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INTERNATIONAL ELECTROTECHNICAL COMMISSION SYSTEM 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 CSA Group an Accepted Certification Body, (ExCB), and Accepted Ex Testing Laboratories (ExTLs) within the IECEx System, Equipment Scheme 02.

Circulation to: Members of the IECEx Management Committee, ExMC

INTRODUCTION

In accordance with the 5 year re-assessment plan for the surveillance and monitoring of bodies within the IECEx System, this document contains the IECEx Re-assessment and Scope Extension Report for the continued acceptance of CSA Group, as an Accepted Certification Body (ExCB) and an Accepted Ex Testing Laboratory (ExTL) within the IECEx System, Equipment Scheme 02.

During the re-assessment the IECEx Assessment Team took the opportunity to deal with the following two extensions:

1. Assess CSA Group facilities, equipment and competence to undertake testing and certification to the additional Standards as listed in the Table to Clause 1.6.1 of this Report.

2. Addition of the CSA Testing Laboratory located in Dallas as an ExTL working with CSA Group of Canada as the ExCB

Please consider the assessment report and return the completed voting form by **2017 12 20** (A separate Word document) to the Secretary chris.agius@iecex.com

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

IECEx Assessment Report Form

IECEx Assessment Report Form for use by IECEx Assessment Teams to report Assessments conducted according to the IECEx Assessment Procedures of

a) Operational Document IECEx OD003-2 for the Certified Equipment Scheme
b) Operational Document IECEx OD316-5 for the Certified Service Facility Scheme
c) Operational Document IECEx OD422 for the IECEx Conformity Mark Licensing System

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IECEx ExCB/ExTL assessment report for CSA Group

INTERNATIONAL
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COMMISSION

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1 Assessment information

1.1 Type of Body covered by this assessment:

ExCB for IECEx Certified Equipment Scheme	✓
ExTL for IECEx Certified Equipment Scheme	✓
ExCB for IECEx Certified Service Facilities Scheme	
ExCB for IECEx Conformity Mark Licensing System	

NOTE 1 ExCB - IECEx Certification Body

NOTE 2 ExTL - IECEx Testing Laboratory

1.2 Type of assessment:

Pre-assessment for candidate body	
Initial assessment for candidate body (ExTL CSA Dallas)	✓
Surveillance	
Re-assessment	✓
Scope extension	✓

1.3 Details of body

1.3.1 Country

Canada

1.3.2 Name of body

CSA Group

1.3.3 Name and title of nominated principal contact

Name	Title	E-mail address
Dorin Stochitoiu	Technical Advisor	dorin.stochitoiu@csagroup.org

1.4 Assessment information

1.4.1 Members of the assessment team

Name	Role
Ron Webb	IECEx Lead Assessor
Bernard Piquette	IECEx Assessor (Acting Lead Assessor under the supervision of Mr Ron webb)

1.4.2 Place(s) of assessment

CSA Group Toronto – ExCB/ExTL	178 Rexdale Boulevard, Toronto, ON M9W 1R3, Canada
CSA Group Edmonton - ExTL	1707-94 Street NW, Edmonton, AB T6N 1E6, Canada
CSA Group Cleveland - ExTL	8501 East Pleasant Valley Road Independence, OH 44131-5516, USA
CSA Group Dallas - ExTL	2860 Guilder Drive, Plano, TX 75074

1.4.3 Assessment date(s)

Toronto – August 14-16, 2017

Edmonton – August 16-19, 2017

Cleveland – August 21-23, 2017

Dallas – August 23-25, 2017

1.5 Application information and background information on the assessment

Information relevant to the Secretariat review process:

CSA Dallas is assessed as a new ExTL working with CSA as the ExCB under CSA Group

1.6 Scopes

1.6.1 ExCB and ExTL scope for equipment certification scheme

Overview of the CSA scope for the ExCB and its ExTLs is set out below :

Standard	Toronto (ExCB)	Toronto (ExTL)	Edmonton (ExTL)	Cleveland (ExTL)	Dallas (Applicant ExTL)
IEC 60079-0 Edition 6.0	✓	✓	✓	✓	Requested
IEC 60079-1 Edition 7.0	✓	✓	✓	✓	Requested
IEC 60079-2 Edition 6.0	✓	✓	✓	✓	Requested
IEC 60079-5 Edition 4.0	✓	✓	✓	✓	Requested
IEC 60079-6 Edition 4.0	✓	✓	✓	✓	Requested
IEC 60079-7 Edition 5.0	✓	✓	✓	✓	Requested
IEC 60079-11 Edition 6.0	✓	✓	✓	✓	Requested
IEC 60079-13 Edition 1.0	✓	✓	✓	✓	Requested
IEC 60079-15 Edition 4.0	✓	✓	✓	✓	Requested
IEC 60079-18 Edition 4.0	✓	✓	✓	✓	Requested
IEC 60079-25 Edition 2.0	✓	✓	✓	✓	Requested
IEC 60079-26 Edition 3.0	✓	✓	✓	Extension	Requested

Standard	Toronto (ExCB)	Toronto (ExTL)	Edmonton (ExTL)	Cleveland (ExTL)	Dallas (Applicant ExTL)
*IEC 60079-27 Edition 2.0	✓	✓	✓	-	-
IEC 60079-28 Edition 2.0	Extension	Extension	-	-	-
IEC 60079-29-1 Edition 1.0	✓	✓	✓	-	-
IEC 60079-29-4 Edition 1.0	Extension	Extension	-	-	-
IEC/IEEE 60079-30-1 Edition 1.0	✓	✓	✓	-	-
IEC 60079-31 Edition 2.0	✓	✓	✓	✓	Requested
IS0 80079-36 Edition 1.0	Extension	Extension	-	-	-
ISO 80079-37 Edition 1.0	Extension	Extension	-	-	-
IEC TS 60079-40 Edition 1.0	✓	✓	Extension	Extension	Requested
IEC 61241-0 Edition 1.0	✓	✓	✓	✓	Requested
IEC 61241-1 Edition 1.0	✓	✓	✓	✓	Requested
IEC 61241-1-1 Edition 2	✓	✓	✓	✓	-
*IEC 61241-4 Edition 1.0	✓	✓	✓	✓	Requested
*IEC 61241-11 Edition 1.0	✓	✓	✓	✓	Requested
*IEC 61241-18 Edition 1.0	✓	✓	✓	✓	Requested
IECEx DS2015/001A 2015 10 09	✓	-	-	-	-

1.6.2 ExCB scope for Service Facilities Scheme

Not applicable.

