

**Rules and Procedures
For
Smart Card / Microcontroller Module / Inlay
Testing and Certification**

(Issue 5 Dated 06 October 2016)

Section 0 : Preface

0.1 Background

National Informatics Centre is a premier Government organization in providing IT related support to different Ministries and Departments in different fields of e-Governance. National Informatics Centre (NIC) has been entrusted by Ministry of Road Transport and Highways (MoRT&H), Office of Registrar General, India (RGI), Ministry of Labour and Employment (MoLE) and Ministry of External Affairs (MEA) to work as Technical support provider for the project of Smart Card based Driving License & Vehicle Registration Certificate (DL/RC), National Population Register (NPR), Rashtriya Swasthya Bima Yojana (RSBY) and e-Passport respectively across the Country. This involves following technological areas:-

- Ensuring Interoperability of Smart Card / Microcontroller Module / Inlay based DL/RC/NPR/RSBY/ePassport across the Country.
- Countrywide Symmetric/ Asymmetric Key Management System
- Ensuring Compliance to Standards and Guidelines issued by MoRT&H, RGI, MOLE & MEA and issuing Certificate of Compliance (SCOSTA/SCOSTA-CL).
- Smart Card / Microcontroller Module / Inlay data format Standardization and application standardization.

Certification of compliance to defined standards and application requirements of Smart Card, Microcontroller Module and Inlay is one major task in insuring the interoperability of Smart Cards across the Country.

0.2 Approval & Issue

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Reviewed by:

Director (Test & Evaluation)

STQC Directorate

Director (Smart Card Product Certification)

National Informatics Centre

Approved by:

Head (Smart Card Product Certification Body)

Section 1: General

1.1 Purpose & Scope

The purpose of this document is to lay down the policies and procedures for Smart Card / Microcontroller Module / Inlay certification Scheme operated by National Informatics Centre (NIC) and Standardization Testing & Quality Certification Directorate (STQC), as per the applicable National/International standards and normative documents.

This document describes the organization of Certification Body and process of certification, which, by means of assessment/evaluation and subsequent surveillance provides an adequate level of confidence that the certified Smart Card/ Microcontroller Module / Inlay are conforming to the specified requirements of the applicable standard and applications.

The Certification Body will take all steps necessary to evaluate Smart Card / Microcontroller Module / Inlay to determine its conformance to all the applicable requirements as defined. This will include:-

- Identification of applicable standards/normative documents
- Evaluation Criteria
- Process for ensuring compliance
- Criteria for suitability and competence of personnel and /or test laboratories

This document is applicable to all those involved in providing the certification services.

1.2 References

ISO/IEC Guide 2 - General terms and their definitions concerning standardisation and related activities

ISO/IEC Guide 65 - General requirements for bodies operating product certification systems

ISO9000 - Quality Management Systems- Fundamentals & Vocabulary

EN 45011 - European standard for 'General criteria for Certification Body operating Product Certification'

ISO 7816 – International Standards for Identification Cards – integrated circuit cards

ISO/IEC14443 - Identification cards – contactless identification cards – proximity cards

1.3 Definitions

For the purpose of this document, the following definitions, in addition to those given in ISO/IEC Guide 2 & ISO 9000 shall apply.

Supplier (Client)/Applicant

The party that is responsible for providing product, process or service and is able to ensure that quality assurance is exercised. The definition may apply to manufacturer, distributors, importers, assemblers, service organizations etc.

Manufacturer of smart card/ Microcontroller Module/ Inlay

An organization situated at stated location(s), which carries out or controls such stages in the manufacturing (implantation/embedding), inspection, handling, and storage of Smart Cards / Microcontroller Modules / Inlays that enables it to accept responsibility for quality assessment of the Smart Cards/ Microcontroller Module/ Inlays.

Quality Assessment

The totality of measures carried out consistently and systematically, in order to ensure that a product conforms to the requirements of a stated specification.

Certification of Conformity (or compliance)

Demonstrating that adequate confidence is provided that the supplier's product and/or system are in conformity with specified requirements of applicable standard or normative document.

Certification System

System that has its own rules, procedures and management for carrying out Certification of compliance/conformity.

Certification Body (CB)

The body which conducts certification of compliance/conformity with respect to published standards and any supplementary documentation required under the system.

