

Brand på ett oljeraffinaderi pga kontaminerat vatten.

950909 MARS 1800_011_001

Kontaminerat vatten antändes av en dieseldriven pump. Den frigjorda gasen fattade eld. Branden ströps av en inkallad specialistentreprenör som täppte till gasläckaget. Den externa katastrofplanen aktiverades, och myndigheterna underrättades. Räddningstjänsten tillkallades men behövde inte ingripa. Polis höll nyfikna på ett säkert avstånd av 300 meter.

Vattnet som pumpades av den dieseldrivna pumpen var kontaminerat av brandfarliga ämnen. Kontaminationen inträffade till följd av ett brott mot rutinerna.

Inblandade ämnen och mängder

	CAS Nr.	Mängd
Gasoline (?)	8006-61-9	Okänt
LPG (Liquid Petroleum Gas)		Okänt

Skador:

Människor:	En arbetare avled två månader senare till följd av komplikationer som uppstod av brännskadorna. Ytterligare två arbetare fick svåra brännskador. Tre arbetare skadades lindrigt.
Materiella:	Skador på anläggningen.
Miljö/ekologi:	Ingas skador rapporterade.
Infrastruktur:	Inga skador rapporterade.

Erfarenheter redovisade (Ja/Nej): Nej

Report Profile

Identification of Report:

country: FA ident key: 1800_011_01

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

Date of Major Occurrence: Time of Major Occurrence

start: 09/09/1995 start: 14:40:00

finish: 09/09/1995 finish: 17:22:00

Establishment:

name:

address:

industry: - not applicable -

Petroleum Refining

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_011_01

Accident Types:

release: No **explosion:** No

water contamination: No **other:** No

fire: Yes

description:

A fire in the gasoline merox section of the fluid catalytic cracking unit appeared during shut down of the unit.

Substance(s) Directly Involved:

toxic: No **explosive:** No

ecotoxic: No **other:** No

flammable: Yes

description:

- gasoline (8006-61-9), quantity lost unknown -

LPG, quantity lost unknown

Immediate Sources of Accident:

storage: No **transfer:** No

process: No **other:** Yes

description:

contaminated fire water, used for cleaning purposes, was ignited by a Diesel driven pump.

Suspected Causes:

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

human: Yes **other:** No

description:

(1) the fire water was contaminated with gasoline due to violation of procedures (back-flow through a hose, connecting a hydrant and a drum)

(2) no safety advice during contract negotiations for renting... see Appendix Short Report / description of suspected causes

Immediate Effects:

material loss: Yes

human deaths: Yes

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

other: No

ecological harm: No

national heritage loss: No

description:

1 person died at 11/11/95 due to complications during recovery from his burns; 2 other workers were seriously burned; 3 other workers were slightly burned; material damage in the affected unit was about 150.000.000 Belgian Francs.

Emergency Measures taken:

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

external services: Yes **restoration:** No

sheltering: No **other:** No

evacuation: Yes

description:

The emergency plan worked as planned. Cooperation between fire brigades of the company, a neighbouring company and the city. Evacuation of the victims (ambulances).

Immediate Lessons Learned:

prevention: Yes **other:** No

mitigation: No

description:

New restricted procedure on the use of fire water. Review of purchasing-procedure. Better procedures to be followed during shut-down.

A Occurrence Full Report

country: FA **ident key:** 1800_011_01

1 Type of Accident

remarks: A fire on the gasoline merox section of the Fluid Catalytic Cracking Unit.

2 Dangerous Substances

remarks: The actual involved inventory is unknown. The fire was supplied with gasoline and LPG from bursted hoses and lines.

3 Source of Accident

illustration: - not applicable -

remarks: - not applicable -

4 Meteorological Conditions

precipitation none: **fog:** **rain:** **hail:** **snow:**

Yes No No No No

wind speed (m/s):

direction (from):

stability (Pasquill):

ambient temperature (°C):

remarks: The meteorological conditions had no effect on the accident.