1.6.3 ExCB scope for ExMark Scheme

Not applicable.

2 Common information

2.1 Legal entity of body

Independent organization, incorporated under Canadian Laws

2.2 Financial support

The commercial activities related to Ex activity are self-financing through customer fees.

2.3 History

CSA Group, of which CSA Group Certification and Testing is a division of, was established in 1919 and works in the area of standards development and the application of standards through product certification. CSA Group, Certification and Testing division operates laboratories to support the product certification program. CSA Group Certification and Testing division's programs of product certification and laboratory testing are accredited by the Standards Council of Canada (SCC). The first accreditation of CSA certification programs was done by SCC in June 1983.

2.4 Documentation

2.4.1 Quality manual

CSA Group has a comprehensive quality manual supported by other procedural documents, which refer to ISO/IEC 17025 standards and ISO/IEC 17065 and meets the requirements of IECEx.

2.4.2 Procedures

CSA Group has a very comprehensive range of procedures covering all aspects of the Certification operations, including testing, and were audited as part of this assessment. The procedures were found to meet the requirements of IECEx. Where applicable each procedure has with it an associated test sheet for completion by the staff.

2.4.3 Work instructions

Work Instructions are incorporated with the CSA Group Procedures. The procedures were found to meet the requirements of IECEx.

2.4.4 Records (including test records where relevant)

All records are maintained according to DQD 335 Management of Quality Records procedure and were found to meet IECEx requirements.

2.4.5 Document change control

The QM and DQD 332 address document control. All documentation is on the intranet site and also available to employees on the CSA web based portal. A monthly notification goes out to advise staff of changes. This also addresses documentation specific to the Scheme which is generally handled through Dorin Stochitoiu. All DQDs are reviewed periodically. There is a regional operating committee (ROC) that reviews all non-conformances and this includes the DQDs, including the need for training. Staff is provided with access to standards through 'IHS' website. Once printed these contain a statement that they are a reference copy only. Distribution and control of other materials are the responsibility of the Technical Advisor for the Ex area

2.5 Confidentiality

All new employees have on-line training and commitment to confidentiality which is recorded in a database. Previously this was done in hard copy but existing employees were also required to do the training in the new system. These records are maintained by HR and available on the intranet. There is a system of security control at the main entrance gates and entrance to buildings is controlled by key (RFID badge). The DQD 050 Quality Manual indicated requirement for confidentiality and avoiding conflict of interest. This was found to comply with ISO/IEC 17065.

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

CSA has a wide range of publications covering both technical and general/marketing information. Application form can also be found on their website.

2.7 Recognitions and agreements

CSA Group has a number of agreements. In the recent years SIRA became a CSA company.

2.8 Internal audit

Internal audits are carried out once a year for each type of operation at each location. The latest internal audit for each location was reviewed. Internal Audit procedure is DQD 305 Management System Audit Program.

2.9 Management review

The Management review is defined in the Quality Manual and is conducted annually by location. Review minutes at each location were reviewed.

2.10 Contracting, subcontracting and witness testing

2.10.1 Contracting

There are no tests that CSA Group has to contract for testing to IEC standards applicable to the IECEx scope.

2.10.2 Subcontracting

There are requirements for subcontracting in the QM and associated procedures.
However, at present, there are no tests that CSA Group had to subcontract for testing applicable to the IECEx scope.

2.10.3 Witness testing

There is a procedure covering witnessing testing at manufacturer's premises which was found to comply with OD 024.

2.11 Training and competence

All staff employed are selected for qualifications and/or experience relevant to their responsibilities. There is a competency matrix for all Activity branches which include the ExCB and the ExTL tasks.

All trainings are managed through a Learning Management System. The Training with mentors is recorded in this system.

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

2.12 Complaints and appeals (including appeals to IECEx)

CSA Group has a general process for external complaints defined in DQD 306 Handling Customer Complaints. The Certification Appeals Procedure is detailed in DQD 458. This covers the complaints mechanism requirements of the ExCB and ExTL and found to comply with IECEx requirements.

2.13 Impartiality

CSA quality documents cover the requirements for impartiality. DQD353 addressees the impartiality aspects in accordance with ISO/IEC 17025 and ISO/IEC 17065

2.14 Commenting on ExTAG Documents

It was verified that ExTAG documents are received and reviewed. The staff is informed about newly released and existing ExTAG decision sheets and their application by internal e-mail

2.15 Special facts to be noted

None

2.16 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 17065
- Checklist for ISO/IEC 17025
- Completed Technical Capability Document (TCD)
- Photos of the facilities/tests witnessed are included in the above TCD
- Assessors' notes

2.17 Recommendations

2.17.1 ExCB

Based on the assessment performed between, 14-16 August 2017, CSA Group is recommended for continued acceptance in the IECEx scheme as an ExCB in the IECEx Certified Equipment Scheme.

2.17.2 ExTL

Based on the assessments performed between, 14-22 August 2017, CSA Group is recommended for continued acceptance in the IECEx scheme as ExTLs in the IECEx Certified Equipment Scheme at the following locations: Toronto, Edmonton and Cleveland.

In addition, based on the assessment performed between, 23-25 August 2017, the Dallas located Testing Laboratory of the CSA Group is recommended for acceptance in the IECEx scheme as an ExTL.

