

Brand i en anläggning för avloppsbehandling.

891025 MARS 1989_05

En brand uppstod i ett mellanlagringsutrymme för speciellt avfall från industri och hushåll. Mellan 1 och 3 ton avfall innehållande bl.a. kvicksilver självantändes. Orsaken till självantändningen är okänd. Kviksilverångor spreds med rökgaserna. Räddningstjänsten släckte branden och släckningsvattnet samlades upp för behandling i anläggningen. Halten av kvicksilver mättes i luften utanför anläggningen och lokalbefolkningen gavs råd om hur grödor borde behandlas före tillagning.

Inblandade ämnen och mängder

	CAS Nr.	Mängd
kvicksilver	7439-97-6	

Skador:

Människor: Inga.
Materiella: Byggnaden skadades.
Miljö/ekologi: Halten av kvicksilver mättes i luften utanför anläggningen och lokalbefolkningen gavs råd om hur grödor borde behandlas före tillagning. Halter i vegetationen utanöfr anläggningen mättes också.
Infrastruktur: Inga.

Erfarenheter redovisade (Ja/Nej): Ja.

Kortfattat anges förebyggande åtgärder.

Report Profile

Identification of Report:

country: FA ident key: 1989_005_01

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

Date of Major Occurrence: Time of Major Occurrence

start: 1989-10-25 start:

finish: finish:

Establishment:

name:

address:

industry: 2007 waste treatment, disposal

Waste Treatment & Disposal (Intermediate Storage Area for Special Wastes)

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:** 1989_005_01**Accident Types:****release:** Yes **explosion:** No**water contamination:** No **other:** No**fire:** Yes**description:**

ACCIDENT CASE HISTORY DESCRIPTION:... see Appendix Short Report / description of accident types

Substance(s) Directly Involved:**toxic:** Yes **explosive:** No**ecotoxic:** No **other:** No**flammable:** Yes**description:**

No information are available about the composition of special wastes (between 1 and 3 tonnes were stored in the building) involved in the accident.... see Appendix Short Report / description of substances involved

Immediate Sources of Accident:**storage:** Yes **transfer:** No**process:** No **other:** No**description:**

The accident occurred in an intermediate storage area for special wastes in a waste treatment industry. In the intermediate storage area there were special wastes (between 1 and 3 tonnes) containing mercury from industry and private househo... see Appendix Short Report / description of immediate sources

Suspected Causes:**plant or equipment:** Yes **environmental:** No**human:** No **other:** No**description:**

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

Immediate Effects:

material loss: Yes

human deaths: No

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

other: No

ecological harm: Yes

national heritage loss: No

description:

MATERIAL LOSS:... see Appendix Short Report / description of immediate effects

Emergency Measures taken:

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

external services: Yes **restoration:** No

sheltering: No **other:** No

evacuation: No

description:

INTERNAL TO THE ESTABLISHMENT:... see Appendix Short Report / description of emergency measures taken

Immediate Lessons Learned:

prevention: Yes **other:** No

mitigation: Yes

description:

MEASURES TO PREVENT ANY RECURRENCE OF SIMILAR ACCIDENTS:... see Appendix Short Report / description of

immediate lessons learned

A Occurrence Full Report

country: FA **ident key:** 1989_005_01

1 Type of Accident

remarks: Self-ignition caused a fire (code 1201) in the intermediate storage area for

special wastes from industry and private households of a waste treatment

plant. Between 1 and 3 tonnes of wastes containing mercury were stored in

the building, an... see Appendix Full Report A / type of accident

2 Dangerous Substances

remarks: The total establishment and the potential directly involved inventories of

special wastes refer to the amount stored in the building (between 1 and 3

tonnes). No information are available about the composition of the special

wastes and the ... see Appendix Full Report A / dangerous substances

3 Source of Accident

illustration: - not applicable -

remarks: The accident occurred in an intermediate storage area (code 3201) for

special wastes in a waste treatment industry (code 2007). In the

intermediate storage area there were special wastes (between 1 and 3 tonnes)

containing mercury from indu... 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 5107 operation: unexpected reaction/phase-transition

