INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC) SYSTEM FOR THE CERTIFICATION TO STANDARDS RELATING TO EQUIPMENT FOR USE IN EXPLOSIVE ATMOSPHERES

IECEx 60079-14 FAR (New)

TITLE: Facility Audit Report Form (FAR) – Installation and Initial Inspection (IECEx 03-3 Installation and Initial Inspection Scheme)

Circulated to: IECEx MC Members

Introduction

Further to the Report from WG10 at the Split 2011 ExMC meeting, refer item 11.2 of the ExMC Split confirmed minutes ExMC/723A/RM, WG10 has progressed with its work to integrate additional Ex related Services beyond Ex Repair.

Refer to Document ExMC/746/Inf for the background and explanation of the new proposed IECEx 03 series Document Structure.

This draft document is the proposed new Facility Audit Report (FAR) for the IECEx 03-3 Scheme (Certified Service Facility Scheme Part 3 – Installation and Initial Inspection) for use by ExCBs to record assessments and audits of Service Facilities providing Ex Installation Services according to IEC 60079-14. This document also contains the proposed Non Conformance Report Form (NCR).

This document has been prepared by WG10 and is presented for consideration at the ExMC Calgary 2012 meeting.

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IECEx 03 - 3 Audit Report No: xx/yyy/FARzz.zzzz/zz

ExCB Internal File Reference No.:

Applicant:
…
…
…
…

Service facility (SF) location covered by this assessment:
…
…
…
…

Percentage of business related to Ex equipment (Optional Additional information):
<list the % of the total business that relates to installation and initial inspection of Ex equipment>

No. of employees:
A total of … employees on site, … involved in installation and initial inspection of Ex equipment.

Responsible person(s):
<list the Responsible Persons, according to IEC 60079-14, that have been assessed. This list must be reviewed each surveillance audit>

Operatives:
<list the Operatives, according to IEC 60079-14, that have been assessed. This list must be reviewed each surveillance audit>

Scope of installation and initial inspection work of the SF, including any limitations:
<specify type of installation and protection, e.g. intrinsically safe circuits, dusts, fuel dispensers etc, and any limitations,

Audit criteria: (state which edition of IEC 60079-14 is used for the assessment)
- IEC 60079-14 Edition 4.0,
- IEC 60079-14 Edition 5.0
- OD 014-3

Type of audit:
[ ] – initial assessment/reassessment of a SF with a verified certified QS
[ ] – initial assessment/reassessment of a SF without a certified QS
[ ] – surveillance of a SF with a certified QS
[ ] – surveillance of a SF without a certified QS
[ ] – special assessment visit, e.g. due to relocation or major changes at the Service Facility

Lead Assessor: …
(name)

Lead Assessor: …
(signature)

IECEx 03 - 3 Audit Report No: xx/yyy/FARzz.zzzz/zz

1 SUMMARY REPORT

Reference Documents:
(include quality manual and other documents or procedures referenced during the audit)

Summary of observations:
(State the most important results of the compliance/surveillance audit)

Nonconformities:
(as detailed in the attached Nonconformity (NCR) Report(s), when applicable

Lead Assessor's recommendations:

[ ] – FAR issued, indicating full compliance with IECEx Scheme Requirements, recommending that IECEx Facility Certification be issued/maintained

[ ] – FAR issued, indicating general compliance with IECEx Scheme Requirements, even if minor non conformances are raised, recommending that IECEx Facility Certification be issued/maintained following receipt of satisfactory documentary evidence supporting effective corrective action. Corrective action to be verified at next surveillance visit

[ ] – FAR issued, indicating non-compliance with IECEx Scheme Requirements, due to major non-conformances being raised, recommending that IECEx Facility Certification be issued only after a satisfactory follow-up visit. Services cannot be claimed as being covered by IECEx Certification until a follow up visit is conducted (must be within 2 calendar months of assessment).

