

6th ICdA H&S Ctee

October 15th 2010

Objective of meeting

□ Reminder:

- The H&S Ctee was set up **primarily** to assist ICdA members with the 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

Statement of Compliance

- ❑ The purpose of the meeting is to address, under the applicable confidentiality rules, issues concerning cadmium and cadmium compounds producers and users and more particularly H&S issues, as reported in the Meeting's objectives .
- ❑ The minutes kept at 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, 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.

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 8th: 2010
- ❑ **Status a the REACH registration process**
 - **6th Ctee, agenda re-formatted for today**
- ❑ Choosing and maintaining the right PPE
 - 7th Ctee, date provisionally set on June 14th 2011, to be confirmed
- ❑ Implementing a prevention culture in our facilities
 - 8th Ctee, date to be set:

Agenda for Today's meeting

- Introduction: Welcome / Agenda / Competition law compliance
- Approval of the minutes of the 5th H&S committee (June 16th 2010)
- Objectives of the meeting: Status of the REACH process for Cd-substances and corresponding "Risk Management measures"
- Review of the registered files so far
- Survey of a Iuclid-dataset and CSR: case of Cadmium

- Restitution of OCdBIO-2 (Occupational Cadmium Bio Indicators Observations) 2009 Data (*Professor Bernard*)

- Review of the "Risk management measures" developed in each Cd-Reach dossier, i.e. exposure scenarios and assessment
- Setting of 7th H&S committee and long term planning

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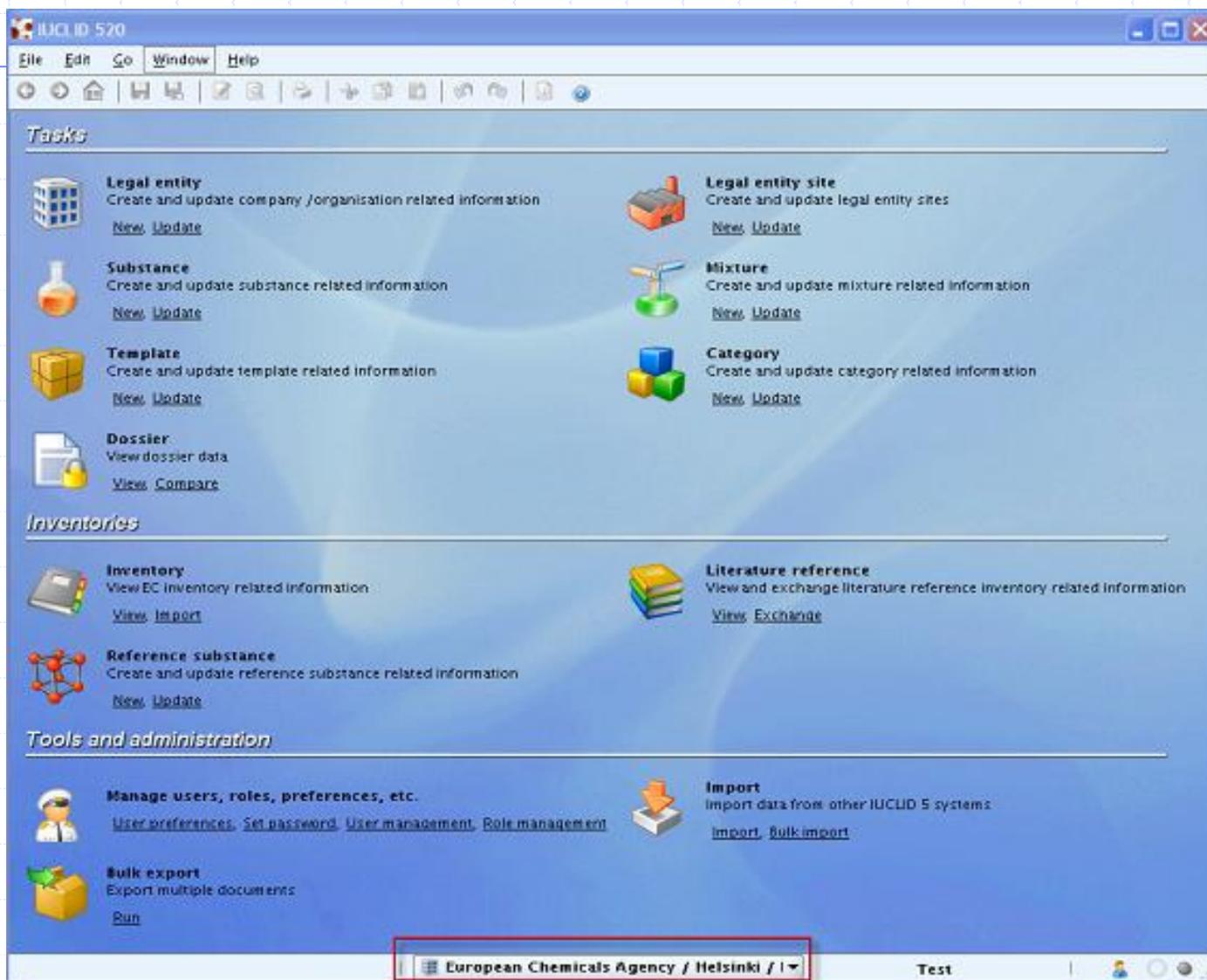
Cadmium-Consortium Membership unchanged

