



**MINUTES**  
**BOARD OF DIRECTORS' MEETING BY CONFERENCE CALL**  
**INTERNATIONAL CADMIUM ASSOCIATION**  
**Thursday, April 7, 2011 – 1530 Hours (3:30 PM) Brussels Time**

**1. CALL TO ORDER**

The conference call of the Board of Directors of the International Cadmium Association was called to order by the Chairman, Emil Josendal, of Boliden at 3:36 PM (Brussels Time). Those participating in the Board of Directors Conference Call included the following:

**DIRECTOR**

Max Cossette  
Emil Josendal  
Laurent Smits  
Al Hardies(Proxy to Emil Josendal)  
Anne Dekker  
Mark Booth  
Patrick de Metz  
Eric Nottez(Proxy to Laurent Smits)  
Colin Thirlaway  
Mark Edwards

**MEMBER COMPANY**

5N Plus  
Boliden for IZA  
Floridienne Chimie  
INMETCO  
Nystar NV for IZA  
Rockwood Pigments (UK) Limited  
SAFT  
SNAM  
Stanley Black & Decker  
Teck Resources Ltd. For IZA

**GUESTS AND STAFF**

Chris Baker  
Frank Van Assche  
Stephen Wilkinson  
Christian Canoo  
Noomi Lombaert  
Hugh Morrow

**ORGANIZATION**

Acme Aerospace  
International Zinc Association  
International Zinc Association  
International Cadmium Association  
International Cadmium Association  
International Cadmium Association

**2. MEETING AGENDA AND STATEMENT OF COMPLIANCE**

General Manager Christian Canoo noted that ten of the association's eleven Directors were present or represented by Proxy and thus a quorum was established for the transaction of business. The complete presentation of all materials presented during the

conference call is attached to these Minutes as Annex I. The agenda for the conference call is shown as Slide 2 in Annex I. Christian Canoo reviewed the planned meeting agenda and asked if there were any additional items any Board Member wished to add to the agenda. No additional items were introduced.

Chairman Emil Josendal then read and reviewed the Statement of Compliance for the conduction of the Association's meetings under Belgian law. This Statement of Compliance is shown on Slide 3 of Annex I. For the convenience of ICdA Members, a Glossary of Acronyms and Abbreviations contained in these Minutes is also attached as Annex II.

### **3. APPROVAL OF THE MINUTES OF THE JANUARY 8, 2010 BOARD MEETING**

Christian Canoo then reviewed the Minutes of the previous ICdA Board of Directors meeting held by teleconference on June 29, 2010 (see Slide 4 of Annex I). Chairman Emil Josendal asked if there were any additions, corrections or comments regarding these Minutes. None being forthcoming, **the Minutes of the June 29, 2010 Board of Directors meeting was approved unanimously as issued to the membership.**

### **4. MEMBERSHIP REPORT**

The Membership Report for the International Cadmium Association as of April 7, 2011 was presented by Christian Canoo, and is shown in Slide 5 of Annex I attached to these Minutes. Dr. Canoo announced that the association had received an application for membership from First Solar, Inc., a major manufacturer of the cadmium telluride (CdTe) thin-film photovoltaic solar panels. **Upon motion duly made and seconded and approved unanimously by the Board of Directors, First Solar Inc. was approved for membership in the International Cadmium Association.**

The General Manager briefly reviewed the association's overall membership, and stated that ICdA now had 16 Members who are listed on Slide 5 of Annex I.

### **5. FINANCIAL REPORT**

Christian Canoo reviewed the final accounts of the association for the calendar year 2010 which are shown as Slide 6 in Annex I attached to these Minutes. The total expenses for ICdA for 2010 were 177,913 Euros compared to a budget of 215,408 Euros. Lower expenses were attributed mainly to funds which had been planned for additional scientific support during 2010 which were not utilized. Total income for 2010 was 194,815 Euros against a planned income of 181,500 Euros. The additional income was generated by favorable exchange corrections and interest from a healthy association bank balance. Thus, a positive balance for the year 2010 was added to the already significant surplus going forward into 2011. The 2011 expense budget is forecast to exceed the present income budget, thus drawing down reserves slightly. However, new memberships and potential income from the Eighth International Cadmium Conference are likely to offset any negative balance for the year. The Board of Directors noted that the International Cadmium Association continued to enjoy a healthy financial condition. **Upon motion**

**duly made, seconded and approved by the Board of Directors, the Financial Accounts for 2010 were accepted as presented.** The approval of the final audited accounts of the association for 2010 will be carried out at the ICdA General Assembly of Members on October 6, 2011 in London.

## **6. ELECTION OF THE CHAIRMAN**

Emil Josendal announced that, due to the assignment of additional job responsibilities at Boliden, he found it necessary to resign as Chairman of the International Cadmium Association (see Slide 7 of Annex I attached to these Minutes). **Emil has served the association well for the past two years, and the Board of Directors unanimously approved a Vote of Thanks to him for a job well done.** Emil also indicated that, because of his new responsibilities, he may be replaced on the ICdA Board by another representative from Boliden, or that International Zinc Association would nominate a new representative to fill Emil's seat on the ICdA Board.

Mark Edwards of Teck Resources Ltd., representing the International Zinc Association, has been nominated to replace Emil as Chairman of the International Cadmium Association. Mark described his background, training and experience, and his willingness to serve as ICdA Chairman. **Upon motion duly made, seconded and unanimously approved, Mark Edwards was elected Chairman of the International Cadmium Association.**

## **7. UPDATE ON THE ICdA WEBSITE**

Dr. Noomi Lombaert reviewed the current status of the ICdA website (see Slide 8 of Annex I attached). Revision of the website has now been completed so that both the public website and the members-only website are combined at one address which may be accessed at [www.cadmium.org](http://www.cadmium.org). A great deal of material, both European and North American, has been added to the website, and the general or overview sections are being updated section-by-section by Noomi Lombaert and Hugh Morrow. Noomi added that a calendar of meetings is being incorporated into the website, and the possible inclusion of links to other sites as well. The Members-Only section, containing association Minutes and other business, must be accessed by a User Name and Password. Any input, questions, comments or suggestions regarding the website should be directed to Dr. Lombaert, who is the administrator for the ICdA website.

## **8. UPDATE ON EUROPEAN UNION REGULATORY AFFAIRS**

Dr. Christian Canoo reviewed the current status of regulatory issues on cadmium in the European Union which included an update on compliance with the requirements of REACH by the Cadmium REACH Consortium, a summary of the activities of the ICdA Health & Safety Committee, and the status of the Cadmium Summary Document by the Scientific Committee on Occupational Exposure Limits (SCOEL). These matters are covered in Slides 9 through 19 in Annex I attached to these Minutes.