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

Bernard PIQUETTE	Ron WEBB
IECEx Lead Assessor	IECEx Assessor

Date: 2017 10 08

3 ExCB for IECEx Certified Equipment Scheme

3.1 Assessment references

3.1.1 General references

a) IECEx02 IECEx Certified Equipment Scheme covering equipment for use in explosive atmospheres – Rules of Procedure

a) OD003-2 Assessment, surveillance assessment and re-assessment of ExCBs and ExTLs operating in the IECEx 02, IECEx Certified Equipment Scheme

b) ISO/IEC 80079-34 Edition 1, Explosive atmospheres – Part 34: Application of quality systems for equipment manufacture

c) OD009 Issuing of CoCs, ExTRs and QARs

d) IECEx Document OD 025 Guidelines on the Management of Assessment and Surveillance programs for the assessment of Manufacturer's Quality Systems in accordance with the IECEx Scheme

e) OD0026 IECEx Certified Equipment Scheme – Guidelines for the qualification of Lead Auditor and Auditors, in accordance with the IECEx System

f) ISO/IEC 17065: 2012, Edition 1, General requirements for bodies operating product certification systems Conformity assessment — Requirements for bodies certifying products, processes and services

g) IECEx Technical Capability Document (TCD)

h) ExTAG decision sheets (DSs)

NOTE The latest editions of the above documents were applied

3.1.2 Additional references applied for this assessment

NOTE To be added by assessment team. For example ODs for non-electrical or Ex s where applicable.

IECEx OD 280 - Guide to Certification of Non-electrical Equipment and Protective Systems

3.2 Candidate ExCB persons interviewed

Name	Position
Dorin Stochitoiu	Technical Advisor
Jay McVeigh	Technical Advisor

3.3 Associated ExTL(s)

CSA Group Toronto	178 Rexdale Boulevard, Toronto, ON M9W 1R3, Canada
CSA Group Edmonton	1707-94 Street NW, Edmonton, AB T6N 1E6, Canada
CSA Group Cleveland	8501 East Pleasant Valley Road Independence, OH 44131-5516, USA
CSA Group Dallas	2860 Guilder Drive, Plano, TX 75074

3.4 Associated certification functions

Beside IECEx certifications, CSA Group carries out a wide range of certification activities. These include electrical, mechanical, plumbing, gas products, house-hold, sports etc. CSA is also a

member of the IECEE Scheme. The majority of ATEX associated activity is done through CSA UK (SIRA), which is part of CSA Group.

3.5 National marks and certificates

The national mark for electrical and Ex products is the CSA mark. There are also marks for ordinary locations, gas products and energy efficiency.

3.6 Standards accepted

See clause 1.6 of this report

3.7 National differences to IEC standards

National differences to IEC standards are those for the Canadian differences listed in the latest version of the IECEx Scheme Bulletin.

3.8 Organisation

3.8.1 Names, titles and experience of the senior executives

Name	Title	Experience
George Tranquada	Vice-President - Technical Integrity	30 years in CSA
Rick Morrison	Director – Technical Integrity	25 years in CSA
Benjamin Barker	Senior Manager - Accreditations	7 years in CSA
John Jakob	Programs Manager IECEE and IECEx	38 years in CSA
Simon Edler	Technical Manager – Industrial and Ex	3 years in CSA, 10 years in Ex

3.8.2 Name, title and experience of the quality management representative

Name	Title	Experience
Ted Greenberg	Senior Manager – Management Systems	17 years in CSA
Pierre Carrier	Quality Assurance Coordinator - Toronto	17 years in CSA
Ken Rutledge	Quality Assurance Coordinator - Edmonton	21 years in CSA
Steve Kazubski	Quality Assurance Coordinator – Cleveland and Dallas	24 years in CSA

3.8.3 Name and title of signatories for certification

Name	Title	Comments
Dorin Stochitoiu	Technical Advisor	18 years in CSA, 20 years in Ex
Jay McVeigh	Technical Advisor	16 years in CSA, 12 years in Ex

3.8.4 Other employees in ExCB activity

Name	Title	Responsibility and Experience in Ex
Vicki Madden	Confidential Secretary	40 years in CSA, 15 years in Ex

3.9 Organizational structure

Included as Annex A

3.10 Indemnity insurance

Evidence was provided that Canadian Standards Association, operating as CSA Group has insurance cover for professional liability insurance.

3.11 Resources

CSA Group appears to have an adequate number of staff for the current level of business. Each laboratory and office are located in industrial units which provide an adequate environment for the work. The testing equipment at each location is suitable for the range of tests carried out in house.

3.12 Committees (such as governing or advisory boards)

There is an impartiality committee which can be involved in case of a question on this topic appears.

There is a procedure for handling appeals, though none has been made during the past five years. IECEx related appeals are handled per procedure shown in CSA document DQD 312.01 and DQD 458 which fulfills the requirements of IECEx 02 clause 10.4.

3.13 Certification operations

3.13.1 National approval/certification methods

CSA Group operates in the two national Ex certification schemes. CSA Group is accredited by the Standards Council of Canada for which they can issue the CSA mark. This follows a similar procedure to that for IECEx scheme. There are unannounced factory inspections generally between two and four times a year which look at product, how it has been manufactured, and how it complies with the certification. It does not look at the whole quality system. Where CSA Group does work associated with the ATEX Directives it conducts in similar fashion to the IECEx Scheme.

3.13.2 Certification policy

The Quality Manual include a quality policy which makes reference to product certification and conformity with the requirements of ISO/IEC 17065.

3.13.3 Application for certification

The applicant can ask for an application for certification by using the application forms which are available on CSA Group website. Once an application has been received, a quote or estimate and lead-time are provided to the applicant.

3.13.4 Certification decision

IECEx Certification process is described DQD 312.01. The certification decision resides with the ExCB and is based on existence of valid QAR's for applicant and manufacturing locations and satisfactory review of applicable ExTR's. Where staff are used in the ExCB who also have an ExTL role, it is clearly specified that they must not have been involved in any project for which they are performing that ExCB role.

3.13.5 Suspension and cancellation of certificates

DQD 312.01 include provisions for suspension and cancellation of certificates.

3.14 Certificates issued

Number of certificates issued under for the preceding four years for each type of protection.