25 Members	Cd I	Cd II	Cd III	~55 Legal entities
5N PV GmbH	x	x	x	<i>Photovoltaic</i>
AMI DODUCO GmbH		x		<i>Surface Technology (elec.)</i>
BOCHEMIE a.s.		x		<i>Cd-comp. Manuf. / Recycler</i>
BOLIDEN AB	x			<i>Cd-producer</i>
CERAC Inc.		x		<i>Cd-comp. Manuf.</i>
FLORIDIENNE CHIMIE	x	x		<i>Cd-comp. Manuf. / Recycler</i>
H. C. MIASTECZKO SLAKIE	x			<i>Cd-producer</i>
JAMES M. BROWN Ltd		x	x	<i>Pigment manuf.</i>
JSC Chelyabinsk Zinc Plant	x			<i>Cd-producer</i>
KCM 2000 S.A.	x			<i>Cd-producer</i>
KOREA ZINC	x			<i>Cd-producer</i>
LN Metals Ltd.	x			<i>Trader</i>
NYRSTAR S.A.-N.V,	x			<i>Cd-producer</i>
PORTOVESME s.r.l.	x			<i>Cd-producer</i>
RECYLEX S.A.		x		<i>Photovoltaic</i>
ROCKWOOD PIGMENTS		x	x	<i>Pigment manuf.</i>
SAFT S.A.	x	x		<i>NiCad-battery</i>
SOUTHERN COPPER CORP.	x			<i>Cd-producer</i>
TECK COMINCO Limited	x			<i>Cd-producer</i>
TODINI & Co, SPA	x	x		<i>Trader</i>
TRAXYS	x			<i>Trader</i>
UMICORE	x	x	x	<i>Recycler / Photovoltaic</i>
VOTORANTIM METAIS ZINCO sa.	x			<i>Cd-producer</i>
XSTRATA ZINC GmbH	x			<i>Cd-producer</i>
ZM SILESIA SA		x		<i>Cd-comp. Manuf. / Recycler</i>

Cd-substances submitted and status registration process

	Name	EINECS	Lead Registrant	Registr. process
	<i>Substances</i>			
1	Cadmium metal	231-152-8	Xstrata	Registered Sept. 21
2	Cadmium oxide	215-146-2	La Floridienne Chimie	Registered Sept. 16
3	Cadmium hydroxide	244-168-5	SAFT	Registered Sept. 17
4	Cadmium nitrate	233-710-6	La Floridienne Chimie	Registered Sept. 16
5	Cadmium chloride	233-296-7	5NPlus	Registered Sept. 8
6	Cadmium carbonate	208-168-9	Rockwood Pigments	Registered Oct. 12
7	Cadmium sulphide	215-147-8	5NPlus	Registered Sept. 8
8	Cd sulphoselenide	261-218-1 <i>235-758-3</i>	Rockwood Pigments	Registration in 2013
9	Cd Zn sulphide	232-466-8	Rockwood Pigments	Registration in 2013
10	Cd telluride	215-149-9	5NPlus	Registration in 2013
	<i>Intermediates</i>			
	Cadmium Sulphate	233-331-6	5NPlus	Registered Sept. 8

