



Chemicals Management in the Electronics Sector: Report Back to Stakeholders on the Potential Role of SMOC

December 2009

Note to Stakeholders

At the 2008 Sound Management of Chemicals (SMOC) stakeholder meeting in Tucson, Arizona, stakeholders expressed an interest in chemicals management in the electronic and electrical equipment sector. As the CEC's Trade and Environment Program was already looking at this issue through their Clean Electronics Pollution Prevention Partnership (CEP3), the SMOC Working Group (WG) committed to exploring whether there was a unique role where it could contribute to the Trade and Environment Program efforts. This letter is to inform you of the outcome of that exploration.

The SMOC WG has reviewed a number of reports commissioned and summarized by the CEC Secretariat, which assessed the possible role of the Working Group in the sound management of chemicals in the electronics sector. Based on these reports, the SMOC WG has determined that further SMOC related work focused on this sector is unwarranted at this time, as the focus of electronics work is on waste issues outside of SMOC purview, and best suited for the CEC's Hazardous Waste Task Force. This conclusion is based on the findings of the Secretariat, consultants and the national experts involved in this project. The attached document summarizes these findings, describes how SMOC will continue to remain engaged in these issues in a limited fashion, and provides the rationale for closing this CEC-SMOC project and moving on to work related to other trilateral sector priorities.

Your input and comments on future sectors for consideration would be greatly appreciated.

Sincerely,

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Chair, CEC Sound Management of Chemicals Working Group, and
Director General, Chemical Sectors
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Summary of Findings

At the 2008 Sound Management of Chemicals (SMOC) stakeholder meeting in Tucson, Arizona, stakeholders expressed an interest in chemicals management in the electronic and electrical equipment (EEE) sector. Knowing that the CEC's Trade and Environment Program was already looking at this issue through their Clean Electronics Pollution Prevention Partnership (CEP3), the SMOC Working Group (WG) committed to exploring whether there was a unique role that it could contribute to the Trade and Environment Program efforts.

To this end, the SMOC WG established an informal Electronic Sector Team (EST) task force. The goal of the task force was to identify existing groups or initiatives under the CEC that address EEE, if gaps exist, and what issues or needs could be associated with working under SMOC via a sectoral approach.

The SMOC WG and CEP3 had previously collaborated on areas of mutual concern within the electronics sector, and a consultant was engaged to assist the groups by identifying potential cross linkages between the two programs vis-à-vis the electronic sector through two reports prepared for CEP3 entitled:

Evaluation of Potential for Improved Environmental Design of Electronics and Electronic Waste Management in North America with a Focus on Supply Chain Environmental Management

Study of Chemical Use Within the Electronics Sector and the Needs of Small and Medium Sized Enterprises (SMEs) Within the Sector to Adapt to Changing National, Regional and International Requirements.

These studies reported that:

- The electronics industry supply chain is a multi-tiered, rapidly adaptive and global process. Many components are manufactured off-shore (mostly in Asia) and then shipped to North America for assembly. Less and less large scale original equipment manufacturing (OEM) occurs in Canada or the United States. In Mexico, however, there continues to be niche manufacturing of flat screens in the television sector.
- Mostly, North American companies in the electronics sector are limited to the design and manufacturing of prototypes for large scale manufacturing overseas. Specialized printed circuit boards are manufactured in the US, Canada and Mexico, generally for local markets, but some are exported to Europe. This brings compliance with the new European Restriction on Use of Certain Hazardous Substances (RoHS) Directive into consideration. RoHS controls 6 toxic substances in specified electronic and electrical equipment. North American firms have been exposed to this factor since July 2006.
- Obsolete and outdated electronic components and products continue to be both an environmental issue and a public concern, with a multiplicity of approaches being developed to encourage sound end of life (EOL) management at the sub-regional level. Many challenges exist to ensure adequate management of the large and growing volume of consumer electronics being discarded each year.

In view of these findings, a number of issues were identified as possible work areas for the CEC, as follows:

Supply chain:

- Supply chain management, including for material disclosure, to obtain substance content information in products and then control toxic or chemicals of concern in consumer electronics being sold into the North American market. This helps to reduce the quantity of such substances to be managed at EOL.
- Facilitating discussions regarding harmonization between EPEAT and Terrachoice®, both of which have clean production purchasing specifications for computer products. This role should be re-visited, as it is still considered of value.

End of Life:

- Training EOL electronics processing SMEs on how to manage materials properly.
- EOL management of batteries (which contain lithium compounds, or nickel and cadmium), fluorescent lamps (which contain mercury) and toner cartridges.

Chemicals:

- The use of PBDEs in the plastics and resins found in consumer electronics.
- Reducing the use of lead based soldering in the remaining highly specialized printed circuit board manufacturing facilities in North America.
- Forging strategic partnerships with key industry associations and organizations who have websites used and referenced by SMEs in order to raise awareness and delivery of existing toolkits and training programs on clean production of electronics.

Through discussions between CEP3 and the EST teams, the following issues were raised in relation to these proposed work areas:

1. While it is recognized that end of life electronics must be managed properly, a high risk of duplication exists due to a number of other initiatives that are currently unfolding; in particular, the Basel Convention's work on the "environmentally sound management of electrical and electronic wastes."
2. SMOC expertise is more suited for issues related to the production and use of chemicals, which to a large degree has been addressed by the work undertaken by CEP 3. The end of life management of the hazardous components of electronics would seem better suited for the North American Working Group on Environmental Enforcement and Compliance Cooperation's Hazardous Waste Task Force; however, the risk of duplication with existing initiatives, such as Basel, still exist.
3. Similarly, the CEC's Greening Supply Chains project, which is designed for promoting pollution prevention in small and medium-size enterprises (SMEs) that supply major companies, would be better positioned to work on supply chain issues.

4. While issues remain regarding the use of lead in the production of specialized printed circuit boards manufactured in North America, the rapid pace at which the issue is evolving is due to external forces, in particular EPEAT & TerraChoice, which require compliance with RoHS and lead-content restrictions. Similarly, REACH & CMP may also target chemicals of concern, and could result in any work under SMOC being likely be duplicative and out of date by the time it was completed.
5. While the SMOC expertise on PBDEs may be of use to the electronics sector, the extent of such contribution will depend on an assessment of Mexico's need to address PBDEs. The SMOC WG has convened a PBDEs team composed of experts from the three Parties, who are currently focusing their efforts on an inventory of Mexico's PBDE sources, following which an assessment of Mexico's needs will be completed. The results of these two studies will help inform the WG's priorities for collaboration.

The CEC is still considering other work on electronics with a focus on end of life management and has convened a team composed of experts from the three Parties to discuss potential projects. While SMOC experts are not involved in these discussions, the SMOC WG will monitor the discussions and provide input as requested. The SMOC WG will end its efforts on the electronics sector and seek other sectors for future work.