IECEx Certificates issued in 2013, 2014, 2015 and 2016

Standard numbers	Type of protection or other identifying information	Number of issued certificates (for last 4 years)				Total
		2013	2014	2015	2016	
IEC 60079-1	Ex d	41	39	47	45	172
IEC 60079-2	Ex p	5	5	2	3	15
IEC 60079-5	Ex q	0	0	2	0	2
IEC 60079-7	Ex e	3	7	12	19	41
IEC 60079-11	Ex i	19	37	34	63	153
IEC 60079-15	Ex n	24	40	58	49	171
IEC 60079-18	Ex m	2	4	4	3	13
IEC 60079-26	Ga	0	0	0	4	4
IEC 60079-29-1	Performance of Combustible Gas Detectors	0	1	0	0	1
IEC 60079-31	Ex t	6	7	16	17	46
IEC 60079-40	Process Sealing	0	0	0	1	1
IEC 61241-0	General requirements dusts (older standard)	1	0	1	0	2
IEC 61241-1	Dusts (older standard)	1	0	1	0	2
IEC 61241-1-1	Dusts (older standard)	3	1	0	0	4

NOTE Above include certificates to IEC 60079-0 unless otherwise shown

In addition, for other certification systems under which CSA group operates under its accreditation (i.e North America certification), there are more than one thousand projects related to Ex (hazloc) equipment with different types of protection fulfilled each year**.**

3.15 National accreditation

CSA Group is accredited by the Standards Council of Canada (SCC). Copies of the accreditation certificates are shown in the Annex B. The SCC accredits against ISO/IEC 17065 and their website indicates the accreditation is active and in good standing.

3.16 Assessment of manufacturers and issue of QARs

The procedures for assessment of manufacturers are contained in DQD312.01, Guidelines for processing of application in the IECEx Scheme. CSA QARs are done by Paul Snider, Barry Hlusko and Jack Chin, who have extensive experience in the Ex field in addition to auditing. A number of CSA Group QAR files were reviewed and seen to be satisfactory.

3.17 Comments (including issues found during assessment)

Some issues were found during the assessment visit. Those mainly concern:

- Organization chart
- Control of QAR

All the issues have been resolved to the satisfaction of the assessment team. Details of issues and how these have been resolved are listed in Annex A of the site assessment report.

4 ExTL for IECEx Certified Equipment Scheme

4.1 Assessment references

4.1.1 General references

a) IECEx02 IECEx Certified Equipment Scheme covering equipment for use in explosive atmospheres – Rules of Procedure

b) IECEx OD003-2 Assessment, surveillance assessment and re-assessment of ExCBs and ExTLs operating in the IECEx 02, IECEx Certified Equipment Scheme

c) IECEx OD009 Issuing of CoCs, ExTRs and QARs

d) ISO/IEC 17025:2005 Edition 2, General requirements for the competence of testing and calibration laboratories

e) IECEx Technical Capability Document (TCD)

f) ExTAG decision sheets (DSs)

NOTE The latest editions of the above documents were applied.

4.1.2 Additional references applied for this assessment

IECEx OD 280 - Guide to Certification of Non-electrical Equipment and Protective Systems

4.2 Dallas located - Candidate ExTL persons interviewed

Name	Position
Eshwar Kashyap	Product Group Manager - Toronto
Nicholas Cameron	Product Group Manager - Edmonton
Dennis Jeffrey	Product Team Lead - Cleveland
Scott Wallace	Product Team Lead - Cleveland
Matthew Brock	Laboratory Team Lead - Dallas
Jignesh Dhabi	Product Team Lead - Dallas

4.3 Associated ExCB(s)

CSA Group

178 Rexdale Boulevard, Toronto, Ontario, Canada, M9W 1R3

4.4 Organisation

4.4.1 Names, titles and experience of the senior executives

Name	Title	Experience	Location
Rich Weiser	Executive Vice President - Operations		Global
Stephane Lariviere	Senior Operations Manager - Toronto	15 years in CSA	Toronto
James May	Senior Operations Manager - Edmonton	5 years in CSA, 5 years in Ex	Edmonton
John McCormick	Senior Operations Manager - Edmonton	1 year in CSA, 5 years in Ex	Edmonton
Peter Ehlers	Senior Operations Manager – Cleveland and	6 years in CSA	Cleveland

Name	Title	Experience	Location
	Dallas		
Rick Hobbs	Operations Manager - Toronto	3 years in CSA	Toronto
Nathan Sabey	Operations Manager - Edmonton	2 years in CSA	Edmonton
Walter Levert	Operations Manager - Dallas	11 years in CSA	Dallas
Eshwar Kashyap	Product Group Manager - Toronto	7 years in CSA, 7 years in Ex	Toronto
Gabriel Lippa	Product Group Manager - Toronto	31 years in CSA, 5 years in Ex	Toronto
Nicholas Cameron	Product Group Manager - Edmonton	6,5 years in CSA, 6 years in Ex	Edmonton
Tim Friesen	Product Group Manager - Edmonton	1 years in CSA,	Edmonton
Peter Schimmoeller	Product Group Manager - Cleveland	16 years in CSA, 28 years in Ex	Cleveland
Dennis Smith	Product Group Manager - Dallas	15 years in CSA, 4 years in Ex	Dallas
Scott Wallace	Team Lead - Cleveland	11 years in CSA, 11 years in Ex	Cleveland
Dennis Jeffrey	Team Lead - Cleveland	7 years in CSA, 7 years in Ex	Cleveland
Jignesh Dhabi	Team Lead - Dallas	5 years in CSA, 5 years in Ex	Dallas
Matthew Brock	Team Lead - Dallas	10 years in CSA, 10 years in Ex	Dallas

4.4.2 Name, title and experience of the quality management representative

Name	Title	Experience
Ted Greenberg	Senior Manager – Management Systems	17 years in CSA
Pierre Carrier	Quality Assurance Coordinator - Toronto	17 years in CSA
Ken Rutledge	Quality Assurance Coordinator - Edmonton	21 years in CSA
Steve Kazubski	Quality Assurance Coordinator – Cleveland and Dallas	24 years in CSA

4.4.3 Other employees in ExTL activity

There are over 60 employees working for the CSA Group in Toronto, Edmonton, Cleveland and Dallas locations for Ex Certification, mainly including product managers, certifiers, laboratory technicians, and administration staff. More than a third of the number of employees have more than 10 years Ex experience. Detailed staff experience and qualifications statistics were provided.

