

VI. INDEPENDENT ASSURANCE PROGRAM

- A. Purpose.** This program provides uniform, statewide procedures to ensure personnel qualified under the Personnel Qualification Program remain capable of performing sampling and testing correctly, and to ensure equipment is checked and calibrated.
- B. Scope.** The program applies to all State Department of Transportation Highway projects and County Federal-aid projects on the National Highway System. This program evaluates samplers, testers, and testing equipment in the modules listed in the Personnel Qualification Program. Central Laboratory (CL) personnel and test equipment are exempt from the Independent Assurance (IA) Program.
- C. Responsibility.** The CL will administer the IA Program. Within the Highways Division, the District Engineer or designated representative shall be the Quality Assurance Officer, who shall be responsible for coordinating the IA activities with the CL and administering these activities within the District and County.
1. The District Quality Assurance Officer shall be responsible for maintaining competency of qualified personnel, calibrating and verifying field laboratory testing equipment, and resolving any deficiencies noted by the IA evaluations. The District Quality Assurance Officer shall also be responsible for consultants, Construction Materials Laboratories (CMLs), and other agencies performing sampling and testing for the District highway projects and County Federal-aid projects on the National Highway System. The District Quality Assurance Officer may require the County to provide a Quality Assurance Officer. However, all coordination with the CL, including County projects, shall be done through the District Quality Assurance Officer.
 2. CL personnel or CL's designated agents that act as IA inspectors, coordinators, evaluators, and reference testers will herein be referred to as "IA inspector". CL equipment or designated agents' equipment will be used as IA reference equipment when split sampling or split-sample testing is performed.
- D. Frequency of Evaluation.**
1. Qualified laboratory technicians from the State District laboratories will be evaluated annually on four modules (Aggregate, Asphalt, Concrete, and Soil) in the Personnel Qualification Program.

Laboratory testing equipment will be evaluated not less than once every three years.

2. Laboratory technicians working for CMLs, who are qualified under each of the Asphalt, Concrete, Soil, and Aggregate modules, and CML testing equipment shall be evaluated by an approved accreditation agency at a frequency established by that agency. However, MTRB Engineer may, at his discretion, conduct unscheduled site visits or require split-sample testing.
3. Personnel qualified in the Field Sampling and Testing module of the Personnel Qualification Program will be evaluated annually. The actual number of personnel to be evaluated annually will be determined by the MTRB Engineer at the beginning of each calendar year, but will not be less than 10 percent of the qualified personnel. Field testing equipment will be evaluated not less than once every three years.
4. Individuals qualified by independent sources acceptable under the Personnel Qualification Program, such as the WAQTC and ACI, who are not evaluated by an accreditation agency approved under the Laboratory Qualification Program, will be included in the pool of personnel qualified in the Field Sampling and Testing module and evaluated for the test methods used for material acceptance.

E. Method of Evaluation.

1. Sampling Personnel. Sampling personnel will be evaluated by observation.
2. Testing Personnel. Testing personnel will be evaluated by one or more of the following:
 - a. Observation.
 - b. Split-sample testing by personnel and IA inspector.
3. Testing equipment. Testing equipment covered under AASHTO R-18 will be evaluated by using one or more of the following:
 - a. Review of calibration and verification records;
 - b. Split-sample testing using equipment being evaluated and IA reference equipment;

