

**IUPAC Committee on Chemistry and Industry (COCI)
Annual Meeting
Ottawa, Ontario, Canada
11 August 2003**

Present:

A. Nelson Wright, Chairman	12539 Rue Ranger, Montreal, PQ, Canada
David Evans, Vice Chairman	Berry Hill, 6 Gong Hill Dr., Lower Bourne, Farnham, Surrey, UK
Mark Cesa, Secretary	BP Chemicals Inc., USA
Daniel Bernard	Atofina, France
Michael D. Booth	Chemical and Allied Industries' Association, South Africa
Paul De Bievre	President, National Committee on Chemistry, Belgium
Michael Droescher	Degussa AG, Germany
Colin Humphris	CEFIC, Belgium
Akira Ishitani	Kanagawa Academy of Science and Technology, Japan
Nedyalko Popov	Lukoil, Bulgaria
Alan Smith	Hydowns Farm, Woodlands, Wimborne, Dorset, UK
Jonas Unger	Ungernet AB, Sweden

Guests:

Alan Hayes	Past President, IUPAC
Christof Buxthorf	Treasurer, IUPAC
T. Charles Gwaza	Safety Training Program Fellow, Nigeria
Kelvin Khisa	Safety Training Program Fellow, Kenya
Esma Toprak	Safety Training Program Fellow, Turkey
Laura Abernathy	IUPAC Secretariat
John Bradley	Committee on Chemistry Education, IUPAC
Peter W. Atkins	Chairman, Committee on Chemistry Education, IUPAC
Alexandre Pokrovsky	Division of Basic and Engineering Sciences, UNESCO

The meeting convened at 9 AM.

Agenda Item 1 – Welcome/Introduction of Dr. David Evans, Vice-Chair and Chair-Elect; Ottawa Events

Wright introduced Dr. David A. Evans as the newly appointed Vice Chairman, who will become COCI Chairman as of 1 January 2004. Dr. Evans is recently retired, and was Director of Research and Technology worldwide for Syngenta, the world's largest agrochemical company.

All attendees and their spouses were invited to the COCI dinner on Monday evening, August 11, at The Keg in the Bytown area of Ottawa.

Agenda Item 2 – Membership List; New Nominees

Also introduced were Michael Droescher of Degussa AG in Germany, Colin Humphris of CEFIC, Daniel Bertrand of Atofina in France, and Nedyalko Popov of Lukoil in Bulgaria. Bernard is an Observer at this meeting and has been nominated by the NAO of France for membership in COCI. Popov has been nominated by the Bulgarian NAO, and Dr. Alexandre

Pokrovsky has been nominated for Titular Membership by the NAO of Russia. See the Program Book for further information on nominees.

Resignations were received from Senti, De Bievre (as of end 2003), and Qiao. Alles, an observer from Uruguay, was unable to attend due to financial reasons. Chon was expected for part of the meeting, and Gorelik was expected to arrive later in the week.

Wright noted the passing of Prof. Miyamoto.

Other attendees included Dr. Christof Buxthorf, IUPAC Treasurer, and Dr. Alan Hayes, past president of IUPAC.

ACTION: COCI Members, representatives, and observers to make changes as necessary to their personal information in the membership list – Notify Secretary ASAP of any changes.

Agenda Item 3 – Finalization of the Agenda

Atkins requested that education –related action items, including DIDAC, be covered earlier in the day to accommodate CCE guests. Further discussion on CCE matters will be moved to Tuesday afternoon's joint COCI-CCE-CHEMRAWN meeting, including:

- UK resolution
- DIDAC
- Public Perception of Chemistry
- Chemistry Olympiad

Dr. Evans will represent COCI at CCE for this General Assembly.

Agenda Item 4 – Approval of Minutes of Sundsvall Meeting

Minutes approved as written.

Agenda Item 5 – 2002/03 Updates to Members

Dr. Wright referred attendees to the program book for updates on COCI activities.

Agenda Item 6 – 2002/03 COCI Reports to/from IUPAC

Wright reviewed his COCI report to council as it appears in program book. Cesa reported a few minor corrections to STP materials. Wright noted Fabienne Meyers' upcoming move from Research Triangle Park to Boston for family reasons. She will continue in her role at the Secretariat.

