

THE RADIOLOGICAL AND ENVIRONMENTAL SCIENCES LABORATORY CERTIFIED REFERENCE MATERIALS PROGRAM

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In 2012, the U.S. Department of Energy's Radiological and Environmental Sciences Laboratory (RESL) received ISO Guide 34 accreditation as a Reference Material Producer. RESL had previously received accreditation to ISO 17025 and ISO 17043 (Proficiency Testing Provider). Among other programs, RESL administers the Mixed-Analyte Performance Evaluation Program (MAPEP) which produces proficiency testing material containing radiological, stable inorganic, and organic components. With ISO G34 accreditation, RESL has been able to provide certificates of reference values with certain MAPEP matrices. RESL plans to produce a variety of CRMs in matrices relevant to DOE and the radiological measurement community. Currently, RESL has CRMs available in soil, water, air filter, vegetation, concrete, and a variety of foodstuff matrices. This paper will present the RESL CRM program. Topics to be discussed will include: the need for and uses of CRMs, the process of obtaining ISO G34 accreditation, the system of analytically demonstrating the traceability of CRMs, and a discussion of the types of CRMs RESL plans to produce.