4.5 Organizational structure

Included in ANNEX A

4.6 Resources

CSA Group appears to have an adequate number of staff for the current level of business. The staff are experienced in hazardous area evaluation and testing. Each laboratory and offices are located in industrial units which provide an adequate environment for the work. The testing equipment at each location is suitable for the range of tests carried out in house.

4.7 Test reports issued

Number of test reports (ExTRs) issued under for the preceding four years for each type of protection.

Standard numbers	Type of protection or other identifying information	Number of issued certificates (for last 4 years)				Total
		2013	2014	2015	2016	
IEC 60079-1	Ex d	41	39	47	45	172
IEC 60079-2	Ex p	5	5	2	3	15
IEC 60079-5	Ex q	0	0	2	0	2
IEC 60079-7	Ex e	3	7	12	19	41
IEC 60079-11	Ex i	19	37	34	63	153
IEC 60079-15	Ex n	24	40	58	49	171
IEC 60079-18	Ex m	2	4	4	3	13
IEC 60079-26	Ga	0	0	0	4	4
IEC 60079-29-1	Performance of Combustible Gas Detectors	0	1	0	0	1
IEC 60079-31	Ex t	6	7	16	17	46
IEC 60079-40	Process Sealing	0	0	0	1	1
IEC 61241-0	General requirements dusts (older standard)	1	0	1	0	2
IEC 61241-1	Dusts (older standard)	1	0	1	0	2
IEC 61241-1-1	Dusts (older standard)	3	1	0	0	4
EN13463 series	Non electrical- EN standards for ATEX	0	0	1	2	3

In addition, for other certification systems under which CSA group operates under its accreditation (i.e North America certification), there are more than one thousand projects related to Ex (hazloc) equipment with different types of protection fulfilled each year. This includes the Dallas facility.

Detail of test reports by ExTL for Year 2016

Location	IEC 60079-1	IEC 60079-11
Toronto	26	38
Edmonton	9	12
Cleveland	10	13

NOTE 1 Above include reports to IEC 60079-0 unless otherwise shown

4.8 National accreditation

4.8.1 Toronto

The Toronto ExTL is accredited according ISO/IEC 17025 by the Standards Council of Canada (SCC) Copy of the accreditation certificate is shown in Annex B. The website indicates the accreditation according to ISO/IEC 17025. However as IEC 60079-28, ISO 80079-36, ISO 80079-37 and IEC 60079-29-4 are not included in the ISO/IEC 17025 scope, the ExTL should be submitted to an annual surveillance until they provide evidence of accreditation to these standards.

4.8.2 Edmonton

The Edmonton ExTL is accredited according ISO/IEC 17025 by International Accreditation Services (IAS). Copy of the accreditation certificate is shown in Annex C. However as IEC 60079-13, IEC

60079-18, IEC 60079-25, IEC 60079-26, IEC 60079-27 and IEC 60079-31 are not included in the ISO/IEC 17025 scope, the ExTL should be submitted to annual surveillance until they provide evidence of accreditation to these standards.

4.8.3 Cleveland

The Cleveland ExTL is accredited according ISO/IEC 17025 by International Accreditation Services (IAS). Copy of the accreditation certificate is shown in Annex D. However as IEC 60079-13, is not included in the ISO/IEC 17025 scope yet, the ExTL should be submitted to annual surveillance until they provide evidence of accreditation to this standard.

4.8.4 Dallas

The Dallas ExTL is accredited according ISO/IEC 17025 by International Accreditation Services (IAS). Copy of the accreditation certificate is shown in Annex E. However as IEC 60079-1, IEC 60079-5, IEC 60079-6, IEC 60079-13, IEC 60079-26 and IEC TS 60079-40 are not included in the ISO/IEC 17025 scope yet, the ExTL should be submitted to annual surveillance until they provide evidence of accreditation to these standards.

4.9 Calibration

Within CSA Group, the metrology laboratory operates as a comprehensive calibration laboratory accredited by SCC and NVLAP for internally providing calibration related services of CSA internal test equipment and instruments, including working standards. The corresponding procedures were well documented and all equipment checked was in calibration. But it is also noted that some of the facilities, for example vibration machine and reference standards are outsourced to be calibrated.

4.10 Tests witnessed during the assessment visit

The following tests were witnessed during the assessment visit to confirm the competency and the test equipment:

4.10.1 Toronto Location

Standard and edition	Clause number	Test	Comments
IEC 60079-0:2011 Edition 6.0	26.13	Surface Resistance Test	
IEC 60079-0:2011 Edition 6.0	26.5.1	Temperature measurement	
IEC 60079-0:2011 Edition 6.0	26.4.5	IP6X/5X Testing	
IEC 60079-11:2011 Edition 6.0	10.1	Spark ignition	Group IIC
IEC 60079-18:2014 Edition 4.0	8.1.1	water absorption test on Ex m material	

4.10.2 Edmonton Location

Standard and edition	Clause number	Test	Comments
IEC 60079-0:2011 Edition 6.0	26.13	Surface Resistance Test	
IEC 60079-0:2011 Edition 6.0	26.5.1	Temperature measurement	
IEC 60079-0:2011 Edition 6.0	26.4.5	IP 6X/5X Testing	
IEC 60079-1:2014 Edition 7.0	15.2.2	Determination of explosion pressure	Group IIB
IEC 60079-11:2011 Edition 6.0	10.1	Spark ignition	Group IIC
IEC 60079-18:2014 Edition 4.0	8.1.1	water absorption test	