Agenda Item 7 – Company Associates

a. State, Solicitations, etc.

Wright reported that all CA's are now receiving Certificates from IUPAC. Please refer to the program book for Wright's activities to recruit new CA's in Canada.

Several representatives reported on CA activities in their home countries. Ishitani reported on CA situation in Japan. Ten of the 40 Japanese CA's sent representatives to the most

recent annual CA meeting. CA's are kept informed with letters from time to time on COCI and IUPAC activities. Four young observers were sent to the 2003 GA from Japan with financial contributions from CA's. Ishitani is also working to involve more CA's in the Safety Training Program – Sankyo participated in 2002. Pharma and polymer manufacturers are being considered. Complicating matters for COCI in Japan is the perception of IUPAC as an academic organization; the Japanese Science Council has a chemistry committee with 61 members, all university professors with the exception of Ishitani.

De Bievre reported that a recent meeting with Belgian CA's had limited success. A common question among industrial personnel was how industry benefits from IUPAC. Belgium has potential for greater industrial involvement with its high concentration of chemical industry near Antwerp.

Smith sends CA's the minutes from COCI and CHEMRAWN meetings via the RSC. He has experienced difficulties in publishing on IUPAC matters in *Chemistry in Britain*. A publication on the RSC's contributions to IUPAC is to be issued.

Booth reported that there is currently only one CA, Sasol, from South Africa, and also that similar comments on IUPAC contributions to industry were heard. He commented that a brochure from IUPAC (a new one has been prepared) is not sufficient –personal contact is also necessary. Booth has been active in organizing safety activities, and he has noted the importance to industrial participants of the issues of proprietary technology and secrecy.

Evans noted that IUPAC's nomenclature contributions and its monograph on endocrine disruptors are examples of frequently used as resources in the pharmaceutical industry. He reported that one of the new Titular Members to COCI will be responsible for CA's, including keeping CA's informed, for example through NAO's. A task force is under consideration to identify ways to provide benefit to CA's, an effort which will take time.

The question of the possible role of trade organizations in interactions between COCI/IUPAC and industry was discussed. Humphris commented that even within CEFIC it is difficult to assure proper representation of industry's interests. There is a continuing effort to make sure industry is properly represented. He noted that the IUPAC strategic plan does not contain strong language about representing industrial interests. He also mentioned that IUPAC should be more proactive about publicizing its contributions. Humphris suggested that IUPAC/COCI use organizations such as CEFIC to assure alignment with industrial interests.

b. Communications with industry, and IUPAC Communications in General

Laura Abernathy, in her role as communications specialist at the IUPAC Secretariat, offered her services to help disseminate information on IUPAC to CA's, and offered free advertising to CA's in *Chemistry International*. Evans reported that one issue in common among companies he has contacted to date is the focus upon government regulations that impact their operations, and whether IUPAC activities can assist in introducing some balance into the current issues. Smith asked whether any new brochures or pamphlets were being prepared. Unger urged consultation with COCI members to prepare new materials.

ACTION: Members are to use Laura Abernathy's office as resource to send information to CA's; e-mail at laura@iupac.org.

Agenda Item 8 – IUPAC-UNESCO-UNIDO Safety Training Program

Cesa gave a summary of the status of the Safety Training Program. Three trainees are expected to receive training at BP Chemicals in the USA in October, and up to four others may be placed at CA's in Europe and Japan during 2004. An article on the Program's activities in 2002 and beyond will appear in the November issue of *Chemistry International*.

Pokrovsky reviewed status and plans for contracts to provide UNESCO support for trainee travel. He reported that universities could be good training locations for the Safety Training Program, and that, for example, in Botswana there is a good infrastructure among universities that can be used in the future (2 to 4 years from now) to expand on the Program. There was also discussion on how the trade associations can contribute to the Program by identifying Host Companies, expanding their efforts in their regions, and identifying trainees. De Bievre reported on his meeting with the Federation of Belgian Chemical Industries to identify possible Belgian host companies.

