

## Syraläckage från en tank.

910525 MARS 1991\_28

Olyckan inträffade i en kemikaliedepå där salpetersyra fanns. Syran läckte ut från en tank.

### Inblandade ämnen och mängder

	CAS Nr.	Mängd
oleum	8014-95-7	8550 kg

### Skador:

Människor: Inga.

Materiella: Inga.

Miljö/ekologi: Inga effekter rapporterade.

Infrastruktur: Ett antal vägar spärrades av. En närliggande restaurang evakuerades och bybefolkning rekommenderades att stanna inomhus med dörrar och fönster stängda.

### Erfarenheter redovisade (Ja/Nej): Nej

Kortfattat anges förebyggande åtgärder.

## Report Profile

### Identification of Report:

country: FA ident key: 1991\_028\_01

reported under Seveso I directive as major accident reports: SHORT+FULL

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

start: 1991-05-25 start: 20:00:00

finish: finish:

### Establishment:

name:

address:

industry: - not applicable -

General Chemical (Oleum [fuming Sulphuric Acid] Production)

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: 1991\_028\_01

**Accident Types:**

release: Yes explosion: No

water contamination: No other: No

fire: No

**description:**

A leakage of fuming sulphuric acid from a 16 m3 capacity depot located in a basement occurred. The released fuming sulphuric acid evaporated forming a toxic cloud.

**Substance(s) Directly Involved:**

toxic: Yes explosive: No

ecotoxic: No other: Yes

flammable: No

**description:**

- Oleum [fuming Sulphuric Acid] (C.A.S. CODE: 8014-95-7): amount involved = 8,550 Kg (about 4,500 litres).

**Immediate Sources of Accident:**

storage: Yes transfer: No

process: Yes other: No

**description:**

The accident occurred in a depot, located in a basement, containing fuming sulphuric acid (oleum) produced in a chemical industry. The depot had a volumetric capacity of about 16 m3 but, when the accident occurred, it was containing about 4... see Appendix Short Report / description of immediate sources

**Suspected Causes:**

plant or equipment: No environmental: No

human: No other: Yes

**description:**

CAUSES:

The causes of the leakage of fuming sulphuric acid in the depot have not been fully identified.

**Immediate Effects:**

material loss: No

human deaths: No

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

**other:** Yes

**ecological harm:** No

**national heritage loss:** No

**description:**

OTHER:... see Appendix Short Report / description of immediate effects

### **Emergency Measures taken:**

**on-site systems:** Yes **decontamination:** Yes

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

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

**evacuation:** Yes

**description:**

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

### **Immediate Lessons Learned:**

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

**mitigation:** No

**description:**

MEASURES TO PREVENT ANY RECURRENCE OF SIMILAR ACCIDENTS:

The decision for a probable abandonment of the "Oleum" process was discussing when the Original report was prepared.

## **A Occurrence Full Report**

**country:** FA **ident key:** 1991\_028\_01

### **1 Type of Accident**

**remarks:** A leakage of fuming sulphuric acid from a 16 m<sup>3</sup> capacity depot located in a basement occurred (code 1102). The released fuming sulphuric acid evaporated forming a toxic cloud (code 1101).

### **2 Dangerous Substances**

**remarks:** The total establishment and the potential directly involved inventories of oleum (fuming sulphuric acid) refer to the volumetric capacity of the depot (about 16 m<sup>3</sup>).