Registration

Inclusion of the supplier's particulars and field of assessed capability by the Certification Body in an appropriate register or list.

Certificate of Compliance/Conformance

Document issued under the rules of a Certification System indicating Compliance/conformance to the specified requirements of the applicable standard or application requirements to a specific product (Smart Card / Microcontroller Module/ Inlay) with unique Brand Name/Product Name given by the interested party, which is a Supplier or Manufacturer of Smart Card/ Microcontroller Module/ Inlays, to its product.

Certification Agreement

An agreement which is part of the Certification System and which details the mutual rights and obligations of the certificate holder and the Certification Body and which includes the right to use the certificate.

Appeal

A formal expression of dissatisfaction by a party affected with a decision of a Certification Body, which is directly related to the certification status of the product of the party affected.

Complaint

A formal expression of dissatisfaction with some matter related to a Certification Body, a certified supplier, a certified product or an individual.

Dispute

Expression of difference of opinion between two parties in relation to some matter related to a Certification Body, a certified supplier, a certified product or an individual.

Minor Non-conformity

A Minor Non-conformity is an isolated lapse that will not directly affect the conformance of the product to the applicable requirements. However, if it persists, it may be considered a major non-conformity.

Major Non-conformity

A Major Non-conformity is the absence of or the in-effective implementation of one or more required system elements or a situation, which would, on the basis of objective evidence or evaluation, affect the conformance of the system or product to applicable requirements (e.g. nonconformities arising from OS and SCOSTA/SCOSTA-CL documents)

Test Scripts / Test Suits

The test software to which the samples are subjected for testing, to test SCOSTA/SCOSTA-CL requirements and functionalities. The bank of test script is an evolving process which gets enriched with feedback and experience.

Section 2: Certification Body

2.1 Name and Office Locations

National Informatics Center (NIC), A-Block, CGO Complex, Lodhi Road, New Delhi-110003.

2.2 Legal Status

NIC is a part of Ministry of Electronics and Information Technology (MeitY), Government of India.

2.3 Goal Policy and Objectives

Goal

To provide certification services for products (Smart Card / Microcontroller Module / Inlay) in a competent and credible manner, to enhance the acceptability of Smart Card/ Microcontroller Module/ Inlay by users/ organizations.

General Policy statements and commitments

The Certification Body provides unhindered access to all the eligible applicants (the organizations intends to bring its products to the market to be used for the Driving License, Vehicle Registration, National Population Register, Rashtriya Swasthya Bima

Yojana and ePassport in India) seeking certification of their products (Smart Card / Microcontroller Module / Inlay) whose activities fall within its declared field of operation, without undue financial or other conditions. However, it is conditional for certification that certified organizations are regularly involved in the activities for which they have been certified.

All the procedures adopted by the Certification Body are administered in a non-discriminatory manner. The Certification Body makes its services accessible to all eligible applicants, without any undue financial or other conditions.

The Certification Body confines its assessment and decision on certification to those matters specifically related to the scope of certification being considered.

The Certification Body has defined criteria against which the product (Smart Card / Microcontroller Module/ Inlay) of an applicant is assessed. In case of change in product specification for any component of the product viz-a-viz this criteria, re-certification will be required.

The Certification Body is responsible for its decision relating to the granting, maintaining, extending, reducing, suspending and withdrawing certifications.

The Certification Body has an identified management structure which has the overall responsibility for the operation of Certification System.

The Certification Body has a documented structure which safeguards impartiality, including provisions to assure the impartiality of the operation of Certification Body. It further enables participation of all interested parties in the content and functioning of certification system.

The Certification Body ensures that each decision on certification is taken by persons different from those who carried out the testing/assessment/evaluation.

The Certification Body has defined authorities and responsibilities relevant to its certification activities.

The Certification Body has adequate arrangements to cover liabilities arising from its operations and/or activities (as specified in certification agreement).

The Certification Body has financial stability and resources required for the operation of the certification system, in the form of budgetary and resource support from MoRT&H / RGI / MEA / MOLE and NIC respectively. The financial administration of the scheme including determination of charges is the responsibility of Head (Smart Card Product Certification Body).

The Certification Body has sufficient number of personnel having the necessary education, training, technical knowledge and experience for performing certification functions under the overall responsibility of Head (Smart Card Product Certification Body).