Pokrovsky proposed a possible IUPAC project to expand the Safety Training Program into new EU member states. He noted that substantial funding might be available for such a program into 2004 and beyond. This program should be proposed for 5 –6 countries, including Hungary, the Baltic States, the Czech Republic, Montenegro, and Serbia. IUPAC would prepare a proposal according to the standard for EU projects, with October as time frame for completion, to focus on expansion of the Safety Training Program, involving intergovernmental organizations. There would be consultation with CEFIC and others on preparation of the proposal. NGO's would handle the project implementation phase. Unger reported on prior CEFIC involvement in safety-related projects in the 1990's.

There was considerable discussion on publicizing the Safety Training Program and on dealing with the media in general. Suggestions are incorporated in the action items below.

The three Safety Training Program fellows in attendance at the COCI meeting reported on their recent activities.

Toprak reported that as knowledge in safety advances, safety is becoming more popular, and her job is getting easier. The concept of safety is now in students' and workers' minds and is becoming evidenced in laws and regulations. She is working on a safety workshop for Turkey, in conjunction with UNESCO, at a University. She is also working on establishing procedures and reporting. In 2003-4 she will begin to give seminars in high schools (new activity) both in Turkish and English, and seminars to industrial companies as well, hopefully some day for a fee (to be donated to her university). She is starting to work with Ministry of Safety on issues of chemical transportation, handling, planning locations of new industrial sites, etc. As a summer trainer at B U., Toprak trains employees at many companies on HSE issues, and she notes that companies are now investing more in safety. However, still much more needs to be invested. The Turkish government now has a proposed budget for university safety issues throughout Turkey. She is preparing a new web site on safety for universities.

Gwaza noted the many challenges regarding safety in Nigeria. Challenge to translate ideas into reality. The key challenges are to translate ideas into reality - to make sure his learnings involve every part of his multinational company, Shell. He noted that the consequences of safety problems impact far beyond his home country. He is now disseminating part of what he's learned. Pokrovsky commented on the possibility of obtaining funding from Sasol, Gwaza's Host Company, for training activities in African countries such as Mozambique and Nigeria.

Khisa is expanding the Kenya National Cleaner Production Centre's program into professional health and safety practices in industry, based on his training experiences in Japan, which focused on new safety standards in Japan during 2001 and 2002. He is translating his learnings into Swahili with industrial funding. He identified fire as a key industrial risk, and he is working on placing fire fighting equipment and infrastructure in Kenya, including workshops (6 so far) for industry leaders. The main focus of these workshops is on awareness raising, worker safety, PPE, training. He has held several in-house training sessions at several companies. Next steps are to identify and carry out successful projects to show results. Several companies have expressed willingness to participate.

Pokrovsky proposed to do an evaluation of DIDAC materials in Kenya and to establish a separate 1 ½ day KNCPC workshop on environmental protection and toxicology. UNESCO will provide materials on toxicology education.

ACTION: Cesa, Wright, Pokrovsky to prepare contract for UNESCO travel support for 2003 trainees. This contract will have a six-month duration, and another contract will be prepared for funding by February 2004 for funding from March – August 2004.

ACTION: Wright, Cesa, Pokrovsky, Bradley to contact Michael Freemantle of C&EN at press room to publicize the Safety Training Program and DIDAC for possible publication and to explore possibility of article in *New Scientist* or other publications.

ACTION: Cesa to prepare presentation and poster on Safety Training Program for use at biennial safety meetings among company associations.

ACTION: Pokrovsky and Toprak to finalize details for workshop in Turkey in 2004.

ACTION: Pokrovsky and Khisa to develop Kenya workshop on environmental protection and toxicology.

ACTION: Evans, Pokrovsky to evaluate feasibility of EU project on safety training in new EU member countries.

Agenda Item 9 – Workshops on Safety in Chemical Production

Booth reported on the Workshop in China in 2002. He acknowledged the contributions of Wright and Qiao in preparing the way and organizing the workshop, and also acknowledged several COCI members for arranging for speakers. There was a good nucleus of speakers that could be drawn upon for future workshops.

