Field Activities Expert Committee (FAC)

Meeting Summary
April 15, 2019

1. Roll call:

   Chair, Scott Haas, called the FAC meeting to order on April 15, 2019 at 11am Eastern by teleconference and Webex. Attendance is recorded in Attachment A – there were 7 members present. Associate Members: Justin Brown and Bruce Weckworth.

   Meeting minutes are sent to the committee by email. If no comments are received within one week of the email notification, they are considered approved and are posted on the TNI website.

2. Standard Update

   The committee continued its review of the combined Standard to look for duplicate language.

   A copy of track changes made to the combined document during the meeting can be found in Attachment E. The Committee stopped at Section 7.8.4.2.

3. New Business

   None.

4. Action Items

   The table in Attachment C summarizes all action items. See notes on table.

5. Next Meeting

   The next meeting will be on Monday, 5-6-19 by teleconference at 11am Eastern.

   The meeting was adjourned at 12:35pm Eastern. (Motion – Kira Second – Kevin Unanimously approved.)

Attachment A

Participants
TNI Field Activities Committee

Members	Term Expires	Affiliation	Balance	Contact Information
Scott Haas (Chair) **Present**	2022	Environmental Testing, Inc.	FSMO	shaas@etilab.com
Shannon Swantek (Vice-Chair) **Present**	2020	ESI	Other	sswantek@envstd.com
Kevin Holbrooks **Present**	2020	Jacksonville Electric Authority	Other	holbke@jea.com
Doug Berg **Absent**	2020*	PJLA	AB	dberg@PJLabs.COM
David Fricker **Absent**	2022*	A2LA	AB	dfricker@a2la.org
Kieth Klemm **Absent**	2021*	ANAB	AB	kklemm@anab.org
Marlene Moore **Absent**	2021*	Advanced Systems, Inc.	Other	mmoore@advancedsys.com
Andora Nguyen **Absent**	2022	Eurofins Eaton Analytical	Other	AndoraNguyen@eurofinsUS.com
Bill Ray **Absent**	2021*	William Ray Consulting, LLC	Other	Bill_Ray@williamrayllc.com
Russell Schindler **Absent**	2021*	SampleServe	FSMO	schindler@sampleserve.com
Kira Stokes **Present**	2021*	HRSD	FSMO	Kstokes@HRSD.com
Tyler Sullens **Absent**	2021*	Alabama Power Company	FSMO	tasullen@southernco.com
Elizabeth West **Present**	2021*	Louisiana DEQ	AB	elizabeth.west@la.gov
Ilona Taunton (Program Administrator) **Recorded**		The NELAC Institute		Ilona.taunton@nelac-institute.org

Attachment B

NEFAP ADVOCACY SCHEDULE

Organization	Event	Type of Presentation	Event Dates	Presenter
Past Events				
Midwest Groundwater Association	2009 Annual Midwest Groundwater Conference	Poster	October 15, 2009	Justin Brown
National Groundwater Association	2010 National Groundwater Summit	Speaking	April 13, 2010	Justin Brown
US Department of Defense	2010 EDQW	Speaking	April 15, 2010	Justin Brown
AEHS Foundation, Inc	26th Annual International Conference on Soils, Sediments, Water, and Energy	Poster	October 18, 2010	Declined Invitation (nobody to present)
US Environmental Protection Agency	20th Annual Quality Assurance Conference	Speaking	October 20, 2010	Jo Ann Boyd
Pacific Northwest Clean Water Association	2010 Annual Conference	Speaking	October 26, 2010	Keith Champman
NWEC	2010 Northwest Environmental Conference	Speaking	December 6, 2010	Scott Hoatson
Midwest Water Analysts Association	2011 Winter Expo	Speaking	January 28, 2011	Justin Brown
Battelle	Battelle for the International Conference on Remediation of Contaminated Sediments	Poster	February 7, 2011	Declined Invitation (nobody to present)
SSAAP	Stationary Source Sampling and Analysis for Air Pollutants XXXV Conference	Speaking	March 20, 2011	Scott Evans
American Water Works Association	2011 Watercon	Speaking	March 20, 2011	Justin Brown
US Department of Defense	2011 EDQW	Speaking	March 28, 2011	Justin Brown
ASQ	2011 ASQ Energy and Environment Conference	Speaking		Randy Querry
US Environmental Protection Agency	2011 Annual EPA Quality Assurance Conference	Speaking	October 18, 2011	Jo Ann Boyd
Midwest Environmental Laboratory Stakeholders	2011 MELSS Annual Meeting	Speaking	December 2, 2011	Justin Brown