The Certification Body has a documented system to provide confidence in its ability to operate a certification system.

The Certification Body's personnel along with Head (Smart Card Product Certification Body) & staff are free from any commercial, financial and other pressures, which might influence the results of Certification process.

The Certification Body has defined criteria for appointment and operation of all the committees needed for Certification process. These committees are free from any commercial, financial and other pressures that might influence decisions.

The Certification Body has a defined policy and procedure for resolution of Complaints, Appeals and Disputes received from suppliers or other parties about the handling of certification or any other related matter.

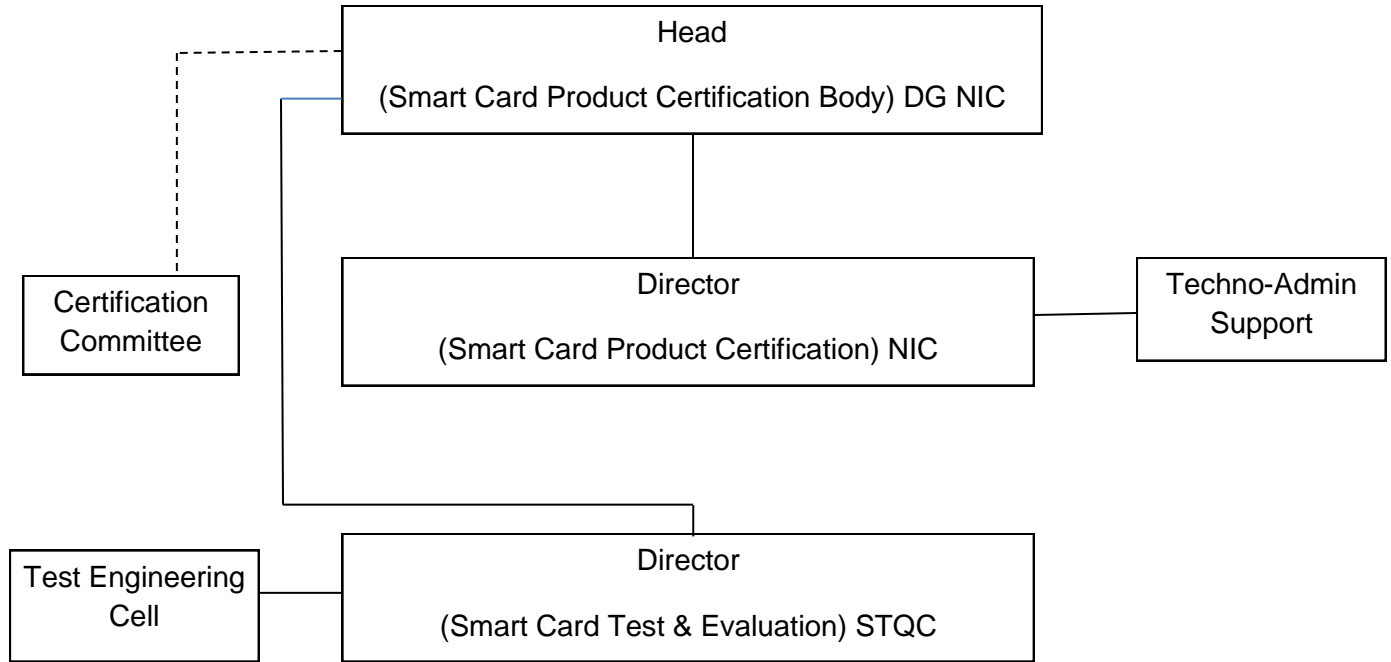
2.4 Organisation

Organisation description

The certification body has

- I. Head (Smart Card Product Certification Body)
- II. Certification Committee (CC)
- III. Director (Smart Card Product Certification)
 - Techno-Administrative Support Cell
- IV. Director (Smart Card Test & Evaluation)
 - Test Engineering Cell

ORGANISATION CHART OF CERTIFICATION BODY



----- Advisory Inputs

_____ Administrative reporting

I) Head, Smart Card Product Certification Body

DG-NIC is the Head of Smart Card Product Certification Body. He is responsible to safeguard the impartiality of the Certification Operations and to provide confidence in its certification.

The members are appointed by the Head (Smart Card Product Certification Body), in consultation with respective interested parties.

