

Svaveldioxidutsläpp från en pappersfabrik.

950506

Vid lossning av svaveldioxid från en tankbil läckte kondenserad svaveldioxid ut vid en fläns, på grund av en bristfällig slangkoppling. Den kondenserade svaveldioxiden förångades omedelbart. Fabrikens katastrofplan aktiverades och räddningstjänsten larmades. Tank och tankbil spejades med vatten för att späda ut effekterna av SO₂.

Inblandade ämnen och mängder

	CAS Nr.	Mängd
ammoniak	7664-41-7	okänt
svavel	7704-34-9	okänt
svaveldioxid	7446-09-5	okänt.

Skador:

Människor: 32 anställda och 11 personer från räddningstjänsten fördes till sjukhus med förgiftningssymptom. Alla utom en av de anställda fick lämna sjukhuset samma dag. Den sistnämnda stannade i fem dagar.

Materiella: Inga skador 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_051_01

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

Date of Major Occurrence: Time of Major Occurrence

start: 06/05/1995 start: 11:40:00

finish: 06/05/1995 finish:

Establishment:

name:

address:

industry: 2018 paper manufacture, printing, publishing

paper 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_051_01**Accident Types:****release:** Yes **explosion:** No**water contamination:** No **other:** No**fire:** No**description:**

32 employees and 11 fire fighters intoxicated due to release of sulphur dioxide.

Substance(s) Directly Involved:**toxic:** Yes **explosive:** No**ecotoxic:** No **other:** No**flammable:** No**description:**liquefied sulphur dioxide (SO₂)**Immediate Sources of Accident:****storage:** No **transfer:** Yes**process:** No **other:** No**description:**

leakage on a flange of a road tanker during the supply of a fixed storage (transfer activity)

Suspected Causes:**plant or equipment:** Yes **environmental:** No**human:** No **other:** No**description:**

the bond of the flexible pipe and the flange of the road tanker were misfit. The normal regulatory procedures applicable to the storage of liquefied sulphur dioxide were not implemented at the plant.

Immediate Effects:**material loss:** No**human deaths:** No

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

other: No

ecological harm: No

national heritage loss: No

description:

32 employees and 11 fire-fighters were intoxicated (hospitalisation).

Emergency Measures taken:

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

external services: Yes **restoration:** No

sheltering: No **other:** No

evacuation: No

description:

Alarm / intervention of the internal safety service and of the fire brigade. Spraying of the tank.

Hospitalisation for examination of the victims.

Immediate Lessons Learned:

prevention: Yes **other:** No

mitigation: Yes

description:

Necessity to consider this activity in the plant-specific risk assessment mode. Control of the suitability of the flanges.

A Occurrence Full Report

country: FA **ident key:** 1800_051_01

1 Type of Accident

remarks: The sulphur dioxide was released in liquid phase (liquefied gas), passing almost immediately into vapour phase

2 Dangerous Substances

remarks: The sulphur dioxide was employed exceptionally for facing problems occurred in the onsite production of gaseous sulphur dioxide

3 Source of Accident

illustration: no attached materials

remarks: The leakage occurred at the connecting flange of the flexible pipe on the supplying vehicle

4 Meteorological Conditions

precipitation none: fog: rain: hail: snow:

No No No No No

wind speed (m/s): 0

direction (from):

stability (Pasquill):

ambient temperature (∞C): 25

remarks: - not applicable -

5 Causes of Major Occurrence

main causes

technical / physical - not applicable -

- not applicable -

- not applicable -

- not applicable -

- not applicable -

human / organizational 5308 organization: design of plant/equipment/system (inadequate, inappropriate)

- not applicable -

- not applicable -

- not applicable -

- not applicable -

remarks: (5308 is used in the original report under technical / physical causes) - the connection of the flexible pipe on the road tanker was inadequate.

6 Discussion about the Occurrence

- not applicable -

Type of Accident country: FA ident key: 1800_051_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_051_01

a) total establishment inventory

CAS number: 1336-21-6 **identity:** Ammonia

name from Seveso I Directive: Ammonia

name from Seveso II Directive: - not applicable -

category from Seveso II: toxic

other hazards (1): flammable liquids

other hazards (2): - not applicable -

maximum quantity (tonnes): -1

use of substance as: - not applicable -

b) substance belongs to relevant inventory directly involved: No

actual quantity: 0 **potential quantity:** 0

c) substance belongs to relevant inventory indirectly involved: No

actual quantity: 0 **indir_pot_quant:** 0

a) total establishment inventory

CAS number: 7704-34-9 identity: sulphur

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: No

actual quantity: 0 potential quantity: 0

c) substance belongs to relevant inventory indirectly involved: No

actual quantity: 0 indir_pot_quant: 0

a) total establishment inventory

CAS number: 7446-09-5 identity:

name from Seveso I Directive: Sulphur dioxide

name from Seveso II Directive: - not applicable -

category from Seveso II: toxic

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: 3 potential quantity: -1

c) substance belongs to relevant inventory indirectly involved: No

actual quantity: 0 indir_pot_quant: 0

Source of Accident - Situation country: FA ident key: 1800_051_01

situation

industry

initiating event - not applicable -

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 4012 other transfer equipment/apparatus/vehicle

initiating event - not applicable -

associated event - not applicable -

B Consequences Full Report

country: FA ident key: 1800_051_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 - not applicable -

2 People

establishment popul. emergency personnel off-site population

total at risk -1 -1 -1

immediate fatalities 0 0 0

subsequent fatalities 0 0 0

hospitalizing injuries 32 11 0

other serious injuries 0 0 0

health monitoring 0 0 0

remarks 42 persons hospitalised for medical examination were dismissed on the same eveni... see Appendix

Full Report B / people

3 Ecological Harm

pollution/contamination/damage of:

- residential area (covered by toxic cloud) No

- 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 Yes No No

- nearby factories/offices/small shops Yes No No

- schools, hospitals, institutions Yes No No

- other places of public assembly Yes 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 No No No

remarks - not applicable -

7 Discussion of Consequences

- not applicable -

Ecological Components involved

country: FA ident key: 1800_051_01

type: - not applicable -

threatened: not applicable affected: No

C Response Full Report

country: FA ident key: 1800_051_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

no information is given

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_051_01 report

Appendix Full Report B / people:

42 persons hospitalised for medical examination were dismissed on the same evening or on the day after, 1 employee was hospitalised for 5 days.