

# Utsläpp på en kemikaliefabrik

940602

Mycket kortfattad

Till följd av ett operatörsmisslag kom vatten att tillsättas en behållare med triklor(metyl)silan, varvid giftig gas kom att utvecklas och spridas.

## Inblandade ämnen och mängder

	CAS Nr.	Mängd
triklor(metyl)silan	75-79-6	okänt

## Skador:

Människor: 19 personer förgiftades och fördes till sjukhus. En anställd och tre barn behölls för observation.

Materiella: Inga effekter rapporterade.

Miljö/ekologi: Inga effekter rapporterade.

Infrastruktur: Inga effekter rapporterade.

## Erfarenheter redovisade (Ja/Nej): Ja

Mycket kortfattat anges förebyggande åtgärder.

## Report Profile

### Identification of Report:

country: FA ident key: 1800\_255\_01

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

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

start: 02/06/1994 start:

finish: 03/06/1994 finish:

### Establishment:

name:

address:

industry: 2001 general chemicals manufacture

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: 1800\_255\_01

### **Accident Types:**

release: Yes explosion: No

water contamination: No other: No

fire: No

#### **description:**

19 persons were intoxicated

### **Substance(s) Directly Involved:**

toxic: Yes explosive: No

ecotoxic: No other: Yes

flammable: No

#### **description:**

trichloro (methyl) silane, water

### **Immediate Sources of Accident:**

storage: Yes transfer: No

process: No other: No

#### **description:**

mixture of water and trichloro (methyl) silane

### **Suspected Causes:**

plant or equipment: No environmental: No

human: Yes other: No

#### **description:**

operation error

### **Immediate Effects:**

material loss: No

human deaths: No

human injuries: Yes community disruption: No

other: No

ecological harm: No

national heritage loss: No

#### **description:**

release of hydrogen chloride and intoxication of 19 persons

### **Emergency Measures taken:**

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

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

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

**evacuation:** No

**description:**

Establishment of a safety zone. Monitoring of the reaction. Hospitalisation of the affected persons.

### **Immediate Lessons Learned:**

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

**mitigation:** No

**description:**

Information of the users about the risks connected with the specific chemical products.

## **A Occurrence Full Report**

**country:** FA **ident key:** 1800\_255\_01

### **1 Type of Accident**

**remarks:** - not applicable -

### **2 Dangerous Substances**

**remarks:** - not applicable -

### **3 Source of Accident**

**illustration:** no attached materials

**remarks:** the trichloro (methyl) silane was stored in a 200 litres drum

### **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** - not applicable -

- not applicable -

- not applicable -

- not applicable -

- not applicable -

**human / organizational** 5401 person: operator error

- not applicable -

- not applicable -

- not applicable -

- not applicable -

**remarks:** Operator error: wrong action: erroneous introduction of water in a container with trichloro (methyl) silane

## 6 Discussion about the Occurrence

- not applicable -

**Type of Accident** country: FA ident key: 1800\_255\_01

**event:**

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

**initiating event** - not applicable -

**associated event** - not applicable -

## Dangerous substances

country: FA ident key: 1800\_255\_01

### a) total establishment inventory

**CAS number: identity:** water

**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):** -1

**use of substance as:** - not applicable -

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

**actual quantity:** -1 **potential quantity:** -1

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

**actual quantity:** 0 **indir\_pot\_quant:** 0

### a) total establishment inventory

**CAS number: identity:** trichloro (methyl) silane

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

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

**category from Seveso II:** extremely flammable gases and liquids

**other hazards (1):** toxic

**other hazards (2):** any classification: contact with water liberates toxic gas

**maximum quantity (tonnes):** -1

**use of substance as:** starting material

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

actual quantity: 0 potential quantity: 0

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

actual quantity: 0 indir\_pot\_quant: 0

**Source of Accident - Situation** country: FA ident key: 1800\_255\_01

### **situation**

#### **industry**

initiating event 2001 general chemicals manufacture

associated event - not applicable -

#### **activity/unit**

major occurrence 3201 storage: process-associated (stockholding, etc. on-site of manufacture)

initiating event - not applicable -

associated event - not applicable -

#### **component**

major occurrence 4003 container; non-pressurised (hopper, tank, drum, bag, etc.)

initiating event - not applicable -

associated event - not applicable -

## **B Consequences Full Report**

country: FA ident key: 1800\_255\_01

### **1 Area concerned**

#### **affected**

extent of effects installation: Yes

establishment: Yes

off-site; local: Yes

off-site; regional: No

off-site; transboundary: No

illustration of effects no information is given

remarks - not applicable -

### **2 People**

**establishment popul. emergency personnel off-site population**

total at risk 3 -1 -1

immediate fatalities 0 0 0

subsequent fatalities 0 0 0

hospitalizing injuries 1 0 18

other serious injuries 0 0 0

health monitoring 0 0 0

remarks the 19 persons affected were submitted to medical examination in the hospital. O... see Appendix

Full Report B / people

### 3 Ecological Harm

**pollution/contamination/damage of:**

- residential area (covered by toxic cloud) Yes
- common wild flora/fauna (death or elimination) No
- rare or protected flora/fauna (death or elimination) No
- water catchment areas and supplies for consumption or recreation No
- land (with known potential for long term ecological harm or No preventing human access or activities)
- marine or fresh water habitat No
- areas of high conservation value or given special protection No

remarks - not applicable -

### 4 National Heritage Loss

**effects on:**

- historical sites None - historic monuments None
- historic buildings None - art treasures None

remarks - not applicable -

### 5 Material Loss

**establishment losses off site losses**

**costs (direct costs to operator) (social costs)**

**in ECU FFR ECU FFR**

**material losses -1 -1 -1 -1**

**response, clean up, restoration -1 -1 -1 -1**

remarks - not applicable -

### 6 Disruption of Community Life

**establishment/plant evacuated disabled/unoccupiable destroyed**

- nearby residences/hotels No 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 Yes No

- political interest Yes No No

remarks - not applicable -

## 7 Discussion of Consequences

- not applicable -

## Ecological Components involved

country: FA ident key: 1800\_255\_01

type: 6102 inland: urban development

threatened: not applicable affected: Yes

# C Response Full Report

country: FA ident key: 1800\_255\_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**

information to the users on th... see Appendix Full Report C / lesson learned - prevent

**measures to mitigate consequences:**

no information is given

**useful references:**

no information is given

### **5 Discussion about Response**

- not applicable -

## **Appendices for the FA / 1800\_255\_01 report**

**Appendix Full Report B / people:**

the 19 persons affected were submitted to medical examination in the hospital. Only the one employee and three children were kept on observation.

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

information to the users on the hazards related to such chemical products.