- not applicable -

- not applicable -

- not applicable -

- not applicable -

human / organizational 5307 organization: process analysis (inadequate, incorrect)

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

inappropriate)

- not applicable -

- not applicable -

- not applicable -

remarks: The fire was caused by an unexpected self-ignition (code 5107) of a stored substance, due

to an insufficient process analysis [code 5307] (the reaction was not foreseen) and to an

inadequate storage area design [code 5308] (the warehouse wa... see Appendix Full Report A

/ causes of major occurrence

6 Discussion about the Occurrence

- not applicable -

Type of Accident country: FA ident key: 1989_005_01

event:

major occurrence 1401 other: combustion products into air

initiating event - not applicable -

associated event - not applicable -

event:

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

initiating event 1201 fire: conflagration (a general engulfment fire)

associated event - not applicable -

Dangerous substances

country: FA ident key: 1989_005_01

a) total establishment inventory

CAS number: identity: Special Wastes With Mercury

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): 3

use of substance as: NORMAL FINISHED PRODUCT

b) substance belongs to relevant inventory directly involved: Yes

actual quantity: 3 potential quantity: 3

c) substance belongs to relevant inventory indirectly involved: No

actual quantity: -1 indir_pot_quant: -1

a) total establishment inventory

CAS number: 7439-97-6 identity: Mercury

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

Source of Accident - Situation country: FA ident key: 1989_005_01

situation

industry

initiating event 2007 waste treatment, disposal

associated event - not applicable -

activity/unit

major occurrence 3201 storage: process-associated (stockholding, etc. on-site of manufacture)

initiating event 3201 storage: process-associated (stockholding, etc. on-site of manufacture)

associated event - not applicable -

component

major occurrence 4006 free placement (unconfined pile, stack,etc; if bagged or in cylinders,

more...F1!)

initiating event 4006 free placement (unconfined pile, stack,etc; if bagged or in cylinders,

more...F1!)

associated event - not applicable -

B Consequences Full Report

country: FA **ident key:** 1989_005_01

1 Area concerned

affected

extent of effects installation: Yes

establishment: Yes

off-site; local: Yes

off-site; regional: No

off-site; transboundary: No

illustration of effects - not applicable -

remarks Inside the installation, soot samples were taken to determine the contents of di... see Appendix

Full Report B / area concerned - remarks

2 People

establishment popul. emergency personnel off-site population

total at risk

immediate fatalities

subsequent fatalities

hospitalizing injuries

other serious injuries

health monitoring

remarks No people were injured during the accident.

3 Ecological Harm

pollution/contamination/damage of:

- **residential area (covered by toxic cloud)** Suspected

- **common wild flora/fauna (death or elimination)** not applicable

- **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 Mercury concentration measurements in plants samples were carried out and recomm... 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 fire damaged the storage building but no data are available about the cost o... 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 Mercury concentration measurements in plants samples were carried out and recomm... see Appendix

7 Discussion of Consequences

Ecological Components involved

country: FA ident key: 1989_005_01

type: 6106 inland: arable land/crops/vineyards/orchards

threatened: not applicable **affected:** not applicable

C Response Full Report

country: FA ident key: 1989_005_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 it was esta... see Appendix Full Report C / lesson learned - prevent

measures to mitigate consequences:

After the accident, the follow... see Appendix Full Report C / lesson learned - mitigate

useful references:

- not applicable -

5 Discussion about Response

- not applicable -

Appendices for the FA / 1989_005_01 report

Appendix Short Report / description of accident types:

ACCIDENT CASE HISTORY DESCRIPTION:

Self-ignition caused a fire in the intermediate storage area for special wastes from industry and private households of a waste treatment plant. Between 1 and 3 tonnes of wastes containing mercury were stored in the building, and an unspecified amount of mercury was emitted during the fire. Mercury concentration measurements in vegetables in the surrounding area were carried out.

Appendix Short Report / description of substances involved:

No information are available about the composition of special wastes (between 1 and 3 tonnes were stored in the building) involved in the accident.

- Mercury (C.A.S. CODE: 7439-97-6): amount involved = not known.

