

Appendix 9.3 Historical Incidents from MHIDAS Database

Native Number	Date of Incident	Country	Details
<u>Pipework</u>			
5039	19910727	UK	Spill from two 30kg cylinders in <u>chlorine</u> building of <u>water treatment plant</u> released chlorine. Incident caused by small crack in pipework which was replaced. Leak stemmed by water authority engineers with BA.
2023	19850827	FRANCE	Cloud of toxic <u>chlorine</u> gas caused by leak at <u>water treatment plant</u> dispersed after hovering for nearly three hours over the countryside of western france.2 employees were hurt,1 seriously when 37000 cubic meters billowed from the plant.
1788	19770930	USA	Cloud of <u>chlorine</u> escaped from faulty connection at <u>water treatment plant</u> . Low dense cloud dispersed by wind.
1683	19780918	UK	Leak from faulty pipe on <u>chlorine</u> cylinder at <u>water treatment plant</u> .3 injured.
5867	19920909	Hong Kong	Leakage of <u>chlorine</u> from <u>water treatment works</u> holding twice recommended safety inventory. 150kg chlorine leaked from 3mm hole in dented pipe during transfer operation. Lime powder sprinkled on pipe to neutralize release.
7029	19940814	UK	<u>Chlorine</u> gas leaked from pipe connected to chemical drums at <u>water treatment works</u> . 1 treated at hospital for breathing problems & 4 families living on site evacuated. Leak believed to have been caused by faulty pressure gauge.
1740	19690508	USA	Release of <u>chlorine</u> from <u>water treatment plant</u> led to cloud over residential area. One man sleeping affected by fumes later died as did his wife. Safety equipment at plant locked away. Damages claim awarded to children orphaned by deaths.
<u>Tank/Drum</u>			
1853	196907	USA	<u>Chlorine</u> gas alarm alerted employees to release from unattended discharging tank container at <u>water treatment plant</u> . Time = 2130. Valve isolated 1 hour later. Cloud dispersed inside 3 hours. 100 people evacuated from nearby restaurant.
1909	19810710	USA	<u>Chlorine</u> leak when fitting broke on tank at rolling hills <u>water treatment facility</u> , owned by fort worth water dept. Leak stopped before evacuation ordered. Two hospitalized workers were not wearing gas masks in violation of plant regulations.
3442	19870902	USA	Rupture of 1te container of <u>chlorine</u> gas at <u>water treatment plant</u> caused 1000 residents to be evacuated from homes ahead of an advancing chlorine gas cloud. 2 company employees & 2 fire-fighters injured.
3636	19810519	PUERTO RICO	Spill of nearly 4 te liquid <u>chlorine</u> at <u>water purification plant</u> gave toxic cloud causing evacuation of 1500. 200 people received emergency treatment in 6 San Juan hospitals. Contents of 3 tanks & most of fourth escaped.
5044	19910731	UK	1kg liquid chlorine spilled at <u>chlorine</u> drum store at <u>water treatment works</u> because of faulty valve.
5232	19911108	UK	85 families evacuated because of gas cloud from <u>water treatment works</u> as hundreds of gallons of <u>chlorine</u> leaked, supposedly from barrel. Wall of water set up to prevent cloud from spreading. Village sealed off.

Native Number	Date of Incident	Country	Details
<u>Cylinder</u>			
10733	20010210	FRANCE	A <u>chlorine</u> leak at a <u>water treatment plant</u> forced the evacuation of a village in southern France.
9050	19980529	UK	Chlorine leaked from a cylinder at a <u>water treatment works</u> . Fire crews were called. It was a small leak and no-one was affected. An investigation has been launched.
1819	19780909	UK	Leak from <u>chlorine</u> cylinder at <u>water treatment plant</u> . Cause thought to be faulty equipment. No injuries reported.