Cadmium REACH Consortium – Dr. Canoo reviewed the status of the REACH files. Under the first registration phase, which was to have been completed in November 2010, eight dossiers were submitted on various cadmium compounds and substances. To date, no negative or critical comments have been received concerning the submitted dossiers. Updates may be needed in the future on some of these dossiers and to cover isolated or transported intermediates such as cadmium sulphate, for which there is already a substantially full substance dossier. An update may also be required on exposure and reporting of “waste” but the deadline for such reporting has not yet been established by ECHA. For the second registration phase, cadmium telluride and cadmium pigments must be registered. The files and chemical safety reports for these substances are due by May 2013.

In addition, the Cadmium REACH Consortium must now begin to work on the Authorization phase. If any Member States prepare Annex XV (“Candidate List”) dossiers on a cadmium-bearing substance, then the REACH Consortium must be prepared to challenge that listing as substances requiring authorization. Recently, for example, SAFT, ICdA, FEDEM and other REACH Members, prepared a paper and presented it to the French authorities to discourage them from requiring certain cadmium chemicals (Cd, CdO and CdS) to be authorized for use. This presentation was well received by the French authorities. It was suggested that the presentations made to the French authorities should be posted on the ICdA website.

ICdA Health & Safety Committee – Christian Canoo pointed out that the H&S Committee was organized primarily to assist ICdA Members with the ICdA Guidance Document related to the management of the risk from chronic occupational exposure to cadmium. The need for this guidance was established by the conclusions of the EU Risk Assessment on cadmium and cadmium oxide that indicated a risk to workers under the systems in use at the time (2007). Past meetings of the H&S Committee have focused on measuring air quality, medical supervision, hygiene procedures, medical surveillance, and the REACH registration process. The next H&S Committee meeting, planned for June 7, 2011, will focus on personal protection equipment, while the following one will deal with implementing a risk prevention culture in the industry.

A number of questions and issues were also raised during the discussions on the Health & Safety Committee activities. One question related to an allowance for cigarette smoking and the fact that cigarette smoking increased the cadmium body burden. Another issue raised related to the ICdA reports on cadmium health effects performed in the past few years. These reports have been completed, and Noomi Lombaert indicated that they could be posted on the ICdA website. It was also added that Professor Bernard’s papers from the past two years should also be available for all Members. Frank Van Assche noted that in order to get a really meaningful data base, as many members as possible should send in their bio-monitoring data. Patrick de Metz added that it was very important to present data which was corrected for creatinine levels.

Follow-Up on SCOEL Recommendations – The SCOEL Summary Document on Cadmium (SCOEL/SUM/136) was issued in February 2010. Its main conclusions

established a threshold carcinogenicity level at 10 µg/g creatinine cadmium-in-urine, an inhalable (respirable) occupational exposure limit (iOEL) of 4 µg Cd /m<sup>3</sup>, and a biological limit value of 2 µg Cd / g creatinine. The question now to be pursued is whether these same levels will be maintained for insoluble cadmium compounds such as cadmium telluride or cadmium pigments based on cadmium sulfide. Cadmium pigments, for example, are not specifically classified, but SCOEL/SUM/136 maintains the iOEL at 4 µg/m<sup>3</sup> irrespective of the compound and its solubility. The question is if the REACH Consortium can make the case in the registration files for deviation from this level based on solubility arguments.

## **9. UPDATE ON NORTH AMERICAN REGULATORY AFFAIRS**

Hugh Morrow reviewed the latest information on regulatory affairs relevant to cadmium in North America. These included a report on the activities of the North American Regulatory Affairs Committee, revision of the Toxic Substances Control Act (TSCA), and cadmium in consumer products such as children's jewelry and drinking glasses. Other minor cadmium regulatory issues were mentioned but not discussed in full at this meeting. Mr. Morrow's review of North American issues is shown in Slides 22 through 30 of Annex I attached to these Minutes.

*North American Regulatory Affairs Committee* – This committee was organized in summer of 2010, held its first meeting in September 2010, and elected Max Cossette of 5N Plus as its Chairman. The Committee proposed a Cadmium Information Monitoring System be organized, received a proposal from Bergeson & Campbell to institute such a system, received approval from the General Assembly in October 2010 to institute such a system in 2011, and has now received two monthly reports thus far for February 2011 and March 2011. It has been well received for a cost of \$12,000 per year, and a tentative proposal has been made to extend report coverage from just the USA, Canada and Asia to worldwide regulatory affairs concerning cadmium. Bergeson & Campbell have proposed such coverage for a total cost of \$16,000 per year. Discussion during the Board meeting indicated that the association should probably defer increasing coverage until 2012. In the meantime, both Chairman Max Cossette and Hugh Morrow expressed satisfaction with the monthly reports as being valuable and informative in establishing the direction and activities of the North American Regulatory Affairs Committee. Noomi Lombaert noted that the Bergeson & Campbell monthly reports have been posted on the association's website.

*Revision of the Toxic Substances Control Act (TSCA)* – Hugh Morrow reviewed the purpose of the original 1976 TSCA, the perceived problems with the existing legislation, and the developments on TSCA during the past year. The three main concerns for the cadmium industry in TSCA reform are the mandatory provision of chemical safety data to EPA (much like REACH) to conclude that chemicals are safe to the public and the environment; risk management decisions made by EPA which will consider cost, sensitive subpopulations and availability of substitutes; and required actions by EPA and manufacturers to act on "priority chemicals" (read cadmium). Because of a politically-divided Congress, legislation to revise TSCA is expected to move very slowly during

2011 and 2012. Therefore, the Democratically-controlled administration and EPA is moving ahead to “enhance” the existing TSCA legislation with many of the provisions being proposed for the reformed TSCA. These include more access to chemicals data, chemical-specific action plans (mercury in certain products, lead as wheel weights and nanoscale materials), and a recently signed Memorandum of Understanding and Cooperation with ECHA in EU.

*Cadmium in Consumer Products* – Hugh Morrow reviewed the negative legislative and publicity developments during the past year surrounding cadmium in children’s jewelry and cadmium in enamels on drinking glasses. The Sierra Club has presented a petition to EPA and the Consumer Product Safety Commission (CPSC) requesting the restriction of cadmium in children’s jewelry. EPA has responded that it would act on its own if the CPSC did not do so, and has now initiated a notice that it intends to require health and safety data from manufacturers under TSCA Section 8(d) by early 2012. ICdA has taken the public position in a statement to CPSC that cadmium should not be utilized in children’s jewelry. CPSC is publically encouraging Chinese manufacturers not to use cadmium in jewelry and toys, yet is deferring its decision on the Sierra Club petition until it can develop a voluntary standard with industry through the American Society of Testing and Materials (ASTM). However, in the meantime, controversy continues because some legislators, regulators and environmentalists wish to regulate based on total cadmium content rather than extracted cadmium level in a standardized test.