Organization	Event	Type of Presentation	Event Dates	Presenter
	2012 Environmental Regulatory and Compliance Conference	Speaking		Calista Daigle
US Environmental Protection Agency	2012 On-site testing conference	Speaking	January 23, 2012	Lauren Smith
US Department of Defense	2012 EDQW	Speaking	March 2012	Justin Brown/ Marlene Moore
Stack Testing Accreditation Council	2012 Source Evaluation Society Annual Conference	Speaking	March 7, 2012	Maggie Cangro
Texas Commission for Environmental Quality	2012 TCEQ Environmental Trade Fair and Conference	Speaking	May 1, 2012	Mike Shepard
US Environmental Protection Agency	2012 Annual EPA Quality Assurance Conference	Speaking	October 15, 2012	Jo Ann Boyd
PIANC USA/ COPRI ASCE	2012 Dredging PIANC/ COPRI ASCE	Speaking	October 22, 2012	Declined Invitation (nobody to present)
Environmental Protection Agency / Dept. of Homeland Security	2013 On-site Analysis Conference	Speaking	January 23, 2013	Lauren Smith
Louisiana Water Environment Association	21st Annual Technical Exhibition and Conference Louisiana Water Environment Association Conference	Speaking	April 18, 2013	Tracy Szerszen
Oregon Environmental Laboratory Association	OELA/ORELAP Annual Environmental Lab Workshop	Speaking	May 16, 2013	Kim Watson
Florida Society of Environmental Analysts	2013 FSEA Annual Spring Meeting and Technical Session	Speaking/ Technical Seminar	May 22, 2013	John Moorman
State Assessor Forum	Conference Call	Speaking / Q&A	July 22, 2013	Justin Brown Marlene Moore
US Army Corp of Engineers	Regional Workshop	Speaking	September 11th, 2013	John Moorman
US Environmental Protection Agency	2013 Annual EPA Quality Assurance Conference Conference	Speaking	October 14, 2013	Jo Ann Boyd
Florida Society of Environmental Analysts	Field Quality Systems Workshop	Speaking	October 23rd, 2013	John Moorman
Illinois Association of Environmental Testing Labs	Midwest Environmental Stakeholder Summit	Speaking	December 6th, 2013	Jerry Parr
TWUA	??	Speaking	March 10th, 2015	JoAnn Boyd

Organization	Event	Type of Presentation	Event Dates	Presenter
US Environmental Protection Agency	2014 Annual EPA Quality Assurance Conference	Speaking	October 24, 2014	Jo Ann Boyd
TCEQ	TCQ Trade Fair	Speaking	May 5, 2015	Marlene Moore
NEMC/TNI	NEMC Conference – Full Day Training: Sample Collection Design and Accreditation – Is Your Sample Data Defensibile?	Speaking	July, 17, 2015	Marlene Moore
FSEA	FSEA Meeting Workshop	Speaking	October 28, 2015	John Moorman (Additional: Mitzi Miller, Katie Strothman, Kelly feist, Mike Shepherd, Chris Gunning, Doug Berg)
FSEA	FSEA Meeting Workshop – NEFAP Forum	Speaking	May 25, 2016	John Moorman (Additional: Calista Daigle, Katie Strothman, Mike Shepherd, Chris Gunning, Doug Berg)
TNI	NEFAP Forum	Webinar	June 13, 2016	John Moorman
NEMC/TNI	NEFAP Workshop	Speaking	August 10, 2016	John Moorman
Dallas – Pretreatment Coordinators	Dinner Meeting	Speaking	March 6, 2017	Jerry Parr
Upcoming Events				