Wright reiterated that format of several specific talks was nicely applicable. 150 persons attended the workshop, with appropriate levels of expertise and authority for the workshop. Safety Training Program fellow Zhang received his STP certificate at the workshop as well.

Agenda Item 10 – DIDAC

De Bievre reminded attendees of the symposium on DIDAC at the IUPAC Congress on Friday. Eddie Mihiels of AGFA is in attendance for the symposium. He mentioned that UNESCO has shipped 8 tons of DIDAC materials to date.

Pokrovsky summarized recent DIDAC activities. He made copies of all five volumes of DIDAC materials available for inspection at the meeting. The eight tons of DIDAC materials were sent to 98 of the 189 UN member countries. The next steps are to prepare 5000 copies of the CD-ROM form of DIDAC for distribution free in Africa, then to other countries. Also, the posters for the module on Water and the Atmosphere will be completed by the end of August, and a booklet for teachers and students to accompany the posters will be completed as well. All COCI members will receive a copy of DIDAC in book form for distribution to developed countries. Future activities, beyond the \$10K IUPAC contract for preparation of the CD-ROM, will include preparation of new modules for use at universities, and posting DIDAC on the Internet. Also, versions of DIDAC in Japanese, Korean, and Russian are either completed or in progress. Toprak offered to assist in translation of DIDA into Turkish. The U. S. State Department has asked Pokrovsky to collaborate with them on applications of DIDAC. To date \$250K has been spent, from various sources, on preparation and distribution of DIDAC. The Secretary General of UNESCO has expressed his pleasure with the DIDAC program.

Wright thanked Pokrovsky and the DIDAC team and reviewed COCI's role as catalyst for this activity.

Bradley noted that dissemination of DIDAC materials has been successful largely because of personal efforts by Pokrovsky and himself to visit recipient countries, particularly in Africa. On these visits they made presentations on DIDAC, and the personal efforts have made a big difference.

Atkins called DIDAC a tremendous achievement. He also suggested that a new CCE project be initiated to assess the efficacy of DIDAC materials in chemistry education around the world. In particular, he wants to assess whether a network of users will develop to disseminate and facilitate learning how to use DIDAC.

Bradley noted that only one set of materials has been delivered to each country at this point, usually in the capital city at a university or center of education. Assessment of DIDAC's impact will depend on what happens next, now that multiple copies can be distributed. He asked for suggestions on how to facilitate networking on DIDAC in these countries, and mentioned that support from IUPAC would be valuable to make sure that materials are distributed and used as intended.

Pokrovsky reported that DIDAC materials are being distributed to national centers responsible for education and for further distribution of the materials within their countries. He proposed a report at CCE Seoul meeting to assess how widely materials have been distributed and used. Atkins agreed in principle to a proposal for a report next January on activities in six African countries, and stated that UNESCO can contribute to an evaluation meeting in Kenya for some time after May 2004 if one can be organized.

Wright encouraged attendance at workshop on Friday.

There was considerable discussion on publicity for DIDAC. Wright suggested that, at the appropriate time, another article be published in *Chemistry International* to accompany the recent article. Pokrovsky reported that the IUPAC logo will appear on the DIDAC CD and books, along with the AGFA and UNESCO logos, and he noted that it will be important to get printed versions in all languages, with copies of each for UNESCO, IUPAC, and AGFA.

Smith offered to explore publicizing DIDAC through RSC connections on web sites. Other NAO's could participate similarly. A common web address would be needed for all materials in order to construct links on other Web sites.

Evans offered his congratulations on the program, and stated that COCI should continue involvement in the program along with CCE. He noted that the materials must support the syllabus in the countries where it is used, and suggested that modifications may be necessary to insure that DIDAC is consistent. Bradley observed that the DIDAC materials are a set of tools or resources not tied to a particular curriculum, analogous to the "Gold Book," which is also a resource or reference and not a curriculum. In that sense they are ideal for the work of IUPAC globally.

De Bievre noted that, after some financially difficult years at AGFA, during which they continued to support IUPAC efforts, they might now be able to become more closely involved again with DIDAC, particularly with assessment and follow-up activities, now that the materials are complete.

