

**SWGDRUG Meeting Minutes**  
**Boston, MA**  
**July 5-7, 2011**

**Core Committee Members (present):**

Scott R. Oulton, Chair, Drug Enforcement Administration  
Sandra E. Rodriguez-Cruz, Secretariat, Drug Enforcement Administration  
Suzanne Bell, West Virginia University  
Michael Bovens, European Network of Forensic Science Institutes  
Sylvia Burns, Private Forensic Consultant, England  
Garth Glassburg, American Society of Crime Laboratory Directors  
Linda Jackson, Mid-Atlantic Association of Forensic Scientists  
Richard Laing, Health Canada  
Jack Mario, Northeastern Association of Forensic Scientists and American Society for Testing  
Materials  
Jerry Massetti, Northwestern Association of Forensic Scientists and California Association of  
Criminalists  
Christian Matchett, Southern Association of Forensic Scientists  
Richard Paulas, Midwestern Association of Forensic Scientists  
Robert Powers, Connecticut Department of Public Safety  
Catherine Quinn, Victoria Forensic Science Centre, Australia  
Scott Vajdos, Southwestern Association of Forensic Scientists  
Udo Zerell, Bundeskriminalamt, Germany  
Eric Person, California State University, Fresno  
Angeline Yap Tiong Whei, Asian Forensic Sciences Network  
Pamela Reynolds, Federal Bureau of Investigation  
Karen Phinney, National Institute of Standards and Technology  
Adriano Maldaner, Iberoamerican Academy of Criminalistics and Forensic Studies

**Core Committee Members (not present):**

Iphigenia Naidis, United Nations Office on Drugs and Crime

**Guests:**

Conor Crean, United Nations Office on Drugs and Crime  
Andrea Placke, Note Taker, Drug Enforcement Administration

**TUESDAY, JULY 5, 2011**

Welcome/Introduction of New Members/Review of Conference Agenda

Scott Oulton welcomed the committee members and opened the meeting by introducing the invited guests, Adriano Maldaner, Conor Crean and Andrea Placke (note taker). Mr. Oulton outlined the agenda for the meeting which included continued work on the following items: Uncertainty examples (SD-3 and SD-4 documents), Education and Training sub-committee work on drug analysts' competencies, revision of Analysis of Clandestine Drug Laboratory Evidence document, and Reporting sub-committee work on reporting examples.

Mr. Oulton commented that the SWGDRUG budget for next year has been approved.

Mr. Oulton informed the committee members that the formatting and rules surrounding any possible SWGDRUG surveys are governed by the Federal Government Paperwork Reduction Act. Mr. Oulton is currently working on obtaining the appropriate authorization to format the SWGDRUG Feedback Mechanism Survey in a fashion that will allow for easier data compilation.

Mr. Oulton initiated a discussion describing how SWGDRUG recommendations are having an impact within the community. Additionally, the use of standard reference materials within the analysis of evidence samples was discussed. Several committee members noted that analyzing the reference material may be done either for quality control purposes or for identifying the unknown sample and, therefore may be done concurrently with the individual sample or at some other time. After further discussion, the group agreed that it is not necessary to analyze the reference materials and samples at the same time, provided that a quality system is in place. An appropriate quality system would include documentation verifying the performance of the instrument used during analysis and data showing the reference material had been previously analyzed under the same conditions as the sample.

#### SWGDRUG Feedback Mechanism / Public Comments

Linda Jackson presented preliminary results from the SWGDRUG Feedback Mechanism, which closed last week. Ms. Jackson mentioned a wide variety of responses were received, many of which specified a need for training modules. Ms. Jackson indicated she would go through all the responses received and present them to the core committee members later in the week.

#### Analysis of Clandestine Drug Laboratory Evidence Document / Public Comments

Christian Matchett summarized the public comments received for the clandestine laboratory document which had been posted for public review. The comments were discussed amongst the core committee members. In particular, the committee discussed the issue of reporting theoretical versus actual yields. The final consensus of the group was that the reported value, theoretical or actual, should be accompanied by a full explanation of its meaning and purpose. Mr. Matchett then indicated the sub-committee would review the comments received, including the glossary and training sections. A final vote on the published document should be possible by the end of the meeting.

