Adaptation to scientific and technical progress under Directive 2002/95/EC

Contract N°07010401/2006/445990/ATA/G4

Monthly Report 1

- final -

Freiburg, 29 November 2006

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Content

1 Background and Objectives

Article 4 (1) of Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment provides “that from 1 July 2006, new electrical and electronic equipment put on the market does not contain lead, mercury, cadmium, hexavalent chromium, PBB or PBDE.” The annex to the Directive lists a limited number of applications of lead, mercury, cadmium and hexavalent chromium, which are exempted from the requirements of Article 4 (1).

Article 5 (1) (b) of the Directive provides that materials and components can be exempted from the substance restrictions contained in Article 4 (1) if their elimination or substitution via design changes or materials and components which do not require any of the materials or substances referred to therein is technically or scientifically impracticable, or where the negative environmental, health and/or consumer safety impacts caused by substitution outweigh the environmental, health and/or consumer safety benefits thereof.

On the basis of this provision the Commission has received (and is still receiving) additional requests for applications to be exempted from the requirements of the Directive from industry. These requests need to be evaluated in order to assess whether they fulfil the above mentioned requirements of Article 5 (1) (b). Where the requirements are fulfilled the Commission proposes a draft decision amending the RoHS Directive.

Against this background Öko-Institut e.V. and Fraunhofer Institute for Reliability and Microintegration IZM have been commissioned by the European Commission with technical assistance for the evaluation of requests for exemptions submitted according to Article 5 (1) (b). The main objective of this technical assistance contract consists in a clear assessment of whether the requests for exemptions are justified in line with the requirements listed in Article 5 (1) (b) and in a subsequent recommendation on whether or not to grant the exemption – including a precise wording. These recommendations as well as the description of the proceeding will be included in monthly reports between October 2006 and October 2007.

2 General Procedure

In order to provide the required clear assessment and evaluation of whether a request for exemption is justified in line with Article 5 (1) (b) the following general procedure will be followed:

The organisational and formal tasks described in

1. Table 1 below are horizontal tasks that will be carried out during the whole project period (i.e. along 12 months of contract duration) and across all exemption requests.
2. The technical and scientific evaluation described in Table 2 below will be carried out for each single exemption request. This procedure is thus a vertical task done in an iterative process.

Table 1: Organisational / formal proceeding

Work packages	**Tasks**
(I) Basic set up	• Install project-specific e-mail account • Set up database for document sharing between team members and experts • Download documents from Commissions' web site and corresponding CIRCA database • Work through stakeholder comments and allocate them to requests • Communicate roles of project team to Commission and nominate one main contact person • Finalise work plan in agreement with the Commission
(II) Communication with applicants and stakeholders	• Contact applicants after stakeholder consultation has closed (give a signal on start of evaluation procedure). • Offer possibility to organise briefing meetings with applicants & stakeholders in view of transparent communication of evaluation proceeding (timeline, steps etc. as described in Table 2 below) • Develop standard questions and e-mail for further request for information and need for clarification
(III) Overall project management	• Regular exchange and close liaison with Commission (e-mail, telephone) • Project manager responsible for every-day communication with all relevant parties (Commission, project partners, external experts, members TAC, …) • Track-record of documents provided by applicants, stakeholders and other parties
(IV) Reporting	• Deliver regular monthly reports • Interim report • Draft final report • Final report • Updates of reports when revision of recommendation is necessary due to new data / information