Accepted by IECEx 03-3 ExCB:

ExCB:
Date:

_____
Ex Certification Manager

2 AUDIT DATA

QS Registration: ☐ ISO 9001 Registrar
(Certification Body):
Certificate No.:
Expiration Date:
☐ SF does not hold a current ISO 9001 certficate

Surveillance audits are carried out xx time(s) a year. The last audit was carried out on xx xxxx 20xx. The audit report, including any nonconformities raised during the audit and corresponding corrective actions, has been evaluated during the audit.

Where applicable, the following documents are retained on the Applicant's file by the ExCB:
– A copy of the ISO 9001 certificate
– A copy of the last ISO 9001 audit report
– A copy of the organization diagram

Composition of audit team:
Xxxx xxxxxxxx, Lead Assessor

Date(s) of the audit:
mmmm dd, yyyy

Number of man-days on-site:
… man-days

Interviewed representatives of the Service Facility (auditees):

Name	Position

Where necessary other staff assisted during the assessment.

3 ASSESSOR'S REPORT

3.1 Assessment to OD 014-3

(The requirements of each of the following Clauses are detailed in OD 014-3)

Clause	Subject	SF reference document	Audit findings	NCR No.
3.1	**Documentation requirements**	No requirements	N/A	
3.1.1	General			
3.1.2.	Records			
3.2	**Management responsibility** *Management representative?*			
3.3	**Resource management** *Staff competence?* *Review of Records showing Competencies of Persons working on specific sites?*			
3.4	**Product realization**			
3.5	**Measurement, analysis and improvement**	No requirements	N/A	
3.5.1	Planning			
3.5.2	Customer satisfaction			
3.5.3	Internal audit			
3.5.4	Monitoring and measurement of processes			
3.5.5	Monitoring and measurement of product			
3.5.6	Control of nonconforming product			
3.5.7	Analysis of data			
3.5.8	Improvement			
3.5.9	Corrective action			
3.5.10	Preventive action			
8.6	**Records** *Legibility* *Traceable* *Retrieval* *Min 10 year retention*			

Clause	Subject	SF reference document	Audit findings	NCR No.
8.7	**Conditions for installation completion** *Initial inspection records*			

3.2 Assessment to IEC 60079-14 – General requirements (Edition 4)

NOTE: For Assessment to IEC 60079-14 Edition 5.0 use Section 3.3.

(The requirements of each of the following Clauses are detailed in IEC 60079-14 Edition 4.0 2007-12)

Clause	Subject	Service Facility Reference Document	Audit Findings	NCR No.
4	**General**			
4.1	General requirements			
4.2	Documentation			
4.3	Assurance of conformity of equipment			
4.4	Qualifications of personnel			
5	**Selection of equipment (excluding cables and conduits)**			
5.1	Information requirements			
5.2	Zones			
5.3	Relationship between Equipment protection levels (EPLs) and zones			
5.4	Selection of equipment according to EPLs			
5.5	Selection according to equipment grouping			
5.6	Selection according to the ignition temperature of the gas, vapour or dust and ambient temperature			
5.7	Selection of radiating equipment for dust			
5.8	Selection of ultrasonic equipment for dust			
5.9	External influences			
5.10	Light metals as construction materials			
5.11	Transportable, Portable and Personal equipment			
5.12	Selection of rotating electrical machines			
5.13	Luminaires			
5.14	Plugs and socket outlets for dust			
6	**Protection from dangerous (incendive) sparking**			
6.1	Danger from live parts			
6.2	Danger from exposed and extraneous conductive parts			
6.3	Potential equalization			