II) Certification Committee

The role of the Certification Committee is to advise the Head (Smart Card Product Certification Body) on decisions relating to

- certification of Products (Smart Card / Microcontroller Module / Inlay) after its technical evaluation.
- certification of assessor/specialist resource for empanelment.

The Certification Committee consists of a three representatives appointed by Head (Smart Card Product Certification Body). Director (Smart Card Product Certification) is the member convener.

- STQC (Two)
- NIC (One)

The representatives should have

- Adequate academic background (preferably post graduate in Engineering / technology with 15 years of experience)
- knowledge of Smart Card Technologies
- knowledge and awareness of certification related matters including national/international standards and other normative documents, Test Engineering, quality and Security Concepts.

While advising the Head (Smart Card Product Certification Body) on certification related decisions, the Certification Committee will:-

- ensure compliance through /evaluation to the defined criteria.
- review the reports of testing and evaluation for adequacy of their content.
- provide feedback for improvement
- seek expert's opinion where necessary for determining the technical basis for granting certification.

The Certification Committee normally meets as and when required. The convener of the committee presents all requisite information along with supporting documentation to the committee. The committee will examine the inputs and advises the Head (Smart Card Product Certification Body) on certification decision.

III) Director (Smart Card Product Certification)

- an active professional in Smart Card technology and certification, and at sufficiently senior level.

- has sufficient work experience (preferably not less than 20 years) in Application development, management, Informatics, testing etc.
- is responsible for approval of System Procedures and Forms/ Formats.
- will act on the advice of Certification Committee to take action on the following issues:
 - Change/ Review of SCOSTA/SCOSTA-CL documents
 - Bugs identified in script during the testing
 - Modification/addition of test cases in test script
 - Review and adoption of Certification Scheme documents
 - Providing clarification and interpretation of technical issues
- Drafting and reviewing the scheme specific documents, including Test Cases etc.
- Resolution of disputes received from supplier/manufacturer with regards to the interpretation of specifications/commands etc.
- the Director (Smart Card Product Certification) will be responsible for all testing and certification related operations at NIC, New Delhi and will be located at NIC HQ, New Delhi.
- should have thorough knowledge and sufficient work experience (preferably not less than 2 years) in Smart Card Technologies and application development, SCOSTA/SCOSTA-CL Standard Development and knowledge of procedures for certification.
- is responsible for day-to-day operations of
 - * all pre-certification activities of Smart Card Products Certification
 - * all activities connected with organizing test lab approval.
 - * all liaison/co-ordination within and outside the certification

Techno-Administrative Support Cell

The Techno-Administrative Support Cell is responsible for providing administrative support to Director (Smart Card Product Certification) such as secretarial help, registration of applications, maintaining register of certified supplier, collection and verification of fee and maintaining records, preparation and dispatch of certificate etc.

VI) Director (Smart Card Test & Evaluation)

The Director (Smart Card Test & Evaluation) will be responsible for all carrying out testing and evaluation of Products (Smart card / Microcontroller Module/ Inlays).

Test Engineering Cell

To attain the confidence in testing process and maintain information security Test Engineering Cell is formed

- Test engineers carry out testing activity independently on the basis of Test Cases approved by Director Smart Card Product Certification.
- Test Engineering cell for all testing related issues shall report to Director (STQC)
- The Team Leader does co-relation of results.
- All the test engineers' sign test Reports.
- has clearly documented procedures/instructions are available for carrying out assigned activities.

2.5 List of Appointments

A control list of appointments with contact addresses/ points of the following is maintained by the Certification Body : (Who is who)

- Head (Smart Card Product Certification Body)
- Director (Smart Card Product Certification)
- Director (Smart Card Test & Evaluation)
- Members of Certification Committee
- Test Engineering Cell
- Techno Administrative Support Cell

The responsibilities of all personnel involved in the certification activities are indicated in cl. No. 2.4

2.6 Records

The Certification Body maintains a record system to comply with existing procedures. The records demonstrate that the certification procedures have been effectively implemented, particularly with respect to application forms, assessment reports, test

and evaluation reports and other documents relating to granting, maintaining, extending, reducing, suspending or withdrawing certification. The records are identified, managed and disposed of in such a way as to ensure the integrity of the process and confidentiality of the information. The records of the product certification which are not in continuation in certification process shall be destroyed 3 years, after the validity of the certificate is over.