4.10.3 Cleveland Location

Standard and edition	Clause number	Test	Comments
IEC 60079-0:2011 Edition 6.0	26.13	Surface Resistance Test	
IEC 60079-0:2011 Edition 6.0	26.5.1	Temperature measurement	
IEC 60079-0:2011 Edition 6.0	26.4.5	IP 6X/5X Dust Testing	
IEC 60079-1:2014 Edition 7.0	15.2.2	Determination of explosion pressure	Group IIC
IEC 60079-18:2014 Edition 4.0	8.1.1	water absorption test	
IEC 60079-18:2014 Edition 4.0	8.1.2	Dielectric strength test	

4.10.4 Dallas Location

Standard and edition	Clause number	Test	Comments
IEC 60079-0:2011 Edition 6.0	26.5.1	Temperature measurement	
IEC 60079-0:2011 Edition 6.0	26.4.5	IP 5X/6X Testing	Good dust cloud
IEC 60079-1:2014 Edition 7.0	15.2.2	Determination of explosion pressure	Group IIC
IEC 60079-11:2011 Edition 6.0	10.1	Spark ignition using PTB circuit No 1 following IIC calibration	
IEC 60079-18:2014 Edition 4.0	8.1.1	water absorption test	Sample of elastomeric material
IEC 60079-18:2014 Edition 4.0	8.1.2	dielectric test	Sample of elastomeric material
IEC 60079-1:2014 Edition 7	B.2	Bubble test pore size	Small breather tested with isopropyl alcohol

4.11 Participation in IECEx Proficiency Testing Programs

Program: PTB Ex PT Scheme
CSA Group participated in all IECEx Proficiency Testing Programs PTB Ex PT Scheme, since inception of the PT program. All IECEx accredited location participate individually and directly as per instruction provided by the Ex PT program provider, PTB.

Year(s) of participation	IECEx Proficiency Testing program	General information about results
2015	Electrostatic Charge – Test Round 2015 (Toronto, Edmonton, Cleveland, Dallas)	Results are included in the final report provided by the Ex PT provider
2015	Intrinsic Safety – Test Round 2015 (Toronto, Edmonton, Cleveland, Dallas)	Results are included in the final report provided by the Ex PT provider
2013	Temperature Classification – Test Round 2013 (Edmonton, Cleveland)	Results are included in the final report provided by the Ex PT provider
2013	Flame Transmission– Test Round 2013 (Edmonton, Cleveland)	Results are included in the final report provided by the Ex PT provider
2011	Spark Ignition - Test Round 2010 (pilot) (Toronto, Edmonton, Cleveland)	Results are included in the final report provided by the Ex PT provider
2011	Explosion Pressure - Test Round 2010 (pilot) (Edmonton, Cleveland)	Results are included in the final report provided by the Ex PT provider

4.12 Comments (including issues found during assessment)

Some issues were found during the assessment visit. Those mainly concern:

- Test equipment
- Uncertainty budget
- Test record

All the issues have been resolved to the satisfaction of the assessment team. Details of issues and how these have been resolved are listed in Annex A of the site assessment report.

5 Annexes

ANNEX A Overall Organisation Chart + ExCB and ExTLs (6 pages)

ANNEX B Accreditation Certificate for ISO/IEC 17065

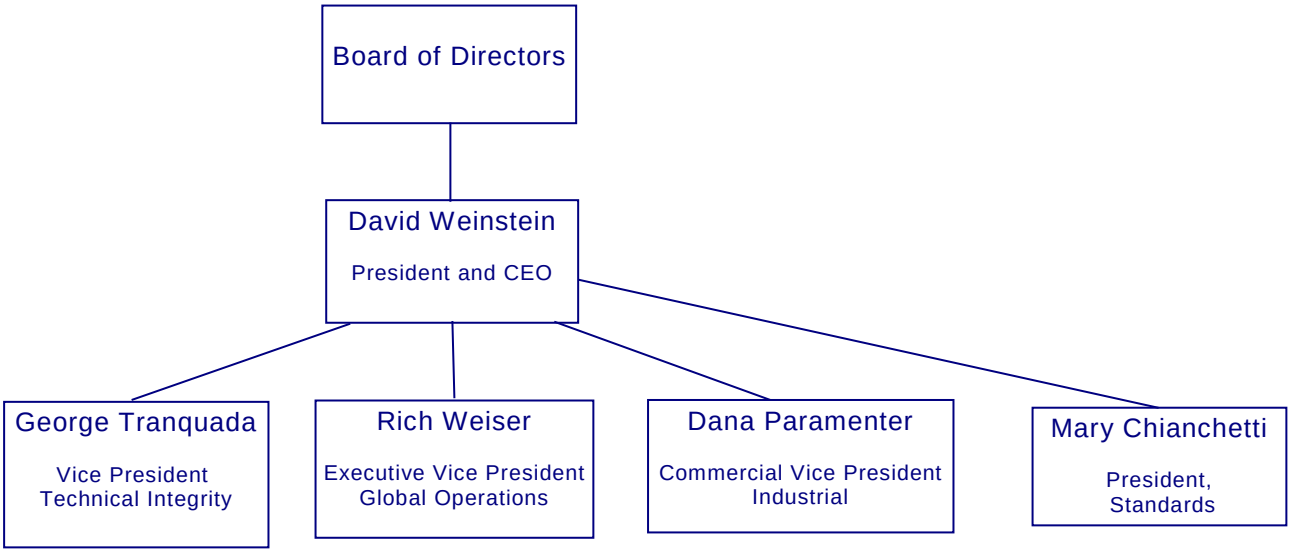
ANNEX C Accreditation Certificate for ISO/IEC 17025 - Toronto

