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Engineering Instruction

# GS-ENG-07-03: Administrative Process for the Certification of Measuring Apparatuses

Version 1.2

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## Record of Change

| Revision | Date | Description |
|---|---|---|
| 0.1 | May 2, 2007 | DRAFT for consultation only |
| 0.2 | May 3, 2007 | Editorials and Additions (for consultation only) |
| 0.3 | May 8, 2007 | Editorials and Additions (for consultation only) |
| 1.0 | May 15, 2007 | First Issue for consultation |
| 1.1 | June 14, 2007 | Editorials and re-issue |
| 1.2 | November 26, 2008 | Modified scope |

## 1.0 Scope

This Engineering instruction documents the general administrative process to be used when measuring apparatuses are submitted to Measurement Canada's Gas Engineering for certification. This document outlines the flow of information and the responsibilities within Measurement Canada (MC).

## 2.0 Applicable Reference Documents

GS-ENG-03-06: *Certification of Gas Measuring Apparatuses Containing Rotary Meters Used for The Purpose of Calibrating Diaphragm Meters*

GS-ENG-04-01: *The Calibration and Certification of Gas Measuring Apparatus – Atmospheric Pressure Turbine Meter Proving Systems*

GL-CP-002: *Calibration Procedure for the Certification of Reference Meters Used In Low Pressure Transfer Provers Document*

GEN-09: Measurement Canada General Bulletin: *Delegation of Authorities*

## 3.0 Authorization

The contents of this document will form the basis of the administrative process performed by Measurement Canada Gas Specialists' on behalf of the Senior Engineer – Gas Measurement to certify measuring apparatuses.

The apparatus will be certified under the delegated authority and supervision of the Senior Engineer - Gas Measurement.

## 4.0 Process Overview

The following pictorial *(Figure 1 Administrative Process for Measuring Apperatus Certification)*, illustrates the review process. Each box represents an activity for which the specific details are found in the above referenced documents. The boxes are aligned in two vertical columns with the name of the responsible party at the top.

### 4.1 Initial Review and On Site Inspection

When a measuring apparatus is of a design or type that is not governed by a promulgated specification and the applicant or operator wishes to use this apparatus for the purpose of verification, re-verification or compliance sampling authorized under the authority of the Electricity and Gas Inspection Act, the following process will be applied.

The applicant shall contact the Regional Measurement Canada Gas Specialist and provide the information as prescribed in this document and other applicable Engineering Recommendation or Guideline.

Where negotiation or revision of the contents of the applicable *Engineering Recommendation and Guideline* is deemed appropriate, the Gas Specialist shall seek and receive conformation from the Senior Gas Engineer prior to commencing the evaluation.

The Measurement Canada Gas Specialist will perform the evaluation detailed in this document and prepare a *Measuring Apparatus, Verification and Conformation Report* for

submission to the Senior Gas Engineer. The content, form and format of this report will be approved prior to the evaluation.

The Gas Specialist will make recommendations to the Senior Gas Engineer relating to the performance of the measuring apparatus.

Where a technical review of the report indicates that the measurement apparatus falls within the criteria set out in the appropriate Recommendation or Guideline, the Senior Gas Engineer will issue a *Certificate of Calibration*. The period of certification for the measuring apparatus will be the same as the reference meter(s) contained in the measuring apparatus and remains conditionally valid for a period of five years.

### 4.2 Annual On-site Inspection and Conformation of Certification Conditions

An annual re-evaluation of the gas measuring apparatus shall be performed by the Regional Gas Specialist at a location mutually acceptable to all parties involved, and must be consistent with the above references. The Gas Specialist will generate an *Annual Re-evaluation Report* and make recommendations to the Senior Engineer, stating the conditions in the certificate of calibration have been met.

Statistical process control charts (SPC) shall also be reviewed to ascertain if the system is in control and that the measurement uncertainty determined at the time of initial calibration is still valid.

## 5.0 Conditions of Certification

Once the *Measuring Apparatus, Verification and Conformation Report* has been accepted by the Senior Engineer Gas, Measurement, a request to the Technical Coordinator of MCs Gas Laboratory will be made for the generation of a certificate of calibration. In addition to the standard information placed on the certificate on the certificate of calibration, the following conditions will also be applied:

This Certificate is valid only under the following condition(s):

1) The Measuring Apparatus in maintained in a manner consistent with the above Engineering Recommendation and Guidelines,
2) The functionality of the apparatus is subjected to a yearly verification,
3) The method(s) and procedures accepted at the time of issuance of this certificate, for process control and the determination of measurement uncertainty, are maintained throughout the certification period.

