



## WWF position on the European Commission's

Proposal for a Directive of the European Parliament and of the Council amending Council Directive 96/82/EC of 9 December 1996 on the control of major [mining and quarrying] accident hazards involving dangerous substances (Seveso II Directive), COM(2001)624 final

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### **GENERAL COMMENTS on the parts of the European Commission's proposal covering mining and quarrying activities only**

WWF welcomes the European Commission's (EC) initiative to amend the Seveso II Directive in order to unequivocally include under its scope those activities of the extractive industry involving the use of dangerous substances. At the moment, these are excluded from its scope as shown in Article 4.

It is WWF's opinion that recent tailings dams failures in Europe<sup>1</sup> and associated environmental and human health impacts could have been predicted and possibly prevented if the EU regulatory framework on mining (environmental) safety had not been so poor. Therefore, proposals such as the one under consideration show that the EC is serious about filling current gaps in EU environmental legislation and, hence, ensuring a high level of protection of human health and the environment from the extractive industry.

WWF understands that not all mining and quarrying activities can be covered by the Seveso II Directive revision, only those that can be deemed "riskier" because of the use of dangerous substances above certain thresholds. Therefore, WWF agrees that mining and quarrying activities not qualifying for coverage under Seveso II, but still presenting a risk to human health and the environment, should fall under the scope of the future EU Directive on Mining Waste Management, which is now at an early stage of its development.

**Nevertheless, WWF considers that the EC's aim to amend the Seveso II Directive in order to include mining and quarrying activities using dangerous substances is not well reflected in the wording of Article 1 of the proposal to replace the current text in Article 4 of the Directive.**

The proposed wording in Article 1 (e) to include the processing of minerals and related storage involving dangerous substances is limited to "chemical" and "thermal" types of processing. These tend to be a minority when compared to other processing methods that can also involve the use of dangerous substances (e.g. "mechanical" methods such as milling, or "physical" methods such as flotation), which would still be excluded from the scope of the Seveso II Directive.

In the case of Article 1 (f) relating to tailings disposal, WWF strongly believes that the use of tailings ponds represents a major-accident potential and an inherent risk to human health and the environment. This is regardless of the type of processing activity to which they are associated to. A toxic spillage will have very negative impacts on, for example, the receiving aquatic environment independently of whether it results from:

- A tailings pond containing cyanide originating from chemical processing, as was the case of the spills from the Aurul S.A "Baia Mare" mine (Sasar, Romania) and the Remin mine (Baia Borsa, Romania) in the year 2000 (a possibility **included** in the current EC proposal), OR
- A tailings pond containing acid waters and heavy metals<sup>2</sup> in solution originating from other types of processing other than chemical and thermal, as was the case of the spill from the Boliden-Apirsa "Los Frailes" mine (Aznalcóllar, Spain) in 1998 (a possibility **excluded** from the current EC proposal).

The Aznalcóllar spill of 1998 on the Doñana wetland system is a clear example of the effects of acid water and heavy-metal rich sludge on the environment. The acid waters allowed the heavy metals to dissolve (i.e. a different form from that naturally present in the ground or subsoil), which facilitated their intake/absorption by aquatic

<sup>1</sup> Boliden-Apirsa "Los Frailes" mine (Aznalcóllar, Spain), 25 April 1998; Aurul S.A "Baia Mare" mine, (Sasar, Romania), 30 January 2000; Remin mine (Baia Borsa, Romania), 10 March 2000; Imerys mine (Cornwall, UK), 5 April 2000; Boliden "Aitik" mine (Gällivare, Sweden), 9 September 2000.

<sup>2</sup> Several heavy metal are currently covered under EU legislation on dangerous substances, such as Directive 67/548/EEC on the classification, packaging and labelling of dangerous substances; amendments to Directive 76/769/EEC on restrictions on the marketing and use of certain dangerous substances and preparations; Regulation EC 793/93 on the evaluation and control of the risks of existing substances; daughter Directives from Directive 76/464/EEC on the discharges of dangerous substances to the aquatic environment; and the " Water Framework Directive" (2000/60/EC).

organism and others. Long-term effects are still visible nowadays on, for example, genetic variations (e.g. deformed beaks in storks from the Dehesa de Abajo wetland) and a reduction in the populations of aquatic birds (e.g. Greylag geese). Further, the processing of minerals in the Aznalcóllar mine was done via mechanical and physical methods, including crushing, grinding, flotation, thickening and dewatering using filters (i.e. types of mineral processing different from chemical and thermal).

In conclusion, as it currently stands, **the EC proposal for a revision of the Seveso II Directive will not prevent major mining and quarrying accidents involving dangerous substances from happening again, because mineral processing operations and related storage to be included under the scope of the Seveso II Directive are restricted to chemical and thermal types, and so are the tailings disposal facilities.** For example, a clear major accident such as the Aznalcóllar spill of 1998 on the Doñana wetland system will not be prevented by this proposal.

## **SPECIFIC COMMENTS / AMENDMENTS to the parts of the European Commission's proposal covering mining and quarrying activities only**

### **1. Article 1 of the EC proposal should be amended so that paragraph (e) of Article 4 of the Seveso II Directive reads:**

*“(e) the exploitation (exploration, extraction and processing) of minerals in mines and quarries, with the exception of processing operations and related storage involving dangerous substances as defined in Annex I of this Directive; hazards related to offshore exploration and exploitation of minerals;”*

**Justification:** The proposed wording for Article 4 (e) of the Directive excludes mechanical (e.g. milling) and/or physical (e.g. flotation) mineral processing methods, which can involve the use of dangerous substances within the meaning of the Seveso II Directive (i.e. not only in terms of their toxicity/harmfulness but also regarding the quantity of substance present in an installation).

