**INTERNATIONAL ELECTROTECHNICAL COMMISSION SCHEME FOR  
CERTIFICATION TO STANDARDS RELATING TO EQUIPMENT FOR USE  
IN EXPLOSIVE ATMOSPHERES (IECEx SYSTEM)**

**Title: Re-assessment and Scope Extension Report for the continued acceptance of UL LLC, US, an Accepted Ex Certification Body (ExCB) Body within the IECEx Scheme for Certification of Personnel Competencies (CoPC) 05 to include Ex 009: Design electrical installations in or associated with explosive atmospheres in their scope.**

**Introduction**

In accordance with the 5-year re-assessment plan for the surveillance and monitoring of bodies within the IECEx System, the following document contains the IECEx Re-assessment and Scope Extension Report for the continued acceptance of UL LLC, US, an Accepted Ex Certification Body within the IECEx Scheme for Certification of Personnel Competencies (CoPC) 05.

During the re-assessment the IECEx Assessment Team took the opportunity to also assess

UL LLC, US, for the following extension of scope –

*Ex 009: Design electrical installations in or associated with explosive atmospheres*

***This document is hereby submitted for ExMC approval via correspondence using the IECEx on-line voting system. ExMC Members are requested to submit their vote via the IECEx On-line Ballot System by the closing date 2022 05 06***

***Please refer to OD 050 for guidance on the “IECEx On-line voting system.”***

***Chris Agius***

**IECEx Secretariat**

|  |  |
| --- | --- |
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IEC System for certification to standards relating to equipment for use in Explosive Atmospheres (IECEx System)

IECEx Assessment Report Form, F-003

IECEx assessment report form for use by IECEx assessment teams to report assessments conducted according to the relevant IECEx assessment procedures of:

Operational Document IECEx OD 003-2 for the Certified Equipment Scheme

Operational Document IECEx OD 316-\* for the Certified Service Facility Scheme

Operational Document IECEx OD 422 for the IECEx Conformity Mark Licensing Scheme

Operational Document IECEx OD 501 for the Personnel Competence Scheme

IECEx ExCB/ExTL/ATF assessment report

UL LLC

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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# Assessment information

## Type of body covered by this assessment:

<Check appropriate boxes>

|  |  |
| --- | --- |
| ExCB for IECEx Certified Equipment Scheme |  |
| ExTL for IECEx Certified Equipment Scheme |  |
| ATF for IECEx Certified Equipment Scheme |  |
| ExCB for IECEx Certified Service Facilities Scheme |  |
| ExCB for IECEx Conformity Mark Licensing System |  |
| ExCB for IECEx Certification of Personnel Competency Scheme |  |

NOTE 1 ExCB - IECEx Certification Body

NOTE 2 ExTL - IECEx Testing Laboratory

NOTE 3 ATF - Additional Testing Facility

## Type of assessment:

<Check appropriate boxes>

|  |  |
| --- | --- |
| Pre-assessment for candidate body |  |
| Initial assessment for candidate body |  |
| Surveillance |  |
| Re-assessment |  |
| Scope extension |  |

## Details of body

### Country

**United States of America**

### Name of body

**UL LLC**

### Name and title of nominated principal contact

|  |  |  |
| --- | --- | --- |
| Name | Title | E-mail address |
| Erin LaRocco | Staff Engineer | Erin.LaRocco@ul.com |

## Assessment information

### Members of the assessment team

|  |  |
| --- | --- |
| Name | Role |
| Thierry Houeix | IECEx Lead Assessor |

### Place(s) of assessment

|  |  |
| --- | --- |
| UL LLC | using Microsoft TeamsTM |

### Assessment date(s)

Remote assessment conducted according to IECEx OD 060 on 20 and 27 October 2021

## Application information and background information on the assessment

Application Form - UL LLC – UL is already accepted as ExCB for IECEx 05 scheme and Units Ex000, Ex001, Ex003, Ex 004, Ex 006, Ex 007, and Ex008

Extension for the units Ex009 has been requested.