Table 2: Technical and scientific evaluation proceeding

Work packages	**Tasks**	**Procedure, methodological background**
(A) Basics: first assessment of exemption request & stakeholder comments	Check: • Specific application described? • Application covered by RoHS Directive? • Wording proposed? Wording precise and clear? • Quantity of substance, need for its use, substitution / elimination efforts described in comprehensive and detailed manner? • Justification in line with criteria of Art. 5 (1) (b)? • Additional evidence / information provided in stakeholder comments?	• Analyses of data and information gathered from documents downloaded from Commission online database • Elaborate questionnaire with need for clarification and further information • Consultation with applicants of exemptions (inter alia on possibly new or changed wording) • Review of literature • Contacting competitors • Exchange with external experts
(B) Assessment of technical specifications & substitution or elimination possibilities	• Identify alternative materials and components including adaptability of substitutes in similar applications to the application in question • Determine possible substitution through alternative materials: effects on characteristics and performance (e.g., reliability, manufacturing yield, appearance) • Determine possible substitution through alternative production processes: effects on characteristics and performance (e.g., reliability, manufacturing yield, appearance) • Determine alternative product design providing the same function • Assessment of the availability of alternatives within the next four years	• Analyses of data and information gathered from documents downloaded from Commission online database • Confrontation of applicants and stakeholders with opposing views on substitution possibilities • If necessary: hold meeting bringing different stakeholders together in order to clarify diverging statements • Review of scientific and patent literature • Consultations with relevant scientific and research bodies within and outside the EU • Expert consultation, esp. component and equipment manufacturers • Check (safety) standards and other related legislation • Check if substitutes have undergone a risk assessment.

Work packages	Tasks	Procedure, methodological background
(C) Assessment of possible environmental, health and / or consumer safety impacts	Comparing potential assets and drawbacks caused by substitution regarding • Environmental impacts (energy use, toxicity, impact waste stream) • Impacts on occupational health • Consumer safety and protection	• Analyses of data and information gathered from documents downloaded from Commission online database; especially check whether LCA or similar has been provided as evidence • Consultation with applicants, stakeholders and external experts • Analyse hazardous properties of substances as well as expected exposure situation; main elements: human health hazard assessment, environmental hazard assessment, assessment of bioaccumulation potential and persistency, exposure assessment, risk characterisation • Regarding working place safety and environmental protection: application of standard or enterprise-specific risk management measures can be included in the exposure assessment if sufficient information is available • Relay on publicly available information on potential negative impacts of substitution
(D) Other criteria going beyond Art. 5 (1) (b)	• Identify arguments used by applicant NOT in line with Art. 5 (1) (b) (e.g. economic aspects, supply chain problems, phase-out periods etc.) • Assess whether these arguments are nevertheless valid from a general environmental, health or safety perspective • Include statement on those arguments in evaluation	• Compare argumentation line with criteria from Art. 5 (1) (b) • Consultation with applicants, stakeholders and external experts • Assess validity of arguments with regard to Community environmental, health and safety policy

Work packages	Tasks	Procedure, methodological background
(E) Over-all assessment and conclusions	• Summarise findings of tasks (A) to (D) with argumentations • Evaluate efforts made by applicant • Draw conclusions and final recommendation for the Commission including precise and clear wording • Include findings and recommendation in regular monthly reports	Consultation with • applicants of exemptions • external experts • branch associations and relevant trade organisations • European Commission • Technical Adaptation Committee • Non-governmental organisations and other stakeholder if possible

3 Scope

On 10 November 2006 the sixth stakeholder consultation round was launched by the Commission and will close on 10 January 2007. The requests open for comments of this sixth consultation round represent the scope of this first monthly report and of the current and forthcoming evaluation.

Table 3 below gives an overview over the corresponding set 6 of requests for exemption.

Table 3: Overview requests set 6

No.	Title	Applicant	Overlapping
1a	Lead used for shielding of x-radiation emissions for CRT	VDC Display Systems	Request 22 set 2
1b	Hazardous materials and Lead in solders in components and assemblies used in non-consumer products	VDC Display Systems	LTB
1c	Electronic equipment where reliability, durability and longevity of the equipment is paramount	VDC Display Systems	Request 16 set 4
2	Lead as soldering alloy in high performance communication electronic board and hexavalent chromium (Cr-VI)	Clarity SAS	Request 5 set 1 e.g. Request 7 set 4 LTB
3	GemCore 410 EMV	Gemplus	LTB
4	SAVBIT solder	Roband Electronics PLC	-