Clause	Subject	Service Facility Reference Document	Audit Findings	NCR No.
6.4	Static electricity			
6.5	Lightning protection			
6.6	Electromagnetic radiation			
6.7	Cathodically protected metallic parts			
6.8	Ignition by optical radiation			
7	**Electrical protection**			
7.1	General			
7.2	Rotating electrical machines			
7.3	Transformers			
7.4	Resistance heating devices			
8	**Emergency switch-off and electrical isolation**			
8.1	Emergency switch-off			
8.2	Electrical isolation			
9	Wiring systems			
9.1	General			
9.2	Aluminium conductors			
9.3	Cables			
9.4	Conduit systems			
9.5	Cable and conduit systems			
9.6	Installation requirements			
10	**Additional requirements for type of protection 'd' – Flameproof enclosures** *(the following Section of this table maybe removed if Ex d is not within the scope of application)*			
10.1	General			
10.2	Solid obstacles			
10.3	Protection of flameproof joints			
10.4	Cable entry systems			
10.5	Conduit systems			
10.6	Motors			
11	**Additional requirements for type of protection 'e' – Increased safety** *(the following Section of this table maybe removed if Ex e is not within the scope of application)*			
11.1	Degree of ingress protection of enclosures (IEC 60034-5 and IEC 60529)			
11.2	Wiring systems			
11.3	Cage induction motors			
11.4	Luminaires			
12	**Additional requirements for types of protection 'i' – Intrinsic safety** *(the following Section of this table maybe removed if Ex i is not within the scope of application)*			
12.1	Introductory remark			
12.2	Installations to meet the requirements of EPL 'Gb' or 'Gc'			
12.3	Installations to meet the requirements of EPL 'Ga'			
12.4	Special applications			
13	**Additional requirements for pressurized enclosures** *(the following Section of this table maybe removed if Ex p is not within the scope of application)*			
13.1	Type of protection 'p'			
13.2	Motors			

Clause	Subject	Service Facility Reference Document	Audit Findings	NCR No.
13.3	Type of protection 'pD'			
13.4	Rooms for explosive gas atmosphere			
14	**Additional requirements for type of protection 'n'** *(the following Section of this table maybe removed if Ex n is not within the scope of application)*			
14.1	General			
14.2	Degree of ingress protection of enclosures (IEC 60034-5 and IEC 60529)			
14.3	Wiring systems			
14.4	Motors..			
14.5	Luminaires			
15	**Additional requirements for type of protection 'o'– Oil immersion** *(the following Section of this table maybe removed if Ex o is not within the scope of application)*			
Record of findings				
16	**Additional requirements for type of protection 'q' – Powder filling** *(the following Section of this table maybe removed if Ex q is not within the scope of application)*			
Record of findings				
17	**Additional requirements for type of protection 'm' – Encapsulation** *(the following Section of this table maybe removed if Ex m is not within the scope of application)*			
Record of findings				
18	**Additional requirements for type of protection 'tD' – Protection by enclosure** *(the following Section of this table maybe removed if tD is not within the scope of application)*			
18.1	Practices A and B			
18.2	Practice A			
18.3	Practice B			
18.4	Motors supplied at varying frequency and voltages			
Annexes That are Normative (an integral part of the Standard) are recorded below.				
Annex A	**Verification of intrinsically safe circuits with more than one associated apparatus with linear current/voltage characteristics**			
A.1	General			
A.2	Intrinsic safety with level of protection 'ib'			
A.3	Intrinsic safety with level of protection 'ic'			
Annex E	**Potential stator winding discharge risk assessment – Ignition risk factors**			
Record of findings				
Annex F	**Knowledge, skills and competencies of 'Responsible Persons', 'Operatives' and 'Designers'**			
F.1	Scope			
F.2	**Knowledge and skills**			
F.2.1	Responsible persons			
F.2.2	Operatives			
F.2.3	Designers			
F.3	**Competencies**			
F.3.1	General			
F.3.2	Responsible persons			
F.3.3	Operatives			
F.3.4	Designers			
F.4	Assessment			
Annex H	Frictional sparking risks with light metals and their alloys			

Clause	Subject	Service Facility Reference Document	Audit Findings	NCR No.
H.1	General			
H.2	Rigidly mounted equipment			
H.3	Portable and transportable equipment			
H.4	Fans			

OTHER REMARKS OR NOTES ARISING FROM THE ASSESSMENT *(IF ANY)*:

3.3 ASSESSMENT ACCORDING TO IEC 6007-14 Edition 5.0 2012 – XX (Based on CDV Draft)

NOTE: For Assessment to IEC 60079-14 Edition 4.0 use Section 3.2 above.
(The requirements of each of the following Clauses are detailed in IEC 60079-14 Edition 5.0 2012-XX)

