

## Utsläpp på en petrokemisk anläggning.

940411 MARS 1994\_13

Olyckan inträffade vid rivningsarbete på en fabrik på anläggningsområdet. Under arbete kom man att avlägsna ventiler på en aktiv rörledning med etanol. Då en tankbil något senare skulle lastas rann etanol ut på gårdsområdet. Etanolen antändes inte, men endast för att en antändningskälla inte fanns.

### Inblandade ämnen och mängder

	CAS Nr.	Mängd
etanol	64-17-5	5640 kg

### Skador:

Människor: Inga.  
Materiella: Inga.  
Miljö/ekologi: Inga effekter rapporterade.  
Infrastruktur: Inga.

**Erfarenheter redovisade (Ja/Nej): Nej**

## Report Profile

### Identification of Report:

country: FA ident key: 1994\_013\_01

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

### Date of Major Occurrence: Time of Major Occurrence

start: 1994-04-11 start:

finish: 1994-04-11 finish:

### Establishment:

name:

address:

industry: 2008 wholesale and retail storage and distribution (incl. LPG bottling & bulk

distrib., more: F1! )

Petrochemical (Storage and Distribution)

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: 1994\_013\_01

**Accident Types:**

release: Yes explosion: No

water contamination: No other: No

fire: No

**description:**

A release of 7,144 litres of ethanol (High Grade Natural Spirit) occurred into a vard area but no ignition was found. If an ignition source was present, a major fire and/or an explosion could happen.

**Substance(s) Directly Involved:**

toxic: No explosive: Yes

ecotoxic: No other: No

flammable: Yes

**description:**

- Ethanol [High Grade Natural Spirit] (C.A.S. CODE: 64-17-5): amount involved = 5,640 Kg (about 7,144 litres).

**Immediate Sources of Accident:**

storage: No transfer: Yes

process: No other: No

**description:**

The accident occurred during the loading of a road tanker with ethanol in a petrochemical industry.

**Suspected Causes:**

plant or equipment: No environmental: No

human: Yes other: No

**description:**

CAUSES:... see Appendix Short Report / description of suspected causes

**Immediate Effects:**

material loss: No

human deaths: No

human injuries: No community disruption: No

other: Yes

**ecological harm:** No

**national heritage loss:** No

**description:**

OTHER:

No material losses occurred except the product released during the accident.

### **Emergency Measures taken:**

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

**external services:** No **restoration:** No

**sheltering:** No **other:** Yes

**evacuation:** No

**description:**

The Emergency plan was not activated and the emergency services were not called. The released ethanol was allowed to evaporate.

### **Immediate Lessons Learned:**

**prevention:** Yes **other:** No

**mitigation:** No

**description:**

MEASURES TO PREVENT ANY RECURRENCE OF SIMILAR ACCIDENTS:

After the accident, the open line between the road loading bay and the drumming shed had been spaded off and isolated.

## **A Occurrence Full Report**

**country:** FA **ident key:** 1994\_013\_01

### **1 Type of Accident**

**remarks:** A release of 7,144 litres of ethanol (High Grade Natural Spirit) occurred into a vard area but no ignition was found (code 1102). If an ignition source was present, a major fire and/or an explosion could happen. The released ethanol evapora... see Appendix Full Report A / type of accident

### **2 Dangerous Substances**

**remarks:** The total establishment and the potential directly involved inventories of the ethanol (High Grade Natural Spirit) refer to the amount released during the accident.

### **3 Source of Accident**

**illustration:** - not applicable -

**remarks:** The accident occurred during the loading of a road tanker with ethanol produced in a petrochemical industry. The release of ethanol occurred from a pipeline between the road loading bay and a drumming shed owing to a plant that was being d... see Appendix Full Report A / source of accident -  
remarks

### **4 Meteorological Conditions**

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

No No Yes No No

**wind speed (m/s):**

**direction (from):** N/K

**stability (Pasquill):**

**ambient temperature (°C):** 6

**remarks:** Weather conditions probably prevented ignition as it was too cold.

## 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)

5401 person: operator error

- not applicable -

- not applicable -

- not applicable -

**remarks:** Before the accident occurred, a plant was being demolished, including a drumming shed.

Between the road loading bay and the drumming shed existed a common line that was isolated

by means of valves. During the demolition works, those valves ... see Appendix Full

