

IA Assessment and IA Split Sampling S.O.P.

Materials and Test Unit

This document will cover the standard procedures for conducting IA Assessments and performing IA Split Sampling for all materials/tests (Concrete, Asphalt, Aggregate, Conventional Density), per the requirements of the Materials and Tests Independent Assurance (IA) Program. For the full scope of the IA Program, refer to the IA Program Manual. For questions regarding the IA Program, contact the IA Program Engineer at the following:
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FHWA IA Program Requirement

§637.203 Definitions.

Independent assurance program. Activities that are an unbiased and independent evaluation of all the sampling and testing procedures used in the acceptance program. Test procedures used in the acceptance program which are performed in the State Transportation Department's central laboratory would not be covered by an independent assurance program.

§637.207 Quality assurance program.

(2) The IA program shall evaluate the qualified sampling and testing personnel and the testing equipment. The program shall cover sampling procedures, testing procedures, and testing equipment. Each IA program shall include a schedule of frequency for IA evaluation. The schedule may be established based on either a project basis or a system basis. The frequency can be based on either a unit of production or on a unit of time.

General Information

- The IA Program requires two distinct processes be performed on “Active” technicians on an annual basis. These processes are described as:
 - 1) **IA Assessment** – A one-on-one, documented observation of Sampling and Testing Methods, between an IA Assessor and an “Active” Technician.
 - 2) **IA Split Sample** – A comparison Sample or Test performed between an IA Assessor and an “Active” technician.

- For the IA Program requirements to be met, both the IA Assessment and the IA Split Sample processes must be completed.
 - ❖ Successful completion of an M&T certification class:
 - 1) Shall serve as the active technician's IA Assessment for that calendar year, meaning no formal IA Assessment will be required that year.
 - 2) Shall not exempt the active technician from having the IA Split Sample process conducted, meaning the IA Split Sample process will be required every year that the technician remains active, even if he/she completes a certification class that year.
- Active technicians are those who conduct acceptance sampling/testing on materials requiring IA Assessments and IA Split Sampling per the current IA Program Manual requirements. To qualify as "Active", technicians must meet the following conditions during the calendar year:
 - 1) Have completed five (**5**) or more samples/tests for a specified material.
 - 2) Sampling and Testing were conducted on the materials for purposes of either:
 - Acceptance
 - Verification
 - Producer's Quality Control
 - Quality Assurance
 - 3) Technician holds an active certification in the material discipline.
- The IA Assessment and IA Split Sample processes shall be conducted separately, meaning a single IA Assessor cannot simultaneously assess a technician, while also conducting an IA Split Sampling. Only if two IA Assessors are present, may both operations be conducted at the same time (one IA Assessor conducts the assessment, while the other IA Assessor conducts the IA Split Sampling).
- In situations where only one IA Assessor is present, the single IA Assessor will be responsible for conducting both the IA Assessment and the IA Split Sampling. The IA Assessment should be conducted first. Following a successful IA Assessment trial, only then can the IA Split Sampling be conducted. The IA Split Sampling can be conducted either the same day or at a later date, still within the calendar year.
- Refusing an IA Assessment and/or IA Split Sampling shall count as an "Unsatisfactory" assessment and shall lead to the suspension of the active technician's certification.
- The IA Program requires that at the end of the year, **90%** of all Active Technicians receive an IA Assessment and an IA Split Sample across all Sampling/Testing disciplines.

Assessment Details

- IA Assessments shall be conducted by IA Assessors while Active Technicians are performing sampling/testing on materials used for any purpose:
 - 1) Acceptance
 - 2) Verification
 - 3) Quality Control (QC)
 - 4) Quality Assurance (QA)
 - 5) Any other material that does not meet a testing category, but such that the material can be sampled/tested by appropriate means (i.e. materials left over from other sampling, clean out materials, spec or non-spec materials).

- IA Assessments evaluate both the techniques of sampling technicians and the equipment they use to conduct such sampling and testing.
 - ❖ Active technicians shall use their own equipment during the IA Assessment. The use of equipment that is in poor, inoperable, or in an uncalibrated condition shall constitute an “Unsatisfactory” IA Assessment.

- IA Assessors shall not conduct IA Assessments on more than one technician at a time.

- Before an IA Assessment begins, the active technician may ask questions about the IA Assessment process. However, once the IA Assessment begins, there shall be no instruction, training, coaching, or indication by the IA Assessor that a step has been missed.

- IA Assessments have only two possible outcomes: **“Satisfactory”** or **“Unsatisfactory”**.

- Any step that is performed incorrectly, skipped, or performed using faulty equipment, shall be recorded as an “Unsatisfactory” step. Any single “Unsatisfactory” step shall lead to an “Unsatisfactory” IA Assessment score.

- During the IA Assessment, if an “Unsatisfactory” step is performed, the IA Assessor shall not notify the technician of the unsatisfactory step. The technician shall be allowed to continue the IA Assessment until completion. After the sampling/testing process is complete, the IA Assessor shall immediately review any missed steps with the technician.

- A total of two IA Assessment attempts shall be granted.
 - ❖ If the 1st trial is “Satisfactory”, the IA Assessment shall be documented in Vendor and the IA Assessment Checklist uploaded to SharePoint.
 - ❖ If the 1st trial is “Unsatisfactory”, the IA Assessment shall be recorded as an “Unsatisfactory” attempt, and the IA Assessment Checklist uploaded to SharePoint. A 2nd trial shall be granted. It will be at the discretion of the IA Assessor if the second trial can be conducted immediately following the initial attempt. If the IA Assessor feels that additional training is necessary, the 2nd trial may be conducted at a later date.
 - ❖ If the 2nd trial is “Satisfactory”, the IA Assessment shall be documented in Vendor and the IA Assessment Checklist uploaded to SharePoint.
 - ❖ If the 2nd trial is “Unsatisfactory”, the IA Assessor shall document the IA Assessment as such and notify the IA Program Engineer. The IA Program Engineer will review the conditions of the IA Assessment and determine what form of remedial training will be necessary for the technician.

IA Split Sample Details

- IA Split Samples shall not be samples that will also be represented as:
 - 1) Acceptance
 - 2) Verification
 - 3) Quality Control (QC)
 - 4) Quality Assurance (QA)
- ❖ IA Split Samples should be independent samples used solely for IA comparisons. The IA Split Sample results shall not stand as, be dually reported as, or replace any of the sample types listed above.
- Do not conduct IA Split Sampling until a “Satisfactory” IA Assessment has been conducted.
- IA Assessors and active technicians shall use their own equipment to conduct their half of the IA Split Sampling.
- Once the results have been determined for both halves of the IA Split Samples, the IA Assessor shall rate the comparison as “Satisfactory” or “Unsatisfactory” using the tolerance limits expressed in the IA Program Manual and review those results with the active technician.

- In the event of a poor comparison between the technician's sample/test and the IA Split Sample, an investigation shall be conducted by the IA Assessor. This investigation shall include:
 - 1) A verification of test results and calculations.
 - 2) Inspection of equipment and evaluation of test procedures.
 - 3) Review of the IA Assessor's Assessment Report.
 - 4) Discussion of the test procedure with the active Technician.
 - 5) Retesting of samples and procedures.

- The results of the investigation, including recommendations, shall be documented in a report and sent to the IA Program Engineer in a prompt and timely manner. If the results of a second trial IA Split Sample are found out of spec, the IA Program Engineer will consult with the IA Assessor further to evaluate if a cause can be determined.