Comments of the Human Factors Task Group on ANSI/ASB 053, "Standard for Report Content in Forensic Toxicology"

The OSAC Human Factors Task Group has unanimously approved these comments.

This standard is promising and important, but it is not yet fully consistent with best practices for reporting of forensic science findings. Improvements are needed before it is placed on the OSAC Registry.

The current version can and should be enhanced by requiring a full and fair acknowledgement of scientific uncertainty. Although in the past it was common for forensic scientists to report findings without discussing possible sources of variability and error, this is no longer considered "best practice," and reports that fail to acknowledge uncertainty are likely to be vulnerable to objections when offered in courts of law. From a human factors perspective, communicating the sources and degree of uncertainty in any scientific result is especially critical in assisting finders of fact to understand how to integrate the results into an overall decision.

The 2009 report of the National Research Council on Strengthening Forensic Science in the United States, a document that has been referenced in a number of cases, declared that forensic science reports must describe, at a minimum, "the sources of uncertainty in the procedures and conclusions along with estimates of their scale (to indicate the level of confidence in the results)." (p. 186). According to the NRC Report, "Forensic science reports, and any courtroom testimony stemming from them, must include clear characterizations of the limitations of the analyses, including associated probabilities where possible." (p. 186).

Similarly, the National Commission on Forensic Science declared that: "Reports should clearly state ... the estimated uncertainty and variability; and possible sources of error and limitations in the method, data, and conclusions." (Recommendations to the Attorney General: Documentation, Case Record, and Report Contents, September 13, 2016).

These recommendations have been incorporated into OSAC's Instructions for Scientific and Technical Review Panels (STRPs). The instructions call for STRPs to verify that a proposed standard "provides for estimates and expressions of the uncertainties in all qualitative and quantitative measurements" and states that the "potential magnitude of errors in any measurement must be assessed and reported so that the measurement can be used for informed decision making." For binary decisions or other classifications, such as reporting that an analyte was "identified" or "detected," the STRP should verify that "it includes guidance on expressing the accuracy of the decision or classification method (or, conversely, the risk of a wrong decision or classification)." The FSSB approved the instructions for STRPs in part to assure that OSAC standards live up to contemporary norms of scientific accuracy and transparency.

The standard under consideration here, ANSI/ASB 053 (1st Ed. 2019), was developed before implementation of the new procedures of OSAC 2.0 and therefore has not had the benefit of STRP review. If such a review were conducted, it is likely that the STRP would conclude that this standard fails to meet the requirements for scientific rigor and transparency in reporting that the STRPs are tasked to

enforce. It would allow qualitative "positive results" to be reported without any expression or discussion of uncertainty, and would require reporting of "an estimated uncertainty of measurement" for quantitative results only when "accreditation, regulation, or internal laboratory procedures require an estimated uncertainty of measurement to be calculated." (Section 5.5). In addition, it would permit analytic results to be reported using qualitative descriptors without requiring the disclosure of any available data on the uncertainty associated with scoring qualitative assays, or their accuracy. This is particularly troublesome from a human factors point of view because of the degree to which qualitative measures, which often rely in part of subjective judgment, are open to different, unanchored interpretations.

The question facing the FSSB is whether such a standard deserves to be on the OSAC Registry when it fails to meet the requirements for scientific rigor and transparency that STRPs are now expected to apply. Placing this standard on the OSAC Registry would suggest that the FSSB does not take these requirements seriously, or views them as merely precatory. It may be seen as setting a precedent under which other standards that have these same scientific shortcomings should be tolerated.

Correcting these shortcomings and developing toxicology standards that incorporate current best scientific practices can be accomplished with very little additional effort. Forensic toxicologists are already required to estimate uncertainty for common procedures. Indeed, the OSAC Registry includes a document, "Standard Practices for Method Validation in Forensic Toxicology" that provides a cogent discussion of how to estimate measurement error in many circumstances. Following this guidance, labs should already have the data needed to describe the uncertainty in their testing results. All that is left to do is to add to the proposed standard language on how to communicate findings regarding uncertainty in a concise manner that can be understood by the intended audience.