Unger urged COCI members to communicate with their own NAO's and industrial contact persons (CA's) on DIDAC as an example of how industry works together with IUPAC.

Evans would like to meet later to discuss more generally how to interact with industry. Industry is interested in improving education in chemistry. For example, there have been 290 new startup companies in the U. K. but projections suggest that as few as 100 new Ph.D.'s might be expected by 2010 – he would like to see IUPAC do more to involve industry and serve their needs.

Humphris asked as the CEFIC representative to COCI how CEFIC can participate. He mentioned the possible involvement of the Brussels organization AllChemie, comprised of CEFIC plus 4 other organizations. Their motto is, "Taking Chemistry to Society." The organization meets regularly with MEP's. A big issue of the organization is the perceived Distance of big issues from people. Unger distributed a brochure on AllChemie.

Atkins mentioned a resolution at Council to shift emphasis toward raising funds from Industry, and said it would be discussed further at the CCE meeting on Tuesday, with input from COCI. As an example of the kind of fundraising intended, see the major contribution of Samsung to IUPAC for organization of the 2003 IUPAC Congress.

ACTION: Wright asked Bradley to prepare article for CI on DIDAC progress.

ACTION: Pokrovsky and Atkins to organize review meeting in 2004-5 for the DIDAC program.

ACTION: Toprak to prepare proposal for \$2K of UNESCO funds for translation of DIDAC materials into Turkish. Cesa to provide official letter from COCI authorizing her to take on responsibility to have DIDAC translated.

ACTION: Ishitani to provide \$1K to prepare package of several sets of Japanese translation of DIDAC materials.

Agenda Item 11 – Cooperation with UNESCO

Examples of this cooperation are listed under Sections 8, 9, 10, and 11 of these minutes and in the program book. Pokrovsky promised to continue UNESCO support of COCI

programs (workshops, safety training program, others.) Future activities include: Safety Workshop in Turkey no later than Feb 2004; COCI Safety Training Program fellowship by Feb 2004; Safety Workshop in Kenya in 2004-5.

Agenda Item 12 – Follow-up to Previous Activities

a. Green/Sustainable

Wright and Evans believe that the term "green" continues to have negative political connotations, particularly in Europe. Evans dislikes "green" because he believes it has no definition and is therefore misinterpreted. Chemicals must be considered on case-by-case basis. See program book for further items on the topic.

b. Oestrogens/Endocrine Disruptors

Wright cited the late Prof. Miyamoto's efforts on the SCOPE/IUPAC project. See program book for further items on this topic.

c. Molecular Basis of Biodiversity

See the program book for further items on this topic.

d. McGill Office for Chemistry and Society

Several items are included in the program book from and about Patrick McDonagh, a writer active in popularizing chemistry in Canada.

e. Nobel Winners – More on George Porter

See program book.

Agenda Item 13 – Liaison with Other Committees/Divisions

a. Committee on Chemical Education (CCE)

Evans will either appoint a formal representative of COCI to CCE or act in this capacity himself.

b. CHEMRAWN

Chon and Smith are current COCI representatives. Smith reported on CHEMRAWN activities, including the CHEMRAWN XVI meeting on Saturday 9 August. A new CHEMRAWN is planned on Water.

c. Division of Chemistry and the Environment

A COCI representative to this committee will be needed.

d. Division of Chemistry and Human Health

De Bievre is the current COCI representative to CCH. He is working on an IUPAC project on traceability of measurement results. This work affects CHH and other chemistry

communities. With De Bievre's membership in COCI expiring at end 2003, a new representative may be necessary. Humphris asked for more information about traceability.

ACTION: Evans to appoint COCI representatives to CCE, CHEMRAWN, Division of Chemistry and the Environment, CHH.

e. CEFIC

Humphris is the current representative from CEFIC to COCI. He mentioned the issue of SCALE (see CHEMRAWN symposium) and whether the "cautionary principle will run riot" with its new emphasis on the effects of mixtures of chemicals on children's health. See the CEFIC articles in the program book. Industry is realizing society's negative impression on chemistry, which impacts industry's license to operate, the number of students studying chemistry, and public trust and the reputation of chemistry. CEFIC is focusing on where and how industry should respond (similar to ACC advertising efforts on trust and reputation.)