IUCLID database is the cornerstone of REACH registrations



The Chemical safety Report (CSR) is the Risk Management guidance summary

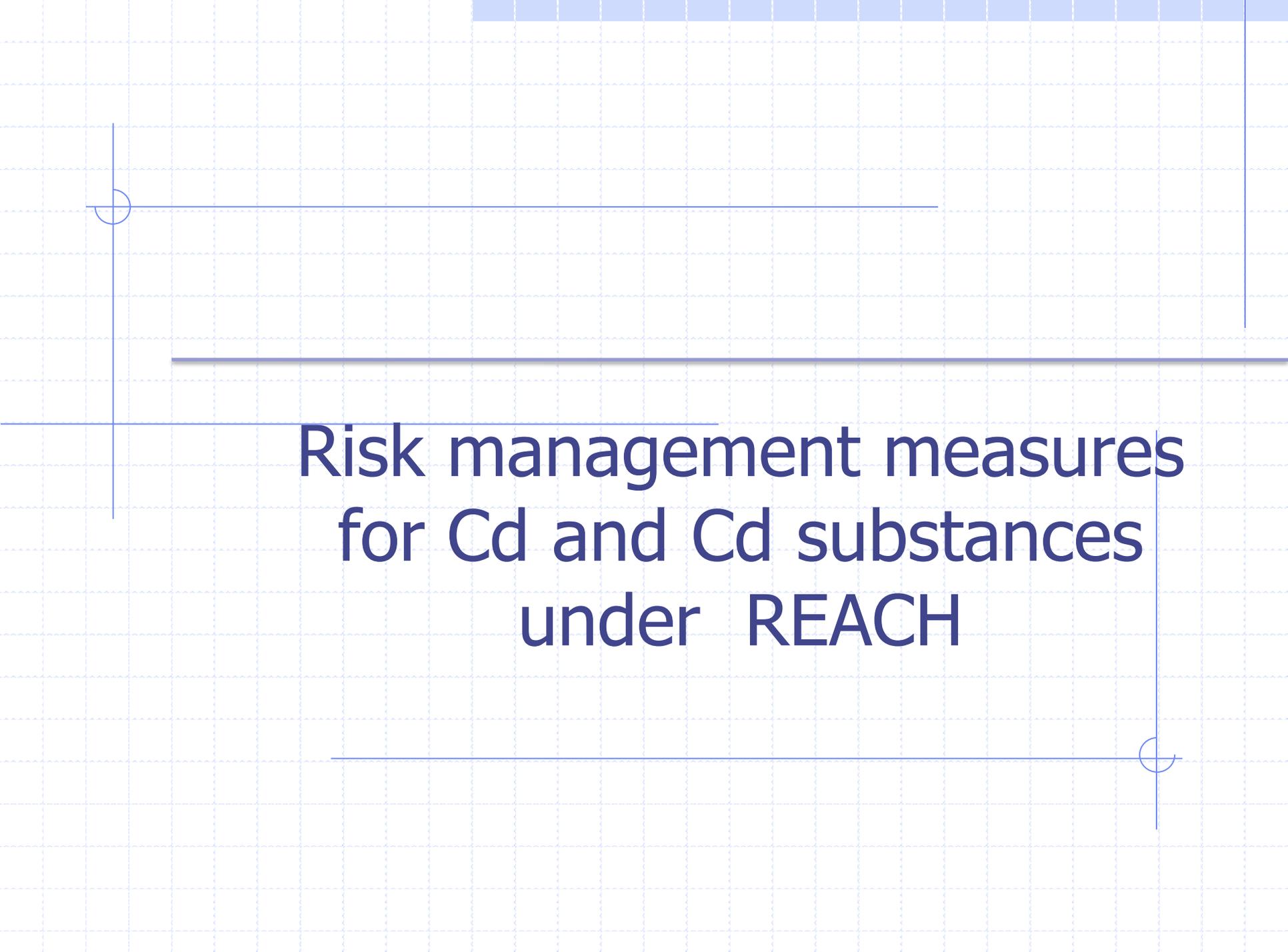
CHEMICAL SAFETY REPORT

Substance Name: cadmium oxide

EC Number: 215-146-2

CAS Number: 1306-19-0

Registrant's Identity: Floridienne Chimie S.A.