#### Uncertainty Sub-Committee Update/SD-3 Public Comments

Dr. Suzanne Bell updated the core committee on the SD-3 document and the comments received from the public. Questions relating to correlation coefficient calculations and values were addressed, among others. Mr. Oulton indicated that SWGDRUG has consistently been recommending a conservative approach to uncertainty calculations. Dr. Bell stated that the document was reasonable and fit for purpose. Included below are comments received from the public and the uncertainty sub-committee's responses:

- **Comment:** For uncertainty due to the weighing process, generally 3 factors are taken into consideration: linearity of calibration of balance, the repeatability of weighing measurement and sensitivity of balance. The values for these 3 factors can be obtained from the manufacturer's technical specification for the balance. Alternatively, some labs

use the uncertainty from the annual calibration certificate. In this document, is there a double counting since the uncertainty from the balance calibration report is taken together with factors like readability, repeatability and linearity?

**Response:** There would certainly be some overlap, which in this example is accepted.

- **Comment:** As stated at the base of this table as a footnote (c): The value for the Repeatability was determined empirically in the laboratory. It would be good to elaborate how this is done for the benefit of those labs that are doing this exercise for the first time.

**Response:** Repeatability is defined in the document and we feel it is better to allow laboratories to design their own repeatability measurements based on their typical caseload.

- **Comment:** Refer to B.3 Calculations of combined standard uncertainty: The origin and how the "r" value is determined are vague. Labs may not know how to apply this "r" value.

**Response:** We clarified the term in the revisions to the document and have also added more references for laboratories to use if they wish to pursue further. Determining the "r" value empirically is not a trivial exercise.

- **Comment:** Refer to C Example 3: Static Weighing of a single item Using Control Chart Data in a Budget Method. In this example a control chart data obtained from a measurement quality assurance process that mimics casework samples as closely as possible is used. It would help if the document also explains what is included in this control chart and how labs can go about setting up this control chart.

**Response:** We felt that laboratories should design their own measurement assurance procedures and develop their own control charts base on their situation and case load. For example, if a balance is used exclusively for marijuana cases, the measurement assurance samples might be different than those for a balance used primarily for powders.

- **Comment:**  
It would also be useful if SWGDRUG came up with the following guides:  
(1) Measurement Uncertainty for volume Determinations  
(2) Measurement Uncertainty contribution from the calibration curve.

**Response:** We are working on a quantitative document that will address point 2; we will consider point 1 at a later date.

Dr. Bell indicated that the sub-committee will continue working on the uncertainty examples for quantitative results (SD-4). The uncertainty sub-committee is expecting to complete the weight examples (SD-3) and have them ready for vote by end of this meeting.

### Education and Training Sub-Committee Update/Direction

Richard Paulas provided an update from the Education and Training sub-committee. The use of online meeting resources was discussed as a supplemental tool for collaboration in between core committee meetings. These could be useful for developing, discussing and editing documents. The Education and Training sub-committee has met on a couple of occasions using online media since the last meeting.

Mr. Paulas and Dr. Person discussed the concept of a website which would provide training materials, such as journal articles, manuals, hyperlinks, discussions, equations, images, and videos. The idea of a specific webpage was presented by Dr. Person. He had researched different providers and presented a brief demonstration of a website he created. The core committee discussed the possible future contents of the page (e.g. law enforcement sensitive materials versus training tools for the general public), access issues and permissions, goals of the site (e.g. primary or supplemental training, reference material for training officers) and the possibility of contributors from the forensic science community (e.g. practicing technicians and scientists, professors and students). Concerns raised by the group included the site being a living document and therefore anyone could post information, and because of this, plagiarism or inappropriate use of sources may be an issue. A "pilot" program following the ENFSI outline was suggested. The Education and Training sub-committee members were tasked with writing instructions for contributors, providing an outline for content of the site and examples. The sub-committee will present another update at end of meeting.