The second area of great concern is the campaign by an Associated Press writer to “expose” high and unsafe levels of cadmium in glassware enamels. Even though they passed the CPSC extraction standards for cadmium, some 12 million “Shrek” glasses were recalled by McDonald’s in the summer of 2010 because of bad publicity and political activism. Coca-Cola has now had to recall 88,000 glasses in November 2010 because of high contained cadmium levels, and Chinese-made glasses depicting superheroes from Warner Brothers in Burbank CA were taken off the shelves because of high lead and cadmium levels. The Associated Press is testing children’s glasses from Coca-Cola, Walt Disney, Burger King and McDonald’s, but using a non-standard test which they claim simulates a child handling the glass. The Associated Press writer, Justin Pritchard, asserts that total cadmium content and not extracted cadmium level should be regulated for these glasses. What position the association should take on this issue provoked considerable discussion, so much so that Chairman Mark Edwards suggested that a separate and more thorough discussion on this subject be conducted at a later date.

## **10. INTERNATIONAL REGULATORY AFFAIRS**

Hugh Morrow updated the Board of Directors on three arenas for regulatory concern for the cadmium industry at the international level – the United Nations Economic Commission for Europe (UNECE) Long Range Transboundary Air Pollution (LRTAP) Heavy Metals Protocol; the four parts of United Nations Environment Program’s activities under its Heavy Metals Program; and the Strategic Approach for International Chemicals Management (SAICM) Chemicals in Products Program. These issues are covered in Slides 31 through 38 of Annex I attached to these Minutes.

UNECE LRTAP Executive Body Meeting – At their annual meeting in Geneva in December 2010, the Executive Body of UNECE decided, with regard to the Heavy Metals Protocol, to introduce flexibility to increase ratifications in Eastern Europe, the Caucasus, and Central Asia. Rather than proceeding with the EU-proposed restrictions on mercury-containing lamps, batteries, thermometers, vehicles, electrical and electronic equipment, and dental amalgams, the Executive Body decided to coordinate their work with that of the Intergovernmental Negotiating Committee for a Global Mercury Partnership, which is also considering mercury-product restrictions, so that conflicting mercury product restrictions are not developed. The Executive Body did decide to coordinate the requirements of the Heavy Metals Protocol with the particulate matter requirements of the Gothenburg Protocol which are currently under negotiation but expected to be completed during 2011 or early 2012. The Heavy Metals Protocol now includes three proposed particulate matter levels for each of the numerous point source emission categories controlled under the protocol. It was further noted that future work on the UNECE LRTAP Heavy Metals Protocol will be carried out by the Working Group on Strategies and Review (WGSR) rather than the Task Force on Heavy Metals (TFHM). Thus industry will have to rely on input through national delegations rather than through its experts on the TFHM. However, it very much appears as if there will be no cadmium product restrictions proposed in the UNECE LRTAP Heavy Metals Protocol before 2013 at the earliest.

UNEP Heavy Metals Programs – While emphasis on cadmium and cadmium products has largely disappeared within the OECD Risk Reduction Programs (1990-2000) and been largely reduced within the UNECE LRTAP Heavy Metals Protocol (1995-2010), it has gathered much more momentum within the UNEP Heavy Metals Programs (2000-2011). There are now four inter-related parts of this program which have seen considerable activity in the past five years or less. These are the Scientific Review on Cadmium which was initiated in 2005; the Trade in Cadmium Products Reports which have been issued in the past two years; the latest meeting of the UNEP Governing Council which took place in Nairobi, Kenya in February 2011; and the Environmental Impacts of Metals Report, a draft copy of which was issued in the past few months.

- (a) UNEP Scientific Review on Cadmium: After five draft versions, UNEP DTIE issued its “Final” version in October 2010. ICdA again responded with many pages of comments pointing out inaccuracies, inconsistencies, biased and inadequate data and a huge number of speculative, unsubstantiated statements. As in the past, these comments were largely ignored. However, copies of ICdA comments were also sent to the USA and Canada delegations which in turn appear to have shared them with other delegations. It appears as if the Governing Council has noted the “need for additional work to fill information gaps” and that a number of delegations at the GC 26 meeting stated that further time was needed to consider the Scientific Review.
- (b) Trade in Cadmium Products Reports: Three reports have been prepared (Africa, Asia, and Latin America) in an attempt to demonstrate that it is trade in cadmium products which is contaminating developing countries which do not have the ability to handle cadmium-containing products or wastes in an environmentally-

sound manner. All three reports compile statistics on trade in products alleged to contain cadmium, but do not measure actual cadmium flow. The cadmium content of the products is ignored and products no longer utilizing cadmium are counted. None of the reports link product flow to human health or environmental effects, just speculate on possible effects. None of the reports consider products (except fertilizers) which contain cadmium as an impurity rather than a deliberate addition. Fertilizers, in fact, account for 75% to 95% of the trade flow in these reports. ICdA has filed very lengthy comments on these reports and sent copies of the comments to the USA and Canada.

- (c) Governing Council Meeting in Nairobi (GC 26): A group of African Nations supported by Norway and Switzerland proposed a Global Partnership on Cadmium similar to that currently being negotiated on Mercury. USA, Canada, Australia, Japan, and Brazil opposed the proposal. However, the Governing Council in its Final Decisions requested the UNEP Executive Director to continue activities on cadmium, particularly in developing countries, but with emphasis on environmentally sound management of batteries (i.e. recycling) and developing the scientific basis of existing studies. Both of these statements are positive developments for the cadmium, battery and recycling industries. However, they also requested the Executive Director to initiate a Global Voluntary Partnership on Cadmium with governments, NGOs and IGOs, and requested that the UNEP Executive Director act as a information clearing house on cadmium substitution in products. This program is not a mandatory one like the Mercury Partnership, but it is very likely that the EU and countries like Sweden, Norway and Switzerland will keep proposing to make it a mandatory program eventually.
- (d) Environmental Impacts of Metals Report: The UNEP International Panel on Natural Resources, which is mainly Dutch and Finnish authors, has prepared a report on the environmental impacts of 22 metals, including cadmium. John Atherton, on behalf of the International Council on Mining & Metals (ICMM) is responding to the report, which they and most metal commodity associations regard as negative, inaccurate, and out-of-date. The International Cadmium Association reviewed the cadmium sections of this report, and forwarded comments to John Atherton who has now responded to the report's lead author.