**Risk management measures
for Cd and Cd substances
under REACH**

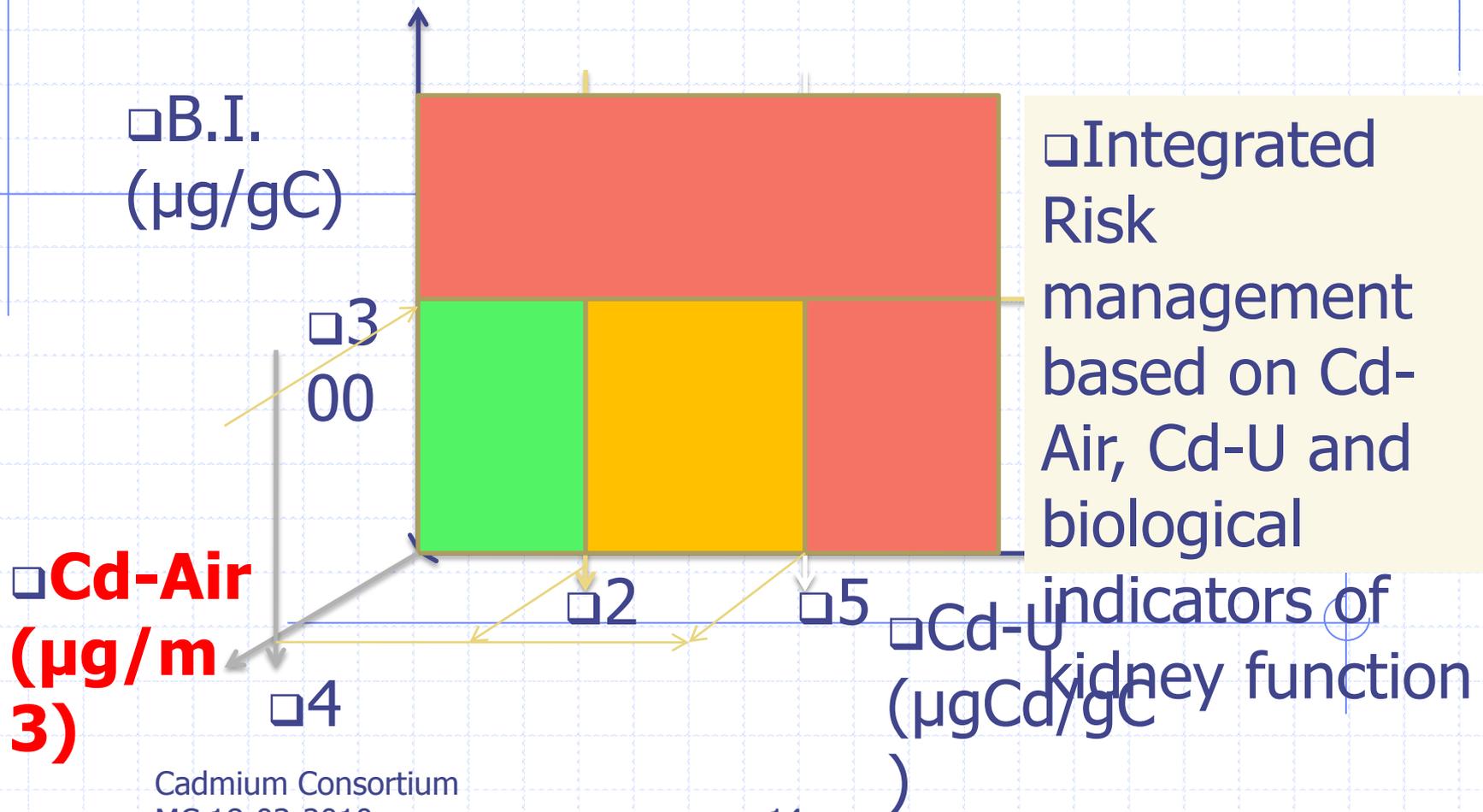
basics

- Protection of workers by protection against renal effects
 - ICdA guidance document 2006
- SCOEL (2009-2010)
 - Cd is threshold genotoxicant
 - Renal effects are most sensitive
 - i-OEL $4\mu\text{g}/\text{m}^3$ (respirable fraction)

