

Ammoniakutsläpp från ett kylaggregat i livsmedelsindustrin.

950210

Mycket kortfattad.

Utsläppet orsakades av defekta ventiler i kylsystemet som gjorde att kylmediet, ammoniak, släpptes ut i atmosfären. Gasmolnet spreds i atmosfären. Ungefär 1000 elever från en närliggande skola och 600 personer i närområdet evakuerades.

Inblandade ämnen och mängder

	CAS Nr.	Mängd
ammoniak	7664-21-6	max 3 ton

Skador:

Människor:	Nio personer skadades av utsläppet. Ytterligare några personer behandlades för mindre besvär.
Materiella:	Inga skador rapporterade,
Miljö/ekologi:	Inga effekter rapporterade.
Infrastruktur:	Evakuering av 1600 personer i närområdet.

Erfarenheter redovisade (Ja/Nej): Nej

Report Profile

Identification of Report:

country: FA ident key: 1800_296_01

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

Date of Major Occurrence: Time of Major Occurrence

start: 10/02/1995 start: 15:00:00

finish: 10/02/1995 finish: 18:00:00

Establishment:

name:

address:

industry: 2019 food and drink

market

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_296_01

Accident Types:

release: Yes explosion: No

water contamination: No other: No

fire: No

description:

release of ammonia, resulting in evacuation of 1600 persons and injuries of various degrees to 9 persons.

Substance(s) Directly Involved:

toxic: Yes explosive: No

ecotoxic: No other: No

flammable: No

description:

ammonia

Immediate Sources of Accident:

storage: No transfer: No

process: Yes other: No

description:

refrigeration installation

Suspected Causes:

plant or equipment: Yes environmental: No

human: No other: No

description:

defective vent, the valve upstream from this vent remained open

Immediate Effects:

material loss: No

human deaths: No

human injuries: Yes community disruption: No

other: No

ecological harm: No

national heritage loss: No

description:

a toxic cloud was formed resulting in human injuries and evacuations

Emergency Measures taken:

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

external services: Yes **restoration:** No

sheltering: No **other:** No

evacuation: Yes

description:

About 1000 students from a nearby school and 600 persons living in the neighbourhood were evacuated, 9 persons (of which one was a firefighter) were hospitalised, 9 persons were treated on place.

Immediate Lessons Learned:

prevention: No **other:** Yes

mitigation: No

description:

no information is given

A Occurrence Full Report

country: FA **ident key:** 1800_296_01

1 Type of Accident

remarks: Release of ammonia in the atmosphere

2 Dangerous Substances

remarks: ammonia employed as refrigeration agent

3 Source of Accident

illustration: no attached material

remarks: refrigeration installation, the vent of the installation was defective and the valve located upstream from this vent remained open

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 5101 operation: vessel/container/containment-equipment failure

- not applicable -

- not applicable -

- not applicable -

- not applicable -

human / organizational - not applicable -

- not applicable -

- not applicable -

- not applicable -

- not applicable -

remarks: the report indicates 5501 (?)

6 Discussion about the Occurrence

- not applicable -

Type of Accident country: FA ident key: 1800_296_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_296_01

a) total establishment inventory

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

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): 3

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

Source of Accident - Situation country: FA ident key: 1800_296_01

situation

industry

initiating event - not applicable -

associated event - not applicable -

activity/unit

major occurrence 3999 other: other

initiating event - not applicable -

associated event - not applicable -

component

major occurrence 4009 heat exchanger (boiler, refrigerator, heating coils, etc.)

initiating event - not applicable -

associated event - not applicable -

B Consequences Full Report

country: FA ident key: 1800_296_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 attached material

remarks the cloud moved over the establishment and the neighbourhood... see Appendix Full Report B /

area concerned - remarks

2 People

establishment popul. emergency personnel off-site population

total at risk -1 -1 1600

immediate fatalities -1 -1 -1

subsequent fatalities 0 0 0

hospitalizing injuries 8 1 19

other serious injuries 0 0 0

health monitoring 0 0 0

remarks 19 students were kept under observation at the hospital... 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 Yes 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 No No

- media interest No No No

- political interest No No No

remarks - not applicable -

7 Discussion of Consequences

- not applicable -

Ecological Components involved

country: FA ident key: 1800_296_01

type: - not applicable -

threatened: not applicable affected: No

C Response Full Report

country: FA ident key: 1800_296_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_296_01 report

Appendix Full Report B / area concerned - remarks:

the cloud moved over the establishment and the neighbourhood

Appendix Full Report B / people:

19 students were kept under observation at the hospital