner. The performance testing cited is typically applied during cover system installation as part of construction quality control and assurance. The IWAG acknowledges it is standard practice to conduct the performance testing noted in the Geosynthetic Institute White Paper #32 (and associated GRI-GM13 Standard) with Oxidation Induction Time (ASTM D3895 and ASTM D5885) and UV Resistance (GM11 and ASTM D5885) during cover installation. The testing above is commonly used as part of the cover system installation Quality Control and Quality Assurance process, and involves sampling every 100,000 square feet of placed liner or one sample per each resin batch.

Ecology's Scope of Work requires a non-standard application of this testing to be performed post-construction to assess on-going performance of the geomembrane. Such an application is beyond the scope of the White Paper. By its clear terms, the purpose of the White Paper is to describe specifications for geomembrane manufacturing quality control. Ecology assumes without any evidence that a set of test methods that is appropriate for a newly manufactured geomembrane is also appropriate for a decades-old liner.[1]

We are not aware of other sites where this post-construction testing was required. Laboratory testing has the potential to negatively impact geomembrane condition and performance. It requires the destructive cutting and collection of samples, resulting in additional welds and seams, which create additional points of vulnerability in the geomembrane.

[1] Regarding long term durability, the authors of the White Paper observe, "The vast majority of geomembranes, however, are covered and backfilled. Twenty year warrantles do not even begin to challenge the potential lifetime for HDPE geomembrane durability. Depletion of antioxidants alone should reach 200 years depending on site temperature, and this is only the first stage in the aging process, e.g., see Hsuan and Koerner, 1998." White Paper #32 at page 26.

In order to meet Ecology's intent while diminishing the risk of cutting into the geomembrane, IWAG recommends required laboratory testing only when monitoring results indicate a potential integrity or functionality issue, such as differential settlement over an area in excess of the liner elongation percentage at yield, rather than destructive testing without any field indicators of performance concerns.

Thank you for consideration of this comment.

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JLS:

cc: All-IWAG Members