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ACCIDENTS AT UFS SITES AND RISK RELATIVE TO OTHER AREAS OF THE ENERGY SUPPLY CHAIN, WITH PARTICULAR REFERENCE TO SALT CAVERN STORAGE

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Abstract

Ninety-one accounts of problems or incidents at underground fuel storage (UFS) facilities have been found. Of varying cause, severity and nature, UFS has been associated with nine reported fatalities, around 65 injured and the evacuation of over 6700 people. The numbers for underground natural gas storage (UGS) are two dead, 18 injured and over 1250 evacuated, with certain communities having suffered multiple evacuations. For UFS in salt caverns, 36 incidents have been found, nine of which have involved casualties/injuries and evacuees, representing the highest rate of problems of all underground storage types. Eight of the nine fatalities found associated with UFS have occurred at four salt cavern UFS incidents in the USA.

In relation to the danger posed to the general public, three of the nine fatalities associated with UFS operations were staff at two facilities. Contrary to public perception, industry and academia recognises that UGS has an excellent health, safety and environmental record. The risks of UGS and the wider UFS activities need to be put into perspective relative to other areas of the energy supply chain, where casualties are orders of magnitude greater. Fifty incidents involving above ground fuel storage tanks have led to 1525 dead, 6826 injured and the evacuation of over 7000 people. Additionally, some individual accidents in other areas of fuel and energy supply have killed orders of magnitude more people than those associated with UFS.

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