## Scopes

### ExCB scope for equipment certification scheme

ExCB regarding IECEx 02 is not part of this assessment

NOTE 3 Any scope changes addressed by this report should be clearly indicated.

### ExTL scope

ExTL is not part of this assessment

### ATF Scope

ATF is not part of this assessment

### ExCB scope for Service Facilities Scheme

ExCB regarding IECEx 03 is not part of this assessment

## ExCB scope for Conformity Mark Licensing Scheme

The Conformity Mark Licensing Scheme is not part of this assessment.

## ExCB scope for IECEx Personnel Competence Scheme

The scope for the IECEx Personnel Competence Scheme is shown below.

| Unit | | Comments |
| --- | --- | --- |
| Unit Ex 000 – Basic knowledge and awareness |  |  |
| Unit Ex 001 – Apply basic principles of protection in explosive atmospheres |  |  |
| Unit Ex 002 – Perform classification of hazardous areas |  |  |
| Unit Ex 003 – Install explosion-protected equipment and wiring systems |  |  |
| Unit Ex 004 – Maintain equipment in explosive atmospheres |  |  |
| Unit Ex 005 – Overhaul and repair of explosion-protected equipment |  |  |
| Unit Ex 006 – Test electrical installations in or associated with explosive atmospheres |  |  |
| Unit Ex 007 – Perform visual & close inspection of electrical installations in or associated with explosive atmospheres |  |  |
| Unit Ex 008 – Perform detailed inspection of electrical installations in or associated with explosive atmospheres |  |  |
| Unit Ex 009 – Design electrical installations in or associated with explosive atmospheres |  | Extension requested |
| Unit Ex 010 – Perform audit inspection of electrical installations in or associated with explosive atmospheres |  |  |

# Common information

## Legal entity of body

Underwriters Laboratories Inc. is the top level parent company in the UL Family of Companies. All UL IECEx System operations in the United States are part of “UL LLC” which is a fully owned subsidiary of Underwriters Laboratories Inc. UL LLC operates in the IECEx System as an ExCB and ExTL.

## Financial support

UL LLC operates on a customer fee for service arrangement.

## History

UL is an independent product safety testing and certification organization founded in 1894, whose corporate mission is to serve the public by testing products for safety. UL's principal activity is investigating the safety of many kinds of products, including electrical and electronic equipment and products, mechanical products, building materials, construction systems, fire protection equipment, burglary protection systems and equipment, and marine products. UL also devotes its resources to the development of UL Standards for Safety.

Underwriters Laboratories Inc. is the top level parent company in the UL Family of Companies. The UL IECEx operations in the United States are part of “UL LLC” which is a fully-owned subsidiary of Underwriters Laboratories Inc.

In the past 123 years, UL has grown to over 9,000 employees. UL's Corporate Headquarters are in Northbrook, IL. Currently, there are 56 testing and certification facilities in the UL family of companies. There are also about 103 Field Services Locations that handle factory production control associated with UL Certification.

## Documentation

### Quality manual

UL LLC has comprehensive quality manuals for the schemes that they operate.

IECEx Scheme for Certification of Personnel Competence For Explosive Atmospheres Compliance Policy and Manual, Policy-ULID-004132 (DCS:00-CB-P0880), Issue 9.0, and IECEx Scheme For Certification of Personnel Competence For Explosive Atmosphere Rules and Requirements, Policy-ULID-004424 (DCS:00-GC-P0887), Issue 4.5, are the top level policies supporting the IECEx Personnel Competence Scheme and contain references to ISO/IEC 17024 and IECEx Rules and Operational Documents.

The policies fulfil the requirements of the IECEx system.

### Procedures

UL LLC has a very comprehensive range of procedures covering all aspects of the certification and testing operations.

IECEx Scheme for Certification of Personnel Competence Procedure, Standard Operation Porccedures-ULID-004269 (DCS:00-EX-S0855), Issue 10.0, is the main procedure used for the scheme that they operate under the reassessment scope.

The procedures fulfil the requirements of the IECEx system.

### Work instructions

UL has work instructions available for administrative and other activities.

