

HASQARD Focus Group

Meeting Minutes

July 17, 2012

The meeting was called to order by Huei Meznarich, HASQARD Focus Group Chair at 2:05 PM on July 17, 2012 in Conference Room 308 at 2420 Stevens.

Those attending were: Huei Meznarich (Focus Group Chair), Cliff Watkins (Focus Group Secretary), Glen Clark, Robert Elkins, Scot Fitzgerald, Larry Markel, Cindy Taylor, Sam Vega, Rich Weiss and Eric Wyse.

- I. Huei Meznarich requested comments on the minutes from the June 12, 2012 meeting. No HASQARD Focus Group members present stated any comments on the June meeting minutes and, after hearing no objections, the minutes were approved.
- II. The status of open and recently closed action items was discussed.
 - a. A few hours before the May 15 meeting, Rich Weiss sent an e-mail to the Focus Group to propose revised language for the last paragraph in Section 5.3 containing the sentence about measured radioactivity being reported along with its total propagated uncertainty but without comparison to the estimates *a priori* MDC. At the May 15 meeting, the Chair asked the group to review this e-mail, provide Rich comments as necessary and be prepared to approve the revision at the next Focus Group meeting in June. Because Rich was not present at the June meeting, it could not be determined if he had received any comments on this. The action was left open with a planned completion date of July 17. On July 12, Rich provided Focus Group members with proposed language for Section 5.3 with a request to review it and be prepared to discuss comments at the July 17 meeting. At the July 17 meeting, the language was reviewed and approved closing this action item. Section 5.3 will read:

“The analytical information reported should include the measured parameters, the details of analysis, the reported data values, and associated data qualifiers in accordance with client requirements. Section 7.5 contains details on defining detect/nondetect status for analyses.

Inorganic or organic results shall be reported as numeric values with appropriate data qualifiers.

Radiochemical results shall be reported based on calculated concentration or activity values (whether negative, positive, or zero) using the appropriate blank for each nuclide. The measured activity or concentration should be reported with estimates of both counting uncertainty and total propagated uncertainty. The MDC should not be reported to the client *in lieu* of low-level measurements for non-detected results.”

- b. At the May 15 meeting, Huei Meznarich reported that she looked up the definition of high purity water currently used in Section 6.1.1 and found it is equivalent to ASTM Type II water. Also at the May 15 meeting, Rich Weiss agreed to look into this matter and determine if a more appropriate definition can be specified in HASQARD. Because Rich was not present at the June meeting, it is not known if he has had time to research and/or propose a better definition for high purity water. The action was left open with a planned completion date of July 17. On July 12, Rich provided Focus Group members with technical information concerning water purity specification used by ISO and ASTM with a request to review it and be prepared to discuss comments at the July 17 meeting. At the July 17 meeting, the proposed language Rich provided was discussed and by the Focus Group members present at the meeting. Rich had suggested a provision that the water is “freshly prepared” be added to the criteria. The Focus Group members present agreed that this criterion is too subjective and it was removed from the final wording. The water purity language in Section 6.1.1 will read:

“High-purity water is generally defined as water that has been distilled or deionized, or both, so that it will have a conductivity less than 1.0 $\mu\text{S}/\text{cm}$ (greater than 1.0 megaohm-cm resistivity). Each laboratory is responsible for ensuring that the water used for data collection activities is of sufficient quality for the operation performed. Water quality is regularly monitored via preparative and analytical blank performance.”

- c. A few hours before the May 15 meeting, Rich Weiss sent e-mail to the Focus Group to propose revised language for the definition of the terms “Tracer” and “Carrier” for Sections 6.2.6 and 6.2.7 respectively. The Focus Group also discussed whether a volume-specific glossary should be added to each Volume. At the May 15 meeting, the Chair asked the group to review the e-mail, provide Rich comments as necessary and be prepared to approve the revision at the next Focus Group meeting in June. Because Rich was not present at the June meeting, it could not be determined if he had received any comments on this. The action was left open with a planned completion date of July 17. On July 12, Rich provided Focus Group members with proposed language for Sections 6.2.6 and 6.2.7 with a request to review it and be prepared to discuss comments at the July 17 meeting. At the July 17 meeting, the language was reviewed. The group discussed the fact that the current and proposed revision to the definition of a carrier addressed yield carriers only. The group discussed the benefits of expanding the definition to include non-yield carriers. After acknowledging the benefit of including non-yield carriers in the definition, Rich agreed to take the **Action Item** to expand the language in the carrier definition to make it inclusive of these types of carriers. The Focus Group members present approved the proposed revision to the definition of a tracer in Section 6.2.6. The action item was closed with a new action item opened to expand the definition of carrier to include non-yield carriers. The definition of tracer will be inserted as the first paragraph in

Section 6.2.6 and will read:

“A tracer is a radioactive isotope that chemically mimics and does not chemically interfere with the target radioisotope through radiochemical preparation and separation. For most radiochemical applications, a tracer is considered to be massless. Tracers are added to all samples in an analytical batch (including batch QC samples) such that each sample has a specific measurable activity of the tracer. From the time of spiking, tracers undergo the same chemical processing as the samples. Tracers are counted but may have different emissions (e.g., gamma emitting Sr-85 used for Sr-90 determinations). Any activity effects of a tracer on the final sample counting configuration must be taken into account. The tracer yield is used in the data calculations to correct for any and all sources of analytical losses.”