### **3 Source of Accident**

**illustration:** - not applicable -

**remarks:** - not applicable -

### **4 Meteorological Conditions**

**precipitation none: fog: rain: hail: snow:**

No No No No No

**wind speed (m/s):**

**direction (from):**

**stability (Pasquill):**

**ambient temperature (∞C):**

**remarks:** - not applicable -

## 5 Causes of Major Occurrence

**main causes**

**technical / physical** 5501 other: not identified

- not applicable -

- not applicable -

- not applicable -

- not applicable -

**human / organizational** - not applicable -

- not applicable -

- not applicable -

- not applicable -

- not applicable -

**remarks:** The causes of the leakage of fuming sulphuric acid in the depot have not been fully identified (code 5501).

## 6 Discussion about the Occurrence

- not applicable -

**Type of Accident** country: FA ident key: 1991\_028\_01

**event:**

**major occurrence** 1101 release: gas/vapour/mist/etc release to air

**initiating event** 1102 release: fluid release to ground

**associated event** - not applicable -

## Dangerous substances

country: FA ident key: 1991\_028\_01

### a) total establishment inventory

**CAS number:** 8014-95-7 **identity:** Oleum (fuming Sulphuric Acid)

**name from Seveso I Directive:** - not applicable -

**name from Seveso II Directive:** - not applicable -

**category from Seveso II:** - not applicable -

**other hazards (1):** - not applicable -

**other hazards (2):** - not applicable -

**maximum quantity (tonnes):** 30,4

**use of substance as:** NORMAL FINISHED PRODUCT

**b) substance belongs to relevant inventory directly involved:** Yes

**actual quantity:** 8,55 **potential quantity:** 30,4

**c) substance belongs to relevant inventory indirectly involved:** No

**actual quantity:** -1 **indir\_pot\_quant:** -1

# B Consequences Full Report

country: FA ident key: 1991\_028\_01

## 1 Area concerned

affected

extent of effects installation: Yes

establishment: Yes

off-site; local: No

off-site; regional: No

off-site; transboundary: No

illustration of effects - not applicable -

remarks Even if, as a precautionary way, a restaurant was evacuated and population of La... see Appendix

Full Report B / area concerned - remarks

## 2 People

establishment popul. emergency personnel off-site population

total at risk

immediate fatalities

subsequent fatalities

hospitalizing injuries

other serious injuries

health monitoring

remarks As a precautionary way, a restaurant was evacuated and population of Lantaron wa... see Appendix

Full Report B / people

## 3 Ecological Harm

pollution/contamination/damage of:

- residential area (covered by toxic cloud) Suspected

- common wild flora/fauna (death or elimination) Suspected

- rare or protected flora/fauna (death or elimination) Suspected

- water catchment areas and supplies for consumption or recreation Suspected

- land (with known potential for long term ecological harm or Suspected

preventing human access or activities)

- marine or fresh water habitat Suspected

- areas of high conservation value or given special protection Suspected

remarks In the Original Report there is no evidence of significant ecological harms.... see Appendix

Full Report B / ecological harm

## 4 National Heritage Loss

effects on:

- historical sites not applicable - historic monuments not applicable

- historic buildings not applicable - art treasures not applicable

remarks No data available.

## 5 Material Loss

establishment losses off site losses

costs (direct costs to operator) (social costs)

in ECU ECU

material losses

response, clean up, restoration

remarks No significant material losses occurred except the cost of the released oleum an... see Appendix

Full Report B / material loss

## 6 Disruption of Community Life

establishment/plant evacuated disabled/unoccupiable destroyed

- nearby residences/hotels Yes No No

- nearby factories/offices/small shops No No No

- schools, hospitals, institutions No No No

- other places of public assembly No No No

interruption of utilities etc. no / yes duration

- gas No

- electricity No

- water No

- sewage treatment works No

- telecommunications No

- main roads No

- railways No

- waterways No

- air transport No

significant public concern none local level national level

- off site populations No Yes No

- media interest No No No

- political interest No No No

remarks Various roads were interrupted outside the establishment. As a precautionary way... see Appendix