Droescher reported that 2003 is the German Year Of Chemistry. There will be several thousand events in Germany, including exhibitions on products (plastics), experimental demonstrations, and the like. See the GDCH home page also the VCI web site for details. He also reported that the number of students studying chemistry in Germany is increasing again after a drastic dip in early-mid 90s.

The decreasing number of chemistry students at universities is addressed on page 179 of program book – see the highlighted text.

Agenda Item 14 – Finance Subcommittee

a. Current Status

The program book contains information on the latest transactions and current balance. In the past COCI charged admission for workshops in developed countries as a source of income. COCI also spent \$30K for the special issue of *Pure and Applied Chemistry* on endocrine disruptors, including honoraria for speakers and reviewers.

b. Future, with IUPAC Biennium Budget

The biennial funding for COCI from IUPAC will begin in 2004. A suggestion was made to discuss the leverage gained by expenditures in COCI.

A treasurer will be needed from among titular members beginning in 2004.

ACTION: Evans to appoint treasurer from among Titular Members.

Agenda Item 15 – IUPAC/ICSU Funding of New Projects

COCI will need to propose new projects via IUPAC based on \$15K budget per biennium. We will need to understand the process better. As an example, see the Wright-Pokrovsky-Bradley proposal for \$10 K for the DIDAC CD-ROM.

It was also noted that IUPAC is part of ICSU, where further funding possibilities may exist.

Agenda Item 16 – New Project Suggestions

a. Public Perception of Chemistry

Evans summarized a presentation he prepared for the committee on this topic.

His goal is to make chemistry a preferred subject, in schools and in communities. He then suggested approaches that might be considered as IUPAC projects for the committee. It was considered essential to avoid duplication with the CCE initiative, where the focus was largely upon the educational aspects. The emphasis for COCI should be those aspects which particularly affect the chemical industry, and should involve related stakeholders such as government/regulatory and the media. In order to determine industry's needs, COCI will pursue demand-led projects initiated by persons who are COCI members, with a particularly important role to be played by CA's and national representatives. Evans proposes that the way to win is via the principles of the scientific method, through expositions of how science is done, explained via examples which are familiar to laypersons. Questionnaires show a low level of understanding of how science is done.

COCI's stakeholders include

Education – chemistry is an unpopular subject. Improving this requires serious study. This, Evans believes, is the job of CCE – we should assist CCE from industrial perspective.

Media – their requirements are to sell papers and ad time. Good news does not sell newspapers. In addition to promulgating success stories, we must explain our positions proactively and in the right way, and thus derive great long-term benefit.

Government – their efforts leading to regulation are a big common interest among COCI industrial reps Evans contacted. The principal need of politicians is to be re-elected. As an example, Evans mentioned a program called 626, in which every MEP in Europe was contacted by bioscientists on regulatory issues.

Scientists – we can be our own worst enemies in the way we present the results of our work. Often big new ideas or results are overstated, and other competing technological solutions to problems are denigrated. Evans advocates a return to the scientific method, as stated thus: Formulate proposition, and then do experiments to move to hypothesis to theory to law. Relate cause to effect by mechanistic studies. Report results for peer review during the process.

Public at large – want to see the benefits of science and to understand that scientists are committed to the public's need. We want public to appreciate science, not necessarily understand it in detail – it is arrogant for scientists to expect and demand that the public at large should understand their work.

There is a great deal of good work being done by chemists worldwide, and much duplication of effort results. COCI can take an assurance role to coordinate efforts and avoid duplication.

COCI will need help with its actions: from IUPAC for media relations; from CEFIC and other trade associations to help bring the scientific method to government actions. COCI must develop an implementation plan, with objectives and milestones, over long time scales.

Droescher emphasized the need to build links between academia and industry, including funding, resources, and finding persons who are committed and authoritative.

