

RJ Lee Monthly Report Summary for May 2017

In support of the ongoing Chemical Vapor Initiative undertaken by the U.S. Department of Energy (DOE) contractor, Washington River Protection Solutions, LLC (WRPS), RJ Lee Group's Mobile Organic Monitoring Laboratory (hereafter referred to as the Mobile Laboratory or ML) conducted systems testing over several weeks at Columbia Basin Analytical Laboratory (CBAL) covering the four-week period between May 3, 2017 and May 31, 2017.

Field measurements were collected at the Hanford Site by the Mobile Lab during this time period. The mobile lab conducted monitoring of the passive breather filter (PBF) of tank A-103 from May 23 through May 25.

The PTR-MS TOF-4000 in the ML is used to quantify chemicals of potential concern (COPCs) from the sampled air.

Descriptions of tests that were conducted include:

- Conducted preventative maintenance and replaced the van's nitrogen cylinder. Additionally, began development of TO-15 and TO-17 methodologies to be used by the van during field monitoring activities. (Week 5.1)
- Developed and tested checklists for PTR-MS, ammonia analyzer, and carbon dioxide monitor sensitivity and zero air checks. Performed an analysis of the ammonia analyzer to determine if data capture could be performed more efficiently and quickly. Determined the data setting could be combined to a single file, eliminating the need for the analyst to combine 12+ files for analysis. (Week 5.2)
- Performed Liquid Calibration Unit (LCU) verification to check for drift. Flow tests were also performed on the standard and nebulizer flow control units across expected operating ranges. Mobilized to monitor A-103 PBF. Since the operation was delayed, the ML conducted offsite monitoring at the Wallula paper mill, a cattle feed lot southeast of Pasco, and in downtown Pasco. The mobile lab then deployed to the Hanford Site and began monitoring the A-103 PBF from May 23-25, continuously. Work was interrupted every two hours for the radiation control crews to conduct testing of the HEPA filters on the gas manifold for radiological contamination. (Week 5.3)
- Performed several mass flow controller verifications. Prepared for combustion source monitoring in the 200E area. (Week 5.4)

At the completion of this report, WRPS' Data Quality Objective (DQO) Group and a Fugitive Emissions/Source Apportionment Sub-team had not yet developed a process for the Mobile Laboratory to sample and monitor certain sources for analysis or vapor composition. Because of this, vapor source identification and quantitative analysis of vapor composition could not be completed for this report. Source identification processes are under development by the WRPS DQO Team and the Fugitive Emissions/Source Apportionment Sub-team with input from RJ Lee Group and will be documented in the FY2017 Test Plan. [Read the full report here.](#)