Strategic Approach to International Chemicals Management (SAICM) – Under the SAICM initiative, a Chemicals-in-Products program was developed in May 2009 at the International Conference on Chemicals Management (ICCM2). A series of meetings and workshops were held in 2009 and 2010, and six product sectors were selected for further study. The product sectors of highest priority were deemed to be children's products and toys, electronics, clothing, and construction materials, and additional reports and studies were carried out and published in 2010. Most recently, two case studies of interest to the cadmium industry were published in February 2011. These include the Toys Sector Case Study, which specifically names cadmium regulations on toys in the EU, USA, Japan, China and ISO 8124, and an Electronic Products Case Study, which mentions cadmium in printed circuit boards, cathode ray tubes, and nickel-cadmium batteries. The reports and the working group for this initiative are largely Scandinavian.



## **11. INTERNATIONAL CADMIUM CONFERENCE IN CHINA**

Christian Canoo reported on the latest status of the Eighth International Cadmium Conference being planned for mid-November 2011 in China in conjunction with the Lead/Zinc Conference planned for approximately the same time and location (see Slides 20 and 21 of Annex I attached to these Minutes). The conference will most likely be held in Kunming in Yunnan Province in southern China which is readily accessible from either Hong Kong or Bangkok. The subject of the conference will be the Risk Management and Control of Cadmium. A two to three day program is planned including a welcome and organizational overview of the conference, four general papers (markets and applications, health effects, environmental effects, regulations), and then the remaining sessions on controlling cadmium in the workplace, controlling cadmium in the environment, and controlling cadmium exposure for the general population. This latter session will include papers on recycling, cadmium in consumer products, and cadmium from non-product sources.

A conference Steering Committee has been organized to plan out a timetable, program, and conference logistics. Included is Annette Huang of the IZA China office in Shanghai who is working with local conference organizers in China. Steering Committee conference calls have been held in the recent past and are planned again for April 20<sup>th</sup>. The ultimate goal of this conference, besides informing the world's largest cadmium producers and users of cadmium of sound cadmium management practices, is to achieve a self-sustaining or break-even conference.

## **12. CADMIUM MARKET REPORT**

Hugh Morrow noted that the cadmium market situation had remained largely unchanged since his last report made at the General Assembly of Members in October 2010 in London. He did however wish to note several points about the ICdA market reports and potential problems with these reports (see Slide 39 of Annex I attached to these Minutes). The ICdA market reports have traditionally been based on statistics gathered from the World Bureau of Metal Statistics (WBMS) and prices published by *Metal Bulletin*. It has been observed for many years now that some of the WBMS production and consumption figures presented for certain countries remain the same for years and years, and often seem to be at odds with what is known about production from certain companies in certain countries. For example, it appears as if the production reported year after year for Germany at 640 metric tonnes is now too high, even though it may have been correct at one point in time. It also appears as if the primary cadmium production reported for China was correct at 7,000 mt several years ago, but is now substantially higher. There is also the question of whether there is double counting of cadmium from primary sources and secondary sources. USA production includes that from both a primary source and a secondary source. Japan has three companies which produce both primary and secondary cadmium, but it is unclear what contributions the WBMS numbers include. Another issue in the consumption estimates is the mixing of first and second level consumption. At the first level, cadmium metal may be converted into cadmium oxide and other cadmium salts, but then at the second level, cadmium oxide and other cadmium salts are then being

consumed in the production of batteries, pigments and coatings. All of these factors could introduce errors into the ICdA cadmium market report. In the future, attempts will be made to sort out these problems and obtain figures which appear more realistic.

### **13. NEXT MEETING DATES**

The next General Assembly of Members of the International Cadmium Association will be held on Thursday, October 6, 2011, from 1300 Hours (1:00 PM) to 1600 Hours (4:00 PM) in London, United Kingdom. The exact meeting venue, agenda and other pertinent meeting information will be issued well before the meeting.

The next ICdA Board of Directors meeting is also tentatively scheduled for Thursday, October 6, 2011 from 0900 Hours (9:00 AM) to 1200 Hours (12:00 PM) in London, United Kingdom. Several expressed a preference for trying to hold the Board meeting and the General Assembly on the same day in the same place if feasible. Details of the meeting will be forthcoming in the near future.

The next meeting of the ICdA Health & Safety Committee will be held on Tuesday, June 7, 2011 in Brussels, Belgium. The meeting venue, meeting agenda and other pertinent meeting information will be issued well before the meeting.

The next meeting of the North American Regulatory Affairs Committee will be held by web teleconference on Thursday, April 28, 2011 beginning at 9:00 AM EDT and adjourning by 12:00 PM EDT. Details of this meeting will be issued shortly.

### **14. ADJOURNMENT**

There being no further business before the Board of Directors, Chairman Mark Edwards adjourned the meeting at 1745 Hours (5:45 PM) Brussels Time.

Respectfully Submitted,

Approved,

Hugh Morrow  
Secretary, Pro-Tempore

Mark Edwards  
Chairman



## ICdA - Board meeting

April 7<sup>th</sup>, 2011, 3<sup>1/2</sup> pm

*For the meeting, link to  
<https://www1.gotomeeting.com/join/133412329>*

*For audio, dial **+32 2 404 03 05**, or national  
number, and Pin code **84414579#***

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### Agenda

- o Introduction by the chairman & statement of Compliance
- o Approval of the minutes - Board meeting June 29, 2010
- o Review membership and final accounts 2010
- o Chairmanship ICdA
- o Update on the EU-regulatory issues
  - Status REACH-files > planning, Registrations 2013, Authorization
  - Update of the H&S-meetings > meeting June
  - Follow-up SCOEL recommendations > OJ
- o Update on North American Regulatory Affairs
  - Revision and Enhancement of Toxic Substances Control Act (TSCA)
  - Cadmium in Consumer Products – Actions by CPSC/EPA/States/Federal
  - NA Regulatory Affairs Committee and B&C Information Monitoring System
- o Update on International Regulatory Affairs > UNEP/UNECE/SAICM
- o International Cd Conference in Shanghai in November 2011
- o Market report
- o New business
- o Next Meeting Date

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## STATEMENT OF COMPLIANCE

- The purpose of the meeting is to address, under the applicable confidentiality rules, issues concerning Cadmium and Cadmium compounds producers and importers and more particularly their obligations under the several regulations.
- The minutes kept during the meeting will have to reflect all significant matters discussed during the meeting.
- No discussions will be held, formally or informally, during specified meeting times or otherwise, involving, directly or indirectly, express or implicit agreements or understandings related to: (a) any company's price; (b) any company's terms or conditions of sale; (c) any company's production or sales levels; (d) any company's wages or salaries; (e) the division or allocation of customers or geographic markets; or (f) customer or suppliers boycotts; or (g) any disclosure of information which may affect applicable rules on Competition Law.
- The International Cadmium Association (ICdA), as a group will make no recommendations of any kind and will not try to reach any agreements or understandings with respect to an individual company's prices, terms or conditions of sale, production or sales levels, wages, salaries, customers or suppliers.