Attachment C

Action Items – FAC

	Action Item	Who	Expected Completion	Actual Completion
47	Update Presentation Summary and distribute before meetings. (Prepare table of speaking engagements. This will be added to minutes and website. Follow-up with Scott Hoatson, Jan and other committee members to find out about other speaking engagements to add to the summary table being prepared.)	JoAnn Justin	Each Meeting	Ongoing 1-15-13: Ilona meeting with William to set this up to add to website. 4/20/13: Ilona requested status update from William.
132	Plan Tools Subcommittee Meeting after the Orange County meeting.	Ilona/Kevin	8/31/16	In Progress
142	Send Scott Scope Subcommittee Charter and DRAFT update to Charter.	Kevin	7/17/17	
144	Review last Standard Update information in upcoming committee meeting.	All	TBD	
152	Compare 2014 FSMO Standard to new ISO/IEC 17025:2017. Move language into new format – first DRAFT.	Shannon	5/21/18	Still in progress.
153	Send Shannon a copy of the current LAB Standard. Shannon will forward to the Committee.	Marlene Shannon	7-9-18	
154	Comment on the DRAFT AB Standard with the 2014 Standard language transferred into the new ISO/IEC 17011:2017 document. Did things get moved to the right sections? Was everything moved?	All	7-16-18	
155	Compare the DRAFT Field AB Standard to work being done at LAB. Present to FAC.	Marlene	Before next meeting after receiving document based on Action item #154.	

	Action Item	Who	Expected Completion	Actual Completion
156	Read NEFAP: 2014 and ISO/IEC 17025:2017	All	Added 9/18/18: 10/1/18	
157	From NOLA Meeting: Discern added value to be included ◦ Make a list ◦ Prioritize Items ◦ Start with Section 4 ISO/IEC 17025:2017 (Marlene) ◦ Evaluate Section 4 at next FAC meeting and assign new sections	All	TBD	
158	From NOLA Meeting: Seek Stakeholder Input for the new outline ◦ Interview data user/engineering firms ◦ AB survey current FSMO ▪ What is value added?	All	TBD	
159	From NOLA Meeting: Public Meeting/Webinar for Input	All	TBD	
160	From NOLA Meeting: Read ISO 17011:2017 • Plan Update w/ABs	All	Added 9/18/18: 10/1/18	
162	Color code DRAFT AB Standard.	Scott	TBD	
167				
168				
169				
170				

Attachment D

Backburner / Reminders – FAC

	Item	Meeting Reference	Comments
2	Review charter in October 2019.	2/2/11	Standing task. 12/3/18: Will be done in Milwaukee.
3	Analyze container issue and present initial plan to committee. Started in 2014 and summarized 4/24/15 and at the Chicago meeting in July 2015. Subcommittee: Justin, Terrence, Kevin, Scott	2014	There was not enough interest to form a subcommittee with the proper representation, so this has been tabled until there is more interest.
4			

Attachement E:

7.5 Technical records

4.13.1.1.1 The FSMO shall have a plan to ensure that the records are maintained or transferred according to the clients' instructions in the event that the FSMO transfers ownership or goes out of business. In addition, in cases of bankruptcy, appropriate regulatory and state legal requirements concerning FSMO records shall be followed.

4.13.1.4.1 Records that are stored only on electronic media shall be supported by the hardware and software necessary for their retrieval.

4.13.1.4.2 Records that are stored or generated by computers or personal computers shall have hard copy or secure backup copies.