The Human Factors Task Group includes a number of scholars with expertise in communicating scientific information to lay audiences, and we hereby volunteer to collaborate with the Forensic Toxicology Subcommittee to develop reporting standards that acknowledge uncertainty and discuss it in a scientifically sound and comprehensible manner. We applaud the effort and progress the Toxicology Subcommittee has made in developing this standard, and appreciate its willingness to consider this proposed enhancement to its important work.

STATEMENT OF THE OSAC LEGAL TASK GROUP

COMMENT TASK GROUP on ANSI/ASB STANDARD 053 - Standard for Report Content in Forensic Toxicology

TO: OSAC

FROM: Legal Task Group (LTG) - CTG (Ron Reinstein, Lori Varnell, Kate Philpot, Andrea Roth, Chris Plourd)

DATE: November 2, 2020

RE: ANSI/ASB Standard 053 - Standard for Report Content in Forensic Toxicology

The LTG Comment Task Group consisting of Ron Reinstein, Lori Varnell, Kate Philpot, Andrea Roth, and Chris Plourd) has reviewed this standard for comment. While the group is not recommending that the standard be withheld from the registry, we submit these comments in the hope that they will be considered in later revisions to the standard.

Comments Regarding Section 4

"Elements of a Laboratory Report" section (sec 4); methods/techniques used and "possible sources of error and limitations in the method" should be required elements. (Nat'l Comm'n on Forensic Sci., Recommendation to the Attorney General Documentation, Case Record, and Report Contents (Sept. 13, 2016), available at https://www.justice.gov/archives/ncfs/page/file/905536/download). There is a requirement to include "technique(s) of analysis" in this standard, but it appears under the section on reporting lab results (sec 5). There are requirements related to limitations scattered throughout the standard (secs. 4.4, 4.5, 5.1(c)). It would be better to have them all addressed in the "elements" section and to include a b road phrase to cover any limitation or potential source of error. For example, potential contamination during testing would not seem to fall under any of the discrete limitations sections referenced above. Sections 4.4, 4.5, and 5.1 could be replaced by a single, broader requirement to include possible sources of error and limitations in the method, with limitations described in §§ 4.4, 4.5 and 5.1(c) as examples.

Comments Regarding Section 5.1

Further re: 5.1(c), reporting limit/limit of detection should be in the report. At very least, the report should state exactly where this information can be found in the case file.

Sec 5.5 essentially makes reporting uncertainty associated with quantitative results optional. For example, a lab could structure its protocols to avoid the uncertainty. We feel this reporting should be required, but if such reporting is not required, the laboratory should be required at least to include in the report that the uncertainty is unknown (NCFS Recommendation, supra.

Comments Regarding Section 7.3

We feel this section fails to address the forensic practitioner's obligations regarding exculpatory evidence as it relates to paragraph 7.3. Specifically, when an issued report is being corrected:

1. The standard should provide guidance for the practitioner related to when corrective reports should and must be issued and should include a "shall" statement as to when a report *must* be restated. For example, "If a prior report falsely states a conclusion included in paragraphs 5.2-5.6 or if a report has been issued that creates a false impression in the user's mind as to the identified results, the practitioner shall issue an amended report. If the practitioner learns that information in a prior report should be clarified in order to fairly state the outcome of forensic testing, the practitioner shall issue an amended report."
2. The standard should provide guidance for setting up protocols for tracking and issuing amended reports. This guidance should include standards for limiting the circulation of the original uncorrected report and for notice to the users of the report as to the correction. These should be "shall" statements since they touch on the exculpatory obligations of the practitioner.
3. The standard should provide guidance related to when additional information "shall" be included in an amended report, such as when the issue that gave rise to the needed correction is indicative of a larger problem that would bring into question the process used, the contamination of the evidence, or when further investigation into the lab or its personnel is required.

