

## **Reduction in Frequency of Stack Flow Measurements**

During the public comment period for Revision 3 of the Rad-NESHAP Quality Assurance Project Plan, questions arose regarding the change in frequency of performing stack flow measurements. The frequency of these measurements has been reduced from quarterly measurements (four times per year) to semi-annual measurements (twice per year).

Prior to making this change, MAQ looked at the historical stack flow measurement results to see if continuing the quarterly measurements was warranted, given our knowledge of stack flow variability over the last 8 years. For the great majority of the stacks, the flow was quite stable (less than 10% variation over time) and we believe that the reduced frequency is technically appropriate and an improvement in program efficiency. Three stacks did not meet this 10% criteria, as the facility adjusted dampers and fan speeds to accommodate facility operational needs.

At these three stacks (and several other high-profile stacks throughout LANL), we installed flow indicator gauges before reducing the frequency of stack flow measurement. We compared the flow gauges to our stack flow measurements and determined that these provide an acceptable monitor of changes to the stack flow. Also, MAQ is in weekly contact with facility representatives, and can be notified if there have been operational changes that could require a stack flow measurement.

The flow indicator gauges provide a weekly snapshot of the stack flow. The gauges do not give a direct measurement of flow; rather they provide a field indication if the stack has a major deviation from its "acceptable" flow range. As mentioned, these gauges have been installed in the three stacks with the most flow variability, as well as other high-profile stacks at LANL. When all stacks are so equipped, we will formally incorporate the program into our QAPP.

An important fact to remember regarding the change in flow measurement frequency is that we still are very conservative when calculating emissions. We use the highest flow rate measured over the past three years when we determine our annual particulate & tritium emissions. This will ensure that we do not underestimate the impact from LANL operations on the public. For annual dose assessments of these emissions, however, we use actual flow measurements made during the year of interest. The use of actual flow measurements, rather than the three-year maximum, ensures that the plume rise is appropriately calculated and that off-site dose is not underestimated.

Overall, the change in the flow measurement frequency utilizes the stability in facility operations to make our program more efficient. Even with the reduced measurement frequency, we continue to maintain the reliability of our program for calculating emissions from LANL operations in a conservative manner. In no way does this change adversely impact public health.

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