

LANL Chemistry Division Bioassay Project Analytical Chemistry Laboratory Participation in Inter-Laboratory Performance Evaluation Programs

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The Los Alamos National Laboratory (LANL) Chemistry Division Bioassay Project provides analytical chemistry laboratory services to the LANL Radiation Protection Program. Currently, these analytical laboratory operations determine americium and plutonium by alpha spectroscopy as well as plutonium by thermal ionization mass spectrometry (TIMS). In support of these analytical operations the Bioassay Project maintains a rigorous quality assurance (QA) program that includes participation in both intra- and inter-laboratory performance evaluation (PE) programs. The Chemistry Division's Bioassay Project Quality Assurance Project Plan requires participation in the following inter-laboratory PE programs: the Oak Ridge National Laboratory (ORNL) Intercomparison Program, the National Institute of Standards and Technology Radiochemistry Intercomparison Program (NRIP), and the Department of Energy Laboratory Assessment Program (DOELAP). Participation in the ORNL In-vitro Bioassay Intercomparison Program is on a semi-annual basis, while the NRIP is on an annual basis, and the DOELAP is every three years.

Successful participation in these inter-laboratory PE programs is an important quality indicator in our overall QA program. Results from each of the PE program studies are monitored, assessed, and communicated to Project and Program management. As part of our continuous improvement process, inter-laboratory PE program study results are combined with intra-laboratory PE program information used to assess the overall quality of the project's service laboratory operations.

Analytical results, along with the assessment, corrective actions, and lessons learned from participation in these inter-laboratory PE Programs will be presented.