For example, copper sulphate is highly toxic to aquatic organism and it is used as a milling reagent<sup>3</sup>. Also xanthates (e.g. sodium ethyl xanthate, also known as sodium ethyl dithiocarbonate) are highly toxic to aquatic organisms<sup>4</sup> and used as collectors in flotation. Both these substances, which are just referred to here only as an illustration, are used in quantities well over the thresholds for "dangerous for the environment" included in the Annex of the current EC proposal to amend the Seveso II Directive<sup>5</sup>. The use of these substances, and probably others related to mineral processing that is not chemical nor thermal, presents a clear major-accident potential.

The wording proposed by WWF above would ensure that **all** the processing of minerals in mines and quarries using dangerous substances is actually covered by the Seveso II Directive, as intended by the current proposal to amend it.

### **2. Article 1 of the EC proposal should be amended so that paragraph (f) of Article 4 of the Seveso II Directive read as follows:**

*“(f) waste land-fill sites with the exception of active (operational) tailings disposal facilities containing dangerous substances as defined in Annex I of this Directive and used in connection with the processing of minerals.”*

**Justification:** The current wording of the proposal for this paragraph excludes tailings ponds that are not linked to chemical and thermal processing. Tailings ponds linked to chemical and thermal processing are a minority when compared to those linked to other processing methods. The current wording of the proposal excludes, in particular, the type of tailings ponds that caused the catastrophic spill from the Boliden-Apirsa

<sup>3</sup> For example, the Boliden-Apirsa "Los Frailes" mine (Aznalcóllar, Spain) used 1780 tonnes of copper sulphate and 667 tonnes of xanthates in the year 2000

<sup>4</sup> CAS Number 140-90-9. Included with number 205-440-9 in the European Inventory of Existing Commercial Substances (EINECS), which was drawn up by the European Commission in application of Directive 67/548/EEC on the classification, packaging and labelling of dangerous substances. No risk assessment is available at the EU level yet, but in Australia it has been classified as "highly toxic to the aquatic environment", which is tantamount to an EU R50 classification (Australia's National Industrial Chemicals Notification and Assessment Scheme, NICNAS, 1999, Priority Existing Chemical (PEC/5), Sodium Ethyl Xanthate, second notification assessment, <http://www.nicnas.gov.au/publications/CAR/PEC/PEC5/PEC5index.htm>)

<sup>5</sup> For example, the Boliden-Apirsa "Los Frailes" mine (Aznalcóllar, Spain) used 1780 tonnes of copper sulphate and 667 tonnes of xanthates in the year 2000

"Los Frailes" mine in Aznalcóllar (Spain) into the Doñana wetland system back in 1989. This is because the pond that burst was used in connection to mechanical and physical mineral processing methods, including crushing, grinding, flotation, thickening and dewatering using filters. Therefore, as it currently stands, the proposal for a revision of the Seveso II Directive misses the chance to prevent this type of major accident from happening again.

The change proposed by WWF above - together with the change to Annex I proposed below - would ensure that the current revision of the Seveso II Directive serves to include many other tailings ponds under the scope of the Directive. Therefore, that the Seveso II Directive contributes to prevent tailings ponds spills such as the one that took place on the Doñana wetland system.

**3. The Annex of the EC proposal should be amended so that the Notes under Part 2 of Annex I of the Seveso II Directive would:**

*Include a reference to the Water Framework Directive (2000/60/EC, OJ No L 327, 22.12.2000) and the Hazardous Waste Directive (91/689/EC, OJ No L 377, 31.12.1991).*

**Justification:** The list Directives used for the classification of substances and preparations as "dangerous" in the Annex of the Seveso II Directive and the current EC proposal to amend it is outdated. Substance priority setting under the Water Framework Directive for reduction, cessation and/or phase-out of discharges, emissions and losses of certain substances<sup>6</sup> (including heavy metals) into the aquatic environment is relevant for the Seveso II Directive. This Directive could, for example, be a reference for substances and preparations that are not yet classified as dangerous according to the Directives listed under the Seveso II Directive, but which are present in an establishment and possess equivalent properties in terms of major-accident potential.

The EU "waste list" pursuant to the Hazardous Waste Directive has classified "*acid-generating tailings from processing of sulphide ore, other tailings containing dangerous substances, and other wastes containing dangerous substances from physical and chemical processing of metalliferous minerals*" as **hazardous**. A reference to the Hazardous Waste Directive in Annex I of the Seveso II Directive is needed to:

- 1) Ensure compatibility between different pieces of legislation concerning mining and quarrying, and
- 2) To allow an Aznalcóllar-type tailings pond accident to be covered by the Seveso II Directive.

**For more information:**

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<sup>6</sup> DECISION No 2455/2001/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC, OJ No. L 331/1, 15.12.2001. It specifically lists Cadmium, Mercury and Nickel as substances for emission controls and/or cessation of discharges, emissions, losses in surface, groundwater and coastal waters.