

## **Nuclear reprocessing accidents at Sellafield 1950 - 1996**

The following accidents and incidents resulting in worker contamination or over-exposure in Sellafield's reprocessing plants have been reported since 1950.

### **1997:**

Six workers contaminated in B205 (Magnox reprocessing plant) (February).

Contamination of external concreted area B205; worker contamination (February)

Worker contamination above site level in Magnox plutonium finishing plant (March).

Worker contamination above site level in Chemical Separation plant (April)

Worker exposure above site investigation level, fuel finishing plant (July).

### **1996:**

Abnormal exposure to 2 workers in fuel finishing plant above site investigation level (January).

Worker contamination in THORP product finishing line (August).

### **1995:**

Worker contamination in chemical separation area (July).

### **1994:**

Spillage of liquor in Magnox waste handling facility. Process worker received skin contamination (June).

### **1993:**

Worker suspected uptake of radioactivity in plutonium finishing plant (August).

Worker exceeded annual dose to bone surface after cut in arm at plutonium finishing plant (February).

Worker in chemical separation area contaminated by arm cut (March).

### **1990:**

Worker contaminated in chemical separation area handling contaminated sample bottles after incorrect disposal (April).

Radiation exposure to worker who discovered sample bottle of active liquor in reprocessing plant (November).

### **1989:**

Worker contamination above investigation limit at chemical separation area (January).

Worker contamination in chemical separation area (April)

4 workers contaminated in B205 (August)

**1987:**

12 men contaminated in plutonium finishing plant (January)

**1986:**

Amber alert when plutonium nitrate mist escapes into reprocessing plant B205 and the atmosphere. Estimated 50 micro-curies released. 11 men contaminated. One worker received dose to bone 4 times above annual limit (February).

5 men contaminated by plutonium oxide in plutonium finishing plant (March).

[Note: in 1982 criteria for reporting accidents were changed so that 'minor' incidents did not need to be reported by BNFL]

**1981:**

Worker contaminated in plutonium plant (March).

Plutonium contaminated wound, plutonium recovery plant (March).

Over-exposure in B205 (June).

Plutonium contaminated wound in plutonium fabrication plant (September).

Plutonium contaminated wound in plutonium recovery plant (November).

Worker contaminated in plutonium plant (November).

Over-exposure in B205 (December).

**1980:**

Worker contaminated in plutonium recovery plant (January).

Worker contaminated in B205 (January).

Worker contaminated in plutonium recovery plant (February).

Worker contaminated in B205 (February).

Over-exposure in B205 (May).

Worker contaminated in plutonium plant (August).

Over-exposure in Magnox plant (August).

Worker contaminated in plutonium recovery plant (September).

Worker contaminated in plutonium recovery plant (September).

Worker contaminated in plutonium plant (November).

Worker contaminated in plutonium plant (December).

Over-exposure in plutonium finishing plant (December).

**1979:**

Worker contaminated in plutonium finishing plant (May).

Contaminated wound, plutonium purification plant (July).

Worker contaminated in reprocessing plant (August).

Worker contaminated in plutonium purification plant (September).

Worker contaminated in Magnox plant (November).

**1978:**

Fitter in separation plant (B205) received 5 to 6 times permitted annual skin dose (May).

Plutonium contaminated wound, process worker (May).

Process worker in B205 exceeded permitted quarterly skin dose (July).

Worker in plutonium plant contaminated (August).

Fitter contaminated in plutonium purification plant (October).

**1977:**

Three process workers plutonium contamination (January).

Plutonium over-exposure, process worker (January).

Plutonium contaminated wound, process worker (January).

Two process workers contaminated with plutonium (December).

Process worker exposed to airborne plutonium, finishing plant (December).

**1976:**

Personal contamination, plutonium recovery plant (September).

Over-exposure, uranium purification plant (September).

**1975:**

Personal contamination, plutonium finishing plant (February).

High film dose process worker, plutonium finishing plant (July).

High film dose charge-hand, plutonium finishing plant (July).

High film dose charge-hand, plutonium finishing plant (July).

**1974:**

Personal beta contamination in reprocessing plant (January).

High film dose, process worker in oxide ponds (January).

Personal plutonium contamination in plutonium finishing plant (May).

**1973:**

High film dose, reprocessing plant (May).

High beta and gamma head dose, reprocessing plant (July).

High film dose, process worker in reprocessing plant (September).

Amber alert - blow back accident in head-end plant, 35 workers contaminated (September).

**1972:**

Plutonium exposure in wound, plutonium recovery plant (March).

**1971:**

Plutonium contaminated wound, plutonium finishing plant (June).

Over-exposure of worker, head-end plant (October).

Plutonium exposure, plutonium finishing plant (October).

**1970:**

Plutonium contamination in wound, plutonium finishing plant (February).

**1969:**

High film dose, reprocessing plant (March).

High beta and gamma hand dose, reprocessing plant (May).

Abnormal exposure, uranium purification plant (October).

**1967:**

Plutonium in wound, plutonium recovery plant (November).

**1960:**

Abnormal film doses, plutonium finishing plant (June).

**1958:**

Personal alpha contamination in plutonium finishing plant (October).

**1955:**

Personal alpha contamination, plutonium recovery plant (August).

The remaining accidents and incidents of worker contamination or over-exposure reported during Sellafield's history breakdown as follows: 53 in unreported or unknown locations on the site; 23 in R&D laboratories; 11 in B30 (the Magnox fuel receipt, storage, decanning and pond storage area); 7 in unnamed ponds; 2 in unnamed storage facilities; 1 in decommissioning; 9 in named treatment facilities for liquid reprocessing wastes; 7 in other named facilities (such as laundry and redundant plant); 1 in the Calder Hall Magnox reactors. There were also 2 major accidents in the plutonium reactors before their closure in 1957 (including the Windscale Fire, which caused a major release of radioactivity into the environment).

Compiled by CORE – Cumbrians Opposed to a Radioactive Environment  
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