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## Approval of the minutes – Board meeting 29 June 2010

- Call to order (9/10 directors attending or represented) and reminder of statement of Compliance
- Review and approval of the minutes of the Board meeting of January 8<sup>th</sup> 2010
- Review of European Cd-related dossiers:
  - ✓ Review of the REACH Consortium activities
  - ✓ EU Proposed Further Restrictions on Cadmium in Brazing Filler Alloys and Jewelry : amendment to Annex XVII of REACH
  - ✓ SCOEL recommendation for occupational exposure to cadmium : follow-up on publication of final SCOEL sumdoc
  - ✓ Update of the EU H&S-meetings
- Review of North-American regulations: TSCA, IRIS revision, Cd in consumer/children's products, set-up of NA 'Regulatory affairs' committee
- Update on the Cd-International issues: UNEP / UNECE, OECD Pollutant Release and Transfer Registry Task Force, SAICM
- Cadmium market report as of June 29, 2010
- Divers :
  - ✓ Relooking and update of ICdA website
  - ✓ An International Conference should be planned for Q2 2011
- Next Meeting: tentatively scheduled December 2010, delayed to January and finally to March 2011

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## Membership report

- **First Solar** (Photo-Voltaic applications) announced its intention to join the Association; the formal application –confirming having read the AoA and fee-schedule- has been received yesterday; subject to Board approval
- **Current membership:**
  1. ACME Aerospace Inc. - Ni-Cd Battery manufacturer
  2. Accurec - Ni-Cd Battery recycler
  3. Black & Decker - Article-user > Ni-Cd Battery user
  4. EnerSys / Gaz - Ni-Cd Battery manufacturer
  5. Floridienne Chimie - Cd compounds manufacturer
  6. Hoppecke - Ni-Cd Battery manufacturer
  7. Inmetco - Ni-Cd Battery recycler
  8. IZA - Zinc Association representing Cd producers
  9. JMIA - Japanese Association > Miners & smelters
  10. James M Brown - Cd pigment manufacturer
  11. 5N Plus - Cd-compounds for PhotoVoltaic applications
  12. Rockwood pigments - Cd pigment manufacturer
  13. Saft Batteries - Ni-Cd Battery manufacturer & recycler
  14. Sanyo - Ni-Cd Battery manufacturer
  15. Snam - Ni-Cd Battery recycler

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## Review Final accounts 2010

(EUR)	2010 Budget	2010 P&L Final	2011 Budget
		31.12.10	
<b>STAFFING</b>			
Total Staff Costs	168.345	130.380	159.582
<b>OPERATIONS</b>			
Total Operation Costs	44.563	47.522	50.405
Depreciation & non-deductible	2.500	0	0
<b>TOTAL Staff &amp; Operational COSTS</b>	<b>215.408</b>	<b>177.902</b>	<b>209.987</b>
<b>TOTAL EXPENSES</b>	<b>215.408</b>	<b>177.913</b>	<b>209.987</b>
<b>INCOME</b>			
Membership fees	180.000	185.181	181.388
Interest Income	3.000	1.198	3.000
Exchange corrections	-1.500	8.438	-1.500
Other income (studies direct contribution)	0	0	0
	0	0	0
<b>TOTAL SUBSCRIPTION INCOME</b>	<b>181.500</b>	<b>194.815</b>	<b>182.888</b>
<b>BALANCE</b>	<b>-33.908</b>	<b>16.902</b>	<b>-27.099</b>
<b>SURPLUS/(LOSS) FOR YEAR</b>	<b>-33.908</b>	<b>16.902</b>	<b>-27.099</b>
<b>SURPLUS/(LOSS) BROUGHT FORWARD</b>	<b>168.578</b>	<b>168.578</b>	<b>185.480</b>



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## Chairmanship ICdA

- **Emil Josendal** informed us he would like to step down as Chairman of ICdA.

>>>> Thank you Emil !!

- **Mark Edwards** (Teck), representative for IZA, agreed to be nominated as next Chairman of ICdA. 5 Board members already indicated they support Mark's election .

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## Update website ICdA www.cadmium.org

- The re-looking of the ICdA website(s) is completed
- The 2 sites (public and members section) have been merged to cadmium.org
- The contents will be updated ... during the next months  
> your input and suggestions are welcome
- Noömi L. is the administrator of the website

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## Update on the EU-regulatory issues

- Cd REACH Consortium
- H&S committee
- SCOEL recommendation

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## Update on the EU-regulatory issues

- Cd REACH Consortium: status REACH files
- H&S committee
- SCOEL recommendation: follow-up

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## 1<sup>st</sup> Registration phase (Nov 2010)

From the 8 submitted dossiers, we did not receive any « alarming » message about the content of the submissions

Updates in future:

- Potential update for « Isolated (transported) Intermediates », namely Cadmium sulphate >>> already a « full substance » dossier
- Updating on « waste » exposure / reporting

Deadline not defined yet by ECHA

## 2<sup>nd</sup> Registration phase (May 2013)

CdTe and Cd pigments still to be registered.

Non-registered substances by the 1<sup>st</sup> registration deadline had to be notified by Jan 3<sup>rd</sup> 2011

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## Workplan Y'2011 ⇔ Y'2013

### □ Prepare registration files (I<sup>5</sup>– CSR) by May 2013

- Cadmium pigments
- Cadmium telluride

### □ Authorisation preparation:

- ✓ Annex XV dossiers (Cd, CdO, CdS) will be prepared by the Consortium secretariat and members for the case it would be needed to support/challenge Annex XV dossiers prepared by one of the Member States for inclusion in the "candidate list (Authorization process).
- ✓ A paper has been prepared recently (SAFT, other involved members, ICdA and FEDEM) with justification for not considering those substances for being subject to Authorisation; the arguments were developed (quite positively received) during a meeting, last week, at MEDDTL

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## Update on the EU-regulatory issues

- Cd REACH Consortium: status REACH files
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## Objective of ICdA H&S Committee

- Reminder:
  - The H&S Ctee was set up **primarily** to assist ICdA members with the general implementation of the ICdA Guidance document
  - "ICdA Guidance on the management of the risk related to chronic occupational exposure to cadmium and its compounds"
- **Source of this initiative:**
  - Cd/CdO risk assessment (RA) shows a conclusion that there is a risk to workers under current management methodologies (2007)
  - Under the current "REACH" regulation, the same "risk management precautions" apply, for Workers and for the Environment

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## Past (and future) H&S Ctees

