



TTR Change Over Procedure for Test Chambers

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Abstract:

This procedure is to establish general requirements for changing the gas mixture in the Test Chambers during normal operating conditions.

SSC LABORATORY PROCEDURE	NUMBER GEM-TN-92-160	REV	PAGE 1 of 2
	EFFECTIVE DATE	SUPERSEDES	
	SPONSORING FUNCTION GEM		
	APPROVED BY DRAFT		
SUBJECT TTR Change Over Procedure for Test Chambers			

1.0 PURPOSE

This procedure is to establish general requirements for changing the gas mixture the Test Chambers during normal operating conditions.

2.0 SCOPE

The scope of this procedure is limited to the routine operation of the TTR and the Test Chambers. It allows the safe initiation of the flow of different test gases and the application of high voltage to the Test Chambers. It does not apply to varying the ratio of an existing gas mixture.

3.0 DEFINITIONS

Test Chamber - one of many detection chambers that are to used in the TTR
TTR - Texas Test Rig

4.0 PROCEDURE

The following are the general procedures for changing the gas mixture for one of the Test technologies for the TTR.

Note: GEM-TN-92-152, TTR Emergency Procedures, will be followed as the situation warrants.

4.1 Test Chamber Purging

4.1.1 The Test Chambers shall be purged in accordance with GEM-TN-92-154, TTR Purging Procedures when any of the following applies:

- a. Chambers that have been inactive for more than four weeks, or
- b. Significant modification or maintenance action has been made to the Test Chambers.

Note: Purging is not required for minor maintenance actions providing all gas lines are properly capped **immediately** upon disassembly.

WARNING: Failure to purge or an inadequate purging may result in a potentially flammable mixture inside the Test Chamber.

4.1.2 Purging will be a nominal 10 volume changes of the test chamber.

4.1.3 Appropriate sign off is required from the individual performing the purging operation and one witness verifying that inert gas is used and the completion of this task.

4.2 Flow new gas mixture into the test chambers a nominal 10 volume changes of the test chamber.

4.3 Leak Check Test Chamber Gas System (May be performed during purging operation)

4.3.1 The Test Chambers shall be leak checked and repaired if necessary, in accordance with GEM-TN-92-155, TTR Leak Check Procedures when any of the following applies:

- a. During purging operations of the chambers,
- b. A leak is probable from operating or other indications, or
- c. Weekly.

WARNING: Failure to leak check, with associated repairs, may result in a potential flammable mixture at the leak point.

4.3.2 Appropriate sign off from the individual performing the leak check operation and required repairs, if any, and one witness verifying completion of this task.

4.4 For each test chamber, position one gas leak sensor (Houston detection system) on each end of the chamber.

4.5 Start flow of test gases.

- a. Establish appropriate mixture.
- b. Set pressure of Test Chamber gas(es) to test pressure.
- c. Flow gas(es) for a nominal of 10 volume changes.
- d. Adjust flow to test settings.

4.6 Apply high voltage to the Test Chambers per values established for test.

4.7 Record settings in 4.4 and 4.5 in appropriate TTR Test Chamber Log Book.

5.0 RESPONSIBILITIES

It is the sole responsibility of the TTR Project Manager to ensure the proper implementation of this procedure.

6.0 REFERENCES

GEM-TN-92-155 TTR Leak Check Procedures
GEM-TN-92-154 TTR Purging Procedures
GEM-TN-92-152 TTR Emergency Procedures
Applicable TTR Test Chamber Log Book

7.0 RECORDS

Records of purging and leak checks of the Test Chamber gas system shall be fully documented in accordance with paragraphs 4.1.3 and 4.2.2 of this procedure. These records may be an entry in the appropriate TTR Test Chamber Log Book.