### ENFSI/DWG Update

Dr. Michael Bovens offered an update from the European Network of Forensic Science Institutes Drugs Working Group (ENFSI/DWG). Dr. Bovens commented on the last ENFSI meeting in May 2011 and the two documents generated pertaining to training and reference materials. These documents will be available to the public via the ENFSI website. Dr. Bovens also discussed the preparation of a new quantitation sampling guideline which will be an EU funded project. The first draft should be ready by next year. Another ENFSI meeting is scheduled for the end of 2011.

### Current Designer Drugs in Switzerland/Europe

Dr. Bovens provided the core committee with an update on designer drugs in Switzerland. Some of the compounds he discussed included synthetic cannabinoids, tryptamines, phenethylamines, piperazines, and opiates. Dr. Bovens indicated that new designer drugs, such as the spice compounds, were developing quickly and most are being seized by customs agents. Most of these compounds are being bought and sold over the internet, not on the street as other drugs. Dr. Bovens discussed these new compounds and their legal status in Switzerland and Europe. Dr. Bovens also stated that labs within Switzerland exchange mass spectral data information as well as utilize the library databases from ENFSI and SWGDRUG.

### Brazil Federal Police Presentation

Adriano Maldaner provided core committee members with an overview of the Brazil Federal Police. Mr. Maldaner discussed their organization and distribution of laboratories, the type of equipment available and how they are continuing to grow and

evolve in order to confront the current drug situation in his country. Mr. Maldaner works for the Brazilian Federal Police in Brasilia and he is also the current chair of the Drug Working Group of the Iberoamerican Academy of Criminalistics and Forensic Studies (AICEF). Mr. Maldaner also discussed how all federal labs in Brazil are accredited, although accreditation is not a requirement at this time. Mr. Maldaner indicated that all 34 federal laboratories use SWGDRUG recommendations as minimum policy standards.

### Core Committee Open Discussion

General discussion topics included:

- The challenges of new designer drugs such as synthetic cannabinoids and bath salts including lack of reference materials, scheduling/legislation, and analogs/homologs.
- Recent U.S. Supreme Court rulings affecting forensic science.
- Court challenges in controlled substances analysis.
- Court challenges in blood alcohol analysis regarding Uncertainty of Measurement.

Mr. Oulton asked core committee members for suggestions on how to provide feedback to forensic community members that have provided comments when documents are posted on the SWGDRUG website. A discussion ensued and the core committee agreed and emphasized that community comments are important and will therefore be addressed. The chairs of the sub-committees agreed to provide summaries of discussions and comment responses to be included within the SWGDRUG meeting minutes.

### Sub-committee Break Out

The core committee members broke out into their respective sub-committees for the remainder of the day.

## **WEDNESDAY, JULY 6, 2011**

### ASTM Update

Jack Mario provided an update on ASTM. Mr. Mario announced that the SWGDRUG uncertainty recommendations document successfully made it through the ASTM ballot process. The new ASTM standard practice should be available for purchase from the ASTM website by the end of the week. Mr. Mario emphasized that the ASTM document and the SWGDRUG recommendation remained very similar and in agreement. Mr. Mario also commented on the possibility of a future ASTM document (standard practice) addressing the analysis of clandestine laboratory samples. Mr. Mario finished by providing information regarding current on-going balloting to update the ASTM terminology standard, which included recent SWGDRUG definitions. This standard is currently being discussed and will be up for vote later in the year.

### SWGDRUG Update

Sandra Rodriguez-Cruz presented an update on SWGDRUG website communications and the SWGDRUG MS library. Dr. Rodriguez-Cruz commented on the positive feedback received from users of the SWGDRUG MS library. Dr. Rodriguez-Cruz shared

communications with the committee members, including emails from the community. It was decided by the group that the MS library will continue to be available in a variety of formats. Updates to the library were also discussed.

Posting a comprehensive list of all compounds within in the library on the SWGDRUG website was discussed by the core committee. Generating a list with new compound additions was also suggested. Dr. Rodriguez-Cruz indicated that with the new NIST platform an automatically populated list, possibly both by structure and in alphabetical order, may be possible.