- Launch of the committee, definition of the format and content
  - 1st Ctee, dated Nov 25th, 2008
- Measuring air quality
  - 2nd Ctee, dated March 10th, 2009
- Medical supervision adapted to cadmium risk
  - 3rd Ctee, dated June 16th 2009
- Individual and collective hygiene procedures
  - 4th Ctee, dated October 13th, 2010
- Detailed procedures regarding medical surveillance
  - 5th Ctee, dated June 8<sup>th</sup>, 2010
- Status a the REACH registration process
  - 6th Ctee, dated October 15<sup>th</sup>, 2010
- **Choosing and maintaining the right PPE**
  - **7th Ctee, date June 7th 2011**
- Implementing a prevention culture in our facilities
  - 8th Ctee, date to be set:

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## 7th Ctee:

### A) Choosing and maintaining the right PPE

- regulatory framework in terms of workers protection and the PPE-solutions
- Presentation of results of survey between H&S members
- Discussion >> synthesis in a kind of "Good practice factsheet"

### B) Agreeing on the basis of the next OCdBio datacollection (summer 2011)

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## Update on the EU-regulatory issues

- Cd REACH Consortium: status REACH files
- H&S committee
- SCOEL recommendation: follow-up

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## SCOEL – Sumdoc

- The Scientific Committee on Occupational Exposure limits (SCOEL) issued February 2010 the final SCOEL/SUM/136 for cadmium and its inorganic compounds
- Main outcome:
  - **Threshold carcinogenicity** (10 µg/g creatinine in Cd/urine), which is incorporated in our REACH registration files
  - **iOEL**: 4 µg Cd/m<sup>3</sup> (respirable fraction: inhalation tox)  
→ **DNEL**
  - **BLV**: 2µg Cd/g creatinine
- SCOEL carcinogen group : C (*genotoxic carcinogen for which a practical threshold is supported and a health –based OEL is proposed*)

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## SCOEL: follow-up

- OEL for pigments?
- Cd-pigments as not specifically classified, but SCOEL sumdoc maintain the i-OEL at  $4\mu\text{g}/\text{m}^3$ , Cd, irrespective of the compounds (solubility properties).
- Make case in Reach-registration files for deviating from  $4\mu\text{g}/\text{m}^3$ ?

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## International Cadmium Conference (1)

- Planned for November 2011 in Shanghai , preceding or following the Pb/Zn Conference, probably in Kunming (Yunnan)
- Risk Management and Control of Cadmium
- Tentative Program: 2 or 3 days
  - Welcome and Organizational Overview
  - Four General Overview Papers – Market and Applications, Health Effects, Environmental Effects, Regulations
  - Controlling Cadmium Exposure in the Workplace
  - Controlling Cadmium in the Environment
  - Controlling Cadmium in the General Population
    - ✓ Recycling of Cadmium
    - ✓ Cadmium in Consumer Products
    - ✓ Cadmium from Non-Product Sources

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## **International Cadmium Conference (2)**

- Steering Committee:
- ✓ timetable and a summary of some items to consider in the preparation of the Cd Conference is prepared
- ✓ contacts with representatives of Antaike (China Metals Information Network) for organization
- ✓ Conference call was held on April 6<sup>th</sup> ; the next one is scheduled on April 20<sup>th</sup>. A first tentative set of budget-items will be collected. The purpose is to have a self-financing Cd-conference

# **Regulatory Affairs Report North America and International**

## Regulatory Affairs Committee

- First Meeting Held in September 2010
- Maxime Cossette of 5NPlus Elected Chairman
- Cadmium Information Monitoring Monthly Report Initiated February 2011 - \$12,000/yr
- Receiving Informal (No Cost) Advice from Lynn Bergeson on Regulatory Matters, and Heads-Up on Breaking News
- Proposal to Increase Coverage to Global for \$16,000/yr but Information from EU, Africa and South America not as Complete as NA
- Thus Far Report is Valuable and Informative

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## North American Cadmium Issues

- Revision of the Toxic Substances Control Act (TSCA)
- Cadmium in Consumer Products Issues
  - Cadmium in Children's Jewelry
  - Cadmium in Enamels in Glassware
- Cadmium in Industrial Products Issues
  - Amendments to NESHAP for Lead Smelting
  - Rules to Reduce Emissions from Existing and New Boilers
- IRIS Update on Cadmium
  - Behind Schedule But EPA has Invited ICdA Information
- NIOSH Immediately Dangerous to Life and Health (IDLH – 30 Minutes) Levels for Cadmium
  - Standard Lowered from 50 mg/m<sup>3</sup> to 9 mg/m<sup>3</sup> for All Forms of Cadmium (metal, vapor, dust, compounds)

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## Revision of TSCA

- Purpose of Original 1976 TSCA
  - Information on New & Existing Chemicals & Mixtures
  - Require Testing of Chemicals and Mixtures
  - Screen and Control Unreasonable Risks of Chemicals
- Perceived Problems with TSCA (Need for Revision)
  - Only Major Environmental Statute Not Reauthorized
  - No Mandatory Program to Determine Chemical Safety
  - Difficult to Ban Chemicals or Request Chemical Effects Data
  - Confidential Business Information Claims Limit Data Access
- Developments in Past Year
  - Growing Number of Chemicals Bans in USA States
  - 2010 Election Leaves a Democratic Senate and Republican House of Representatives = Difficult to Pass Legislation
  - Estimated That Toxics Legislation in 30 States in 2011

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## Revision of TSCA

- EPA's Six Principles for TSCA Reform
  - Chemicals Reviewed against Science-Based Safety Standards and Risk-Based Health Criteria
  - **Manufacturers Provide EPA with Data to Conclude Chemicals are Safe to Public and Environment**
  - **Risk Management Decisions will Consider Cost, Sensitive Subpopulations and Substitutes**
  - **Manufacturers and EPA Act on "Priority Chemicals"**
  - Green Chemistry Should Be Encouraged, and Transparency and Public Access Strengthened
  - EPA Must Be Given Sustained Source of Funding

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## TSCA Reform Legislative Process

- Introduce Proposed Legislation in House and Senate
  - Lautenberg(D-NJ) to Reintroduce 2010 Safe Chemicals Act
- If Proposals Have Support, Relevant Committees Hold Hearings, Make Amendments, Pass the “Bills” to Full House and Senate for Consideration
- If House and Senate Bills Have Differences, Both Chambers Meet to Reconcile These Differences
- Reconciled Bill Sent to the President for Signature
- With a Democratic-Majority Senate and a Republican-Majority House, Differences Might be Significant
- Therefore, TSCA Reform is Expected to be Lengthy
- Because of This Expected Delay, Democratic Administration is Enhancing Existing TSCA

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## Enhancing Current EPA Program