The work instructions fulfil the requirements of the IECEx system.

### Records (including test records where relevant)

All records are retained electronically in accordance with IECEx Scheme For Certification of Personnel Competence For Explosive Atmosphere Rules and Requirements, Policy-ULID-004424 (DCS:00-GC-P0887), Issue 4.5, and the relevant procedures described in Section 16, which include storage location, protection, minimum retention time and disposition, if applicable. At the moment the storage time is set to ‘indefinite’.

Example of the project archive was reviewed and found that the records are detailed. The information is sufficient to the satisfaction of the assessment team and meets the requirements of the IECEx.

### Document change control

Document change control is covered by Operation Procedures-ULID-001013 (DCS:00-QA-S0003), Document Management SOP and the [Global Forms Management Process, Operation Procedured-ULID-001017 (DCS: 00-QA-S0026)](http://dcs.ul.com/function/dcs/ControlledDocumentLibrary/00-QA-S0026/00-QA-S0026.docx), and fulfil the requirements of the IECEx system.

## Confidentiality

All files, records, and communications maintained by UL are private and confidential. Procedures for safeguarding confidentiality of information are included in the UL Standards of Business Conduct, Policy-ULID-000516 (DCS:00-LE-P0001), and in the Confidential Information and Trade Secrets Policy, Policy-ULID-000520 (DCS:00-LE-P0400), and records of employee commitment to abide by these requirements are described in the Record of Agreements Pertaining to Confidentiality, Conflict of Interest, Business Ethics, and Other Policies, Standard Operating Procedures-ULID-000207 (DCS:00-HR-S0052), and information contained in applications for employment.

Historically, confidentiality agreements were by way of signed documents. This has transitioned to an online acceptance for new employees.

An example of the signed version was viewed by the team and fulfils the requirements of the IECEx.

Confidentiality requirements for outside councils and committees are covered by the contracts with the individuals serving on these councils and committees.

## Communication with public and customers (Hard copy and Electronic)

UL LLC has a website for communicating with the public and customers with a specific area focused on Hazardous Locations (<http://industries.ul.com/hazardous-locations>). UL LLC also has an app, UL HazLoc, which is publicly available in six languages and includes information relevant to the IECEx. UL LLC also has hard copy publications, such as the HazLoc Educational Poster, which is distributed to clients, trade shows, etc.

## Recognitions and agreements

* OCS Group in Houston, Texas, USA
* PCEC in Tianjin, Peoples Republic of China

## Internal audit

The Internal Quality Audits (IQA) department with input from the IECEx Program Owner plans and conducts annual audits in accordance with the Audit Policy, Policy-ULID-001011 (DCS:00-QA-P0028), and the Internal Audits Procedure, Standard Operation Procedures-001014 (DCS:00-QA-S0004).

The last internal audit for IECEx, carried out on 30 September 2021 through 8 October 2021, was reviewed and was seen to fulfil the requirements of the IECEx.

## Management review

The IECEx management review is conducted annually in accordance with IECEx System Internal Audit and Management Review Procedures, 80-EX-S0025.

The last management review on 3 March 2021 for the IECEx Scheme was reviewed and was seen to fulfil the requirements of the IECEx.

## Contracting, subcontracting and witness testing

### Contracting

Not part of this assessment

### Subcontracting

Not part of this assessment

### Off-site and Witness testing

Not part of this assessment

## Training and competence

Details of staff competencies are included in the site assessment report.

## Complaints and appeals (including appeals to IECEx)

Complaints and appeals are made as described in IECEx Scheme For Certification of Personnel Competence For Explosive Atmospheres Compliance Policy and Manual, Policy-ULID-004132 (DCS:00-CB-P0880), Issue 9.0, which fulfils the IECEx requirements.

There have been 0 complaints so far in 2021 for the whole of the Hazloc section.

## Impartiality

UL LLC has Impartiality committee. This is defined in the document in Section 4.3 of IECEx Scheme For Certification of Personnel Competence For Explosive Atmospheres Compliance Policy and Manual, Policy-ULID-004132 (DCS:00-CB-P0880), Issue 9.0.

