International Cadmium Association

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Minutes of the 2nd ICdA H&S Committee

March 10th, 2009
Eurometaux, Metals Conference Center
100, Rue du Duc – 1150 Brussels

1- Introduction

Christian Canoo welcomes the participants and introduces the meeting. Twenty people representing Accurec, Boliden, Enersys, Floridienne Chimie, Gaz-Zwickau,James M. Brown, Hoppecke, Nyrstar, Rockwood Pigments, Xstrata, Saft and ICdA attend the meeting, and introduce themselves (cf. file 1 Attendance). Each participant signs a statement of compliance.
Christian Canoo informs the participants that Patrick de Metz has been chosen by the last ICdA Board (Februray 2009) as the chairman of the ICdA H&S committee.

Patrick de Metz chairs the meeting. The agenda proposed by ICdA is adopted (cf. file 2 Agenda).

2 - Approval of the minutes of the 1st H&S committee (25 November 2009)

The minutes of the first H&S committee (November 25, 2008) are approved unanimously.

3 – The objectives of the meeting *(Patrick de Metz)*

In his presentation (cf. file 3) Patrick describes the objectives of the meeting:

For cadmium in air :
- Review how cadmium dust in air is monitored across our industries
- Agree on a set of recommended practices

Others:
- Make a recommendation to the ICdA Board regarding the cadmium exposure observatory
- Update on SCOEL situation and proposed actions
- Organise of the 3rd H&S meeting.

4 – Of dust and health : some definitions *(Bernard Pitié)*

The objective of this presentation (cf. file 4) is to explain the main definitions on which a common understanding is necessary during the meeting.
Three themes are developed:
- Respiratory tract, deposition and clearance scheme
- Definitions concerning dust (aerodynamic diameter, inhalable, thoracic and respirable particles) and a tentative to establish equivalence between inhaled cadmium and ingested cadmium
- Definitions concerning OEL (occupational exposure limits).

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5 – Analysis of dust monitoring questionnaire information *(Phil Rowley)*

In his presentation (cf. file 5) Phil Rowley analyses the answers to the dust questionnaire sent to the participants. Seventeen answers have been received and they represent the cadmium industry.

Most of the sites use personal sampling, with different kind of samplers The OEL (generally 8 hours TWA, total, inhalable or respirable) are very different between the countries, and sampling methods are different too. Analytical measurements are made either by internal laboratory, either by external laboratories. Some sites have developed quality assurance.
In spite of all these differences, for inhalable dust, personal sampling results are comparable between countries.

6 - SAFT presentation on cadmium exposure monitoring *(Philippe-René Kreher and Benoît de Fournoux)*

In the presentation (cf. file 6), Philippe-René Kreher explains what are the principles of management of the Bordeaux and Nersac SAFT factories, their experience and the sampling methodology (personal sampling, followed by static sampling if it is necessary to determine the cadmium sources).
There is one campaign per year and workshop air quality is driven by personal air sampling results. According to the results the actions are prioritized.
Several difficulties are mentioned: comfort (weight and noise of personal samplers), cross-contamination in the internal laboratory (before 2002), period selection, changing of workplace during the sampling period.
To increase the credibility of the measurements, sampling and testing are now made by an external laboratory.
Last difficulty: for personal sampling, with 2l/min during 8h, a level of 20 µg Cd caught in the cartridge is very low and a small incident car modify significantly the analytical result.

Summary of the discussion on SAFT presentation
- Norm EN 482 specifies general performance requirements for procedures for determination of the concentration of chemical agents in workplace atmospheres.
- The issue of the credibility of an internal laboratory seems specific to France.
- The internal laboratory equipment for the factory/production analysis needs to be separated from equipment for hygiene sample analysis to avoid cross-contamination.
- When a site gets a bad result, a new personal sampling is made to confirm it.
- In some countries, one measure per person and per year (sampling + analysis) has to be done by an external laboratory.
- Nyrstar uses personal samplers online with real time dust monitoring on a computer, what is very interesting for localizing the inhalable dust sources. It is not specific of cadmium dust.
To detect emission sources high volume static sampling is also used to get faster and in a short sampling time more accurate data.
By using the standard EN-689 the number of personal sampling can be limited by defining homogeneous exposure groups. At least 1 sample par 10 workers needs to be taken to become statistical valid results (chapter 521 EN689).

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- Biological indicators are never measured by internal laboratories.