Dr. Rodriguez-Cruz also presented statistics from the SWGDRUG website, including number of visits and page loads. A significant increase over the past 6 years was noted and so far this year there has been an increase compared to last year.

Mr. Oulton initiated a discussion on the possibility of a SWGDRUG IR library, similar to the MS library. Concerns were raised, including the differences in spectra when using salt pellets vs. ATR for data collection and the use of library spectra in lieu of a reference material. SWGDRUG core committee members agreed that the use of verified reference materials is still strongly recommended. However, committee members also believe addition of a SWGDRUG IR library would be very useful.

#### Sub-committee Break Out

Core committee members broke out into their respective sub-committees.

#### SWGDRUG Feedback Mechanism Update

Ms. Jackson presented the results compiled from the feedback mechanism. A total of 56 responses were received, with 37 complete forms received. Overall, the responses received were positive, and those responding consider SWGDRUG an excellent resource. Most responders indicated that their laboratories consider SWGDRUG recommendations during the establishment of their policies and procedures. Results also indicate that SWGDRUG meets the needs of the community. It was noted that the main suggestion for future SWGDRUG projects was to put together more training aids and modules. Additional information for uncertainty, including practical tools, examples, and an uncertainty calculator are also desired. Mr. Oulton will work to get the permissions necessary for a multiple choice survey, as opposed to the open-ended questionnaire. Mr. Oulton thanked Ms. Jackson and the entire group for their hard work. Mr. Oulton emphasized that the feedback from the community is very valuable and that he would like for SWDGRUG to continue with the practice. Multiple core committee members emphasized that SWGDRUG has a responsibility to the community to address the responses, which may be done through the meeting minutes or possibly addressed on the SWGDRUG website.

#### Assignments for Thursday

Mr. Oulton passed out two documents for the core committee to review overnight. These are the latest drafts of Uncertainty Examples for Drug Weights (SD-3) and the Analysis of Clandestine Drug Laboratory Evidence. Mr. Oulton indicated both of these documents

will be discussed on Thursday. Mr. Oulton then asked for the Uncertainty, Clandestine Laboratory, Training and Reporting sub-committees to be prepared to give updates to the core committee on Thursday.

## **THURSDAY, JULY 7, 2011**

Mr. Oulton welcomed Eric Person, Angeline Yap Tiong Whei, Pam Reynolds, Karen Phinney and Adriano Maldaner as official members of the SWGDRUG core committee.

### Uncertainty Sub-committee Update

Dr. Bell reviewed the SD-3 document page by page with the core committee. Dr. Bell emphasized the sub-committee addressed both the NIST suggestions and public comments. Dr. Bell stated that references will be added to the document and the document revision date will be updated. The core committee reviewed and edited the document thoroughly. It was reiterated that the most conservative approach was taken when calculating the uncertainty values. It was decided additional references for the calculation of the correlation coefficient will be added to the document. The core committee discussed significant figures, rounding and truncating. It was noted that this document provides the calculations; however, the manner in which the numbers are reported is up to each individual laboratory's policy.

Garth Glassburg made a motion to accept the SD-3 document, pending editorial revisions, into the SWGDRUG recommendations. Ms. Cate Quinn seconded the motion.

All present committee members unanimously voted to approve the motion.

Dr. Bell also updated core committee members on the progress of Uncertainty Examples for Drug Purity Determinations (SD-4). Sub-committee members will continue working on the document during the next couple months. It is expected for SD-4 to be ready for presentation to the core committee during the next SWGDRUG meeting, after which the document will be sent out for public comments.

### Clandestine Laboratory Sub-committee Update

Mr. Matchett reported that the clandestine laboratory sub-committee focused their discussion and revisions on comments received from the community, which included reporting theoretical versus actual yields, clarifying practical experience needs for training programs, changing wording from "upper level recommendation" to more common place language, defining the term "capacity", limiting the scope of the document to bench analysis versus on-site issues, deciding which terms to include in the glossary, and clarifying the recommendations for technical review of verbal conclusions. Mr. Matchett then reviewed the entire contents of clandestine laboratory document with the core committee members. The core committee revised and edited the document.