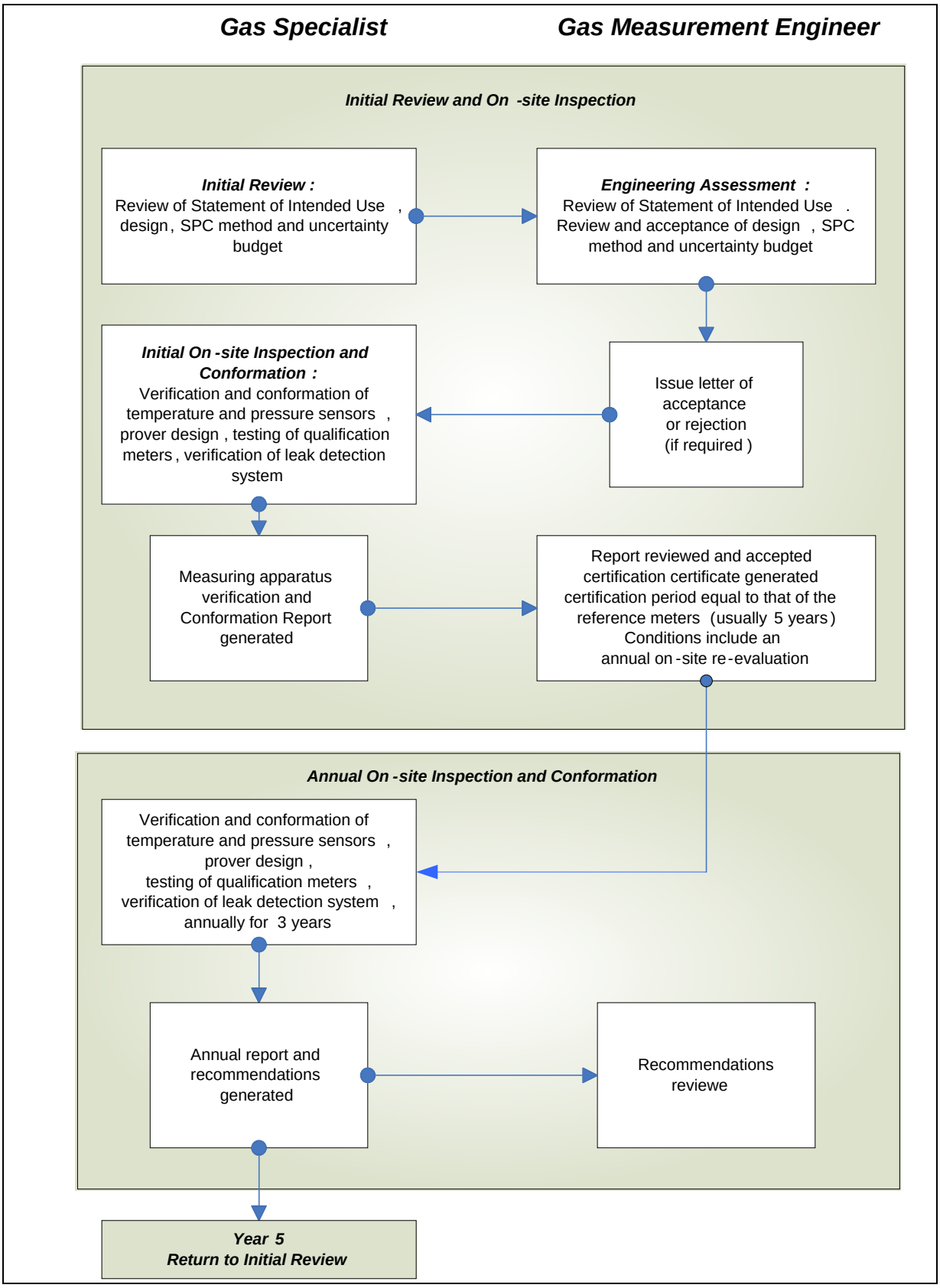


Figure 1 Administrative Process for Measuring Apparatus Certification