

# Utsläpp av förorenade vattendroppar från en avfallsförbränningsstation.

920420 MARS 1992\_03

Olyckan inträffade på en avfallsförbränningsanläggning. En lös och delvis borttagen bit av en vattenfördelare gjorde att rökgaser inte tvättades korrekt i en skrubber. Detta ledde i sin tur till en ansamling av olika syror i tvättvattnet. Föroreande vattendroppar formades i de gaser som gick ut ur skorstenen och spreds med vinden i miljön. Dessa föroreningar föll sedan till marken likt ett finfördelat duggregn. Växtligheten i ett stort område påverkades, men man bedömde att ingen hälsofara förelåg. Allmänheten i området informerades, liksom miljömyndigheterna som ombads utvärdera omfattningen av eventuella skador.

## Inblandade ämnen och mängder

	CAS Nr.	Mängd
vatten innehållande bl.a. väteklorid		300 kg
varav syror med klor eller fluor		5 kg

## Skador:

Människor:	Inga.
Materiella:	Inga.
Miljö/ekologi:	300 kg förorenad attemkondens föll som regndroppar över ett 14 ha stort område och orsakade etsning av växtligheten i området.
Infrastruktur:	Inga.

## Erfarenheter redovisade (Ja/Nej): Ja

Kortfattat anges förebyggande åtgärder.

## Report Profile

### Identification of Report:

country: FA ident key: 1992\_003\_01

reported under Seveso I directive as major accident reports: SHORT

### Date of Major Occurrence: Time of Major Occurrence

start: 1992-04-20 start: 06:00:00

finish: finish:

### Establishment:

name:

address:

industry: - not applicable -

Plant for elimination of solid or liquid substances by combustion EG-R1 Annex 3

Seveso II status: not applicable: Yes art. 6 (notification): No

art. 7 (MAPP): No

art. 9 (safety report): No

### Date of Report:

short: full:

### Authority Reporting:

**name:**

**address:**

**Authority Contact:**

**rep\_cont\_name:**

**rep\_cont\_phone:**

**rep\_cont\_fax:**

**Additional Comments:**

a) - not applicable -

b) - not applicable -

c) - not applicable -

d) - not applicable -

e) - not applicable -

## Short Report

**country:** FA **ident key:** 1992\_003\_01

**Accident Types:**

**release:** Yes **explosion:** No

**water contamination:** Yes **other:** Yes

**fire:** No

**description:**

SAFETY SYSTEMS OR OPERATORS INTERVENTION:... see Appendix Short Report / description of accident types

**Substance(s) Directly Involved:**

**toxic:** Yes **explosive:** No

**ecotoxic:** No **other:** No

**flammable:** No

**description:**

- Acids containing chloride and fluoride EG-RL Annex III Nr.16

300 kg water droplets containing max. 5 kg hydrogen chloride and fluoride.

**Immediate Sources of Accident:**

**storage:** No **transfer:** No

**process:** Yes **other:** No

**description:**

- not applicable -

**Suspected Causes:**

**plant or equipment:** Yes **environmental:** No

**human:** No **other:** No

**description:**

INITIATING EVENT AND CONSEQUENCES:... see Appendix Short Report / description of suspected causes

**Immediate Effects:**

**material loss:** Yes

**human deaths:** No

**human injuries:** No **community disruption:** No

**other:** No

**ecological harm:** Yes

**national heritage loss:** No

**description:**

- Ecologic harm: ( Amount: 10,000 D) Etching of the nearby plants (ornamental and of utility) about 14

ha.... see Appendix Short Report / description of immediate effects

### **Emergency Measures taken:**

**on-site systems:** Yes **decontamination:** No

**external services:** No **restoration:** Yes

**sheltering:** No **other:** No

**evacuation:** No

**description:**

EXTERNAL TO THE ESTABLISHMENT:... see Appendix Short Report / description of emergency measures taken

### **Immediate Lessons Learned:**

**prevention:** Yes **other:** No

**mitigation:** No

**description:**

INTERNAL TO THE ESTABLISHMENT:... see Appendix Short Report / description of immediate lessons learned

## **Appendices for the FA / 1992\_003\_01 report**

### **Appendix Short Report / description of accident types:**

SAFETY SYSTEMS OR OPERATORS INTERVENTION:

After the personnel discovered the emission of droplets, they reduced the waste addition to the incinerator in the installation. This reduction lasted until no more droplets were emitted.

ENVIRONMENTAL AND ATMOSPHERIC CONDITIONS:

At the moment of the failure there were the following weather conditions:

- Temperature: about 5°C
- Wind direction: from east
- Wind speed: about 3m/sec

ACCIDENT CASE HISTORY DESCRIPTION:

Due to a loose and partly removed section of the water distribution unit, a uniform distribution of wash water in flue gas system did not occur. Therefore the acid content in the wash water in a part of the flue gas system increased strongly. The wash water must then have formed big drops on the way between the washer and the chimney mouth. These drops did not evaporate completely to the atmosphere due to their size and the weather conditions at the time of the incident, and fell down as drop emission in the immediate vicinity of our installation.

### **Appendix Short Report / description of suspected causes:**

INITIATING EVENT AND CONSEQUENCES:

A section of the water distribution unit was loose and through this an emission of droplets from the flue gas chimney took place. As a consequence the plants, both crops and ornamental ones, in the area around the installation were etched.

Causes:

As cause of the emission of droplets it was been established that a failure occurred in the washer of waste boiler n° 3 for domestic waste. This failure consisted of a loose

section of the water distribution floor of the washer. Probably due to a material failure this section could become loose over an area of about 1/4 square meter. The final report from experts is not yet available. The information available in this moment does allow the conclusion that there is no long term damage to the environment, animals or human beings. Furthermore may it already be concluded that contact with plants and soil polluted by the drop emission does not pose any acute health problems.

#### **Appendix Short Report / description of immediate effects:**

- Ecologic harm: ( Amount: 10,000 D) Etching of the nearby plants (ornamental and of utility) about 14 ha.

#### **Appendix Short Report / description of emergency measures taken:**

EXTERNAL TO THE ESTABLISHMENT:

The affected neighbours were contacted and informed on the cause of the damage.

Furthermore the regional Institute for immission protection, Essen, has been asked to evaluate the reasons for the release and the effects.

#### **Appendix Short Report / description of immediate lessons learned:**

INTERNAL TO THE ESTABLISHMENT:

Immediately after establishing the damage to the scrubber the loose section was changed with a new one. Furthermore all sections of the scrubber floor were tested to confirm that they were not loose and in good conditions. Precautionary also the scrubbers of the other incinerators for domestic waste were checked. The affected scrubber will be definitively put out of service at end of 1993. Until then this scrubber will be controlled regularly and the water distribution floor will be renewed completely. This should ensure that there are no more emissions of droplets.

EXTERNAL TO THE ESTABLISHMENT

At the moment a new flue-gas purification plant is under construction. To this new unit the three incinerators for domestic waste will be connected. The new flue-gas unit is so equipped that drop emission is no more to be feared. At the end of 1993 the three incinerators for domestic waste will be connected to the new flue-gas unit.