- Increase Public Access to Chemicals Data
  - Confidential Business Information Changes
  - Inventory Update Rule Changes
- Develop Chemical-Specific Action Plans for Risk Management of Chemicals of Concern
- New Regulatory Risk Management Actions
  - Hg in Switches, Relays, Batteries, Flame Sensors
  - Pb as Wheel Weights
  - Nanoscale Materials
- Memorandum of Understanding and Cooperation with ECHA in European Union

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## Cadmium in Children's Jewelry

- Sierra Club Petition of May 2010 Requesting CPSC & EPA to Restrict Cadmium in Children's Products
- EPA to Invoke TSCA Section 8(d) to Require Health and Safety Data from Manufacturers by Early 2012
- ICdA Submitted Statement to CPSC in October 2010
- CPSC Speech at Toy Safety Conference in Hong Kong Encourages Toy Manufacturers not to Use Cadmium
- CPSC Defers Petition Decision, Involved with ASTM F963 to Develop Voluntary Standards on Cadmium
- Present Limits Based on Extracted Amount, but Some are Pressing for Cadmium Content Standards
- CPSC Has Increased Its Cadmium Intake Standard for Children from 0.03 to 0.1  $\mu\text{g}/\text{kg bw}/\text{day}$
- Boxer (D-CA) Introduced Safe Kids Act (S.76)

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## Cadmium in Glassware Enamels

- Recall of McDonald's Shrek Glasses in Summer 2010 Even Though They Passed CPSC Standards
- Coca-Cola Recall of 88,000 Glasses with High Amounts of Cadmium Red Pigment - November 2010
- Chinese-Made Glasses with Superheroes from Warner Brothers in Burbank CA – High Lead and Cadmium
- Associated Press (AP) Testing Children's Glasses from Coca-Cola, Walt Disney, Burger King, McDonald's
- Associated Press (Justin Pritchard) Claims That Coatings on Children's Glasses Contain Up to 2.5% Cd and Asserts That Cadmium Content and Not Cadmium Solubility Should be Regulated

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## International Cadmium Issues

- United Nations Economic Commission for Europe (UNECE) LRTAP Heavy Metals Protocol
  - Executive Body Meeting Dec 13-17, 2010 Geneva
- United Nations Environment Program (UNEP)
  - Three Trade-in-Cadmium-Products Reports
  - Scientific Review on Cadmium
  - UNEP Governing Council GC 26 Feb 21-24 Nairobi
  - Environmental Impacts of Metals Report
- Strategic Approach for International Chemicals Management (SAICM)
  - Chemicals in Products Program

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## UNECE LRTAP Executive Body Meeting

- Introduce Protocol Flexibility to Increase Ratifications Particularly in Eastern Europe, Caucasus & Central Asia
- Coordinate UNECE LRTAP Work on Mercury Products with UNEP International Negotiations on Mercury (INC)
- Present EU Proposal to Ban Mercury-Containing Lamps, Batteries, Thermometers, Vehicles, EEE and Dental Amalgams Will Not Go Forward
- Coordinate Heavy Metals Protocol Requirements with Gothenburg Protocol (Particulate Matter Control)
- Work to be Carried Out by Working Group on Strategies and Review (WGSR), not Task Force on Heavy Metals

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## UNEP Reports on Trade in Cadmium Products

- Three Reports Have Now Been Prepared
  - Africa; Latin America and Caribbean; Asia and the Pacific
- All Three Compile Statistics on Trade in Products Alleged to Contain Cd, Not Actual Cadmium Flow
  - Cadmium Content of Products is Ignored
  - Products No Longer Utilizing Cadmium Chemicals (Rubber and All Plastics, Not Just PVC) Are Included
- None of the Reports Link Product Flow to Human Health or Environmental Effects, Just Speculate
- None of the Reports Treat Unintentional Sources of Cadmium Except Trade Flow in Fertilizers Which Actually Accounts for 75% to 95% of Trade Flow
- Reports All Include Cadmium-Containing Wastes, But in a Category for Which Cadmium is Very Minor Part
- ICdA Filed Extensive Written and Verbal Comments with UNEP, USA and Canada on All Three Reports

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## UNEP Scientific Review on Cadmium

- UNEP DTIE Issued "Final" Version in October 2010
- ICdA Responded with 24 pages of comments which were sent to UNEP, USA and Canada
- UNEP Posted Comments on Their Website and a Response was Received from EPPA-Spain
- However, No Changes Were Made on October 2010 Version Which was Tabled at UNEP GC 26 in Nairobi
- Draft Decisions of GC 26 "noted actions to finalize the reviews but also acknowledges the need for additional work to fill information gaps."
- Several Delegations at GC 26 Noted That Further Time is Needed to Consider the Scientific Reviews
- However UNEP DTIE Considers the Review to be Final

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## Governing Council Meeting GC 26

- Group of African Nations Proposed Global Partnership in Concert with UNEP Global Mercury Partnership to Take Action on Lead and Cadmium
- Emphasis on Developing Nations, Especially Africa
- Emphasis on Children's Products, Especially Jewelry
- Supported by Norway, Switzerland, Africa, Colombia
- Opposed by USA, Canada, Australia, Japan, Brazil
- Invites SAICM ICCM to Use Scientific Review to Consider How to Reduce Risks from Cadmium
- Some Parts of African Proposal are Included in Final Draft Decisions of Working Group on Chemicals Management Which Includes UNEP Mercury Program

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## GC 26 Draft Decisions on Cadmium

- Requests UNEP Executive Director to Continue Activities on Cadmium, Particularly in Developing Countries to:
  - Achieve Environmentally Sound Management of Cadmium Batteries Throughout Their Life Cycle
  - Deepen the Scientific Basis of Existing Studies
- Requests UNEP Executive Director to Initiate a Global Voluntary Partnership on Cadmium with Governments, IGOs and NGOs
- Requests UNEP Executive Director to Act as an Information Clearing House on Cadmium Substitution in Products

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## Environmental Impacts of Metals Report

- Prepared by UNEP International Panel on Natural Resources (Dutch & Finnish Authors)
- ICMM (John Atherton) is Responding on Behalf of the Mining / Metals Industry
- 22 Metals Including Cadmium are Covered
- Report Negative, Inaccurate, Out-of-Date
- Commodity Associations Have Been Asked to File Comments on Their Specific Metals
- ICdA Forwarded Comments on Cadmium to John Atherton on March 23, 2011

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## Strategic Approach to International Chemicals Management (SAICM)

- Chemicals in Products Initiated at ICCM2 in May 2009
- Scoping Meeting in December 2009 in Geneva
- Product Sectors of Highest Priority
  - Children's Products and Toys
  - Electronics
  - Clothing
  - Construction Materials
- Several Reports and Studies Issued in 2010
- Case Studies Published in February 2011
  - Toys Sector Case Study – Mentions Cadmium Regulations in Toys in EU, US, Japan, China, and ISO 8124
  - Electronic Products Case Study – Mentions Cadmium in Printed Circuit Boards, Cathode Ray Tubes, and NiCd Batteries
- Reports and Working Group Largely Scandinavian

