

Distribution Date:  
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Minutes  
American Petroleum Institute  
COMMITTEE ON REFINERY EQUIPMENT  
RISK-BASED INSPECTION SOFTWARE USER GROUP  
September 1, 2005  
Marriott Greenspoint, Houston, TX

**ATTENDEES:**

M. Geisenhoff – CHAIRMAN, Flint Hills Resource Group	S. Haines – Amerada Hess
G. C. Alvarado – Equity Engineering	P. A. Henry – Equity Engineering
M. Badeen – ConocoPhillips	L. C. Kaley – Equity Engineering
J. Britton – DNV	D. Lindballe – Petro-Canada
J. Bumgarner – Placid Refining	H. E. Mead – Shell Global Solutions
S. Campbell – Irving Oil	S. Pinca – Instituto Italiano della Saldatura
K. Carnahan – Suncor Energy	T. Poulassichidis – Dow Chemical
R. Costa - ISQ	B. D. Ray – Marathon Ashland
A. Correia da Cruz – ISQ	J. R. Riley – Chevron
P. Eckhardt – Valero Aruba	C. Roberts – Total Petrochemicals
C. B. Eckstein – PETROBRAS	E. Sanchez – Berwanger
R. Goderie – Dow Chemical	R. Sitton – Berwanger
R. A. Goodman – API	C. Tinkle – Total Petrochemicals
K. Gottselig – Lyondell Chemical	K. L. VanLoon – ConocoPhillips
	H. D. S. Werneck – PETROBRAS

**1. OPENING AND INTRODUCTIONS**

Mark Geisenhoff called the meeting to order at 8:30 a.m. The meeting attendance sheet is attached as Attachment 1.

**2. APPROVAL OF AGENDA**

Scheduling of the next meeting was moved after approval of the previous meeting minutes and the Software Working Group Update was moved to beginning of Item 6. The meeting agenda (Attachment 2) was approved as amended.

**3. APPROVAL OF MINUTES FROM PREVIOUS MEETING**

The committee approved the minutes from the February 23-34, 2005, meeting as distributed. These minutes can be found on the API RBI website at:  
<http://committees.api.org/standards/cre/scrbi/mtginfo/mtghm.html>.

#### 4. NEXT MEETING

An RBI Steering Committee conference call will occur on January 17, 2006 from 9:00 a.m. – 11:00 a.m. CST. The next User Group Meeting will be held on February 22, 2006 in Houston, TX. The location of the meeting will be determined at a future date.

The next working group meeting will be held on January 17, 2006 from 12:00 p.m. – 4:30 p.m. and January 18, 2006 8:30 – 4:30 p.m.

#### 5. SOFTWARE ISSUES

- A. Software Working Group Update – Ken Gottselig reported that the new release seems to be performing as planned in the training session. Ken reiterated that future technology improvements or new equipment/technical modules will not be added to the software until documentation and the balloting process by the User Group is complete.
- B. Release of Version 7.0 – Mark Geisenhoff reported that the two day training on V7.0 (held on August 30-31) went very well. The software is working as designed and additional tools to help the user are now available (e.g. database browser, synchronization and import/export tools). The training course was intended for company RBI champions in order to provide the internal support to upgrade to V7.0. Lynne Kaley issued CD's with the production version of the V7.0 software. Additional copies of the software can be downloaded from Equity's website at [www.equityeng.com/distribution/downloads/](http://www.equityeng.com/distribution/downloads/).

The SCARAB site for tracking the status of software issues will be set-up for the User Group. This site will be available for all users to view other software issues and look for resolution and version information. It will not be editable by users. Any user findings will still be submitted to E<sup>2</sup>G (Lynne Kaley at [lckaley@equityeng.com](mailto:lckaley@equityeng.com)) and entered on the site by the E<sup>2</sup>G administrator. All software related issues **must** be submitted with a complete input file demonstrating the comment.

- C. Software Validation Testing – Lynne Kaley presented the results of the validation study that compared the results between software versions 3.3.3 and 7.0 (see Attachment 3). Conclusions of the validation study were:
1. Good correlation was found between V3 and V7, except where differences were expected.
  2. Initial differences in V3 programming and documentation generated different consequence area results from V7. Once modifications were made to reflect actual V3 equations, good correlation resulted.
  3. Changes to ar/t and DF calculations for thinning mechanisms generate larger DF than V3.
  4. Average Risk values in V3 ranged from 20-30 ft<sup>2</sup>/year. Comparable risk levels in V7 averaged 90 ft<sup>2</sup>/year, primarily due to higher thinning DFs noted above.
  5. New equipment modules (tanks, bundles, PRDs) and the consequence modeler were not a part of this validation study.
  6. Inspection planning module returns comparable inspection recommendations, except where differences were expected (thinning DF).

