

Kemikalieutsläpp från en fabrik för produktion av platser och gummi.

940201

Mycket kortfattad

På en ålderstigen fabrik för produktion av polymera hartser inträffade ett kemikalieutsläpp till följd av operatörsslarv. Processerna vid fabriken var alla manuella och automatiska larmsystem saknades. Efter att ett första arbetslag startat en vakuumprocess, kom det påföljande arbetslaget att fortsätta processen vid atmosfärstryck utan att aktivera vakuumutrustningen. Resultatet blev en kraftig tryckökning som ledde till att ett sprängbleck brast och reaktorinnehållet strömmade ut i miljön.

Som en följd av olyckan lades produktionen ned.

Inblandade ämnen och mängder

	CAS Nr.	Mängd
Formaldehyd	50-00-0	okänt
Fenol	108-95-2	okänt
Hartser		

Skador:

Människor:	Inga människor skadades.
Materiella:	Inga skador rapporterade.
Miljö/ekologi:	Ytvattnet i den närliggande floden Aude förorenades avsevärt. Maximal koncentration av fenol befanns vara 4,3 mg/l. Kostnaderna uppskattades till 300 000 franska Franc.
Infrastruktur:	Dricksvattenförsörjningen avbröts för 80 000 människor under 24 timmar.

Erfarenheter redovisade (Ja/Nej): Nej

Report Profile

Identification of Report:

country: FA ident key: 1800_217_01

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

Date of Major Occurrence: Time of Major Occurrence

start: 01/02/1994 start: 16:18:00

finish: 03/02/1994 finish:

Establishment:

name:

address:

industry: 2003 plastics and rubber manufacture

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_217_01

Accident Types:

release: Yes **explosion:** No

water contamination: Yes **other:** No

fire: No

description:

the drinking water supply for 80000 persons was interrupted during 24h.

Substance(s) Directly Involved:

toxic: Yes **explosive:** No

ecotoxic: Yes **other:** No

flammable: No

description:

phenol, formol (formaldehyde), resins

Immediate Sources of Accident:

storage: No **transfer:** No

process: Yes **other:** No

description:

rupture of a bursting disk in a polymerisation reactor

Suspected Causes:

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

human: Yes **other:** No

description:

operation error

Immediate Effects:

material loss: No

human deaths: No

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

other: No

ecological harm: Yes

national heritage loss: No

description:

river pollution (surface waters), damages estimated around 300000 FFr

Emergency Measures taken:

on-site systems: Yes **decontamination:** Yes

external services: Yes **restoration:** No

sheltering: No **other:** No

evacuation: No

description:

pumping for drinking water interrupted during 24h, monitoring of the polluted flow

Immediate Lessons Learned:

prevention: No **other:** Yes

mitigation: No

description:

interruption of the resin production in the establishment procurement of the resin through qualified suppliers

A Occurrence Full Report

country: FA **ident key:** 1800_217_01

1 Type of Accident

remarks: the rise of the pressure in the reactor caused the rupture of the bursting disk, the content of the reactor was released into the environment and more precisely into the river Aude.

2 Dangerous Substances

remarks: - not applicable -

3 Source of Accident

illustration: a series of maps are attached, the first shows the region around Quillan, with relevant structures (hospital, Formica, schools, emergency response centre etc.), the second is an enlargement of the first, the third map shows the premises of ... see Appendix Full Report A / source of accident - illustration

remarks: The installation concerned is a unit for the production of polymeric resins of old design, being operated manually and not equipped with alarm systems. The first crew started a vacuum process. The second crew continued the same process under... 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 5304 organization: training/instruction (none, inadequate, inappropriate)

- not applicable -

- not applicable -

- not applicable -

- not applicable -

remarks: missing written procedures and/or instructions (no instructions)

6 Discussion about the Occurrence

- not applicable -

Type of Accident country: FA ident key: 1800_217_01

event:

major occurrence 1103 release: fluid release to water

initiating event 1301 explosion: pressure burst (rupture of pressure system)

associated event - not applicable -

Dangerous substances

country: FA ident key: 1800_217_01

a) total establishment inventory

CAS number: identity: resins

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: starting material

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: 50-00-0 identity: formol (formaldehyde)

name from Seveso I Directive: - not applicable -

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): -1

use of substance as: starting material

b) substance belongs to relevant inventory directly involved: Yes

actual quantity: 24 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: 108-95-2 identity: phenol

name from Seveso I Directive: - not applicable -

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): -1

use of substance as: starting material

b) substance belongs to relevant inventory directly involved: Yes

actual quantity: 45 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_217_01

situation

industry

initiating event - not applicable -

associated event - not applicable -

activity/unit

major occurrence 3101 process: chemical batch 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_217_01

1 Area concerned

affected

extent of effects installation: Yes

establishment: Yes

off-site; local: Yes

off-site; regional: Suspected

off-site; transboundary: No

illustration of effects - not applicable -

remarks - not applicable -

2 People

establishment popul. emergency personnel off-site population

total at risk -1 -1 80000

immediate fatalities -1 -1 -1

subsequent fatalities 0 0 0

hospitalizing injuries 0 0 0

other serious injuries 0 0 0

health monitoring 0 0 0

remarks 80000 people were affected by the interruption of the water distribution... 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 Yes

- land (with known potential for long term ecological harm or No

preventing human access or activities)

- marine or fresh water habitat Suspected

- areas of high conservation value or given special protection No

remarks the maximum phenol concentration found was of 4.3 mg/l.... see Appendix Full Report B /

ecological harm

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 45000 300000 0 0

response, clean up, restoration 0 0 0 0

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 Yes 24 hours

- 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 Yes No No

- political interest Yes No No

remarks - not applicable -

7 Discussion of Consequences

- not applicable -

Ecological Components involved

country: FA ident key: 1800_217_01

type: 6204 freshwater: river

threatened: Yes affected: Yes

C Response Full Report

country: FA ident key: 1800_217_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

the production of resins was g... see Appendix Full Report C / lesson learned - prevent

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_217_01 report

Appendix Full Report A / source of accident - illustration:

a series of maps are attached, the first shows the region around Quillan, with relevant structures (hospital, Formica, schools, emergency response centre etc.), the second is an enlargement of the first, the third map shows the premises of Formica, the fourth shows the different buildings and departments inside Formica. A technical scheme of the batch reactor is annexed.

Appendix Full Report A / source of accident - remarks:

The installation concerned is a unit for the production of polymeric resins of old design, being operated manually and not equipped with alarm systems. The first crew started a vacuum process. The second crew continued the same process under atmospheric conditions, without having activated the vacuum generating equipment. The vent valve was closed, the pressure in the reactor rose and the bursting disk ruptured.

Appendix Full Report B / people:

80000 people were affected by the interruption of the water distribution

Appendix Full Report B / ecological harm:

the maximum phenol concentration found was of 4.3 mg/l.

Appendix Full Report C / lesson learned - prevent:

the production of resins was given up (production abandoned)