Comments Regarding Section 8

Sec 8, second paragraph. We recommend the word "shall." This section is imperative. Alternatively, in section 8(c), if citations are not included in the report, the report itself should state that the citations are available upon request. Generally, the report should state something along the lines of (taken from NCFS Recommendation), "the report does not contain all of the documentation associated with the work performed. In order to understand and evaluate all the work performed, and independently analyze and interpret the data and draw conclusions, a review of the case record is required."

OSAC Registry Request Comment Adjudication Response Template

Document Title	ANSI/ASB 053 Standard for Report Content in Forensic Toxicology
Requesting Unit	Forensic Toxicology

Unit Chair

Name: Robert Johnson
Affiliation: Tarrant County Medical Examiner's Office

Unit Technical Contact

Name: Madeline Montgomery
Affiliation FBI

Beginning Comment Period Date	10/6/20
End Comment Period Date	11/6/20
Comment Adjudication Meeting Dates # of Members Present	Virtual Ballot
Resolution Date and Vote Outcome	Passed; 15-2-2; Dec 14 2020

Note: This template is intended for use by all Units considering a new document for addition into OSAC Registry

Area
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ID	Person	Section	Page	Line	Editorial or Technical	Attached File
1	William Thompson					HFTG Comment on ASB 053-Final.pdf
2	Lori Varnell					ANSI-ASB 053 Stnd Report Toxicology.docx.pdf
3	Megan Barton					
4	Luke N. Rodda					
5	Ronald D. Oliver					Std 053 R Oliver comments.docx

Comment/Proposals
The comments in the accompanying document reflect the consensus viewpoint of the entire membership of the OSAC Human Factors Task Group. Several members of the Task Group participated in drafting these comments. These comments were then reviewed and approved unanimously by the Task Group.
It should be placed on the registry, but we believe it has several deficiencies, which are explained in the attached memo.
No, requires too much information on reports and instead of standardizing labs will lead to reports being completely different based on required information like Interpretive Information and Measurement Uncertainty.
It should be registered, it brings simple and minimal guidelines that all tox labs should be adopting.
Should not be placed on the OSAC registry UNTIL minor corrections are applied. See attached document: Std 053 R Oliver comments.docx

Response	Reason	Resolution
No comments were made regarding requirement of inclusion of MU during the ASB public comment period. Document does require reporting of MU in some instances. The NCFS also acknowleged that providing all documenation in a single report may be impractical, which may be the case for some forensic toxicology applications. This issue has already been considered by the Toxicology SC and we have arrived at the current document.		Previously considered
No response needed; memo requests considerations for future drafts.		No response needed
Interpretive information and measurement uncertainty are NOT required. Not pursuasive.		Not persuasive
No response needed		No response needed
Comment one - regarding foreward - Scope clearly specifies breath alcohol not covered. Rejected. Comment two - regarding definitions - No comments were made on definitions during ASB public comment period. The phrase "additional work" is sufficient to differentiate supplemental and amended reports. Rejected.		Not persuasive

No response needed

Categories for adjudication of negative public comment for addition to registry

Term	Definition
Not Germane	Comment is not relevant to the subject of document being considered
Persuasive - review required	General agreement with comment given, further review by subcommittee
Withdrawn by submitter	Comment withdrawn by submitter
Not persuasive	Justification for non persuasive rationale is indicated by committee action
Previously considered	Topic of comment was previously discussed and resolved by subcommittee*
No response needed	Comment does not require a response

*If all commenters express the same or similar reasoning for not moving a document forward, the OPO looks to confirm that all similar comments have the same adjudication response (e.g. Persuasive, Not Persuasive, etc.). We also look to confirm that the response provided by the unit is the same or similar. This is to ensure that when the final comment(s) and response(s) are published to the OSAC website, that viewers have a clear understanding of the unit's perspective on a given issue.