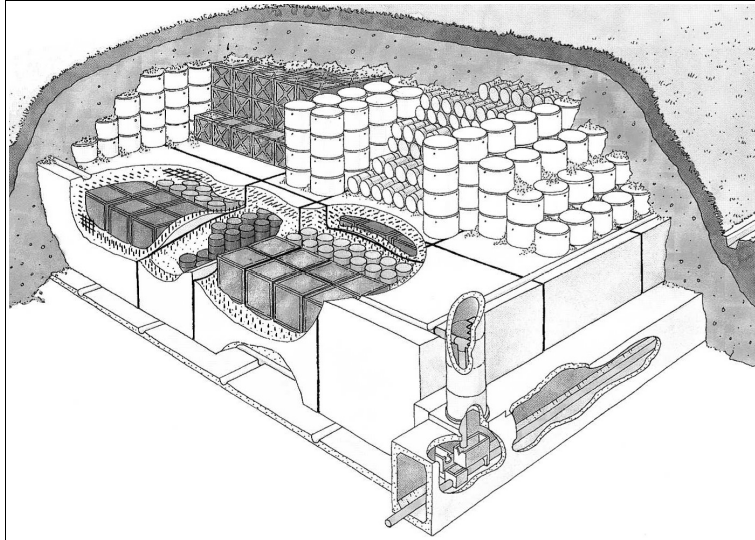


GREENPEACE

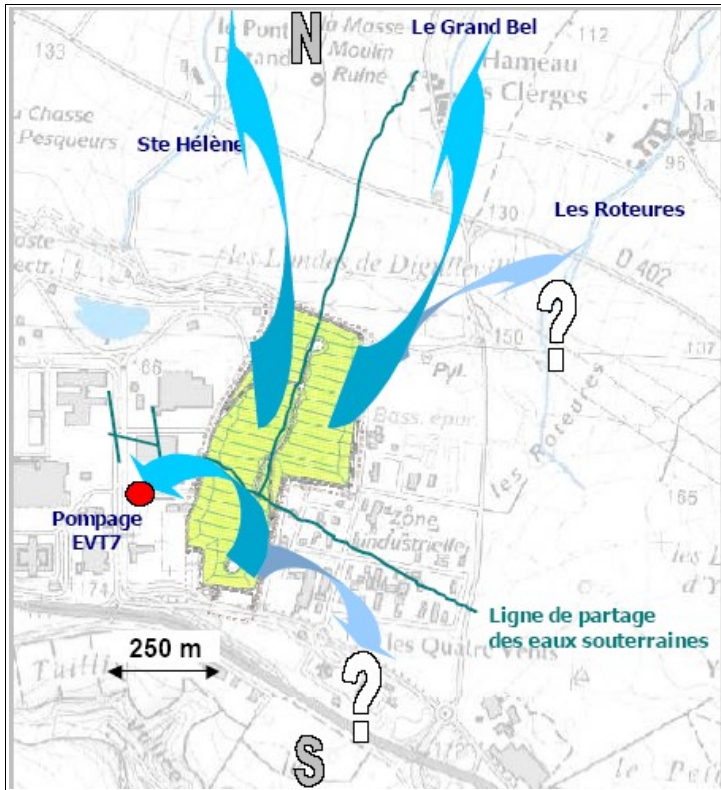
Nuclear waste management. The lesson from the CSM disposal site Main conclusions from the report



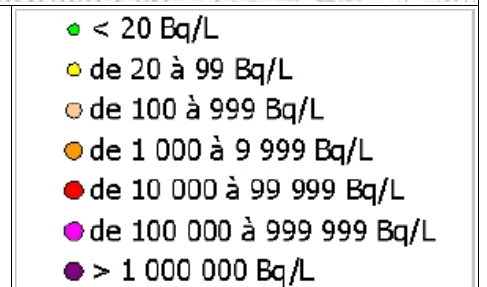
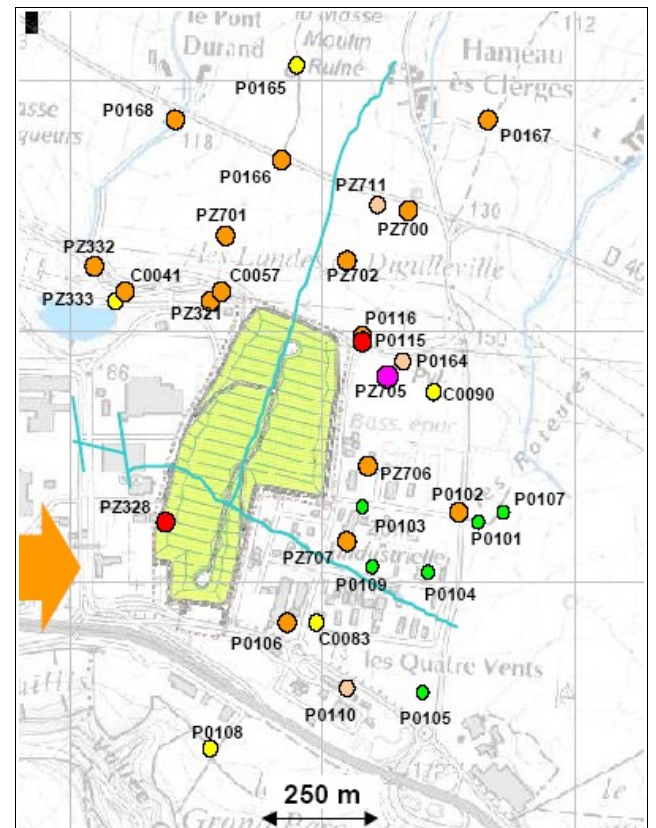
cross-section of the CSM nuclear dump site