7.5.1

4.13.1 Technical Records

4.13.2.1 *ISO/IEC 17025:2005(E), Clause 4.13.2.1*

The laboratory shall retain records of original observations, derived data and sufficient information to establish an audit trail, calibration records, staff records and a copy of each test report or calibration certificate issued, for a defined period. The records for each test or calibration shall contain sufficient information to facilitate, if possible, identification of factors affecting the uncertainty and to enable the test or calibration to be repeated under conditions as close as possible to the original. The records shall include the identity of personnel responsible for the sampling, performance of each test and/or calibration and checking of results.

NOTE 1: In certain fields it may be impossible or impractical to retain records of all original observations.

NOTE 2: Technical records are accumulations of data (see 5.4.7) and information which result from carrying out tests and/or calibrations and which indicate whether specified quality or process parameters are achieved. They may include forms, contracts, work sheets, work books, check sheets, work notes, control graphs, external and internal test reports and calibration certificates, customers' notes, papers and feedback.

7.5.2

7.6 Evaluation of measurement uncertainty

7.6.1

Commented [SH1]: Stopping point 4/1/2019

Commented [SH2]: 8.4.2

Commented [SH3]: Retain for future review

Deleted: *<#>ISO/IEC 17025:2005(E), Clause 4.13.1.2¶*
<#>¶
<#>All records shall be legible and shall be stored and retained in such a way that they are readily retrievable in facilities that provide a suitable environment to prevent damage or deterioration and to prevent loss. Retention times of records shall be established.¶
<#>¶
<#>NOTE: →Records may be in any media, such as hard copy or electronic media.¶
<#>¶
<#>ISO/IEC 17025:2005(E), Clause 4.13.1.3¶
<#>¶
<#>All records shall be held secure and in confidence.
¶
<#>4.13.1.4→ISO/IEC 17025:2005(E), Clause 4.13.1.4¶
<#>¶
<#>The laboratory shall have procedures to protect and back-up records stored electronically and to prevent unauthorized access to or amendment of these records.¶

Commented [sm4]: dded in 7.11 not in records. SAH also see 7.5, 8.4

8.4.2=readily available

Commented [sm5]: Look for other records references besides 4.13

Commented [SH6]: Original observations 7.5.2,

Commented [sm7]: Crosswalk comment "New 4.13.2.3-like)

Deleted: 5.4.6.2→*Testing laboratories shall have and shall apply procedures for estimating uncertainty of →measurement. In certain cases the nature of the test method may preclude rigorous, →metrologically and statistically valid, calculation of uncertainty of measurement. In these cases →the laboratory shall at least attempt to identify all the components of uncertainty and make a →reasonable estimation, and shall ensure that the form of reporting of the result does not give a →wrong impression of the uncertainty. Reasonable estimation shall be based on knowledge of →the performance of the method and on the measurement scope and shall make use of, for →example, previous experience and validation data.*
¶
NOTE 1: →The degree of rigor needed in an estimation of uncertainty of measurement depends on factors such as:
¶
the requirements of the test method;¶ ... [1]

7.6.2

7.6.3

5.0 TECHNICAL REQUIREMENTS

5.1 General (ISO/IEC 17025:2005(E) Clause 5.1)

5.1.1 ISO/IEC 17025:2005(E), Clause 5.1.1

Many factors determine the correctness and reliability of the tests and/or calibrations performed by a laboratory. These factors include contributions from:

- *human factors (5.2);*
- *accommodation and environmental conditions (5.3);*
- *test and calibration methods and method validation (5.4);*
- *equipment (5.5);*
- *measurement traceability (5.6);*
- *sampling (5.7);*
- *the handling of test and calibration items (5.8).*

7.7 Ensuring the validity of results

7.7.1

a)

c)

e)

f)

g)