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## Cadmium Market Report

- Market Largely Unchanged Since Oct 2010
- ICdA Analysis Based on WBMS & MB Figures
- WBMS Numbers Increasingly Unreliable
  - Germany High, China Low, Same Year-to-Year
- Double Counting of Primary and Secondary ?
  - Japan Recycling at Toho, Mitsui and Nippon
- Consumption Figures Mix First and Second Level Consumption
  - Conversion of Metal to Oxide and Other Salts
  - Consumption in Batteries, Pigments, Coatings

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## Next meetings

- The next GA is fixed on October 6<sup>th</sup>, (London tbc)
- The next H&S-EU meeting is fixed on June 7<sup>th</sup> Brussels
- The next NA regulatory affairs meeting will held on April 28<sup>th</sup> by web teleconference
- The next Board meeting is proposed to be scheduled on **6th October ?** (to be confirmed)

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## GLOSSARY OF ACRONYMS AND ABBREVIATIONS

<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>ASTM</b>	American Society for Testing and Materials
<b>ATSDR</b>	Agency for Toxic Substances and Disease Registry (USA)
<b>BAT</b>	Best Available Technology
<b>BI</b>	Biological Indicator(s)
<b>CDC</b>	Center for Disease Control (USA)
<b>ChAMP</b>	Chemicals Assessment and Management Program (USEPA)
<b>COM</b>	Council of Ministers (EU)
<b>CMR</b>	Carcinogenic, Muta-genetic and Reproductive Toxicant
<b>CPSC</b>	Consumer Product Safety Commission (USA)
<b>CRT</b>	Cathode Ray Tube
<b>CSA</b>	Chemical Safety Assessments
<b>CSR</b>	Chemical Safety Report
<b>DG</b>	Directorate General
<b>DEQ</b>	Department of Environmental Quality
<b>DNEL</b>	Default No Effect Level
<b>DTIE</b>	Division of Trade, Industry and Economics (of UNEP)
<b>DU</b>	Downstream User
<b>E</b>	Environment
<b>EB</b>	Executive Body (of the UNECE LRTAP Treaty)
<b>EC</b>	European Commission
<b>ECHA</b>	European Chemicals Agency
<b>EEE</b>	Electrical and Electronic Equipment
<b>EINECS</b>	European Inventory of Existing Chemical Substances
<b>ELV</b>	Emission Limit Value
<b>EPA</b>	Environmental Protection Agency (United States)
<b>EU</b>	European Union
<b>FAO</b>	Food and Agricultural Organization (United Nations)
<b>GA</b>	General Assembly of Members of the International Cadmium Association
<b>GACT</b>	Generally Available Control Technology
<b>GC</b>	Governing Council (of the United Nations Environment Program)
<b>GES</b>	Generic Exposure Scenario
<b>GHS/CLP</b>	Globally Harmonized System of Classification, Labeling and Packaging
<b>HH</b>	Human Health
<b>HM</b>	Heavy Metals
<b>H&amp;S</b>	Health and Safety Committee of International Cadmium Association
<b>IARC</b>	International Agency for Research on Cancer
<b>ICCM</b>	International Conference on Chemicals Management (of SAICM)
<b>ICMM</b>	International Council on Metals and Mining
<b>ICdA</b>	International Cadmium Association
<b>IFCS</b>	Intergovernmental Forum for Chemical Safety

<b>IGO</b>	Intergovernmental Organization
<b>ILA</b>	International Lead Association
<b>i-OEL</b>	Inhalable Occupational Exposure Limit (Based on Respirable Fraction)
<b>IOMC</b>	International Organization for Management of Chemicals
<b>IPSRM</b>	International Panel for Sustainable Resource Management (of UNEP)
<b>IRIS</b>	Integrated Risk Information System (USEPA)
<b>ISO</b>	International Standards Organization
<b>IUCLID</b>	International Uniform Chemical Information Database
<b>IZA</b>	International Zinc Association
<b>IZA-E</b>	International Zinc Association - Europe
<b>JECFA</b>	Joint Expert Committee on Food Additives (World Health Organization)
<b>LRTAP</b>	Long Range Transboundary Air Pollution
<b>MS</b>	Member States (of the European Union)
<b>MSW</b>	Municipal Solid Waste
<b>NAMC</b>	North American Metals Council
<b>NCEA</b>	National Center for Environmental Assessment (of U.S. EPA)
<b>NCOM</b>	Nordic Council of Ministers
<b>NESHAPS</b>	National Emission Standards for Hazardous Air Pollutants
<b>NGO</b>	Non-Governmental Organization
<b>NOEL</b>	No Observable Effect Level
<b>NTP</b>	National Toxicology Program (USA)
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>OSPAR</b>	Oslo-Paris Convention
<b>PRBA</b>	Portable Rechargeable Battery Association (United States)
<b>PRTR</b>	Pollutant Release and Transfer Registry
<b>PTWI</b>	Provisional Tolerable Weekly Intake
<b>PVC</b>	Polyvinylchloride
<b>RA</b>	Risk Assessment
<b>RBRC</b>	Rechargeable Battery Recycling Corporation (North America)
<b>REACH</b>	Registration, Evaluation & Authorization of Chemicals (EU)
<b>RIP</b>	REACH Implementation Projects
<b>RPA</b>	RPA Ltd. (formerly Risk Policy Analysts), Consultant for EU
<b>RRS</b>	Risk Reduction Strategy (European Commission)
<b>SAICM</b>	Strategic Approach to International Chemicals Management
<b>SCOEL</b>	Sub-Committee on Occupational Exposure Levels
<b>SEE</b>	South East Europe
<b>SIEF</b>	Substances Information Exchange Forum
<b>SUMDOC</b>	Summary Document
<b>TCNES</b>	Technical Committee on New and Existing Chemicals
<b>TFHM</b>	Task Force on Heavy Metals (UNECE LRTAP Heavy Metals Protocol)
<b>TSCA</b>	Toxic Substances Control Act (United States)
<b>UCL</b>	Universite Catholique Louvain (Belgium)
<b>UNECE</b>	United Nations Economic Commission for Europe
<b>UNEP</b>	United Nations Environment Programme
<b>USEPA</b>	United States Environmental Protection Agency
<b>USGS</b>	United States Geological Survey
<b>WBMS</b>	World Bureau of Metal Statistics
<b>WGs</b>	Working Groups
<b>WGSR</b>	Working Group on Strategies and Review (of UNECE LRTAP Treaty)
<b>WHO</b>	World Health Organization
<b>WSSD</b>	World Summit on Sustainable Development