ANNEX D Accreditation Certificate for ISO/IEC 17025 –Edmonton

ANNEX E Accreditation Certificate for ISO/IEC 17025 –Cleveland

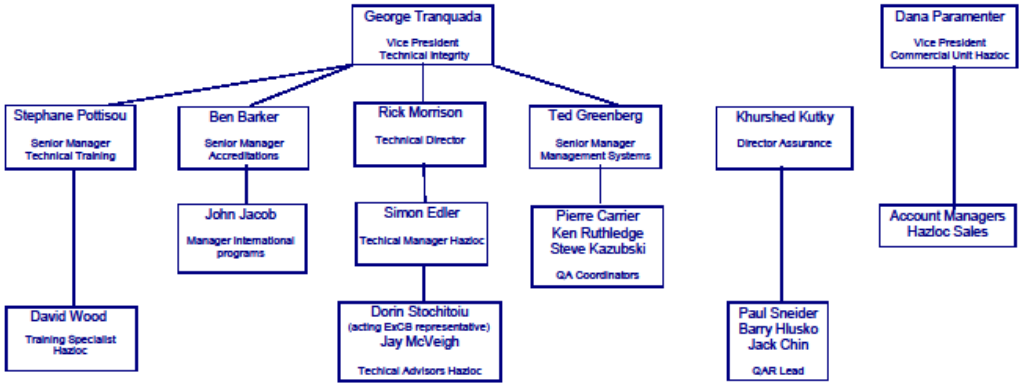
ANNEX F Accreditation Certificate for ISO/IEC 17025 -Dallas

Annex A
Overall Organisation Chart



Organisation Chart of ExCB and ExTL

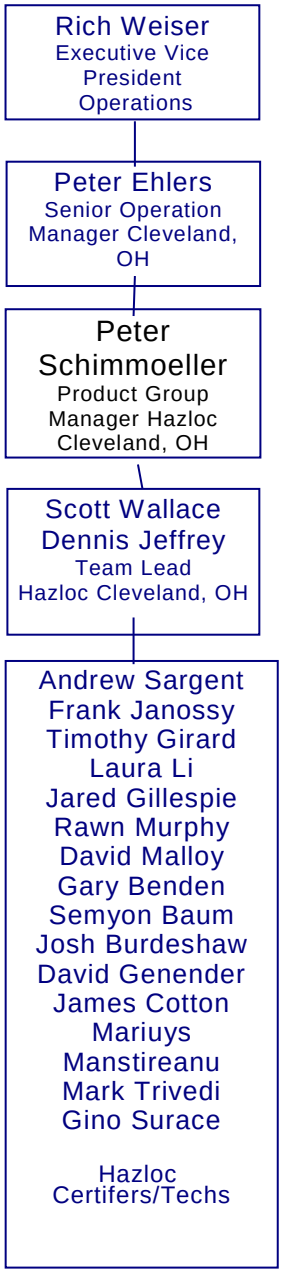
CSA Group ExCB Structure :



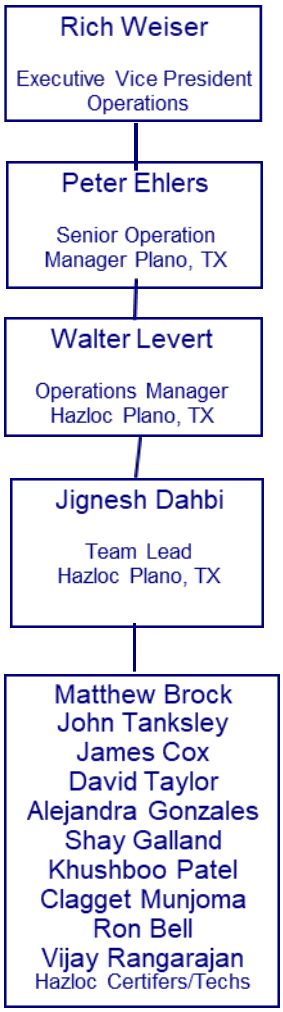
CSA Group ExTL Edmonton

CSA Group ExTL Toronto:

CSA Group ExTL Cleveland



CSA Group ExTL Dallas



Annex B
Accreditation Certificate for ISO/IEC 17065

CERTIFICATE OF ACCREDITATION

Standards Council of Canada
Conseil canadien des normes

CERTIFICAT D'ACCRÉDITATION

Canadian Standards Association operating as CSA Group
178 Rexdale Boulevard, Toronto, ON, M9W 1R3, Canada

having been assessed and found to conform with the requirements of ISO/IEC 17065:2012, the Additional Requirements for Accreditation of Certification Bodies (CAN-P-1500), and other requirements, and the conditions for accreditation established by the SCC is hereby recognized as an

ACCREDITED CERTIFICATION BODY

in specific subject areas and for key locations as identified in the scope of accreditation approved by SCC and found on the SCC website at www.scc.ca.

ayant été soumis à une évaluation et ayant été jugé conforme aux exigences d'ISO/CEI 17065:2012, aux *Exigences supplémentaires relatives à l'accréditation des organismes de certification* (CAN-P-1500) et autres exigences, ainsi qu'aux conditions d'accréditation établies par le CCN, est de fait reconnu comme étant un

ORGANISME DE CERTIFICATION ACCRÉDITÉ

dans les domaines d'activité et pour les établissements clés indiqués dans la portée d'accréditation approuvée par le CCN et figurant dans le site web du CCN au www.ccn.ca.

Accreditation number: / Numéro d'accréditation : 10004

Initial accreditation date: / Date de la première accréditation : 1983-06-28

Re-accreditation date: / Date de la réaccréditation : 2014-09-11

Expiry date: / Date d'expiration : 2019-06-28

This certificate is valid until the date of expiration unless suspended, withdrawn or superseded by the SCC. / Le présent certificat est valide jusqu'à la date d'expiration, à moins qu'il ne soit suspendu, retiré ou remplacé par le CCN.