A discussion was also held concerning the definition and terminology used in HASQARD on Mean Difference (Section 7.4.3) and the QSAS term Duplicate Error Ratio (DER). Rich Weiss proposed the last paragraph in Section 7.4.3 be revised to:

“If the MD is greater than or equal to 1.96, a 95% confidence exists that the two results are not equal. If the MD is greater than or equal to 3, then there is a 99% confidence that results are not equal. The MD calculation is also referred to as relative error ratio (RER) or duplicate error ratio (DER).”

- d. At the June 12 meeting, the Focus Group was assigned the action to evaluate the criteria for method blank acceptance found in Table 6-1 and approve a criteria based on information provided by Huei Meznarich on the methods used in QSAS and MARLAP to evaluate method blank acceptance. The QSAS and MARLAP evaluate method blanks for acceptance by comparing the result to the total propagated uncertainty (TPU) associated with the measurement. In discussing the current contents of Table 6-1, it was noted that the evaluation criteria specified were already a list from which a laboratory could select an appropriate criterion. Therefore, the criterion $<2 \times \text{TPU}$ was added to the possible criteria list. The action item was closed. The evaluation criteria for method blanks in Table 6-1 will now read:

“ $<\text{MDC}$, $<2 \times \text{TPU}$, $<5\%$ sample isotope concentration, or $<5\%$ decision level”

- e. At the June 12 meeting, a long discussion on detection limits and associated terms was held. Huei Meznarich accepted the action item to produce proposed language to allow flexibility in the way detection limits are determined and the use of these terms. On July 12, Huei provided a proposed revision to the detection limit section requesting the group to read it and come prepared with specific comments to discuss at the July 17 meeting.

The Focus Group spent a great deal of time discussing the proposed revision. Specific concerns raised were:

Another major issue was on whether a frequency for verifying that the method detection limits are acceptably determined should be specified. There was philosophical disagreement between the participants in the discussion on this matter.

After hearing all sides in this discussion, Rich Weiss accepted the **Action Item** to review Huei's revision based on the input received during the MDL subgroup meeting and the input received from Eric Wyse on this subject and try to write something congruent with all views. Rich commented that there is a need for more discussion/work on detection limits for the radiochemistry in Section 7.5.2. The proposal from Rich will be provided prior to the August meeting to allow further discussion on this topic at that time.

- f. At the June 12 meeting, Glen Clark accepted the action to locate a white paper he knew of on deviating from methods and provide it to the Focus Group Secretary for subsequent distribution to the Focus Group. That action was completed on June 19, 2012. This paper was discussed in the context of actions required to complete a draft of HASQARD Volume 1 for review (see Section V below).

III. The status of the preparations of Revision 4 for Volume 2 was discussed.

- a. Chris Sutton was not present at the meeting, but Scot Fitzgerald stated Chris had reported to him that he had nothing new to report concerning progress on addressing comments received and issuing a draft of Volume 2 for review.

IV. Actions to Complete Draft of HASQARD Volume 4, Revision 4

At the May 15 meeting of the Focus Group, action items were identified associated with all of the residual comments that make the final draft of Revision 4 to Volume 4 incomplete. The status of these action items is discussed in Section II of these minutes. Resolution of the actions is still in progress. In addition to the actions listed in Section II of these minutes, one action remains that the Focus Group deferred until the draft of Revision 4 to Volume 1 is finalized. Specifically, that action is:

A comment made on Section 5.1, "Data Review" stated the entire section needed to be revised and reconciled against Volume 1. The Focus Group agreed to take no action on this outstanding commitment until the review of Volume 1 was completed. This comment remains an outstanding issue requiring resolution prior to completion of the final draft Revision 4 to Volume 4.

