

# Abstract - Living in the Shadow of Sellafield

## Environmental and Health Effects

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Reprocessing has been Sellafield's principal operation since 1950. Initially to provide plutonium for Britain's nuclear weapons programme, the process is today undertaken by British Nuclear Group (BNG) as a service to its UK and Overseas customers. Whilst absolving overseas customer countries, their environment and citizens from the problems of managing spent nuclear reactor fuel themselves, detrimental environmental and health effects are instead concentrated in the communities around Sellafield in West Cumbria. Contrary to BNG's claim of reprocessing as a recycling process, just 5% of 40,000 tonnes of recovered uranium has actually been re-used as new fuel. An even smaller percentage of Sellafield's stockpile of plutonium, now standing at 100 tonnes, has been reused.

Following rising financial liabilities, BNG was forced to relinquish ownership of Sellafield to the Nuclear Decommissioning Authority (NDA) on 1<sup>st</sup> April 2005. The NDA - a Government organisation - now controls the site and all commercial operations, with BNG as contractors.

There is no doubt that Sellafield has contributed in a major way to jobs in the area, but a heavy price continues to be paid for them. As a result of its operations the Irish Sea has become the most radioactively contaminated sea in the world and its discharges have travelled around the globe. Seashore radiation levels around the plant are higher than would be allowed inside Sellafield, at levels which would be illegal in customer countries. Selected soil samples are higher than some of those in the Chernobyl exclusion zone.

In Cumbria, radiation from Sellafield can be measured in house dust, our bodies, our children's teeth, local seafood, seaweed, vegetables and drinking water. It has also been detected in our wildlife, seagulls and feral pigeons.

In 1983 a TV company discovered a childhood leukaemia rate of 10 times the national average in the village of Seascale near Sellafield as well as a 2-6 times higher rate of childhood cancers along the Irish Sea coastal strip. The 1990 Gardner report linked a Sellafield fathers' preconceptional radiation dose (PPI) to an 8 times higher risk of their child developing leukaemia. A 1993 Government Health and Safety study found that the incidence of leukaemia and NHL in Seascale (village nearest to Sellafield) was 14 times the national average, particularly for children born to fathers who started work at the plant before 1965.

BNG has always denied that radiation from the plant is responsible and continues to promote the theory that 'Population Mixing' (construction workers brought to the area) together with an as yet unidentified virus are to blame, even though there were no childhood cancers before Sellafield started operations.

West Cumbria has been declared a Health Action Zone because of the high incidence of heart disease, cancers and thyroid disorders in the general public. Sellafield operates a radiation scheme, compensating workers on a 20% probability that their cancers have been caused by working at the plant and which has paid out nearly £5 million over the last 20 years. Yet outside the plant, the public get nothing.

A possible terrorist attack on Sellafield has become an additional concern. Newspapers claim that detailed plans of the plant were found in a car linked to one of the London bombers. Nuclear transports were on an IRA hit list and so called 'safe' plutonium and high level waste sea transports are protected by heavily armed escorts.

Today THORP, the newer of the two reprocessing plants, with its history of accidents and technical failures is still closed since April 2005, due to a major spillage of 18,000 litres of highly radioactive nitric acid. The leak had been going on for 9 months while workers and managers ignored the warnings. Prosecutions are possible and a decision whether to repair and re-open the plant will be made later this year.