## 7 Discussion of Consequences

# C Response Full Report

country: FA ident key: 1991\_028\_01

## 1 Emergency Measures

taken - on site - not applicable - - not applicable -

- not applicable - - not applicable -

- not applicable - - not applicable -

- **off site** - not applicable - - not applicable -

- not applicable - - not applicable -

- not applicable - - not applicable -

**still - on site** - not applicable - - not applicable -

**required**

- not applicable - - not applicable -

- not applicable - - not applicable -

- **off site** - not applicable - - not applicable -

- not applicable - - not applicable -

- not applicable - - not applicable -

**continuing contamination or danger**

-**on site** not applicable

-**off site** not applicable

**remarks** - not applicable -

## **2 Seveso II Duties**

**pre-accident evaluation**

**Article item not due yet not done done/submitted evaluated**

**6 notification** No No No No

**7 policy (MAPP)** No No No No

**9 safety report** No No No No

**9, 10, 11 update** No No No No

**11 internal plan** No No No No

**11 external plan** No No No No

**13 informing public** No No No No

**9, 12 siting policy** No No No No

**post-accident evaluation**

**Seveso II duty was actual were actual compared with actual**

**contingency consequences consequences, the**

**addressed? addressed? predicted extent was?**

**Article item**

**7 policy (MAPP)** not applicable not applicable not applicable

**9 current safety report** not applicable not applicable not applicable

**11 internal plan** not applicable not applicable not applicable

**11 external plan** not applicable not applicable not applicable

**13 informing public** not applicable not applicable not applicable

**9, 12 siting policy** not applicable not applicable not applicable

**evaluation of safety organisation**

**organisational element element existed did element relate to actual circumstances of**

yes / no no / partly / yes adequate?

- written policy objectives No

- specified management No

structure

- specified responsibilities No

- specified working procedures No

- specified procedures for No

assessment/auditing of

management system

- specified procedures for No

review and update of

management policy

- specified general training No

procedures

- specified emergency No

training procedures

evaluation of ecological impact control

organisational element element existed did element relate to actual circumstances of

yes / no no / partly / yes adequate?

- ecological status review No

before incident

- potential ecological No

consequences assessment

- ecological impact review No

after incident

- ecological restoration No

procedures

- subsequent review of No

restoration success

remarks - not applicable -

### **3 Official Action Taken**

legal action

- not applicable -

other official action

- not applicable -

### **4 Lessons Learned**

measures to prevent recurrence

The decision for a probable ab... see Appendix Full Report C / lesson learned - prevent

measures to mitigate consequences:

- not applicable -

useful references:



- not applicable -

## **5 Discussion about Response**

- not applicable -

# **Appendices for the FA / 1991\_028\_01 report**

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

The accident occurred in a depot, located in a basement, containing fuming sulphuric acid (oleum) produced in a chemical industry. The depot had a volumetric capacity of about 16 m<sup>3</sup> but, when the accident occurred, it was containing about 4,500 litres of fuming sulphuric acid.

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

OTHER:

No material losses occurred except the escaped oleum.

COMMUNITY DISRUPTION:

Various roads were interrupted outside the establishment. As a precautionary way, a restaurant was evacuated. Population of Lantaron was warned to stay indoors. The accident had impact on public.

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

EXTERNAL TO THE ESTABLISHMENT:

Various roads were interrupted outside the establishment. As a precautionary way, a restaurant was evacuated. Population of Lantaron was warned to stay indoors.

DECONTAMINATION:

The remaining acid was transferred to another tank whilst the released product was absorbed and collected into a concrete basin.

### **Appendix Full Report B / area concerned - remarks:**

Even if, as a precautionary way, a restaurant was evacuated and population of Lantaron was warned to stay indoors, in the Original Report there is no evidence of significant effects outside the establishment.

### **Appendix Full Report B / people:**

As a precautionary way, a restaurant was evacuated and population of Lantaron was warned to stay indoors but no data are available about the number of people involved.

### **Appendix Full Report B / ecological harm:**

In the Original Report there is no evidence of significant ecological harms.

### **Appendix Full Report B / material loss:**

No significant material losses occurred except the cost of the released oleum and the cleaning up operations.

### **Appendix Full Report B / disruption of community life:**

Various roads were interrupted outside the establishment. As a precautionary way, a restaurant was evacuated. Population of Lantaron was warned to stay indoors. The accident had impact on public.

### **Appendix Full Report C / lesson learned - prevent:**

The decision for a probable abandonment of the "Oleum" process was discussing when the Original Report was prepared.