## Active involvement in development of Decision Sheets

Evidence was provided that UL LLC comments on ExPCC decision sheets.

## Special facts to be noted

None

## Supporting documentation

Copies of additional supporting information for this assessment have been provided to the applicant and the IECEx Secretariat. These are included in a site assessment report or provided separately and include:

* Details of issues raised and how these have been resolved
* Checklist for ISO/IEC 17024
* Information on competencies
* Assessors’ notes

## Recommendations

Based on the assessment performed, **UL LLC** is recommended for continued acceptance in the IECEx scheme as:

* An ExCB in the IECEx Certification of Personnel Competency Scheme

This is according to the scope of the standards listed in this document (including the extension of scope).

|  |  |  |
| --- | --- | --- |
| **Thierry Houeix** | <name> | <name> |
| IECEx Lead Assessor | IECEx Assessor | IECEx Assessor |

Date: **2022-03-18**

# ExCB for IECEx Certified Equipment Scheme

Not part of this assessment

# ExTL for IECEx Certified Equipment Scheme

Not part of this assessment

# ATF for IECEx Certified Equipment Scheme

Not part of this assessment

# ExCB for Certified Service Facilities Scheme

Not part of this assessment

# IECEx Conformity Mark Licensing Scheme

Not part of this assessment

# ExCB for IECEx Personnel Competence Scheme

## Assessment references

1. IECEx 05 IEC System for Certification to Standards relating to Equipment for use in Explosive Atmospheres (IECEx System) IECEx Scheme for Certification of Personnel Competence for Explosive Atmospheres – Rules of Procedure
2. IECEx OD 501 IECEx Scheme for Certification of Personnel Competence for Explosive Atmospheres – Assessment procedures for IECEx acceptance of Certification Bodies (ExCBs) for the purpose of issuing and maintaining IECEx Certificates of Personnel
3. IECEx OD 503 IECEx Scheme for Certification of Personnel Competence for Explosive Atmospheres - ExCB Procedures for issuing and maintaining IECEx Certificates of Personnel Competencies
4. IECEx OD 504 IECEx Scheme for Certification of Personnel Competence for Explosive Atmospheres – Specification for Units of Competence Assessment Outcomes
5. IECEx OD 505 Site Re-Assessment Report for Assessment of IECEx Candidate and Accepted Ex Certification Bodies (ExCBs) for the IECEx 05 Certificate of Personal Competencies Scheme (CoPC)
6. IECEx OD 506 - Guidance on the use of the IECEx Certificates of Personnel Competence Scheme’s Assessment Question Bank by ExCBs IECEx OD 060 IECEx Guide for Business Continuity – Management of Extraordinary Circumstances or Events Affecting IECEx Certification Schemes and Activities
7. ISO/IEC 17024 Conformity assessment — General requirements for bodies operating certification of persons
8. IECEx OD 507 Check list for assessment to ISO/IEC 17024
9. ExPCC Decision Sheets
   1. Additional references applied for this assessment

NOTE To be added by assessment team if applicable.

## ExCB persons interviewed

|  |  |
| --- | --- |
| Name | Position |
| Erin LaRocco | Staff Engineer, IECEx Certification of Personnel Competency Scheme Owner |
| David Malohn | Staff Engineer, Process Owner – HazLoc Knowledge Solutions |

## National certificates

**UL LLC** does not have specific accreditation to ISO/IEC 17024 covering this activity. Therefore, this IECEx assessment includes assessment to ISO/IEC 17024. The subsequent assessment has verified compliance.

