



CEERD-GS-E

1 October 2002

MEMORANDUM FOR RECORD

SUBJECT: Quality Assurance Laboratory Audit and Validation

1. In accordance with Engineer Regulation (ER) 1110-1-8100, "Engineering and Design; Laboratory Investigations and Testing," and ER 1110-1-261, "Engineering and Design; Quality Assurance of Laboratory Testing Procedures," the Engineer Research and Development Center (ERDC) Materials Testing Center (MTC) has responsibility for inspections and validations of contractor quality control (QC) laboratories, project quality assurance (QA) laboratories, and contracted commercial materials testing laboratories in determining the laboratory's capabilities to perform certain materials tests and evaluations.
2. The District shall determine whether the commercial materials testing laboratory has been inspected by the AASHTO Material Reference Laboratory (AMRL) and the Cement and Concrete Reference Laboratory (CCRL) inspection programs of the Department of Commerce within the past two years
3. Where AMRL and CCRL inspections have been performed, the District shall request the USACE Materials Testing Center (MTC) to conduct an audit of the laboratory. The audit of the AMRL and CCRL inspection reports and other documents shall determine whether the laboratory meets validation criteria set forth in Engineer Regulations ER 1110-1-261, Engineering and Design; Quality Assurance of Laboratory Testing Procedures, and in ER 1110-1-8100, Engineering and Design; Laboratory Investigations and Testing.
4. The MTC shall provide an Information Request Form to the District or the commercial materials testing laboratory to obtain pertinent information concerning the current laboratory structure and all laboratory and field personnel. With the Information Request Form, the District or commercial materials testing laboratory shall provide a list of required test methods and procedures and all those that the laboratory is capable of performing.
5. The District or the commercial materials testing laboratory shall provide the following documents for review:
 - a. The current AMRL and CCRL inspection report (within the last two years),
 - b. Letters to AMRL and CCRL documenting the corrective action taken on all deficiencies that were found during the inspections; if the laboratory chose not to respond to AMRL and CCRL concerning the deficiencies found, then a letter describing the corrective actions taken shall be written and sent to the MTC,
 - c. Current edition of the laboratory's Quality Manual,
 - d. Results of required equipment calibration and verification,
 - e. Results of internal audits and documentation of corrective action,
 - f. Results of on-the-job training,
 - g. Results of competency check for all field and laboratory materials testing personnel,
 - h. Results of proficiency sample testing and documentation of corrective action,
 - i. Latest Corps of Engineers project file including data sheets and final report,
 - j. Copy of the title page of all the latest ASTM Annual Book of Standards (i.e. Vol. 4.02, 4.08, 4.09, etc.), as applicable.

6. The District shall prepare a MIPR to cover the cost of the audit. If the commercial laboratory is paying for the audit, then a Testing Services Agreement between the commercial laboratory and the MTC shall be established and a check shall be sent to the MTC. Only those test procedures or methods inspected by CCRL and AMRL can be validated through the audit process. If additional procedures or methods not inspected by CCRL or AMRL are needed, then an on-site inspection is required.

7. An auditor shall within four weeks review the documentation presented and determine whether the laboratory has satisfied the requirements as prescribed in ER 1110-1-261 and ER 1110-1-8100. Upon completion of the audit, an audit report detailing the findings and results of the inspection shall be sent to the District and the inspected laboratory. When all deficiencies have been corrected, a validation letter will be sent to the District and the inspected laboratory.