Report A / causes of major occurrence

## 6 Discussion about the Occurrence

- not applicable -

**Type of Accident** country: FA ident key: 1994\_013\_01

**event:**

**major occurrence** 1102 release: fluid release to ground

**initiating event** 1102 release: fluid release to ground

**associated event** - not applicable -

## Dangerous substances

country: FA ident key: 1994\_013\_01

### a) total establishment inventory

**CAS number: identity:** Toxics

**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): 35000

use of substance as: NORMAL FINISHED PRODUCT

**b) substance belongs to relevant inventory directly involved:** No

actual quantity: -1 potential quantity: -1

**c) substance belongs to relevant inventory indirectly involved:** No

actual quantity: -1 indir\_pot\_quant: -1

**a) total establishment inventory**

CAS number: identity: Highly Flammable Liquids

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): 85000

use of substance as: NORMAL FINISHED PRODUCT

**b) substance belongs to relevant inventory directly involved:** No

actual quantity: -1 potential quantity: -1

**c) substance belongs to relevant inventory indirectly involved:** No

actual quantity: -1 indir\_pot\_quant: -1

**a) total establishment inventory**

CAS number: identity: Acrylonitrile

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): 10000

use of substance as: NORMAL FINISHED PRODUCT

**b) substance belongs to relevant inventory directly involved:** No

actual quantity: -1 potential quantity: -1

**c) substance belongs to relevant inventory indirectly involved:** No

actual quantity: -1 indir\_pot\_quant: -1

**Source of Accident - Situation** country: FA ident key: 1994\_013\_01

**situation**

industry

initiating event - not applicable -

**associated event** - not applicable -

**activity/unit**

**major occurrence** 3301 transfer: pipeline/pipework transfer

**initiating event** - not applicable -

**associated event** - not applicable -

**component**

**major occurrence** 4010 valves/controls/monitoring devices/drain cocks

**initiating event** - not applicable -

**associated event** - not applicable -

**situation**

**industry**

**initiating event** - not applicable -

**associated event** - not applicable -

**activity/unit**

**major occurrence** 3202 storage: distribution-associated (not on-site of manufacture)

**initiating event** - not applicable -

**associated event** - not applicable -

**component**

**major occurrence** 4003 container; non-pressurised (hopper, tank, drum, bag, etc.)

**initiating event** - not applicable -

**associated event** - not applicable -

## **B Consequences Full Report**

**country:** FA **ident key:** 1994\_013\_01

### **1 Area concerned**

**affected**

**extent of effects installation:** No

**establishment:** No

**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 because the ... see Appendix

Full Report B / area concerned - remarks

### **2 People**

**establishment popul. emergency personnel off-site population**

**total at risk** 10 0 0

**immediate fatalities** 0 0 0

**subsequent fatalities** 0 0 0

**hospitalizing injuries** 0 0 0

**other serious injuries** 0 0 0

**health monitoring** 0 0 0

**remarks** Approximately 10 persons in vicinity when leak occurred who could have been affe... 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 preventing human access or activities)** Suspected

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

**remarks** No buildings affected.

### **5 Material Loss**

**establishment losses off site losses**

**costs (direct costs to operator) (social costs)**

**in ECU British Pounds ECU British Pounds**

**material losses** 140000 -1

**response, clean up, restoration** -1 -1

**remarks** No material losses occurred except the ethanol released during the accident (pro... 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 Yes No No
- media interest No No No
- political interest No No No

remarks In the Original Report there is no evidence of significant effects outside the i... see Appendix

## 7 Discussion of Consequences

# C Response Full Report

country: FA ident key: 1994\_013\_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

After the accident, the open l... 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 / 1994\_013\_01 report

#### Appendix Short Report / description of suspected causes:

CAUSES:

Before the accident occurred, a plant was being demolished, including a drumming shed. Between the road loading bay and the drumming shed existed a common line that was isolated by means of valves. During the demolition works, those valves were removed in the drumming shed, due to both operator error and inadequate operating procedures. When the loading of the road tanker initiated, ethanol poured out of the open line into the vard area.

#### Appendix Full Report A / type of accident:

A release of 7,144 litres of ethanol (High Grade Natural Spirit) occurred into a vard area but no ignition was found (code 1102). If an ignition source was present, a major fire and/or an explosion could happen. The released ethanol evaporated and ran into the drain system.

#### Appendix Full Report A / source of accident - remarks:

The accident occurred during the loading of a road tanker with ethanol produced in a petrochemical industry. The release of ethanol occurred from a pipeline between the road loading bay and a drumming shed owing to a plant that was being demolished.

#### Appendix Full Report A / causes of major occurrence:

Before the accident occurred, a plant was being demolished, including a drumming shed. Between the road loading bay and the drumming shed existed a common line that was isolated by means of valves. During the demolition works, those valves were removed in drumming shed, due to both operator errors (code 5401) and inadequate operating procedures (code 5303). When the road tanker loading initiated, ethanol poured out of the open pipeline in the drumming shed.

**Appendix Full Report B / area concerned - remarks:**

In the Original Report there is no evidence of significant effects because the released ethanol evaporated and ran into the drain system but no ignition was found.

**Appendix Full Report B / people:**

Approximately 10 persons in vicinity when leak occurred who could have been affected if fire had taken place. No people were 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:**

No material losses occurred except the ethanol released during the accident (production loss and excise duty on loss).

**Appendix Full Report B / disruption of community life:**

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

**Appendix Full Report C / lesson learned - prevent:**

After the accident, the open line between the road loading bay and the drumming shed had been spaded off and then isolated.