7 - Monitoring of cadmium dust-in-air at JMB Limited (*Phil Rowley)*

In his presentation Phil Rowley explains the pigments manufacturing processes, dust in-air limits (8 hours or 15 min, inhalable or respirable according to the material), the UK HSE "MDHS" documents which includes the MHDS 10/2 document on "Cadmium and inorganic compounds of cadmium in air ». The MHDS documents can be downloaded freely.
Exposed workers are tested every 6 months. All results are given to the person monitored. In the case of any result over the relevant limit, the same person is retested twice doing the same job, as soon as this can be arranged. All results reported to health & safety committee with names, all results are made public (within company) in safety committee meeting minutes with results anonymised.
The laboratory quality assurance scheme is based on WASP which appears to be the only QA scheme covering cadmium dust-in-air analysis.
All plant dust-extraction (LEV) is now interlocked with the equipment it serves, ensuring that it is always operating when necessary
Dust results above the limit happen rarely and they are often due to sampler contamination.
JMB doesn't employ any workers who smoke.

Summary of the discussion on JMB presentation
- In dusty area PPE (Personal Protective Equipment) are used (the air is filtered and push inside the helmet). For other sites, there seems there is no difficulty for working 6 hours with this type of helmet.

8 - Discussion and elaboration of recommendations on measuring air quality *(Patrick de Metz)*
Patrick de Metz defines the objective of the discussion "How to measure air quality?" with two main themes:
1) Checking site compliance with requirements
2) Creating a strategy to improve a site situation

The results of this discussion have been incorporated in a document named: "Recommendations on measuring and managing air quality".

9. Draft recommendation to the Board on setting up an EU observatory on cadmium occupational exposure *(Patrick de Metz, Bernard Pitié)*

9.1. Presentation of the objectives
Patrick de Metz reminds that a draft concerning the setting-up of an observatory on cadmium occupational exposure (cf. file 9bis) was sent a few weeks ago. During the presentation (cf. file 9) Patrick de Metz explains the objectives of this observatory:
- Good internal benchmarking tool
    - Win-win seal: If a company shares its data with the rest of the industry, industry will share its data with it.
- Ability for industry to verify that it is making progress

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- One can discuss only what is measurable.
- Ability for industry to communicate with authorities

9.2. Summary of the discussion

9.2.1. Should the trustee be internal or external to ICdA?

The H&S committee thinks that the data collection should be done inside ICdA and that it is a normal part of the business of ICdA. But, data analysis could be done by an external person (medical doctor?).

9.2.2. Which level of details should be shared with trustee (actual measures or only averages by band) ?

There is a consensus on the presentation type A (cf. page 5 of file 9), with different classes of a BI, the average value of the BI and the number of employees.
Two bio-indicators will be collected: Cd-U and Cd-B.
The number of classes has to be increased for Cd-U.

9.2.3. Which statistics should the trustee generate for industry?

For reasons of confidentiality statistics the industrial sectors should be defined in such a way that it would impossible to calculate the average of some groups of sites or companies. This point has to be discussed again.

9.2.4. Which analysis/assessment should the trustee generate?

The trustee should generate mainly analysis of trends.

10. Scoel, third H&S committee (16th June 2009) and long term planning

10.1 SCOEL

Patrick de Metz summarizes the content of his discussion with a SCOEL representative (cf file 10):

- the 72nd SCOEL meeting will be held on March 11th 2009
- SUMDOC (summary document) will be proposed early April
- Main recommendations of SCOEL (cf.supra)
  - Respirable [Cd-Air] = 4 µg/m3
  - [Cd-U] = 2 µg Cd/ g creatinin.
- The SUMDOC will be circulated by ICdA as soon as possible.

- Cd-Air

  Companies have to think about what is feasible and what is probably acceptable?

- Cd-U (2 µg Cd/ g Creatinin)

  The recommendation from SCOEL will be stricter than the Swedish regulation! Studies are on going under REACH Cadmium consortium and they will be useful. First results seem to prove that there is a risk for exceeding the limit value of RBP (300) only if the Cd-U is greater than 10 µg Cd/ g creatinin. These preliminary results have to be confirmed and, for obvious statistical reasons, the number of workers in the upper classes of Cd-U is very important.

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10.2 Practical consequences and next meeting

It is proposed and accepted to permute the themes of the 4th H&S Committee (medical surveillance) and that of the 3rd one (Personal Portative Equipment).

The respective dates are 16 June 2009 and 15 September 2009 in Brussels

The H&S committee will invite an Arbetmiljöverket specialist for a Swedish law presentation during the 3rd H&S Ctee meeting (16 June 2009). The plant medical doctors will be invited to attend the meeting.

Then, there will be a report of the ICdA H&S action to the SCOEL.

11 - Next H&S meeting

Third H&S committee : Tuesday **16th June 2009** (with medical doctors, Brussels)

Fourth H&S committee : Tuesday **15th September 2009.**

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