

# *Nuclear Free Local Authorities* **briefing**

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Date: March 2001

Subject: **Sellafield: Tc-99 Marine Pollution**

The Environment Agency for England and Wales is responsible for deciding whether BNFL is to be allowed to continue discharging technetium-99 (Tc-99) into the Irish and North Seas. Tc-99 is a radioactive element arising mainly from Magnox nuclear fuel reprocessing.

Tc-99 from Sellafield is significant because:

- ◆ it has a half-life of 213,000 years;
- ◆ Sellafield alone has discharged ten times more Tc-99 than resulted from above-ground nuclear weapons testing;
- ◆ it is already detectable at very long distances from the point of discharge;
- ◆ lobsters in the Irish Sea have been contaminated by Tc-99 to levels that would make their sale for consumption unlawful in the event of a nuclear emergency.

The NFLA position is that:

- ◆ Tc-99 pollution can be most quickly halted by closing all UK Magnox nuclear power stations and ending reprocessing of their fuel at Sellafield; that is the best way to deal with the problem;
- ◆ failing this,
  - ◆ BNFL has enough capacity to store the liquid containing the Tc-99 for a period of up to thirteen years;
  - ◆ BNFL should not discharge further Tc-99 into the sea but should develop ways to retrieve the Tc-99 in this period.

The Agency proposes that:

- (i) all Tc-99 currently stored or produced in the next three years will in principle all continue to be discharged at current rates until 2006; but
- (ii) Tc-99 produced after 2003 might be incorporated into a solid waste glass form (vitrified) if this is feasible;

(continued...)



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- (iii) Tc-99 stored from past or future production might not be discharged from an unspecified future date if a treatment method using TPP (tetraphenylphosphonium bromide) can be shown to be acceptable; and
- (iv) other Tc-99 management methods are too costly and should be ignored.

An NFLA submission to the Environment Agency makes the following points, amongst others:

1. Government and the Environment Agency inaction has allowed BNFL to continue to discharge Tc-99 at high levels;
2. the Agency underestimates the time available for developing alternative methods to manage Tc-99; it assumes that, without continued discharges Tc-99 storage might run out by 2004; NFLAs believe that storage could be achieved until 2013 so that there is consequently no need to permit discharges until 2006;
3. if the TPP method is really feasible, it is unnecessary to allow discharges in the interim whilst it is being developed;
4. the Agency has overlooked the UN treaty obligation of the UK to "...take ALL measures to ensure that...pollution from activities under their jurisdiction or control does NOT spread beyond the areas where they exercise sovereign rights..";
5. the Agency has wrongly dismissed alternative Tc-99 management methods as too expensive:

it values human life at only £20,000 per person;  
it counts only predicted deaths arising from the additional radioactive dose burden in the environment from discharged Tc-99 over the next 500 years rather than the next 213,000 plus years;  
it has failed to compel BNFL to provide breakdowns of the capital sums mentioned or to explain how the Company arrives at its capital estimates for different options; and  
it allocates no value to meeting the wishes of neighbouring states which have appealed for an immediate end to Tc-99 pollution of the marine environment.

If you require the full text of the NFLA submission then contact the NFLA Secretariat.

If you have any queries relating to the submission then contact the NFLA Legal Adviser: Jamie Woolley, Tel/Fax: 0114 220 4452, email: [jkwoolley@gn.apc.org](mailto:jkwoolley@gn.apc.org)

Please note that although the formal deadline for comment passed on 5 March 2001 views may still be faxed to the Environment Agency marked 'Sellafield Review' at: 01768 866666

We would encourage submissions and would be very grateful for copies of submissions.