- F. Evaluation Procedures.** The IA evaluation will focus on sampling and testing procedures routinely performed by the personnel to be evaluated. For example, the IA inspector may evaluate personnel who perform sampling and testing only at project sites, only on the test method section that covers sampling and testing at project sites. Materials used in IA evaluations are not required to be project specific. IA test results shall not be used to verify specification compliance on construction projects. Therefore, IA tests shall not be used for acceptance. Evaluation procedures are described as follows:
1. Evaluation by Observation.
 - a. Personnel evaluation of qualified laboratory technicians from the State District laboratories will be coordinated by the MTRB.
 - b. Observation of personnel qualified in the Field Sampling and Testing module will be performed at an appropriate location, determined by the IA inspector upon discussion with the Quality Assurance Officer or Project Engineer. The IA inspector will consider availability of materials, location of personnel, and impact to construction testing when determining the appropriate site. Sites may include a test site prepared by the District for the purpose of this evaluation.
 - c. The IA inspector, using a checklist, will observe the person performing the sampling or testing procedure and will note any deficiencies during the demonstration. After the demonstration is completed, the IA inspector will discuss with the person those deficiencies observed during the demonstration.
 - d. The IA inspector will summarize results of the IA evaluation and report any deficiencies to the Quality Assurance Officer. When deficiencies are reported, the Quality Assurance Officer shall follow procedures of Subsection VI.G — Procedures When Deficiencies Are Reported.
 2. Evaluation by Split Sample.
 - a. Split samples may be used to evaluate personnel and testing equipment.
 - b. A material sample will be split into two equal portions, with one portion to be used by the tester and the other portion to be used by the IA inspector.

- c.** IA samples shall be placed in a container or sample bag, which shall be sealed to prevent tampering. Samples shall be submitted with a green sample card (Form MTRB IA-1 — Appendix 2). Each IA container and sample bag shall be labeled and identified as an “IA” sample. The identification shall also include a tag with the following information:

 - (1)** IA sample number and source of the sample;
 - (2)** Date of split sample;
 - (3)** Address where each split sample was sent;
 - (4)** Name of the tester.
 - d.** The tester shall perform required test and submit test results to the IA inspector within two working days. Test data shall be submitted with a green sample card (Form MTRB IA-1 — Appendix 2).
 - e.** The tester’s results will be compared to the results of the IA inspector. Difference will be subject to the standards established by the CL. The IA inspector will summarize results of the IA evaluation and report any deficiencies to the Quality Assurance Officer. When deficiencies are reported, the Quality Assurance Officer shall follow the procedures of Subsection VI.G — Procedures When Deficiencies Are Reported.
- 3.** Evaluation by Calibration and Verification.
- a.** Calibration and Verification checks shall be made to ensure equipment covered in AASHTO R-18 is within the specified tolerances. Each piece of equipment shall be checked at the specified frequency and clearly marked with an identification number.
 - b.** The Quality Assurance Officer shall have a program to ensure equipment verification and calibration are done at the required frequency. Records of test equipment verification and calibration shall be kept on file.
 - c.** The IA inspector will review equipment records and may, at his discretion, inspect any equipment for conformance.

- d. The IA inspector will summarize results of the IA evaluation and report any deficiencies to the Quality Assurance Officer. When deficiencies are reported, the Quality Assurance Officer shall follow the procedures of Subsection VI.G — Procedures When Deficiencies Are Reported.

G. Procedures When Deficiencies Are Reported. The Quality Assurance Officer shall use one of the following procedures, as appropriate:

- 1. Procedures to Follow When Deficiencies Are Reported for Evaluation by Observation.
 - a. Discuss each procedural deficiency with the tester and review the proper procedure.
 - b. Observe the technician perform the test properly.
 - c. Prepare memorandum of record summarizing corrective action taken.
 - d. Submit memorandum of record to the CL.
- 2. Procedures to Follow When Deficiencies Are Reported for Poor Results from Split Samples.
 - a. Determine if the data reported were correctly entered.
 - b. Determine if the test results obtained were properly transferred to the submitted data sheet.
 - c. Determine if all calculations leading to the test results obtained were correct.
 - d. Determine if equipment conformed to specifications.
 - e. Determine if proper test procedures were followed.
 - f. Take corrective action to repair or replace defective equipment, or review proper procedures with the tester.
 - g. Prepare memorandum of record summarizing investigation results, identifying cause of deficiencies, and describing any corrective action taken.

- h.** Submit memorandum of record to the CL.
- 3.** Procedures to Follow When Deficiencies Are Reported on Equipment.

 - a.** Determine if equipment conformed to specifications.
 - b.** If the equipment is found to be defective, take corrective action to repair or replace it.
 - c.** Prepare memorandum of record summarizing the results of the investigation and any corrective action taken.
 - d.** Submit memorandum of record to the CL.