

Klorgasutsläpp vid en offentlig simbassäng.

951107

Vid klorineringsanläggningen vid en offentlig simbassäng begicks ett misstag då kemikalier skulle fyllas på. Resultatet blev klorgasutveckling som spreds via ventilationssystemet till de allmänna utrymmena. 41 skolelever utsattes för klorgas och fördes till sjukhus för behandling. Sju av dem behölls i ett dygn.

Inblandade ämnen och mängder

	CAS Nr.	Mängd
klorgas	7782-50-5	okänt
trichloroisocyanuric acid	87-90-1	3 ton
salt av trichloroisocyanuric acid		

Skador:

Människor:	41 skolelever utsattes för klorgas och fördes till sjukhus för behandling. Sju av dem behölls i ett dygn.
Materiella:	Inga skador.
Miljö/ekologi:	Inga effekter rapporterade.
Infrastruktur:	Inga effekter.

Erfarenheter redovisade (Ja/Nej): Nej

Report Profile

Identification of Report:

country: FA ident key: 1800_231_01

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

Date of Major Occurrence: Time of Major Occurrence

start: 07/11/1995 start: 08:30:00

finish: 07/11/1995 finish:

Establishment:

name:

address:

industry: 2022 fairgrounds/amusements

public swimming pool

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_231_01

Accident Types:

release: Yes explosion: No

water contamination: No other: No

fire: No

description:

41 schoolchildren intoxicated

Substance(s) Directly Involved:

toxic: Yes explosive: No

ecotoxic: No other: No

flammable: No

description:

trichloroisocyanuric acid (symclosene) and one of its salts

Immediate Sources of Accident:

storage: No transfer: No

process: Yes other: No

description:

not appropriate (wrong, erroneous) mixture isocyanuric acid and water

Suspected Causes:

plant or equipment: No environmental: No

human: Yes other: No

description:

wrong handling

Immediate Effects:

material loss: No

human deaths: No

human injuries: No community disruption: No

other: Yes

ecological harm: No

national heritage loss: No

description:

release of chlorine in the premises (rooms) used by the sportsmen (visitors)

Emergency Measures taken:

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

external services: No **restoration:** No

sheltering: No **other:** No

evacuation: Yes

description:

evacuation of the persons, medical examination and hospitalisation of 7 persons between them for observation during 1 day

Immediate Lessons Learned:

prevention: No **other:** No

mitigation: Yes

description:

necessity to improve (of a better) labelling. Bad design of the ventilation system of the room for the chlorination of the swimming pool water.

A Occurrence Full Report

country: FA **ident key:** 1800_231_01

1 Type of Accident

remarks: - not applicable -

2 Dangerous Substances

remarks: The 2 basic products (starting products) are solids packaged in plastic buckets (drums) of 25 kilograms and labelled with their commercial name (chlorilong and chloriklar)

3 Source of Accident

illustration: A schematic plan illustrating the disposition (lay out) of the swimming pool, indicating the distance between the water treatment room and the pool, and the localisation of the air vent (50 centimetres from the ground).

remarks: The chlorination (room) station is located in a technical premise of 2 square meters (2 m²). The station accommodates the container containing the hydrolysable chlorinated product. It is connected with a water supply (water feeding pipe). Th... see Appendix Full Report A / source of accident -
remarks

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 5303 organization: organized procedures (none, inadequate, inappropriate,

unclear)

5308 organization: design of plant/equipment/system (inadequate,

inappropriate)

- not applicable -

- not applicable -

- not applicable -

remarks: The information indicated on the labels of (The labelling on) the buckets and the

(written) instructions for refilling (recharging) the chlorination equipment (apparatus)

were not precise (insufficient). Among other factors the (design of t... see Appendix Full

Report A / causes of major occurrence

6 Discussion about the Occurrence

- not applicable -

Type of Accident country: FA ident key: 1800_231_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_231_01

a) total establishment inventory

CAS number: 87-90-1 **identity:** trichloroisocyanuric acid (symclosene)

name from Seveso I Directive: - not applicable -

name from Seveso II Directive: - not applicable -

category from Seveso II: oxidising

other hazards (1): - not applicable -

other hazards (2): - not applicable -

maximum quantity (tonnes): 3

use of substance as: starting material

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

a) total establishment inventory

CAS number: 7782-50-5 identity:

name from Seveso I Directive: Chlorine

name from Seveso II Directive: Chlorine

category from Seveso II: toxic

other hazards (1): - not applicable -

other hazards (2): - not applicable -

maximum quantity (tonnes): -1

use of substance as: normal finished product

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: salt of trichloroisocyanuric 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): 3

use of substance as: starting material

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_231_01

situation

industry

initiating event - not applicable -

associated event - not applicable -

activity/unit

major occurrence 3102 process: chemical continuous reaction

initiating event - not applicable -

associated event - not applicable -

component

major occurrence 4002 reaction vessel; pressurised

initiating event - not applicable -

associated event - not applicable -

B Consequences Full Report

country: FA ident key: 1800_231_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 no information is given

remarks - not applicable -

2 People

establishment popul. emergency personnel off-site population

total at risk 46 -1 -1

immediate fatalities 0 0 0

subsequent fatalities 0 0 0

hospitalizing injuries 0 0 0

other serious injuries 0 0 0

health monitoring 7 0 0

remarks the persons affected were second class primary school children... 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 not applicable

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 Yes No 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_231_01

type: - not applicable -

threatened: not applicable affected: No

C Response Full Report

country: FA ident key: 1800_231_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_231_01 report

Appendix Full Report A / source of accident - remarks:

The chlorination (room) station is located in a technical premise of 2 square meters (2 m²). The station accomodates the container containing the hydrolisable chlorinated product. It is connected with a water supply (water feeding pipe). The water discharge (flow) is controlled automatically.

Appendix Full Report A / causes of major occurrence:

The information indicated on the labels of (The labelling on) the buckets and the (written) instructions for refilling (recharging) the chlorination equipment (apparatus) were not precise (insufficient). Among other factors the (design of the)ventilation system of the premises (rooms) accessible to the users of the swimming pool has allowed to catch (suck) the chlorine released because of unfortunate (wrong, erroneous) handling (manipulation).

Appendix Full Report B / people:

the persons affected were second class primary school children