At the June 12 meeting, the Focus Group requested Chris to provide the current set of required and optional information listed on a chain-of-custody form (as specified in the current proposed Rev 4 to Volume 2) to the Secretary. The Secretary forwarded that information to the Focus Group members. At the July meeting, the language concerning what is to be checked by the sample receiving personnel on a chain-of-custody form was compared to what is required to be entered on a chain-of-custody form by field sampling personnel in the proposed draft to Volume 2. The Focus Group agreed that sample receiving personnel will not be able to determine if all information provided (e.g. date and time of sampling) is accurate. Therefore, the language in the proposed revision to Volume 4 was changed to say:

“Verify that the chain-of-custody documentation is complete and legible.”

The next statement in the sample receiving requirement specifies a list of items that a chain-of-custody form “should” include. However, this list is not consistent with the list of items that the proposed language for Volume 2 requires a sampler to input on a chain-of-custody form. After a discussion on this, Larry Markel accepted the **Action Item** to mesh the requirements portion of Volume 2 with the language in Section 3.3 of the proposed revision to Volume 4 and provide the language for consideration before the next HASQARD Focus Group meeting in August.

In reviewing Table 6-2, the Focus Group made a comment concerning the duplicate acceptance criteria for inorganic analyses. The criteria statement found in the table is, “ $\leq 20\%$ RPD when result $> \text{EQL}$ (10 times IDL, or 100 times the IDL for ICP/MS) for liquids $< 35\%$ RPD when result is $> \text{EQL}$ (10 times IDL, or 100 times the IDL for ICP/MS) for solid samples.” The Focus Group requested that the reference to “10 times IDL, or 100 times the IDL for ICP/MS” be checked for accuracy as well as whether the “ $< 35\%$ ” value was accurate. Eric Wyse accepted the **Action Item** to research these criteria and provide input to the group for the August meeting.

V. Discussion of Proposed Revisions to HASQARD Volume 1

At the July meeting, the Focus Group spent a great deal of time discussing the major revision proposed by the QA subcommittee on Section 4.0 “Procedures.” The proposal includes revising the title of this Section to “Methods” and addressing only qualification and revisions to sampling and analytical methods. The material addressing modification of “Procedures” is

proposed to be moved to Section 6, "Documents and Records." The reason for this proposed change is that the content of Revision 3 was addressing methods and documentation of these methods in a confusing fashion. The subcommittee sought to ensure that the subject of revising procedures is captured as a document control matter and that the subject of revising technical methods is addressed separately. Although much of the material presented was information already in Revision 3 of the HASQARD that was relocated with the previous location identified in the electronic version being displayed at the meeting, the Focus Group had a difficult time reaching consensus on such a major change in a meeting where this much material was presented for the first time. The outcome was to request the Secretary to send out files containing the new material for the Focus Group to review prior to the next Focus Group meeting where it could be discussed again. As part of the discussion, Glenn Clark accepted the action item to locate a white paper he is aware of on deviating from methods and provide it to the Focus Group for consideration of the material presented in this proposed new section. On June 19, Glen Clark distributed the white paper. At the July meeting, the Focus Group members continued to discuss their philosophical differences on this subject. Larry Markel provided some context on why a discussion of method deviations is included in HASQARD. Larry recalled that the lab experienced comments from regulators concerning use of regulatory methods at the 222-S laboratory and the concept of using CLP methods with no changes allowed in the methods. Because of this, the white paper distributed by Glen Clark was developed. HASQARD adapted the white paper approach. Therefore, all revisions of HASQARD have contained language on the manner in which such modifications can be made. The Focus Group acknowledged that except where specified in a permit or when used to perform toxicity characteristic determinations, the SW-846 methods are guidance. The language in SW-846 states:

"In addition, SW-846 methods, with the exception of required method{s} us{d} for the analysis of method-defined parameters, are intended to be methods which contain general information on how to perform an analytical procedure or technique which a laboratory can use as a basic starting point for generating its own detailed standard operating procedure (SOP), either for its own general use or for a specific project application."

With the language of SW-846 known, and the opinion that the relationship with the regulators is now more sophisticated and includes working with analytical method specifications that are appropriate in meeting agreed to data quality objectives, Larry Markel stated that some of the old requirements for method deviation found in HASQARD may not be necessary anymore. Larry Markel accepted the **Action Item** to review the revisions proposed in Section 4.0 and 6.0 of the draft Revision 4 of Volume 1 and see if some of the more contentious material could be removed. He will prepare something for review and discussion at the August meeting.

The proposed revision to Section 5.0 of Volume 1 was reviewed (and slightly revised) in the Focus Group meeting held in June, but all of the subsequent sub-sections in Section 5 have not yet been discussed.

After discussing the proposed changes to Sections 4.0 and 6.0 to Volume 1, the Focus Group Chair noted the time for closing the meeting was at hand. Hearing no objections, the Focus Group Chair adjourned the meeting at 4:26 PM.

The next meeting is scheduled for August 21, 2012 at 2:00 PM in 2420 Stevens, Room 308.