Deleted: **5.4.6 Estimation of Uncertainty of Measurement** *(ISO/IEC 17025:2005(E), Clause 5.4.6)*¶ *5.4.6.1 A calibration laboratory, or a testing laboratory performing its own calibrations, shall have and shall apply a procedure to estimate the uncertainty of measurement for all calibrations and types of calibrations.…*

Deleted: 5.4.6.2 *Testing laboratories shall have and shall apply procedures for estimating uncertainty of measurement. In certain cases the nature of the test method may preclude rigorous, metrologically and statistically valid, calculation of uncertainty of measurement. In these cases the laboratory shall at least attempt to identify all the components of uncertainty and make a reasonable estimation, and shall ensure that the form of reporting of the result does not give a wrong impression of the uncertainty. Reasonable estimation shall be based on knowledge of the performance of the method and on the measurement scope and shall make use of, for example, previous experience and validation data.*¶ ¶ *NOTE 1: The degree of rigor needed in an estimation of uncertainty of measurement depends on factors such as:*¶ ¶ *the requirements of the test method;*¶ … [2]

Commented [SH8]: This term is not found in ISO17025_2017

Deleted: **5.9 Assuring the Quality of Test and Calibration Results** *(ISO/IEC 17025:2005(E) Clause 5.9)*¶ ¶ *5.9.1 ISO/IEC 17025:2005(E), Clause 5.9.1*¶ … [3]

Deleted: 5.6.3 Reference Standards and Reference Materials (*ISO/IEC 17025:2005(E) Clause 5.6.3)*¶ ¶ *5.6.3.1 Reference standards*¶ ¶ … [4]

Deleted: *5.6.3.2 Reference materials*¶ ¶ *Reference materials shall, where possible, be traceable to SI units of measurement, or to certified reference* … [5]

Deleted: 5.5.10 *ISO/IEC 17025:2005(E), Clause 5.5.10*¶ ¶ *When intermediate checks are needed to maintain confidence in the calibration status of the equipment,* … [6]

Deleted: *5.6.3.3 Intermediate checks*¶ ¶ *Checks needed to maintain confidence in the calibration status of reference, primary, transfer or working standards and reference materials shall be* … [7]

Deleted: *5.9.1 c) replicate tests or calibrations using the same or different methods;*

Deleted: *5.9.1 d) retesting or recalibration of retained items…*

h)

k)

7.7.2

a)

7.7.3

5.9.2 The FSMO shall participate in a proficiency testing program that is applicable to its scope of accreditation.

NOTE: The selected methods should be appropriate for the type and volume of the work undertaken.

5.9.3 Quality control data shall be analysed and, where they are found to be outside pre-defined criteria, planned action shall be taken to correct the problem and to prevent incorrect results from being reported.

7.8 Reporting of results

7.8.1 General

7.8.1.1 *The results shall be reviewed and authorized prior to release.*

5.4.7 Control of Data *(ISO/IEC 17025:2005(E), Clause 5.4.7)*

5.10.2

7.8.1.2

5.10 Reporting the Results *(ISO/IEC 17025:2005(E) Clause 5.10)*

5.10.1 General (*ISO/IEC 17025:2005(E) Clause 5.10.1*)

Deleted: *5.9.1 e) correlation of results for different characteristics of an item.*¶

Deleted: *5.9.1 ISO/IEC 17025:2005(E), Clause 5.9.1*¶
¶
The laboratory shall have quality control procedures for monitoring the validity of tests and calibrations undertaken. The resulting data shall be recorded in such a way that trends are detectable and, where practicable, statistical techniques shall be applied to the reviewing of the results. This monitoring shall be planned and reviewed and may include, but not be limited to, the following:¶
¶
a) –regular use of certified reference materials and/or internal quality control using secondary reference materials;
¶
b) –participation in interlaboratory comparison or proficiency-testing programmes; ¶
¶
c) –replicate tests or calibrations using the same or different methods; ¶
¶
d) –retesting or recalibration of retained items;
¶ ... [8]

Deleted: *5.9.1 ISO/IEC 17025:2005(E), Clause 5.9.1*¶
b) –participation in interlaboratory comparison or proficiency-testing programmes;

Commented [sm9]: This crosswalk match does not seem to fit? Will look into standard referring to control charts.