RMM in exposure scenarios: a stepwise approach

- 1) general working environment measures
 - Compliance with i-OEL?
 - ✓ $4\mu\text{g Cd/m}^3$ respirable \approx $8\text{-}20\mu\text{g CD/m}^3$ total
- 2) if compliance not ensured consistently
 - Individual measures of protection
 - Individual medical follow-up
 - ✓ Parameters of exposure
 - ✓ Parameters of (subclinical) effect

⇒ Management of Cd-risk at the workplace (post-SCOEL)



Management is function of the medical follow-up

- CdU < 2 μ g/gC (CdB < 5 μ g/l)
 - General hygiene measures
 - General medical follow-up
- 2 < CdU < 5 μ gCd/gC (5 < CdB < 8 μ gCd/l)
 - **= Action level**
 - ✓ Systematic and frequent medical follow-up
 - ✓ Measurement of Biological indicators of (subclinical) effect (e.g.: B2-MG, RBP)
 - ✓ Check for reasons of increased exposure
 - ✓ **⇒ Management decisions**

Management decisions

- CdU < 2 μ g/gC (CdB < 5 μ g/l: OK)
- 2 < CdU < 5 μ gCd/gC (5 < CdB < 8 μ gCd/l)
 - CdU/CdB remain stable, no progression
 - (no BI progression)
 - \Rightarrow Keep workers at post, careful follow-up
- CdU > 5, CdB > 8, and/or if progression BI towards higher values:
 - \Rightarrow removal from exposure
- Newly exposed – historically exposed

Industrial hygiene is key

□ General, Individual

- Implement best practice in collective and individual hygiene procedures in compliance with articles 5 and 8 of 98/24/EC
- Detailed in (G)Exposure scenarios

Extended MSDS

- ❑ The information on risk management measures needs to be translated into the extended MSDS
- ❑ Parts of the e-SDS information will be harmonised conform to the registration files

OCdBio-2 Data of 2009

- Most of the (European) sites asked for bio-monitoring data responded favorably
- It would, of course, be better to have everybody on board for this exercise
- The questionnaire has been answered by 19 EU-sites for biomonitoring in 2009
 - ✓ 18 are giving Urine data >> 2651 workers
 - ✓ 16 are giving Blood data >> 1883 workers

1	Boliden - Odda
2	Boliden - Kokkola
3	Nyrstar - Auby
4	Nyrstar - Budel
5	Nyrstar - Balen
6	Nyrstar - Overpelt
7	Xstrata - Nordenham
8	Xstrata - San Juan
9	Porto Vesme
10	KCM - Plovdiv
	OCK - Kardjali
	Miasteczko
	Boleslav
	Copsa - Mica
11	SAFT - Oskarshamn
12	SAFT - Ferak
13	SAFT - Nersac
14	SAFT - Bdx
15	La Floridienne - Ath
16	SNAM - Viviez
17	ACCUREC - Wiehagen
	Gaz - Zwickau
	Hoppecke - Brillon
18	Rockwood - Kids Grove
19	JMB - Fenton
	ZM SIL - Katowice

Next meetings

- Proposed next date: March April (tbd)
 - ✓ Theme: Choosing and maintaining the right Personal Protective Equipments (PPE)
A questionnaire will be prepared and circulated by Rolf Rodermund (Xstrata)
- Long term planning: 2nd 2011-Meeting in September – October (tbd) on “Implementing a prevention culture in our facilities
- As agreed previously, the key activities of the H&S Committee will remain:
 - ✓ To generate a revision of the ICdA Guidance
 - ✓ To make a follow up of the new regulation requirements
 - ✓ To keep updated the OCdBio Observatory