Clause	Subject	Service Facility Reference Document	Audit Findings	NCR No.
4	**General**			
4.1	General requirements			
4.2	Documentation			
4.3	Initial inspection			
4.4	Assurance of conformity of equipment			
4.5	Qualifications of personnel			
5	**Selection of equipment (excluding cables and conduits)**			
5.1	Information requirements			
5.2	Zones			
5.3	Relationship between Equipment protection levels (EPLs) and zones			
5.4	Selection of equipment according to EPLs			
5.5	Selection according to equipment grouping			
5.6	Selection according to the ignition temperature of the gas, vapour or dust and ambient temperature			
5.7	Selection of radiating equipment			
5.8	Selection of ultrasonic equipment			
5.9	Selection to cover External influences			
5.10	Selection of Transportable, Portable and Personal equipment			
5.11	Rotating electrical machines			
5.12	Luminaires			
5.13	Plugs and socket outlets for dust			
5.14	Cells and Batteries			
5.15	Radio Frequency Identification RFID Tags			
5.16	Gas Detection Equipment			
6	**Protection from dangerous (incendive) sparking**			
6.1	Light metals as construction materials			
6.2	Danger from live parts			
6.3	Danger from exposed and extraneous conductive parts			
6.4	Potential equalization			

Clause	Subject	Service Facility Reference Document	Audit Findings	NCR No.
6.5	Static electricity			
6.6	Lightning protection			
6.7	Electromagnetic radiation			
6.8	Cathodically protected metallic parts			
6.9	Ignition by optical radiation			
7	**Electrical protection**			
Record of findings				
8	**Switch-off and electrical isolation**			
8.1	General			
8.2	Switch-off			
8.3	Electrical isolation			
9	**Wiring systems**			
9.1	General			
9.2	Aluminium conductors			
9.3	Cables			
9.4	Conduit systems			
9.5	Cable and conduit systems			
9.6	Installation requirements			
10	**Cable entry systems and blanking elements**			
10.1	General			
10.2	Selection of cable glands			
10.3	Connections of cables to equipment			
10.4	Additional requirements for entries other than Ex ”d”, Ex ”t” or Ex ”nR”			
10.5	Unused openings			
10.6	Additional requirements for type of protection “d” – Flameproof enclosures			
10.7	Additional requirements for type of protection “t” – Protection by enclosure			
10.8	Additional requirements for type of protection “nR” – Restricted breathing enclosure			
11	**Rotating electrical machines**			
11.1	General			
11.2	Type of protection “d” – Flameproof enclosures			
11.3	Type of protection “e” – Increased safety			
11.4	Type of protection “p” and “pD” – Pressurized enclosures			

Clause	Subject	Service Facility Reference Document	Audit Findings	NCR No.
11.5	Type of protection “t” – Protection by enclosures supplied at varying frequency and voltage			
11.6	Type of protection “nA” – Non-sparking			
12	**Luminaires**			
Record of findings				
13	**Electric heating systems**			
13.1	General			
13.2	Temperature monitoring			
13.3	Limiting temperature			
13.4	Safety device			
13.5	Electrical trace heating systems			
14	**Additional requirements for type of protection 'd' – Flameproof enclosures** *(the following Section of this table maybe removed if Ex d is not within the scope of application)*			
14.1	General			
14.2	Solid obstacles			
14.3	Protection of flameproof joints			
14.4	Conduit systems			
15	**Additional requirements for type of protection ‘e’ – Increased safety** *(the following Section of this table maybe removed if Ex e is not within the scope of application)*			
15.1	General			
15.2	Maximum dissipated power of terminal box enclosures			
15.3	Conductor terminations			
15.4	Maximum number of conductors in relation to the cross-section and the permissible continuous current			
16	**Additional requirements for types of protection 'i' – Intrinsic safety** *(the following Section of this table maybe removed if Ex i is not within the scope of application)*			
16.1	Introductory remark			
16.2	Installations to meet the requirements of EPL ‘Gb’ or ‘Gc’ and ‘Db’ or ‘Dc’			
16.3	Installations to meet the requirements of EPL 'Ga' or ‘Da’			
16.4	Simple apparatus			
16.5	Terminal Boxes			
16.6	Special applications			
17	**Additional requirements for pressurized enclosures** *(the following Section of this table maybe removed if Ex p is not within the scope of application)*			
17.1	General			
17.2	Type of protection 'p'			
17.3	Type of protection 'pD'			
17.4	Rooms for explosive gas atmosphere			
18	**Additional requirements for type of protection 'n'** *(the following Section of this table maybe removed if Ex n is not within the scope of application)*			
18.1	General			