Commented [SH10]: 7.7.1 and 7.7.1 d ?

Deleted: *5.4.7.1 –Calculations and data transfers shall be subject to appropriate checks in a systematic manner.*...¶
¶ ... [9]

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Test Reports and Calibration Certificates (*ISO/IEC 17025:2005(E) Clause 5.10.2*)

Deleted: *j) –the name(s), function(s) and signature(s) or equivalent identification of person(s) authorizing the test report or calibration certificate*

Deleted: *The results of each test, calibration, or series of tests or calibrations carried out by the laboratory shall be reported accurately, clearly, unambiguously and objectively, and in accordance* ... [10]

Deleted: *The results shall be reported, usually in a test report or a calibration certificate (see Note 1), and shall include all the information requested by the customer and necessary for the interpretation of the* ... [11]

Deleted: *NOTE 1: –Test reports and calibration certificates are sometimes called test certificates and calibration reports respectively*

Deleted: *NOTE 2: –The test reports or calibration certificates may be issued as hard copy or by electronic data transfer provided that* ... [12]

7.8.1.3

7.8.2 Common requirements for reports (test, calibration or sampling)

7.8.2.1

p) clear identification when results are from external providers.

5.10.2 Test Reports and Calibration Certificates (*ISO/IEC 17025:2005(E) Clause 5.10.2*)

Each test report or calibration certificate shall include at least the following information, unless the laboratory has valid reasons for not doing so:

such as sample type (grab, composite etc.), including an identification of the matrix sampled (aqueous, solids etc.).

including phone number of the person authorizing the report.

l) results for any applicable field blanks, spikes, duplicates, and confirmation samples.

7.8.3.1

5.10.3 Test Reports *(ISO/IEC 17025:2005(E) Clause 5.10.3)*

5.10.3.1 *ISO/IEC 17025:2005(E) Clause 5.10.3.1*

Deleted: <#>Technical Records
¶
<#>4.13.2.1 *ISO/IEC 17025:2005(E), Clause 4.13.2.1*¶
<#>¶
<#>*The laboratory shall retain records of original observations, derived data and sufficient information to establish an audit trail, calibration records, staff records and a copy of each test report or calibration certificate issued, for a defined period. The records for each test or calibration shall contain sufficient information to facilitate, if possible, identification of factors affecting the uncertainty and to enable the test or calibration to be repeated under conditions as close as possible to the original. The records shall* ... [13]

Deleted: <#>¶

Deleted: *In the case of tests or calibrations performed for internal customers, or in the case of* ... [14]

Deleted: ¶

Deleted: ¶ ... [15]

Commented [sm15]: Match each to 7.8.2.1 except for p) which is matched to 5.10.6

Deleted: *a) a title (e.g. "Test Report" or "Calibration Certificate");*

Deleted: *b) the name and address of the laboratory, and the location where the tests and/or* ... [16]

Deleted: *c) unique identification of the test report or calibration certificate (such as the serial* ... [17]

Deleted: *d) the name and address of the customer;…*

Deleted: *e) identification of the method used;*

Deleted: *f) a description of, the condition of, and unambiguous identification of the item(s) tested or* ... [18]

Commented [SH16]: FSMO language

Deleted: *g) the date of receipt of the test or calibration item(s) where this is critical to the* ... [19]

Deleted: *h) reference to the sampling plan and procedures used by the laboratory or other bodies* ... [20]

Deleted: *i) the test or calibration results with, where appropriate, the units of measurement;*

Deleted: *j) the name(s), function(s) and signature(s) or equivalent identification of* ... [21]

