

Explosion och brand på ett oljeraffinaderi.

920622 MARS 1992_16

Då några anställda skulle fylla en tank släpptes ett moln av bensinångor ut. Gasmolnet antändes och exploderade kort därefter. Explosionen följdes av en brand.

Inblandade ämnen och mängder

	CAS Nr.	Mängd
bensin	8006-61-9	okänt

Skador:

Människor: 4 personer omkom och 2 skadades vid olyckan.

Materiella: Delar av anläggningen skadades.

Miljö/ekologi: Inga effekter rapporterade.

Infrastruktur: INga.

Erfarenheter redovisade (Ja/Nej): Nej

Report Profile

Identification of Report:

country: FA ident key: 1992_016_01

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

Date of Major Occurrence: Time of Major Occurrence

start: 1992-06-22 start: 14:30:00

finish: finish:

Establishment:

name:

address:

industry: - not applicable -

Petroleum Refinery

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: 1992_016_01

Accident Types:

release: Yes explosion: Yes

water contamination: No other: No

fire: Yes

description:

When some company workers were preparing to fill a storage tank, gasoline vapours were released into the environment forming a cloud. When the unconfined gasoline vapours cloud reached the furnace of the nearest unit, it was ignited, result... see Appendix Short Report / description of accident types

Substance(s) Directly Involved:

toxic: No explosive: Yes

ecotoxic: No other: No

flammable: Yes

description:

- Gasoline (C.A.S. CODE: 8006-61-9): amount involved = not known.

Immediate Sources of Accident:

storage: Yes transfer: No

process: Yes other: No

description:

The accident occurred during the preparative operations for the filling of the gasoline storage tank in a petroleum refinery.

Suspected Causes:

plant or equipment: Yes environmental: No

human: No other: No

description:

CAUSES:

The leakage of gasoline was caused by a defective pump used for light products transfer.

Immediate Effects:

material loss: Yes

human deaths: Yes

human injuries: Yes community disruption: Yes

other: No

ecological harm: No

national heritage loss: No

description:

EFFECTS ON PEOPLE:... see Appendix Short Report / description of immediate effects

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 Emergency Plan was activated and the nearest refinery units were stopped.

Immediate Lessons Learned:

prevention: No **other:** No

mitigation: No

description:

- not applicable -

A Occurrence Full Report

country: FA **ident key:** 1992_016_01

1 Type of Accident

remarks: When some company workers were preparing to fill a storage tank, gasoline vapours were released into the environment forming a cloud (code 1101). When the unconfined gasoline vapours cloud reached the furnace of the nearest unit, it was ign... see Appendix Full Report A / type of accident

2 Dangerous Substances

remarks: No data are available about the amount of gasoline involved in the accident.

3 Source of Accident

illustration: - not applicable -

remarks: - not applicable -

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 - not applicable -

- not applicable -

- not applicable -

- not applicable -

- not applicable -

remarks: The leakage of gasoline was caused by a defective pump used for light products transfer

(code 5102).

6 Discussion about the Occurrence

- not applicable -

Type of Accident country: FA ident key: 1992_016_01

event:

major occurrence 1307 explosion: VCE (vapour cloud explosion; supersonic wave front)

initiating event - not applicable -

associated event - not applicable -

event:

major occurrence 1202 fire: pool fire (burning pool of liquid, contained or uncontained)

initiating event 1101 release: gas/vapour/mist/etc release to air

associated event - not applicable -

Dangerous substances

country: FA ident key: 1992_016_01

a) total establishment inventory

CAS number: 8006-61-9 **identity:** Gasoline

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: 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: -1 indir_pot_quant: -1

B Consequences Full Report

country: FA ident key: 1992_016_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 In the Original Report there is no evidence of significant effects outside the e... see Appendix

Full Report B / area concerned - remarks

2 People

establishment popul. emergency personnel off-site population

total at risk

immediate fatalities 4

subsequent fatalities

hospitalizing injuries 2

other serious injuries

health monitoring

remarks Inside the establishment 4 people were killed and other 2 injured during the acc... see Appendix

Full Report B / people

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 The accident caused damages inside the establishment but no data are available a... 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** No Yes No

- **media interest** No No No

- **political interest** No No No

remarks The accident had impact on public.

7 Discussion of Consequences

C Response Full Report

country: FA **ident key:** 1992_016_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

- not applicable -

measures to mitigate consequences:

- not applicable -

useful references:

- not applicable -

5 Discussion about Response

- not applicable -

Appendices for the FA / 1992_016_01 report

Appendix Short Report / description of accident types:

When some company workers were preparing to fill a storage tank, gasoline vapours were released into the environment forming a cloud. When the unconfined gasoline vapours cloud reached the furnace of the nearest unit, it was ignited, resulting in an explosion followed by a fire.

Appendix Short Report / description of immediate effects:

EFFECTS ON PEOPLE:

Inside the establishment 4 people were killed and other 2 injured during the accident.

MATERIAL LOSS:

The accident caused damages inside the establishment but no data are available about the cost of the material losses.

COMMUNITY DISRUPTION:

The accident had impact on public.

Appendix Full Report A / type of accident:

When some company workers were preparing to fill a storage tank, gasoline vapours were released into the environment forming a cloud (code 1101). When the unconfined gasoline vapours cloud reached the furnace of the nearest unit, it was ignited, resulting in an explosion (code 1307) followed by a fire (code 1202).

Appendix Full Report B / area concerned - remarks:

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

Appendix Full Report B / people:

Inside the establishment 4 people were killed and other 2 injured during the accident.

Appendix Full Report B / ecological harm:

In the Original Report there is no evidence of significant ecological harms.

Appendix Full Report B / material loss:

The accident caused damages inside the establishment but no data are available about the cost of the material losses.