Smith pointed out that there are a great many activities under way around the world on improving public perception of chemistry. See the program book, p. 200ff, on activities around the world. De Bievre mentioned that the public sees chemistry as a polluter; but while fewer people study chemistry, only chemists can clean the environment. He also stated that the concept of experimental uncertainty needs to be properly used.

Humphris noted that industry will always be rocked by events; COCI can contribute through new initiatives to "combat those who work to instill fear."

b. Others

Pokrovsky's proposals are documented above in these minutes.

Unger mentioned the upcoming AllChemie meeting in Brussels. Humphris stated that it will be important to decide which messages to public come from IUPAC, and which from CEFIC, etc.

Evans noted IUPAC's "brand name" in nomenclature and standards. IUPAC's status as an NGO should be a stronger part of IUPAC strategy.

It was suggested that COCI should not be spokesman for industry, but can coordinate scientific activities in support of industrial concerns, and that IUPAC can take on the role of issuer of formal statements of fact in chemical science.

ACTION –Humphris and Evans to identify where IUPAC and AllChemie can coordinate activities.

ACTION: Proposal from Macromolecular Division on nomenclature to be sent to Evans for review - \$3K requested from COCI for 2004.

Agenda Item 17 – COCI Review of IUPAC Projects

Wright reminded COCI members that at the last Bureau meeting it was decided that any project proposal that is industrially focused would go through COCI for opinions or approval. A better job needs to be done on review of project proposals in a timely manner.

ACTION: Evans to appoint coordinator of project proposal review.

Agenda Item 18 – CHEMRAWN XVI – "Innovation in the Chemical Industry", Aug. 9 and 12

Smith reviewed the program, which was held on August 9. Chon was among the speakers. COCI members were encouraged to attend the joint meeting on Tuesday AM to expand on topics resulting from the workshop.

Agenda Item 19 – Conclusion of the Ad Hoc IRSC on Reorganization

Wright reviewed the output from this committee. It was part of the overall reorganization of IUPAC. There are two final results: 1. COCI becomes a regular standing committee of IUPAC with a regular budget. A budget of \$15K per biennium was approved beginning in

2004. 2. David Evans will become Chairman of COCI in 2004. See p. 233ff of the program book for the new COCI terms of reference and other information. COCI is now a formal committee of IUPAC with titular members and national representatives appointed by the IUPAC President on recommendation of the chairman of COCI and the nominations of NAO's.

Agenda Item 20 – Proposed Reorganization of IUPAC – Should COCI Have a Position?

For information on this issue see the program book. The proposed change in IUPAC structure will likely be approved.

Agenda Item 21 –WCLM, August 15, 2 PM

This topic was discussed for informational purposes – see the program book (p. 261) for details. The World Chemistry Leadership Meeting is an attempt to get the heads of the world's chemical societies together to discuss various issues. As such, it can increase prestige and influence of IUPAC.

Agenda Item 22 – Next COCI Meeting

ACTION: Evans to determine location for next COCI meeting, to be held in March – April 2004.

Agenda Item 23 – Other Business/Adjournment

Cesa led a brief presentation thanking Wright for his contributions to COCI. Among Nelson's many accomplishments were invigoration of the Safety Training Program and Workshops, the catalytic role in the success of DIDAC, and the White Book on endocrine disruptors. He received a signed certificate of thanks from the COCI membership.

Meeting adjourned 4:15 pm.

Appendix: Action Items from the Safety Training Program Workshop

ACTION: Pokrovsky, Gwaza, and Booth to collaborate on the following activities with Shell Petrochemical Development Company in Nigeria:

- 1. Courses on toxicology in Ghana and other West African countries– Shell to arrange with Gwaza's leadership; UNESCO to provide financial support**
- 2. Bridge between Nigeria and the Singapore Science Center**
- 3. All African Union of Pure and Applied Chemistry – encourage Safety Training Program Fellows to act as speakers at meetings such as an upcoming conference in Dar Es Salaam, Tanzania, on university-industry cooperation.**
- 4. Michael Booth to arrange for a plenary lecture by one of the Safety Training Program fellows, with UNESCO support for travel.**

5. **Pokrovsky to lead conference on Iraqi chemistry curriculum as part of Iraqi reconstruction efforts.**