Commented [SH17]: FSMO language

Deleted: *k) where relevant, a statement to the effect that the results relate only to the items* ... [22]

Commented [SH18]: FSMO language

Deleted: *NOTE 1: Hard copies of test reports and calibration certificates should also include the* ... [23]

Deleted: *NOTE 2: It is recommended that laboratories include a statement specifying that* ... [24]

In addition to the requirements listed in 5.10.2, test reports shall, where necessary for the interpretation of the test results, include the following:

a)

7.8.3.2

5.10.3.2 *ISO/IEC 17025:2005(E) Clause 5.10.3.2*

and latitude, longitude, and altitude when sample point is not otherwise identified; see *Clause 5.1.3*;

d

including a description of sample preservation, transportation and storage and sample containers as on a chain of custody for example; see *Clauses 5.4.2.1, 5.5.4.1, and 5.5.6.1*;

f) *any standard or other specification for the sampling method or procedure, and deviations, additions to or exclusions from the specification concerned.*

7.8.4 Specific requirements for calibration certificates

7.8.4.1

c)

d)

e)

Deleted: *deviations from, additions to, or exclusions from the test method*

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Deleted: *and information on specific test conditions, such as environmental conditions;*

Deleted: *<#>where relevant, a statement of compliance/non-compliance with requirements and/or specifications;¶*

Deleted: *<#>where applicable, a statement on the estimated uncertainty of measurement; information on uncertainty is needed in test reports when it is relevant to the validity or application of the test results, when a customer's instruction so requires, or when the uncertainty affects compliance to a specification limit;¶*

Deleted: *<#>where appropriate and needed, opinions and interpretations (see 5.10.5);¶*

Deleted: *<#>additional information which may be required by specific methods, customers or groups of customers.¶*

Deleted: *In addition to the requirements listed in 5.10.2 and 5.10.3.1, test reports containing the results of sampling shall include the following, where necessary for the interpretation of test results:* ¶ … [25]

Deleted: *b) unambiguous identification of the* … [26]

Deleted: *c) the location of sampling, including* … [27]

Commented [SH21]: FSMO language

Deleted: *) a reference to the sampling plan and* … [28]

Commented [SH22]: FSMO language

Deleted: *e) details of any environmental* … [29]

Commented [SH23]: Review – the second half seems … [30]

Deleted: 5.10.4 Calibration Certificates *(ISO/IEC* … [31]

Deleted: *b) the uncertainty of measurement* … [32]

Deleted: *c) evidence that the measurements* … [33]

Deleted: *5.10.4.3 When an instrument for* … [34]

Deleted: *5.10.4.2 The calibration certificate shall* … [35]

Deleted: *When a statement of compliance with a* … [36]

Deleted: ¶

Deleted: *When statements of compliance are* … [37]

Deleted: ¶

f)

NOTE 2: *Opinions and interpretations included in a test report may comprise, but not be limited to, the following:*

- *an opinion on the statement of compliance/noncompliance of the results with requirements;*
- *fulfilment of contractual requirements;*
- *recommendations on how to use the results;*
- *guidance to be used for improvements.*

Deleted: 5.10.5 Opinions and Interpretations (*ISO/IEC 17025:2005(E) Clause 5.10.5)*¶

¶

When opinions and interpretations are included, the laboratory shall document the basis upon which the opinions and interpretations have been made. Opinions and interpretations shall be clearly marked as such in a test report....

Deleted: *NOTE 1: Opinions and interpretations should not be confused with inspections and product certifications as intended in ISO/IEC 17020 and ISO/IEC Guide 65.*

Deleted: ¶

Deleted: *NOTE 3: In many cases it might be appropriate to communicate the opinions and interpretations by direct dialogue with the customer. Such dialogue should be written down.*

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Review – the second half seems to correlate to 7.8.5 f. Was the first part intended to refer to something like a sampling SOP?

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