Garth Glassburg made a motion for the SWGDRUG core committee members to accept the Analysis of Clandestine Drug Laboratory Evidence document and for it to be

included, pending editorial changes and sub-committee final review, as Part III C of the SWGDRUG Recommendations Edition 6.0. Scott Vajdos seconded the motion.

All present committee members unanimously voted to approve the motion.

#### Reporting Sub-committee Update

Dr. Powers provided the core committee with an update on the laboratory reporting examples. Reporting examples currently being developed include both minimal and extensive reporting formats, which will be included in a Supplemental Document. The Reporting sub-committee members want to provide several options to the community for reporting their analysis results. Mr. Powers indicated that the sub-committee should have these examples ready for the next SWGDRUG meeting, when the documents will be ready for edit and review. The core committee agreed with the direction of the Reporting sub-committee. It was noted that the reporting examples should be mindful of the UNODC, ENFSI and SWGDRUG guidelines. Udo Zerell offered his assistance in collaborating with the sub-committee on formatting the examples.

#### Education and Training Sub-committee Update

Dr. Person presented an update on the progress made with the webpage. Dr. Person discussed the proposed future direction of the website with the core committee members. It was agreed that the future page will follow the ENFSI outline for training and each section and will be populated by volunteer contributors from the forensic community as well as from academia. Four user levels will be established for the site, including readers, contributors, editors and administrators. The URL will be moved to the SWGDRUG account, access settings will be changed as appropriate, detailed instructions will be provided for contributors and finally invitations will be sent out for contributions. The core committee members agreed with the general direction of this project by the Training and Education sub-committee. Multiple core committee members reiterated the importance of maintaining control of the site and including disclaimers. Mr. Oulton indicated he would like to see the site active by the next meeting, and at that time the content and process will be reviewed and altered, as needed. Mr. Oulton also advised core committee members regarding invitations to future contributors to the page. Editors may be responsible for sending out acknowledgements and recognizing all main contributors. Multiple core committee members commented on the positive impact SWGDRUG could have on the community by providing such a training tool.

#### Core Committee Open Discussion

Angeline Yap Tiong Whei proposed the idea of providing retention index numbers for new designer drugs added to the SWGDRUG MS library. Dr. Yap Tiong Whei believes this could be a useful additional tool for those unique compounds for which reference materials are difficult to obtain. Mr. Maldaner indicated this would be a very useful tool especially for laboratories with limited resources. The idea was discussed amongst the core committee members and it was decided that the project should move forward. Dr. Yap Tiong Whei and Mr. Vajdos will collaborate on this subject.

Dr. Rodriguez-Cruz and Dr. Burns initiated a discussion regarding the verification of reference materials when the material can only be obtained from one vendor and no

previous literature data is available. Current SWGDRUG Recommendations indicate the purchaser of the material must verify its identity prior to use. Dr. Rodriguez-Cruz suggested that a future revision of the SWGDRUG Recommendation may be necessary in order to address this issue.

Mr. Maldaner thanked SWGDRUG committee members and emphasized his country's desire to maintain open collaboration with the organization. Mr. Maldaner also indicated that experts at his laboratory are allowed a 3 month continuing education experience in another country. Mr. Maldaner expressed his interest in establishing contacts for possible host positions for Brazilian drug analysis experts. Mr. Maldaner emphasized the importance of these opportunities for the future progress of Brazil's crime laboratories.

Close out

Mr. Oulton thanked all core committee for their hard work and dedication during this week. Mr. Oulton also thanked Dr. Rodriguez-Cruz for all her hard work and dedication during the organization of the meeting, and Ms. Placke for taking meeting notes. Mr. Oulton finished by thanking all sub-committee chairs and international guests and members. The next SWGDRUG meeting is tentatively scheduled for the week of January 9-13, 2012.

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Notes were respectfully submitted by Andrea Placke on July 25, 2011.