Vice-President - Accreditation Services / Vice-présidente - Services d'accréditation

To verify the validity of this certificate, please see the Directory of Accredited clients on www.scc-ccn.ca

Pour vérifier la validité du certificat, veuillez consulter le Répertoire des clients accrédités au www.ccn-scc.ca

This certificate is the property of the Standards Council of Canada (SCC) and must be returned on request; reproduction is prohibited except on written approval of the SCC
Ce certificat est la propriété du Conseil canadien des normes (CCN) et doit lui être remis sur demande; toute reproduction est interdite sans l'autorisation écrite du CCN

Canada

Annex C
Accreditation Certificate for ISO/IEC 17025

TORONTO Location

CERTIFICATE OF ACCREDITATION

Standards Council of Canada
Conseil canadien des normes

CERTIFICAT D'ACCRÉDITATION

Canadian Standards Association
CSA Group - Toronto
178 Rexdale Boulevard, Etobicoke, ON, M9W 1R3, Canada

having been assessed by the Standards Council of Canada (SCC) and found to conform with the requirements of ISO/IEC 17025:2005 (CAN-P-4E) and the conditions for accreditation established by SCC is hereby recognized as an

ayant fait l'objet d'une évaluation réalisée par le Conseil canadien des normes (CCN) et été jugé conforme aux exigences énoncées dans ISO/CEI 17025:2005 (CAN-P-4E) et aux conditions liées à l'accréditation établies par le CCN, est de fait reconnu comme étant un

ACCREDITED TESTING LABORATORY

LABORATOIRE D'ESSAIS ACCRÉDITÉ

for the specific tests or types of tests listed in the scope of accreditation approved by SCC and found on the SCC website at www.scc.ca.

pour les essais ou types d'essais énumérés dans la portée d'accréditation approuvée par le CCN et figurant dans le site web du CCN au www.ccn.ca.

Accredited laboratory number: / Numéro de laboratoire accredité : 12
Accreditation date: / Date d'accréditation : 1984-08-15
Issued on: / Délivré le : 2014-10-13
Expiry date: / Date d'expiration : 2017-08-15

This certificate is valid until the date of expiration unless suspended, withdrawn or superseded by the SCC. / Le présent certificat est valide jusqu'à la date d'expiration, à moins qu'il ne soit suspendu, retiré ou remplacé par le CCN.

Vice-President - Accreditation Services / Vice-présidente - Services d'accréditation

This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated January 2009)"

Ce laboratoire est accrédité conformément à la Norme internationale reconnue ISO/CEI 17025:2005. Cette accréditation démontre la compétence technique d'un organisme pour une portée définie et l'exploitation d'un système de management de la qualité de laboratoire (cf. communiqué conjoint ISO-ILAC-IAF daté de janvier 2009)

This certificate is the property of the Standards Council of Canada (SCC) and must be returned on request; reproduction is prohibited except on written approval of the SCC.
Ce certificat est la propriété du Conseil canadien des normes (CCN) et doit lui être remis sur demande; toute reproduction est interdite sans l'autorisation écrite du CCN.

Canada

Annex D
Accreditation Certificate for ISO/IEC 17025

EDMONTON Location

INTERNATIONAL ACCREDITATION SERVICE®

CERTIFICATE OF ACCREDITATION

This is to attest that

CSA GROUP
1707-94 STREET
EDMONTON, ALBERTA T6N 1E6
CANADA

Testing Laboratory TL-267

has met the requirements of AC89, *IAS Accreditation Criteria for Testing Laboratories,* and has demonstrated compliance with ISO/IEC Standard 17025:2005, *General requirements for the competence of testing and calibration laboratories.* This organization is accredited to provide the services specified in the scope of accreditation maintained on the IAS website (www.iasonline.org).

This certificate is valid up to November 1, 2018.

This accreditation certificate supersedes any IAS accreditation bearing an earlier effective date. The certificate becomes invalid upon suspension, cancellation or revocation of accreditation. See www.iasonline.org for current accreditation information, or contact IAS at 562-364-8201.

INTERNATIONAL ACCREDITATION SERVICE®

ilac-MRA

C.P. Ramani, P.E., C.B.O
President

Annex E
Accreditation Certificate for ISO/IEC 17025

Cleveland location

INTERNATIONAL ACCREDITATION SERVICE®

CERTIFICATE OF ACCREDITATION

This is to attest that

CSA GROUP
8501 EAST PLEASANT VALLEY ROAD
CLEVELAND, OHIO 44131

Testing Laboratory TL-266

has met the requirements of the IAS Accreditation Criteria for Testing Laboratories (AC89), has demonstrated compliance with ISO/IEC Standard 17025:2005, *General requirements for the competence of testing and calibration laboratories*, and has been accredited, commencing April 11, 2016, for the test methods listed in the approved scope of accreditation.

(See laboratory's scope of accreditation for fields of testing and accredited test methods.)

This accreditation certificate supersedes any IAS accreditation bearing an earlier effective date. The certificate becomes invalid upon suspension, cancellation or revocation of accreditation.
See http://iasonline.org/More/search.html for current accreditation information, or contact IAS at 562-364-8201.

ilac-MRA

ACCREDITED

C.P. Ramani, P.E., C.B.O
President

Annex F
Accreditation Certificate for ISO/IEC 17025

Dallas Location

International Accreditation Service

CERTIFICATE OF ACCREDITATION

This is to signify that

CANADIAN STANDARDS ASSOCIATION OPERATING AS CSA GROUP
2860 GUILDER DRIVE
PLANO, TEXAS 75074

Testing Laboratory TL-562

has met the requirements of the IAS Accreditation Criteria for Testing Laboratories (AC89), has demonstrated compliance with ISO/IEC Standard 17025:2005, *General requirements for the competence of testing and calibration laboratories*, and has been accredited, commencing August 26, 2015, for the test methods listed in the approved scope of accreditation.

Patrick V. McCullen
Vice President, Chief Technical Officer

C. P. Ramani, P.E.
President

ilac-MRA

IAS ACCREDITED

(see attached scope of accreditation for fields of testing and accredited test methods)

Print Date: 9/2/2015

Page 1 of 2

This accreditation certificate supersedes any IAS accreditation certificate bearing an earlier date. The certificate becomes invalid upon suspension, cancellation or revocation of accreditation. See the IAS Accreditation Listings on the web at www.iasonline.org for current accreditation information, or contact IAS directly at (562) 364-8201.

11-04577