

Gasutsläpp på en kemikaliefabrik för produktion av pesticider.

900919 MARS 1990_03

En 65%-ig lösning med oleum läckte ut vid en defekt flänspackning i en framledning mellan lagertanken och produktionsanläggningen. Ett svavelsyre moln bildades. Företagets interna brandkår spolade bort det med vatten.

Inblandade ämnen och mängder

	CAS Nr.	Mängd
oleum (65%)	8014-95-7	100 kg
svavelsyra	7664-93-9	okänt

Skador:

Människor: Inga.
Materiella: Inga.
Miljö/ekologi: Inga effekter rapporterade.
Infrastruktur: Inga.

Erfarenheter redovisade (Ja/Nej): Ja

Mycket kortfattat anges förebyggande åtgärder.

Report Profile

Identification of Report:

country: FA ident key: 1990_003_01

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

Date of Major Occurrence: Time of Major Occurrence

start: 1990-09-19 start:

finish: finish:

Establishment:

name:

address:

industry: 2004 pesticides, pharmaceuticals, other fine chemicals

Pesticide (Production Plant and Storage Area)

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: 1990_003_01

Accident Types:

release: Yes explosion: No

water contamination: No other: No

fire: No

description:

ACCIDENT CASE HISTORY DESCRIPTION:... see Appendix Short Report / description of accident types

Substance(s) Directly Involved:

toxic: Yes explosive: No

ecotoxic: No other: Yes

flammable: No

description:

- Oleum [65 % vol] (C.A.S. CODE: 8014-95-7): amount involved = 100 kg.

Immediate Sources of Accident:

storage: No transfer: Yes

process: Yes other: No

description:

The accident involved a pipeline for the transfer of oleum between the storage tank and the production plant in a pesticide industry.

Suspected Causes:

plant or equipment: Yes environmental: No

human: No other: No

description:

CAUSES:

The oleum release was caused by a defective flange gasket that was not detected because of insufficient maintenance procedures.

Immediate Effects:

material loss: No

human deaths: No

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

other: Yes

ecological harm: No

national heritage loss: No

description:

OTHER:

No material losses occurred except the released oleum.

Emergency Measures taken:

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

external services: No **restoration:** No

sheltering: No **other:** No

evacuation: No

description:

INTERNAL TO THE ESTABLISHMENT:

The internal fire brigade removed the sulphuric acid cloud with water.

Immediate Lessons Learned:

prevention: Yes **other:** No

mitigation: No

description:

MEASURES TO PREVENT ANY RECURRENCE OF SIMILAR ACCIDENTS:... see Appendix Short Report / description of

immediate lessons learned

A Occurrence Full Report

country: FA **ident key:** 1990_003_01

1 Type of Accident

remarks: 65% vol. oleum leaked (code 1102) from a defective flange gasket in the

supply pipeline between the storage tank and the production plant. A

sulphuric acid cloud formed (code 1101) and the plant fire brigade removed

it with water.

2 Dangerous Substances

remarks: The total establishment and the potential directly involved inventories of

oleum 65% vol. refer to the amount released during the accident.

3 Source of Accident

illustration: - not applicable -

remarks: The accident involved a pipeline (code 4011) for the transfer (code 3301) of

oleum between the storage tank and the production plant in a pesticide

industry (code 2004).

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 5102 operation: component/machinery failure/malfunction

- not applicable -

- not applicable -

- not applicable -

- not applicable -

human / organizational 5313 organization: maintenance/repair (none, inadequate, inappropriate)

- not applicable -

- not applicable -

- not applicable -

- not applicable -

remarks: The oleum release was caused by a defective flange gasket (code 5102) that was not detected because of insufficient maintenance procedures (code 5313).

6 Discussion about the Occurrence

- not applicable -

Type of Accident country: FA ident key: 1990_003_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: 1990_003_01

a) total establishment inventory

CAS number: 8014-95-7 **identity:** Oleum

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): 0,1

use of substance as: STARTING MATERIAL

b) substance belongs to relevant inventory directly involved: Yes

actual quantity: 0,1 potential quantity: 0,1

e) substance belongs to relevant inventory indirectly involved: No

actual quantity: -1 indir_pot_quant: -1

Source of Accident - Situation country: FA ident key: 1990_003_01

situation

industry

initiating event 2004 pesticides, pharmaceuticals, other fine chemicals

associated event - not applicable -

activity/unit

major occurrence 3301 transfer: pipeline/pipework transfer

initiating event 3301 transfer: pipeline/pipework transfer

associated event - not applicable -

component

major occurrence 4011 general pipework/flanges

initiating event 4011 general pipework/flanges

associated event - not applicable -

B Consequences Full Report

country: FA ident key: 1990_003_01

1 Area concerned

affected

extent of effects installation: Yes

establishment: No

off-site; local: No

off-site; regional: No

off-site; transboundary: No

illustration of effects - not applicable -

remarks In the Original report there is no evidence of significant effects outside the i... 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 No people were injured during the accident.

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 material losses occurred except the released oleum.... see Appendix Full Report B / material

loss

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 Yes No No

- media interest No No No

- political interest No No No

remarks In the Original Report there is no evidence of significant effects outside the i... see Appendix

7 Discussion of Consequences

C Response Full Report

country: FA ident key: 1990_003_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

After the accident the followi... 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 / 1990_003_01 report

Appendix Short Report / description of accident types:

ACCIDENT CASE HISTORY DESCRIPTION:

65% vol. oleum leaked from a defective flange gasket in the supply pipeline between the storage tank and the production plant. A sulphuric acid cloud formed and the plant fire brigade removed it with water.

Appendix Short Report / description of immediate lessons learned:

MEASURES TO PREVENT ANY RECURRENCE OF SIMILAR ACCIDENTS:

After the accident the following measures were established:

- 1- exchange of all gaskets in pipelines for oleum;
- 2- scheduled checks of all gaskets in pipelines for oleum.

Appendix Full Report B / area concerned - remarks:

In the Original report there is no evidence of significant effects outside the installation.

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 material losses occurred except the released oleum.

Appendix Full Report B / disruption of community life:

In the Original Report there is no evidence of significant effects outside the installation.

Appendix Full Report C / lesson learned - prevent:

After the accident the following measures were established:

- 1- exchange of all gaskets in pipelines for oleum;
- 2- scheduled checks of all gaskets in pipelines for oleum.