

Utsläpp av gift i naturen från en kemikaliefabrik.

940819

MARS 1994_09

mycket oklar

En beskrivning av olyckan saknas i rapporten. Det förfaller som om aceton cyanohydrin, ett kraftigt gift, släppts ut i stora mängder, eventuellt under en längre tid. Orsaker och konsekvenser är oklara. Orsakerna återstår att utreda, konsekvenserna att undersöka.

Inblandade ämnen och mängder

	CAS Nr.	Mängd
aceton cyanohydrin	75-86-5	minst 298 ton

Skador:

Människor:	Framgår inte.
Materiella:	Framgår inte.
Miljö/ekologi:	Omfattande påverkan på miljön som kräver långvarig bevakning.
Infrastruktur:	Inga.

Erfarenheter redovisade (Ja/Nej): Nej

Report Profile

Identification of Report:

country: FA ident key: 1994_009_01

reported under Seveso I directive as major accident reports: SHORT

Date of Major Occurrence: Time of Major Occurrence

start: 1994-08-19 start:

finish: finish:

Establishment:

name:

address:

industry: - not applicable -

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_009_01

Accident Types:

release: Yes explosion: No

water contamination: Yes other: No

fire: No

description:

- not applicable -

Substance(s) Directly Involved:

toxic: Yes explosive: No

ecotoxic: Yes other: No

flammable: Yes

description:

Acetone cyanohydrin (2-Methylacetonitrile, 2-Hydroxy-2methylpropionitrile, alfa-hydroxyisobutyronitrile, (Acetoncianidrina, italian)... see Appendix Short Report / description of substances involved

Immediate Sources of Accident:

storage: Yes transfer: No

process: No other: No

description:

- not applicable -

Suspected Causes:

plant or equipment: Yes environmental: No

human: Yes other: No

description:

The development of the accident is not yet completely clear. The leak occurred through the little losing well containing the ejector of the fire fighting system joined to the ACH tanks. The fire fighting system for the ACH tanks is based on... see Appendix Short Report / description of suspected causes

Immediate Effects:

material loss: No

human deaths: No

human injuries: No community disruption: No

other: No

ecological harm: Yes

national heritage loss: No

description:

There were no effects on human health. It was involved the superficial water-bearing stratum. The Local Sanitary Unit and the PMP (Prevention Multizonal Garrison) are going on with daily tests over 25 wells. It is involved the superficial w... see Appendix Short Report / description of immediate effects

Emergency Measures taken:

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

external services: No **restoration:** No

sheltering: No **other:** Yes

evacuation: No

description:

The mayor issued ordinances in date 94 09 16, 94 09 23, 94 10 13 and 94 12 05. Such ordinances oblige the ATOCHEM Company to... see Appendix Short Report / description of emergency measures taken

Immediate Lessons Learned:

prevention: No **other:** No

mitigation: No

description:

- not applicable -

Appendices for the FA / 1994_009_01 report

Appendix Short Report / description of substances involved:

Acetone cyanohydrin (2-Methylacetonitrile, 2-Hydroxy-2methylpropionitrile, alfa-hydroxyisobutyronitrile, (Acetoncianidrina, italian)

(CH₃)₂COHCN CAS-Number: 75-86-5

Colourless liquid, melting point: -20oC, flash point 74oC.

Very toxic by inhalation, skin contact and ingestion. Readily decomposes to hydrocyanic acid and acetone (keep cool and don't store for long periods).

Combustible when exposed to heat or flame. Vigorous reaction with sulphuric acid.

When heated to decomposition it emits toxic cyanide fumes.

Used for insecticides and as intermediate for organic synthesis (especially methyl

methacrylate). It has been evaluated the pouring of 298 t (at least) of ACH but the USSL (local Sanitary Unit) considers as possible a previous not revealed pouring; for this reason the Company should give a mass balance for the period before the accident that is down to June 2 1994, the last date of testing of the ejection system (considering also the product's rendering.

Appendix Short Report / description of suspected causes:

The development of the accident is not yet completely clear. The leak occurred through the little losing well containing the ejector of the fire fighting system joined to the ACH tanks. The fire fighting system for the ACH tanks is based on a foaming substance which is conveyed by water of the fire fighting network in the ACH tank at a level close to the bottom. The ejector system is sited in a little well with losing bottom. In case of fire inside the ATC tank the mixture of foam and water is introduced in the tank. The water pressure breaks two teflon membranes having the function to separate the ATC from the water of firefighting system. It is supposed that

phenomena of ageing together with a non perfect clamping of ejector's parts have caused the leak. Such leak spread successively from the ejector well (which was losing) to the ground.

Appendix Short Report / description of immediate effects:

There were no effects on human health. It was involved the superficial water-bearing stratum. The Local Sanitary Unit and the PMP (Prevention Multizonal Garrison) are going on with daily tests over 25 wells. It is involved the superficial water-bearing stratum (5-8 m) but not the first water-bearing stratum (30 m) due to the presence of an impermeable clay stratum. The water-bearing stratum from which the drinking water is withdrawn is at 60 m then is still more protected. However the pollution of the superficial water-bearing is very high and it is necessary to continue in the future to verify that the deeper strata are not involved. This problem is emphasized in the ordinance of the Mayor of the city of Rho.

Appendix Short Report / description of emergency measures taken:

The mayor issued ordinances in date 94 09 16, 94 09 23, 94 10 13 and 94 12 05. Such ordinances oblige the ATOCHEM Company to:

- carry on studies on the morphology and permeability of the clay stratum and on the flows behaviours of the superficial water-bearing stratum;
- realize a mechanical barrage and a hydraulic barrage, with purifying system of the withdrawn water;
- install some piezometer for the control of the first and the second water-bearing stratum;
- study solutions to permit the oxidation on site.

Moreover the mayor authorized the ATOCHEM to transfer the polluted water withdrawn from underground by the pumps of the hydraulic barrage (toxic waste) for their provisional storing nearby the "Italiana Petroli" company. The mayor authorized also the provisional storing nearby the ATOCHEM through the installation of a containment basin. He has obliged also the ATOCHEM to daily measure, by the piezometers, the concentration of acetone, free cyanides, total cyanides and ACH. Finally the mayor asked the ATOCHEM to give an exact evaluation of the released ACH.

ATOCHEM has prepared a reclaim plan based on the prosecution of the ACH squeezing

operation from the water-bearing stratum and on the continuous water immission in the pouring point and in the well No.2, with squeezing in the downstream wells 9, 10 and 12, up to values near to 0. Analysis of the ground and following treatment of the same are foreseen. On February 28 1995 the mayor authorized the Elf ATOCHEM to reclaim the area, following its plan. He promoted a technical-scientific committee to direct the reclaim. The committee which is composed by technicians of the USLL 68 and 69 will give the results of his work(as soon as they will be available) to the European Commission.