5 Causes of Major Occurrence

main causes

technical / physical - not applicable -

- not applicable -

- not applicable -

- not applicable -

- not applicable -

human / organizational 5301 organization: management organization inadequate

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

5304 organization: training/instruction (none, inadequate, inappropriate)

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

5401 person: operator error

remarks: -Fire water was contaminated with gasoline due to violation of procedures. - There was no safety advise/control during the contract negotiations for renting of mobile pumps.

6 Discussion about the Occurrence

- not applicable -

Type of Accident country: FA **ident key:** 1800_011_01

event:

major occurrence 1201 fire: conflagration (a general engulfment fire)

initiating event - not applicable -

associated event - not applicable -

Dangerous substances

country: FA **ident key:** 1800_011_01

a) total establishment inventory

CAS number: identity: Lpg

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): 760

use of substance as: NORMAL FINISHED PRODUCT

b) substance belongs to relevant inventory directly involved: Yes

actual quantity: -1 **potential quantity:** 25

c) substance belongs to relevant inventory indirectly involved: No

actual quantity: -1 **indir_pot_quant:** -1

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): 500

use of substance as: STARTING MATERIAL

b) substance belongs to relevant inventory directly involved: Yes

actual quantity: -1 **potential quantity:** 300

c) substance belongs to relevant inventory indirectly involved: No

actual quantity: -1 **indir_pot_quant:** -1

B Consequences Full Report

country: FA **ident key:** 1800_011_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 There was severe damage in the unit in which there was the fire. Other units wer... see Appendix

Full Report B / area concerned - remarks

2 People

establishment popul. emergency personnel off-site population

total at risk 30 20 0

immediate fatalities 0 0 0

subsequent fatalities 1 0 0

hospitalizing injuries 5 0 0

other serious injuries 0 0 0

health monitoring 0 0 0

remarks One worker died at 12 11 95, due to complications during recovery from his burns... 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 There was no ecological harm. The fire-fighting-water was caught.... see Appendix Full Report B

/ ecological harm

4 National Heritage Loss

effects on:

- **historical sites** Suspected - **historic monuments** Suspected
- **historic buildings** Suspected - **art treasures** Suspected

remarks No heritage was threatened.

5 Material Loss

establishment losses off site losses

costs (direct costs to operator) (social costs)

in ECU BF ECU BF

material losses 1,5E+08 -1

response, clean up, restoration

remarks Material damage: instrumentation, lines, pipes and air-coolers.... 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 Yes
- **political interest** No Yes No

remarks - not applicable -

7 Discussion of Consequences

C Response Full Report

country: FA **ident key:** 1800_011_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

* New restricted procedure on ... 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 / 1800_011_01 report

Appendix Short Report / description of suspected causes:

(1) the fire water was contaminated with gasoline due to violation of procedures (back-flow through a nose, connecting a hydrant and a drum) (2) no safety advice during contract negotiations for renting the mobile pump The Internal Emergency Plan was activated (code 7100). Gaz de France put in operation the safety resources (personnel and materials [code 7201]) available at Beynes (Yvelines). The release was halted with the assistance of a specialized contractor (code 7205) called in by the manufacturer, who covered the escape source with sludge and brought the bar to its original position by increasing the loading on it (code 7501). The External Emergency Plan was activated and the Authorities were alerted (code 7200). The Fire Brigade was mobilized but its intervention was not necessary (code 7201). The Police (code 7203) kept curious people away at a safe distance of 300m (code 7207). No emergency measures are still required, neither on-site nor off-site (code 7703).

Appendix Full Report B / area concerned - remarks:

There was severe damage in the unit in which there was the fire. Other units were not affected.

Appendix Full Report B / people:

One worker died at 12 11 95, due to complications during recovery from his burns. Two other workers were seriously burned.

Appendix Full Report B / ecological harm:

There was no ecological harm. The fire-fighting-water was caught.

Appendix Full Report B / material loss:

Material damage: instrumentation, lines, pipes and air-coolers.

Appendix Full Report C / lesson learned - prevent:

- * New restricted procedure on use of fire water
- * Review of the purchasing - processes
- * Better procedures to be followed during shut-down.