

## **Guidance on exposure assessment for the waste stage**

**Commissioned by:**

European Chemicals Agency (ECHA/2008/2/SR 17)

**Carried out by:**

Institute for Environmental Strategies

**Duration:**

2009 – 2010

### **Background and objectives**

According to REACH Annex I, the waste stage is to be considered in the frame of the chemical safety assessment for all dangerous substances. For each identified use it is to be determined which fraction of the registered substance becomes waste, how the wastes are managed at the different steps of the supply chain and whether or not risks to man or the environment could occur.

The exposure assessment of the waste stage is a particular challenge for registrants, because frequently information on waste management in the supply chain is lacking, similar or even the same types of wastes could be handed over to different waste treatment processes and substance – specific release factors are available in the minority of cases.

This project was commissioned by ECHA develop a methodology for the release estimation of substances in the waste stage and to compile relevant information, in order to provide a basis for an update of the respective guidance document on exposure assessment for the waste life stage.

### **Results**

According to the developed method registrants may identify the possible waste streams of their substances (at the first level, these are municipal waste, wastes for recycling and hazardous wastes) and estimate releases by using default release factors. This is to be done separately for each identified use. Possibilities of refinement of the emission estimated are described.

The amount of waste treatment installations of a particular technology is considered in the estimation of local emissions (from source) in order to take the different infrastructure of the waste sector into account. Waste treatment processes which correspond to processes of the supply chain, like the recycling processes of polymers, don't have to be assessed again but can be regarded as covered by the assessment of the use. Two examples were developed (antioxidant in polymers and use of medium chain chlorinated paraffins) to illustrate the procedure of emission estimation and which information should be communicated with the safety data sheet.

The ECHA guidance update based on the project results is currently under consultation. It can be found at  
[http://guidance.echa.europa.eu/guidance4\\_en.htm](http://guidance.echa.europa.eu/guidance4_en.htm)

### **Contact**

Dirk Jepsen  
Antonia Reihlen

[jepsen@okopol.de](mailto:jepsen@okopol.de)  
[reihlen@okopol.de](mailto:reihlen@okopol.de)