

Explosion och brand i källaren på en administrativ byggnad på en oljedepå.

951002 MARS 1995_04

Olyckan inträffade i källaren på en administrativ byggnad på en oljedepå. Man fann att där fanns underjordisk förbindelse mellan tankområdet och byggnaden där gaser kunde spridas. Eftersom dessa tunnlar inte var ordentligt gastätade tog sig gas fram till källaren där de antändes vid kontakt med värmepannan. Efter att branden var släckt förseglades tunnlarna.

Inblandade ämnen och mängder

	CAS Nr.	Mängd
brandfarliga gaser, eventuellt toluen och hexan		okänt
toluen	108-88-3	
hexan	110-54-3	

Skador:

Människor:	Förutom 6 personer på anläggningen skadades även 2 personer utanför.
Materiella:	Den administrativa byggnaden skadades.
Miljö/ekologi:	Inga effekter rapporterade.
Infrastruktur:	Inga.

Erfarenheter redovisade (Ja/Nej): Nej

Report Profile

Identification of Report:

country: FA ident key: 1995_004_01

reported under Seveso I directive as major accident reports: SHORT

Date of Major Occurrence: Time of Major Occurrence

start: 1995-10-02 start:

finish: 1995-10-02 finish:

Establishment:

name:

address:

industry: - not applicable -

tank storage farm; installation for the storage of 5000 tons of mineral oil products

in tanks

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:** 1995_004_01

Accident Types:

release: No **explosion:** Yes

water contamination: No **other:** No

fire: Yes

description:

An explosion with subsequent fire occurred in the cellars of the administrative building of the company. In these rooms the foam extinguishing equipment and the electric ... see Appendix Short Report / description of accident types

Substance(s) Directly Involved:

toxic: No **explosive:** No

ecotoxic: No **other:** No

flammable: Yes

description:

flammable liquids.

Immediate Sources of Accident:

storage: No **transfer:** No

process: Yes **other:** No

description:

see accident description.

Suspected Causes:

plant or equipment: Yes **environmental:** No

human: Yes **other:** No

description:

Technical error: it has to be assumed that the explosion was caused by explosive mixtures which could reach

the basement of the office-building through the unsealed hollow pipes and ignited there through the burner of

the heating-installati... see Appendix Short Report / description of suspected causes

Immediate Effects:

material loss: Yes

human deaths: No

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

other: No

ecological harm: No

national heritage loss: No

description:

6 onsite injuries, 2 offsite injuries. Six onsite persons were injured through the explosion and had to be hospitalised. Consistent material loss was caused. Two offsite persons claimed for damages. 1.200.000 DM onsite material loss, 80.000... see Appendix Short Report / description of immediate effects

Emergency Measures taken:

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

external services: No **restoration:** No

sheltering: No **other:** Yes

evacuation: No

description:

none.

Immediate Lessons Learned:

prevention: Yes **other:** No

mitigation: No

description:

The manager of the company assured that the named pipes are to be immediately sealed in order to avoid the recurrence of the explosion.

Appendices for the FA / 1995_004_01 report

Appendix Short Report / description of accident types:

An explosion with subsequent fire occurred in the cellars of the administrative building of the company. In these rooms the foam extinguishing equipment and the electric operation equipment pertaining to the storage of mineral oil products are kept. According to the indications of the operator, chemicals, solvents and similar substances were not stored in the cellar rooms. Investigations on the premises established that between the basement of the office building and the tank storage hollow pipes, housing electric leads for the tank storage, were laid underground. In the particular case there are two lines of several hollow pipes each which lead from the basement of the office-building towards the tank storage and end under a platform. Also several hollow pipes coming from the vault manholes of the underground tanks end in this area. Electric cables are laid too in these hollow pipes to the vault manholes. The inspection established that none of these hollow pipes was sealed. Measurements during the investigation on the premises found explosive mixtures in the connecting pipes between the vault manhole and the platform as well as in the area under the platform even several days after the explosion. It has to be assumed that the explosion was caused by explosive mixtures which could reach the basement of the office-building through the unsealed hollow pipes and ignited there through the burner of the heating-installation. Six persons were injured through the explosion and had to be hospitalised. Consistent material loss was caused. Two persons claimed for damages. Measurement of the Fire-brigade at the fire source indicated higher concentrations of benzene, toluene, and hexane. Toluene and hexane are stored in the tank storage, whereas benzene is not.

Due to the dimensions of the explosions it has to be assumed that a large amount of

explosive mixture had to be involved. It is not clear which kind of chemicals were released and led to the explosion. However there is no evidence of overflowing or leakage of chemicals. No over-ground leakage could be found in the tank installation.

On the basis of the investigations leakages in the underground piping system or in the underground tanks cannot be excluded.

Appendix Short Report / description of suspected causes:

Technical error: it has to be assumed that the explosion was caused by explosive mixtures which could reach the basement of the office-building through the unsealed

hollow pipes and ignited there through the burner of the heating-installation (missing sealings).

Appendix Short Report / description of immediate effects:

6 onsite injuries, 2 offsite injuries. Six onsite persons were injured through the explosion and had to be hospitalised. Consistent material loss was caused. Two offsite persons claimed for damages. 1.200.000 DM onsite material loss, 80.000 DM offsite material loss.