Clause	Subject	Service Facility Reference Document	Audit Findings	NCR No.
18.2	Combinations of terminals and conductors for general connection and junction boxes			
19	**Additional requirements for type of protection 'o'– Oil immersion** *(the following Section of this table maybe removed if Ex o is not within the scope of application)*			
19.1	General			
19.2	External connections			
20	**Additional requirements for type of protection 'q' – Powder filling** *(the following Section of this table maybe removed if Ex q is not within the scope of application)*			
Record of findings				
21	**Additional requirements for type of protection 'm' – Encapsulation** *(the following Section of this table maybe removed if Ex m is not within the scope of application)*			
Record of findings				
22	**Additional requirements for type of protection 'op' – Optical radiation** *(the following Section of this table maybe removed if op is not within the scope of application)*			
Record of findings				
23	**Additional requirements for type of protection 't' – Protection by enclosure** *(the following Section of this table maybe removed if tD is not within the scope of application)*			
Record of findings				
	Annexes That are Normative (an integral part of the Standard) are recorded below.			
Annex A	**Knowledge, skills and competencies of 'Responsible Persons', 'Operatives/technicians' and 'Designers'**			
A.1	Scope			
A.2	**Knowledge and skills**			
A.2.1	Responsible persons			
A.2.2	Operatives/technicians			
A.2.3	Designers			
A.3	**Competencies**			
A.3.1	General			
A.3.2	Responsible persons			
A.3.3	Operatives/technicians			
A.3.4	Designers			
A.4	Assessment			
Annex C	**Initial Inspection Equipment specific Inspection schedules**			
Record of findings				
Annex G	**Potential stator winding discharge risk assessment – Ignition risk factors**			
Record of findings				
Annex H	**Verification of intrinsically safe circuits with more than one associated apparatus with linear current/voltage characteristics**			
H.1	Scope			
H.2	Intrinsic safety with level of protection “ib”			
H.3	Intrinsic safety with level of protection “ic”			
Annex K	**Additional requirements for type of protection “op” – Optical radiation**			
K.1	General			
K.2	Inherently safe optical radiation “op is”			
K.3	Protected optical radiation “op pr”			

Clause	Subject	Service Facility Reference Document	Audit Findings	NCR No.
K.4	Optical radiation interlocked with optical breakage “op sh”			

OTHER REMARKS OR NOTES ARISING FROM THE ASSESSMENT *(IF ANY)*:

IECEx 03 – 3 Typical Non Conformity Report (NCR)

IECEx FAR No:	xxxx
Date(s) of assessment:	xxxx

Non Conformity Number: mm/yyyy/xx
(Month/Year/No. issued)

Requirement reference:
(e.g. IEC 60079-14 / OD 014-3 clause …)

Response time by Auditee:

Non Conformance (objective finding and statement of non-conformance):

ExCB Auditor:	**Service Facility representative:**

Response of Service Facility

1) Proposed Corrective Action + Timeframe
Include a statement describing actual corrective action

ExCB Auditor:	**Service Facility representative:**

2) Corrections and Corrective actions:
Include a statement describing actual corrective/preventative action implemented

3) Verification of Corrective and Preventive Action by ExCB:

ExCB Auditor:	**Service Facility representative:**