2.7 Documents and Change Control

Certification body maintains a formal document control system where all procedures, specifications etc. are controlled by Doc. No., Version No., and Records / History of amendments and approval of changes. A master list of approved documents indicating above is maintained by Director (Smart Card Product Certification).

2.8 Confidentiality

The Certification Body has adequate arrangements, consistent with applicable laws, to safeguard confidentiality of the information obtained in the course of its certification activities at all levels of its organization, including committees and external bodies or individuals acting on its behalf.

Except as required in this documents information about a particular product or supplier will not be disclosed to a third party without the written consent of the supplier. Where the law requires information to be disclosed to a third party, the supplier will be informed of the information provided as permitted by the law.

2.9 Liability

The Certificate of Compliance given to a supplier under the scheme shall not be regarded as in any way diminishing the mutual contractual responsibilities/obligations between the supplier and purchaser. While the Certificate of Compliance will normally be a sound indicator of the capability of supplier to provide quality products/services, it should not be taken as a sort of guarantee accorded by the Certification Body. The Certification Body will not be liable for any deficiency in the product/service supplied by supplier.

2.10 Appeals, Complaints and Disputes

Appeals, Complaints and Disputes brought before the Certification Body by suppliers or other parties are subject to the review of certification committee.

The Certification Body will

- a) Keep a record of all appeals, complaints and disputes and remedial actions relative to certification

- b) take appropriate corrective and preventive action
- c) document the actions taken and assess their effectiveness.

2.11 Changes in the Certification Requirements

The Certification Body will give due notice of any changes it intends to make in its requirements for certification. It will take account of views expressed by the interested parties before deciding on the precise form and effective date of the changes. Following a decision on, and publication of, the changed requirements it shall verify that each certified supplier carries out any necessary adjustments to its procedures within such time, as in the opinion of the Certification Body, is reasonable. Certification Body will accept specification changes only from the committee, which is responsible for Specification Development (SCOSTA/SCOSTA-CL) and other.

Section 3: Requirements for Certification

3.1. Application for Certification

The Certification Body requires that a supplier organization (client):

- a) Always complies with the relevant provisions of the certification program
- b) Provide all necessary inputs for testing.
- c) Only claims that it is certified with respect to those activities for which it has been granted certification.
- d) does not use its certification in such a manner as to bring the Certification Body into disrepute and does not make any statement regarding its certification which the Certification Body may consider misleading or unauthorized.
- e) upon suspension or withdrawal of its certification (however determined) discontinues use of all advertising matter that contains any reference thereto and returns any certification documents as required by the Certification Body.
- f) uses certification only to indicate that the product(Smart Card Microcontroller Module/ Inlays) are in conformity with specified standards or other normative documents, and does not use its certification to imply otherwise.
- g) ensures that no certification document, mark or report nor any part thereof is used in a misleading manner.

h) in making reference to its certification in communication media such as documents, brochures or advertising, complies with the requirements of the Certification Body.

3.2 Application for Renew of Certification

The renewal of certificate shall be performed as per Certificate Renewal Procedure (SCPC-05-07) for the valid “Certificate of Compliance” issued to supplier by Smart Card Product Certification Body of NIC. Only records of the current applications are maintained. All applications will be treated as obsolete which are not in continuation and the records of such applications shall be destroyed 3 years, after the validity of the certificate is over. Only 3 consecutive renewals are allowed for a product to be certified, after that a fresh application should be submitted.

The Application

The Certification Body requires an official Application Form (SCPC-05-06) duly completed, and signed by a duly authorized representative of the applicant, in which the applicant agrees to comply with the requirements for certification and to supply any information needed for its evaluation.

3.2 Decision on Certification

The decision whether or not to certify a supplier’s Smart Card Product will be taken by the Head (Smart Card Product Certification Body) based on the recommendation of the Certification Committee on the basis of the information gathered during the certification process, evaluation of the test report and any other relevant information. Where necessary, the Certification Committee will seek expert’s opinion to determine the technical basis for its decisions.

The Certification Body will not delegate authority for granting, maintaining, extending, reducing, suspending or withdrawing certification to an outside person or body without prior approval of Head (Smart Card Product Certification Body) in each and every case.