## Organisation

### Names, titles and experience of the senior executives

|  |  |  |
| --- | --- | --- |
| Name | Title | Experience (years) |
| Erin LaRocco | Staff Engineer, IECEx Certification of Personnel Competency Scheme Owner | 16 |
| David Malohn | Staff Engineer, Process Owner – HazLoc Knowledge Solutions | 24 |

### Name, title and experience of the quality management representative

|  |  |  |
| --- | --- | --- |
| Name | Title | Experience (years) |
| Erin LaRocco | Staff Engineer, IECEx Certification of Personnel Competency Scheme Owner | 16 |

### Name and title of signatories for certification

|  |  |  |
| --- | --- | --- |
| Name | Title | Comments |
| Erin LaRocco | Staff Engineer, IECEx Certification of Personnel Competency Scheme Owner | 16 |
| Katy Holdredge | Senior Staff Engineer, UL IECEx Program Owner | 24 |

### Other employees in ExCB activity

|  |  |  |
| --- | --- | --- |
| Name | Title/responsibility | Experience in Ex (years) |
| David Malohn | Staff Engineer/Examiner | 24 |
| John Chambers | Staff Engineer/Examiner | 24 |
| Robert Deadman | Senior Staff Engineer/Examiner | 34 |
| Lucy Frieders | Staff Engineer/Examiner | 22 |
| … |  |  |

## Organizational Structure

Included in site assessment report.

## Indemnity insurance

**UL LLC** has a policy for professional liability insurance covering its operations worldwide. This was viewed and found to meet the requirements of the IECEx.

## Resources

**UL LLC** has appropriate facilities, equipment and trained personnel to fulfil their IECEx scope.

## Committees (such as governing or advisory boards)

There is a board of trustees for all of UL. This has responsibility for:

* Election of officers of the corporation
* Overview of the finances of the corporation
* Overview of formulation of strategic matters relating to policy of UL
* Overview of implementation of UL policies

## Certification operations

### National approval/certification Methods

The national approval concerns equipment certification.

### Certification policy

UL LLC’s certification policies include IECEx Scheme For Certification of Personnel Competence For Explosive Atmospheres Compliance Policy and Manual, Policy-ULID-004132 (DCS:00-CB-P0880), Issue 9.0, and IECEx Scheme For Certification of Personnel Competence For Explosive Atmosphere Rules and Requirements, Policy-ULID-004424 (DCS:00-GC-P0887), Issue 4.5, which fulfil the requirements of the IECEx System.

### Certification application, assessment and examination processes

There is application for Competency certification which are available on request

### Issuing of IECEx Personnel Competence Assessment Report (PCAR)

UL LLC’s has procedure to prepare and to issue Personnel Competence Assessment Report. The summary of the report is uploaded on the IECEx website.

### Decision on Certification

The certification decision is taken by **UL LLC** staff that have the delegation for Certification signatories which are listed in 8.5.3.

### Suspension and cancellation of certificates

The suspension and cancellation of certificates rules is defined in Work Instructions-ULID-004098 (DCS:80-EX-W0025), Suspension and Cancellation of IECEx System Documents.

## Statistics

Detail experience in certification of personal competence for past three years.

| Unit | Experience | | |
| --- | --- | --- | --- |
| **2020** | **2021** | **2022** |
| Unit Ex 000 – Basic knowledge and awareness | **1** | **5** | **1** |
| Unit Ex 001 – Apply basic principles of protection in explosive atmospheres | **15** | **13** | **10** |
| Unit Ex 003 – Install explosion-protected equipment and wiring systems |  |  | **4** |
| Unit Ex 004 – Maintain equipment in explosive atmospheres |  |  |  |
| Unit Ex 006 – Test electrical installations in or associated with explosive atmospheres |  |  |  |
| Unit Ex 007 – Perform visual & close inspection of electrical installations in or associated with explosive atmospheres |  |  | **5** |
| Unit Ex 008 – Perform detailed inspection of electrical installations in or associated with explosive atmospheres |  |  | **5** |

## Question bank

**UL LLC** is ready to use the IECEx Question Bank for Personal Competency and are participating in the software trial for the IECEx Question Bank. Regarding the extension **UL LLC** will provide 36 additional questions according to OD 503 to the Question Bank.

## National accreditation

**UL LLC** has no National accreditation regarding ISO/IEC 17024 and therefore, will require an assessment within 2.5 years.

## Comments (including issues found during assessment)

None