



Challenges in the case of an incident during transport of spent nuclear fuel along the Norwegian coast

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Increase in transports of spent nuclear fuel

Over the last few years there has been an increase in transports of spent nuclear fuel (SNF) along the Norwegian coast. The transports are part of the Global Threat Reduction Initiative (GTRI) which, among other issues, aims to reduce the use of highly enriched uranium in civilian research reactors, and return the spent fuel to the countries of origin.

The GTRI program was launched in 2004 and SNF has been shipped along the Norwegian coast for some years, but awareness was significantly raised in the autumn of 2009, when MCL Trader passed Norway on its way from Gdynia in Poland to Murmansk in Russia. Last year there were 5 or more such transports, and there are indications that they will be repeated at the same or a higher frequency in the future.



M/V Puma transported spent nuclear fuel from Koper in Slovenia, to Murmansk in Russia at the end of 2010.

Photo: Anders Vegstein, Sandnes.

Challenges

These transports represent a risk to Norwegian coastal waters, as well as the Norwegian coast. The objective risk and the perceived risk is not necessary the same. There is no reason to believe that the transport regulations (IMDG code and INF code) are not followed. A report made by NRPA in 2007 (M. Iosjpe et.al) concluded that the health consequences due to elevated radiation doses in humans after an accident during transport of SNF would be of minor concern.

However, the fact that these shipments for security reasons are not notified officially, and that the ships involved often are quite small and sometimes associated with negative incidents, increases the public awareness. If a ship were to run aground off the Norwegian coast and/or sink, or an incident were to occur affecting the nuclear cargo, this would be a major challenge to Norway, independent of the size of a possible release.

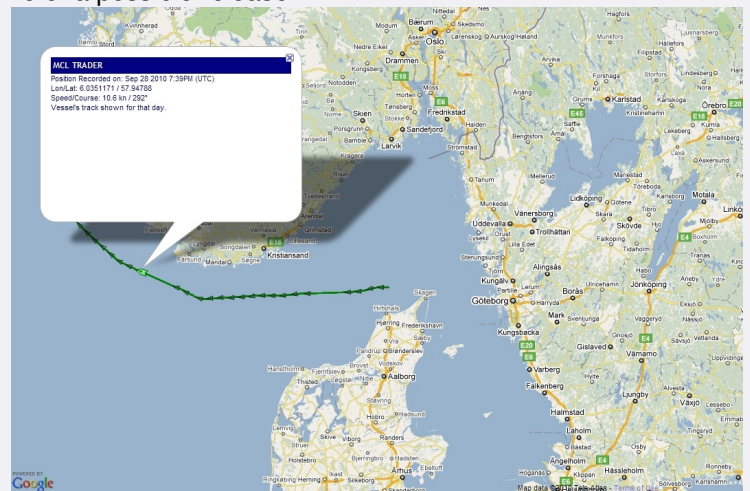


StrålevernRapport • 2007-3: Radioecological consequences of a potential accident during transport of radioactive materials along the Norwegian coastline, (M. Iosjpe et.al)

Preparedness and response

To be as well prepared as possible it is important for the Norwegian Radiation Protection Authority (NRPA) to have sufficient knowledge about these transports in advance, even if it is not possible to know e.g. the exact date or ship. The NRPA have notification agreements with the Norwegian coastal administration and the Norwegian rescue coordination centre, which will secure an early warning if there is a transport of spent nuclear fuel in trouble outside the Norwegian coast.

The NRPA also follows a number of ships that we either know have transported spent nuclear fuel, or we believe might do this in the future. There is also informal cooperation between the Nordic countries, where information on these transports are shared. This way we might catch if a transport is in progress.



MCL trader just south of the Norwegian coast in September 2010, the last of 5 transports of SNF from Gdynia to Murmansk. (MarineTraffic.com)