Jim Riley noted that the material of construction library that Equity has provided as a part of the API software is a state of the art library that he is not aware is available through any other source. Ken Gottselig and others noted that this may be the time to add other material specifications to the software beyond ASTM.

***ACTION: International User Group company representatives to recommend appropriate standards that need to be added to API RBI as well as the database information for consideration at future meetings.***

Ken Gottselig raised the question if it was time to compare the results of the new consequence modeler to V3.3.3. It was concluded that a calibration of the new modeler, rather than a validation, is required.

***ACTION: Equity to provide a proposal for the consequence modeler validation and calibration, as necessary, for the next User Group meeting.***

- D. IT Administrators Working Group – Ken Gottselig explained some of the problems experienced by Shell when installing the software on a network. Shell's difficulties raised the problem of the project not having allocated the resources to address these types of installation problems. It was concluded by the Steering Committee that a task group of IT administrators from should be formed to help the project scope the problem and suggest possible solutions. The objective of this task group is to identify the networking issues experienced, isolate company-specific installations and develop a plan to resolve these issues. It was also noted that the annual User Group fees might require adjustment to pay for technical assistance for network installations.

***ACTION: Each User Group company should nominate one of their IT personnel to serve on the task group. Nominations should be sent to Ken Gottselig ([ken.gottselig@lyondell.com](mailto:ken.gottselig@lyondell.com)) and Roland Goodman ([goodmanr@api.org](mailto:goodmanr@api.org)) by November 1, 2005.***

***ACTION: Equity to provide a proposal, as needed, for IT Network support as a part of the new contract for User Group support.***

- E. Software Project Plan for 2005 – Lynne Kaley presented the current project plan for software development (see Attachment 4).

## **6. USER GROUP BALLOTING PROCESS**

Roland Goodman explained the importance of each User Group voting member returning their ballots on equipment and technical modules. The last few ballots issued have not achieved the required level of consensus because a lack of returns. It was agreed that the best way to address this problem is to limit the consensus body (i.e. voting members) to those companies and individuals that are interested in a particular module.

## 7. INTERNATIONAL ACCEPTANCE OF API RBI

Greg Alvarado presented a summary of international regulatory issues and some of the issues surrounding extending the use of API RBI internationally. It was decided that a task group was needed to recommend a direction for international exposure and marketing of the API RBI approach. The objective of the group would be to provide an API RBI international focus with the goal of providing existing User Group members with the means to promote and use the tool internationally within their companies.

***ACTION: A working group will be formed to establish priority countries to focus on. Roland Goodman, Greg Alvarado, Ken Gottselig John Reynolds, Antonio Cruz and Rene Goderie volunteered to work on this group.***

## 8. TECHNICAL WORKING GROUP

- A. Technical Working Group Update – Hearl Mead presented the current actions of the Technical Working Group (TWG). Hearl requested more User Group members participate in reviewing and developing modules to help meet the project deadlines. See Attachment VI for more detail on the status of each individual module.
- B. Ballot and Technical Approval Process & Discussion – Hearl Mead reminded the group that no changes would be made to the software until documentation has been completed and approved through the ballot process. Each company needs to reply to each ballot in order for the process to work.
- C. Damage Module Status – Hearl Mead reviewed the current resource plan for future module development (Attachment 5). The development should accelerate since resources are available from software testing. Work will be completed depending on the availability of TWG members to lead individual activities.
- D. New Equipment Module Status – The new equipment modules are available in V7.0 but validation testing has not been performed to date.
- E. Consequence Modeler Status – Phil Henry indicated that the new consequence modeler is in Version 7.0. Phil asked the users to test the new model, paying particular attention to results you receive when modeling a cloud resulting from a small release. It was recommended to the users that use of the consequence module should be done on a unit basis. The user should not mix and match old and new consequence results until validation and normalization testing has been completed.
- F. BRD Update – Lynne Kaley reported that the BRD rewrite completion is planned for the end of September. The ballot process should be started in October and is projected to be complete in January of 2006. All sections of the BRD will be balloted to target groups at the same time. Follow-up to assure review and ballot returns will be done by email and phone in order to accelerate the process.

## 9. NEW FLUID PROPERTIES PROPOSAL

The User Group approved the proposal with future fluid listed in the proposal (see Attachment 6).

***ACTION: Equity will work with a small group of UG members to finalize the list of 100 fluids +/- 10 fluids.***

## 10. NEW BUSINESS

Jim Riley reported that during their discussions with California regulators a question was raised about whether the effectiveness of RBI had been validated. Jim asked how we would approach this type of validation for API RBI. It was recommended that an API RBI validation report be developed using test results and data from past validation work.

***ACTION: Lynne Kaley will gather and compile data from past work and recommend a plan for communication of the results of this activity at a future meeting.***

## 11. ADJOURNMENT

Having no additional business, the meeting was adjourned at 3:10 p.m.

Respectfully submitted,



Roland A. Goodman  
goodmanr@api.org