The Certification Body will provide to each of its suppliers whose Products (Smart Card / Microcontroller Module/ Inlays) are certified, a certificate signed by Head (Smart Card Product Certification Body) or an officer who has been assigned such responsibility. These documents will identify for the supplier (clients) and each of its sites covered by the certification

a)

1. Product Name : (Brand Name) (Model)
2. Certified to:
 Name and address

ISO Certificate No. /
CMMI ID No. & Level:

3. Manufactured at:
Name and Address

ISO Certificate No. /
CMMI ID No. & Level:

4. Embedded chip configuration
- a. Chip make and model No:
 - b. Mask Part No.
 - c. Memory Details
 - d. Type of Interface

5. Operating system details

b) the scope of the certification granted including

- the standards and/or other normative documents to which Products (Smart Card / Microcontroller Modules / Inlays) are certified

c) the effective date of certification and the term for which the certification is valid

d) Simultaneously, arrangements will be made to update the list of certified clients.

Need of Re-Certification:

Any change after Certification, in any of the components listed below, will be treated as Major Non-conformity and will require re-certification

- Operating System of Smart Card/ Microcontroller Module/ Inlays or its Version.
- Microcontroller Chip (Integrated Circuit), Module (its Make, Model or Technical Architecture).

3.3 Surveillance and Re-assessment

The Certification Body will carry out periodic surveillance and re-assessment at sufficiently close intervals to verify that suppliers, whose Smart Card / Microcontroller Modules / Inlays products are certified, continue to comply with the certification requirements.

Currently, the following policies (on surveillance and re-assessment) are being pursued

- The surveillance activities are subject to re-testing on if a supplier with a certified (Smart Card / Microcontroller Module/ Inlays) product makes major

modifications to the System/Product or if other changes take place which could affect the basis of the certification at least.

- Audit testing will be performed at least once in a year by
 - picking up smart card from supplier premises
 - market / users

3.4 Suspension and Withdrawal/Cancellation of Certification

Suspension

Certification may be suspended for a limited period at the discretion of Certification Body under the following circumstances

- if the surveillance/audit/Renewal testing indicates minor non-conformance to the relevant System/Product requirements and the same is not cleared even after lapse of initial time period given for corrective actions
- if the surveillance/audit/Renewal testing indicates major non-conformance to the System/Product requirements.
- if improper use of the Certificate of Registration or Logo/Mark is not rectified to the satisfaction of Certification Body;
- if the certified supplier is not regularly involved in the activities for which he is certified.
- if there has been any other contravention of the applicable requirements or rules of procedures of certification body.

An official suspension will be confirmed by the Certification Body in a registered letter to the supplier or by equivalent means and will indicate the conditions under which suspension will be revoked. The Certification Body may publish notification of suspension. Upon fulfillment of the indicated conditions within the specified period, the Certification Body will revoke suspension and notify the supplier accordingly; otherwise, the certification will be cancelled and certificate will be withdrawn.

Withdrawal/Cancellation

The Certification Body will cancel certification; withdraw the Certificate and authorisation for the use of the Logo/Mark under the following circumstances

- if the supplier under suspension fails to rectify non-conformance within specified period

- if the supplier either will not or cannot ensure conformance to changed rules of procedure of Certification Body.
- if the supplier ceases to supply the product, process or service
- if the supplier fails to meet the financial obligation to Certification Body
- at the former request of the supplier
- if the supplier fails on the Certification Agreement signed between CB.
- any other serious contravention of applicable requirements of rules of procedures of Certification Body

The official communication by the Certification Body of the withdrawal/cancellation will be either through a registered letter or equivalent means. The Certification Body will publish notification of the withdrawal/cancellation.

3.5 Maintenance of Certification

For maintenance of certification, the client shall submit annually a statement regarding continuing compliance with the criteria and the requirements of the certification smart card products along with objectively verifiable documents. The Certification Body will carry out the surveillance of these documents along with the audit/renewal testing.

Based on the results of the audit/renewal testing documents surveillance Certification Body will take the decision for continuation of the certification or otherwise.

Access to Records of Complaints to Suppliers

The Certification Body will require the certified supplier to

- a) keep a record of all complaints made known to the supplier relating to products/services compliance with applicable requirements and to make these records available to the Certification Body when requested
- b) take appropriate action with respect to such complaints and any deficiencies found in products or services that affect compliance with the requirements for certification;
- c) document the actions taken.