No.	Title	Applicant	Overlapping
5	Sn-Pb soldering used in Ground-based Aeronautical Communication Equipment Manufacturing	Telerad	Request 15 set 2 Request 1 set 1 LTB
6	Transducers used in professional loudspeaker systems, using tin-lead solder	Gemini Sound products Corp.	Request 6 and 8 set 3, request 16 set 2, request 6 set 4 and exemption 27
7	Tin-lead solder in the manufacture of professional audio equipment	Gemini Sound products Corp.	Request 6 and 8 set 3, request 16 set 2, request 7 set 4
8	Inventory of special ICS having tin-lead solder on/in leads/balls, used in specialist/professional equipment	Gemini Sound products Corp.	Request 5 and 8 set 3, request 3 set 2, request 10 set 4, LTB
9	Crystal Stones within the battery operated watch	Zeon Ltd.	-
10	EEE used for the broadcast and homeland security sector	Tieline Technology	Requests covering long-term reliability concerns
11a	AM186ES-V40 containing lead in used in the leads over plating and AM79C961AKC containing lead in used in the leads over plating	Digigram	LTB
11b	Audio board manufacturing process	Digigram	LTB
12	Cadmium sulphide or cadmium selenide in polymer based thin film transistor	Silk Displays Inc.	-
13	Lead used in the soldering for surface finishing at the electric pole terminal on the electronic parts	ICOM Incorporated	Request 1 set 1
14	Cadmium contained in the cadmium oxide of a thick film ceramic substrate	ICOM Incorporated	Request 1 set 4, exemption 8
15	All electronics assemblies using lead in solder	RoHSUSA Inc	Request 1 set 1 Requests covering long-term reliability concerns
16	Lead in electric overblankets for Hot Spot detection	Beurer / Especialidades Eléctricas Daga S.A.	-
17	MPC10 used in automatic vending machines to achieve the payment by card	Sagem monetel	LTB
18	Hexavalent Chrome Cr-VI when used as a passivate	Amphenol Limited	Request 5 set 1, exemption 28.

No.	Title	Applicant	Overlapping
19	Lead contained in circuit boards, obsolete and non-compliant Intel 80c188/86 EA\XL microprocessors, Analog Devices ADMC300 DSP, and NEC uPD7101 DART and hexavalent chromium	NBS Technologies Inc.	Request 2 set 3; LTB
20	Component used in the manufacture of electric blankets and heating pads	Thermocable (Flexible Elements) Limited	Request 16 Set 6
21	Request to delete exemption for "Lead as impurity in RIG (rare earth iron garnet) Faraday rotators used for fibre optic communications systems	Integrated Photonics	Request 10 set 1, exemption 22
22	Lead in Trimmer Potentiometer elements	Tokyo Denshi Ltd.	-
23	Cadmium in opto-electronic components	Marshall Amplification plc	Request 9 set 1, request 10 set 2 and request 5 set 4

4 Results

A first screening of the requests of set 6 lead to a certain need for clarification (e.g. no contact details of applicants available or two requests under one heading). It should be noted that it resulted that request 11 actually contains two requests which will be treated separately. Request 11a now is the former request 11 and request 11b is new on the list. Furthermore, request 1 actually contains three different requests, since the Commission's questionnaire has been filled out for three different applications. Request 1a now is the former request 1 and request 1b and 1c are new. Hence, the current consultation covers 26 requests in total. These changes will not appear on the internet since changes are not possible once the consultation is launched.

In addition, requests 13 and 14 are joined in one pdf document which could not be separated. Thus, it is the same file that is posted on the internet for both requests but indeed two different requests.

Concerning request 16, confusion arouse because two nearly identical requests were posted. It resulted that these two requests were sent to the Commission one after the other (the first one - by Especialidades Eléctricas Daga S.A. - in July 2006 and the second one - by Beurer - in November 2006). The only difference is that the second one two more additional documents accompanying the request. One of these documents is missing. This is currently under clarification.

In a first step, it could be identified which requests are overlapping with former requests as well as existing recommendations and thus need to be considered as a whole (cf. Table 3).

The results of this first screening will be used for contacting applicants where it appears to be necessary or useful before the current stakeholder consultation closes.

5 Further proceeding

During the next month the Commission will inform the contractor if comments on requests are available and posted so as to allow a fast and efficient start of the evaluation procedure as described in Table 2.

As soon as it seems adequate, the contractor will start contacting applicants, external experts and stakeholders in view of evaluating the first requests (including necessary clarification if necessary).

The next monthly report is scheduled for 22 December 2006.