Appendix Short Report / description of immediate sources:

The accident occurred in an intermediate storage area for special wastes in a waste treatment industry. In the intermediate storage area there were special wastes (between 1 and 3 tonnes) containing mercury from industry and private households. The warehouse was not subdivided in compartments by fire walls.

Appendix Short Report / description of suspected causes:

CAUSES:

The fire was caused by an unexpected self-ignition of a stored substance, due to an insufficient process analysis (the reaction was not foreseen) and to an inadequate storage area design (the warehouse was not subdivided in different compartments by means of fire walls in order to avoid the fire spreading).

Appendix Short Report / description of immediate effects:

MATERIAL LOSS:

The fire damaged the storage building but no data are available about the cost of the material losses.

ECOLOGICAL HARM:

Mercury concentration measurements in plants samples were carried out and recommendations in using homegrown vegetables as human and animal food were given.

COMMUNITY DISRUPTION:

Recommendations in using homegrown vegetables as human and animal food were given.

Appendix Short Report / description of emergency measures taken:

INTERNAL TO THE ESTABLISHMENT:

The fire brigade intervened to extinguish the fire. Soot samples were taken to determine the contents of dioxine. The fire fighting water was collected.

EXTERNAL TO THE ESTABLISHMENT:

Gas concentration measurements were carried out. Mercury concentration measurements in plants samples were carried out and recommendations in using homegrown vegetables as human and animal food were given.

Appendix Short Report / description of immediate lessons learned:

MEASURES TO PREVENT ANY RECURRENCE OF SIMILAR ACCIDENTS:

After the accident it was established to analyse the needed safety measures with respect to the best available technology.

MEASURES TO MITIGATE THE EFFECTS OF THE ACCIDENT:

After the accident, the following measures were established:

- 1- subdivision of the warehouse in fire sections and separated storage of substances;
- 2- using of infrared sensing device for fire alarm;
- 3- analysis of needed safety measures with respect to the best available technology.

Appendix Full Report A / type of accident:

Self-ignition caused a fire (code 1201) in the intermediate storage area for special wastes from industry and private households of a waste treatment plant. Between 1 and 3 tonnes of wastes containing mercury were stored in the building, and an unspecified amount of mercury was emitted during the fire (code 1401).

Appendix Full Report A / dangerous substances:

The total establishment and the potential directly involved inventories of special wastes refer to the amount stored in the building (between 1 and 3 tonnes). No information are available about the composition of the special wastes and the amount of mercury released into the environment during the fire.

Appendix Full Report A / source of accident - remarks:

The accident occurred in an intermediate storage area (code 3201) for special wastes in a waste treatment industry (code 2007). In the intermediate storage area there were special wastes (between 1 and 3 tonnes) containing mercury from industry and private households (code 4006). The warehouse was not subdivided in compartments by fire walls.

Appendix Full Report A / causes of major occurrence:

The fire was caused by an unexpected self-ignition (code 5107) of a stored substance, due to an insufficient process analysis [code 5307] (the reaction was not foreseen) and to an inadequate storage area design [code 5308] (the warehouse was not subdivided in different compartments by means of fire walls in order to avoid the fire spreading).

Appendix Full Report B / area concerned - remarks:

Inside the installation, soot samples were taken to determine the contents of dioxine. Outside the installation, mercury concentration measurements in plants samples were carried out and recommendations in using homegrown vegetables as human and animal food were given.

Appendix Full Report B / ecological harm:

Mercury concentration measurements in plants samples were carried out and recommendations in using homegrown vegetables as human and animal food were given.

Appendix Full Report B / material loss:

The fire damaged the storage building but no data are available about the cost of the material losses.

Appendix Full Report B / disruption of community life:

Mercury concentration measurements in plants samples were carried out and recommendations in using homegrown vegetables as human and animal food were given.

Appendix Full Report C / lesson learned - prevent:

After the accident it was established to analyse the needed safety measures with respect to the best available technology.

Appendix Full Report C / lesson learned - mitigate:

After the accident, the following measures were established:

- 1- subdivision of the warehouse in fire sections and separated storage of substances;
- 2- using of infrared sensing device for fire alarm;
- 3- analysis of needed safety measures with respect to the best available technology.