- Dumping of radioactive waste at the above-ground radioactive waste dump site CSM (Centre de Stockage de la Manche) started at 1969 and continued for 25 years till 1994. More than 1.4 million barrels were piled, composing together more more than 520,000 m³ of radioactive waste which makes it one of the largest nuclear dump sites in the world;
- The main origin of the waste is from the reprocessing of spent fuel from nuclear reactors of the French electricity company EdF. Apart of that, there is also some 59,000 m³ of foreign waste dumped in CSM, or 11% of the total volume, of which 54% from German utilities, 28% Japanese, 7% Suisse, 6% Belgian and 5% Dutch. Dumping of foreign waste in France is not allowed under French legislation;
- In 1996, the government-appointed commission 'Turpin' concluded that the site – which was designed to contain only low level waste – also contains long-living and higher radioactive waste and that the inventory was not exactly known. The commission also found that radioactivity from the site is leaking into the environment. It however concluded that dismantling and reconditioning the waste would cost too much and might generate a significant risk to the workers involved;
- Rainwater and groundwater is penetrating into CSM and radioactivity is leaching out of the dump site. Part of that contaminated water is collected and discharged into the sea through the pipeline operated by Cogema. Less contaminated water is diluted before being discharged into the river St Helene and the remaining water is directly leaking into the underground aquifer which spreads into the area around CSM;

- Contaminated water from the aquifer is used by farmers to water their cattle, where levels of radioactivity from Tritium (radioactive hydrogen) are on average 750 Bequerels per litre, over seven times the European safety limit of 100Bq/l. In agricultural land close to the dumpsite, levels in the underground aquifer averaged 9000 Bq/l or 90 times above the safety limit during 2005;
- Tritium migrates easily in the environment and is therefore a good indicator of future contamination by other radioactive isotopes, including fission products such as strontium and caesium and very long living and very highly radiotoxic plutonium;

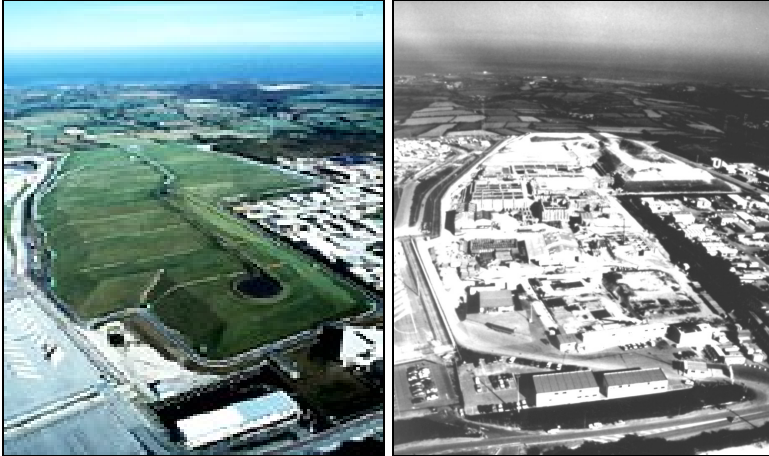


main migration pathways of contaminated water in the underground aquifer



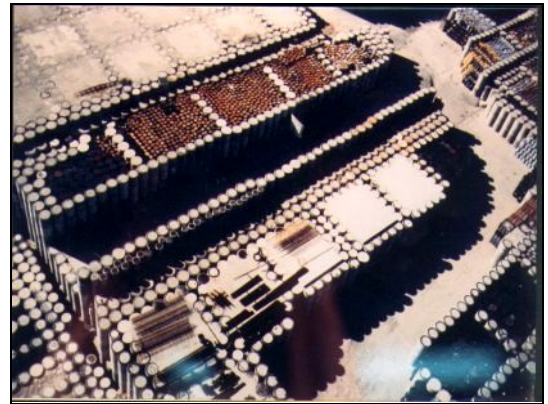
Tritium levels measured in the underground aquifer

Putting it in perspective...



“The CSM site, after twenty-five years of good and faithful services, has now become an international reference regarding the techniques of wastes disposal [...]”

The CEA (Commissariat à l’Energie Atomique, Découvertes Gallimard / CEA, 1995)



Damaged barrels

Transmitted anonymously, these pictures were taken inside the CSM disposal site during the exploitation phase