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Directorate of Safety and Claims  
Assistant Director Nuclear Accident Response  
Level 6, Zone C, Desk 10  
**MINISTRY OF DEFENCE**  
Main Building, Whitehall, London, SW1A 2HB



Telephone: XXXXXXXXXXXXXXXXXXXXXXXX  
Fax: XXXXXXXXXXXXXXXXXXXXXXXX  
Email: XXXXXXXXXXXXXXXXXXXXXXXX  
Dii internal : XXXXXXXXXXXXXXXXXXXXXXXX

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**NUCLEAR WEAPON ACCIDENTS**

Dear XXXXXXXXXXXXX,

I refer to your request for information under the Freedom of Information Act dated 3 February 2005, which asked for: ‘Information held by your department concerning accidents involving British nuclear weapons since their introduction into service.’ Annex A provides details of UK nuclear weapons accidents and incidents since 1960. This information was placed in the Library of both Houses of Parliament in October 2003.

Given the lapse of over 40 years in some cases, I should explain that the amount of information held on both the accidents and incidents is limited. I would also like to point out that information which serves to confirm a past picture of the operational patterns, transportation routes and deployed locations of nuclear weapons will continue to have a bearing on the security of current and future operations. This policy is essential to safeguard the operational effectiveness and security of our nuclear deterrent and it is the reason why we Neither Confirm Nor Deny (NCND) the presence of nuclear weapons at any particular time or location.

If this information does not address your requirements or you wish to complain about any aspect of the handling of this request, then you should contact the undersigned in the first instance. Should you remain dissatisfied, then you may apply for an internal review by contacting the Director of Information Exploitation, 6<sup>th</sup> Floor, MOD Main Building Whitehall, SW1A 2HB.

If you are still unhappy following an internal review, you may take your complaint to the Information Commissioner under the provisions of Section 50 of the Freedom of Information Act. Please note that the Information Commissioner will not investigate your case until the MOD internal review process has been completed. Further details of the role and powers of the Information Commissioner can be found on the Commissioner’s website, <http://www.informationcommissioner.gov.uk>.

Finally, I should like to confirm that there has never been an occurrence involving a UK nuclear weapon which has represented any threat to public safety.

I hope this is helpful.

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## UK NUCLEAR WEAPON SAFETY SINCE 1960

On 17 July 2001, the Secretary of State for Defence published a table outlining the circumstances of the seven accidents involving British nuclear weapons that have occurred since 1966, none of which have involved the release of radioactive material. An unclassified summary of a report by Sir Ronald Oxburgh (then Chief Scientific Adviser to the Ministry of Defence) into all aspects of nuclear safety published in 1992 referred to “some twenty” accidents and incidents since 1960. Part 1 of the table below provides summary descriptions of the seven accidents and, where the information is still available, of any subsequent investigation and follow-up action. Part 2 of the table provides similar descriptions of other events (or “incidents”) included in the Oxburgh report, defined as an unplanned occurrence which did not constitute an accident but were reported in the interests of safety, or because they were likely to attract public or media attention.

### Section 1 – Accidents

An accident is defined in the Oxburgh report as “an unplanned occurrence involving the destruction of, or damage, or suspected damage to, a nuclear weapon which has resulted in actual or potential hazard to life or property, or which may have impaired nuclear safety”. There are two categories:

**Category 1:** in which there are reasonable grounds for concluding that no release of radioactive material has occurred.

**Category 2:** in which a release of radioactive material has been detected, or the nature or severity of the occurrence is such that the possibility of a release cannot be excluded. **There has never been a Category 2 accident involving a British nuclear weapon.**

	Date	Location	Cause and description	Results of any enquiry and subsequent action
1	April 1973	Near the Royal Naval Armament Depot (RNAD) Coulport.	A Scottish Electricity Board Land Rover reversed into a RAF nuclear weapon load carrier transporting nuclear warheads for Polaris missiles. Minor damage was caused to the load carrier. The weapons were not damaged.	No specific record is now available of any enquiry or follow-up action.
2	February 1974	Off Malta.	Two Mk44 torpedoes which were being removed from a storage rack fell a few inches onto a WE177 weapon. There was some superficial scratching on the plastic protective strips on the edges of the weapon’s rear tail fin. There was no damage to the weapon itself.	Investigation of the incident concluded that the torpedo handling equipment was incorrectly rigged and modifications were made to the equipment as a result.
3	1974	At sea	The diaphragm of a missile tube compressed on to a Polaris missile. There was no damage to missile or warheads.	No specific record is now available of any enquiry or follow-up action. But see below on the similar occurrence at serial 5.
4	August 1977	RNAD Coulport	While a Polaris missile was being lifted during re-alignment, the threads on a securing pin stripped due to the incorrect assembly of a hoist fixture. The missile fell a few inches but did not impact on any other object. There was no damage to missile or warheads.	After an enquiry, improvements in relevant documentation, test procedures, inspection and working practices were implemented.

5	1981	At sea	A number of missile diaphragms compressed onto Polaris missiles. There was no damage to missiles or warheads.	An enquiry determined that the incident was due to procedural error. A modification to the design of the missile tube pressurisation was made to prevent a recurrence of the problem.
6	August 1983	M8 near Glasgow	A RAF nuclear weapon load carrier carrying tow warheads for Polaris missiles was involved in a collision with a private car. Minor damage was caused to the load carrier. There was no damage to the warheads.	No blame was apportioned to the load carrier driver. No information is now available on any other action that may have been taken in response to this occurrence.
7	January 1987	Wiltshire	A RAF nuclear weapon load carrier carrying two WE177 nuclear weapons, seeking to avoid a stationary private vehicle, left the road after skidding on ice and rolled on to its side. A second carrier, which was also carrying two weapons, skidded on the road and came to rest partly off the road. The containerised weapons were not damaged. Minor damage was caused to the first load carrier.	A Board of Inquiry found that all relevant orders, instructions and operating procedures were compiled with and all personnel concerned showed adequate care. No person was held blameworthy.

## Section 2 – Additional incidents referred to in the Oxburgh report, 1992

As defined in the Oxburgh report, an “incident” was an unplanned occurrence which did not constitute an accident “...but which need[ed] to be reported in the interests of safety, or because it [was] likely to attract the attention of the public or the media”.

	Date	Location	Cause and description	Results of any enquiry/subsequent action
8	1960	Lincolnshire	A RAF nuclear weapon load carrier forming part of a convoy experienced a brake failure on an incline and overturned. There was no damage to any nuclear weapon. [This event has some similarities to entries 1,6 and 7 in Section 1 but pre-dates the current reporting system. As acknowledged in 2001, it is unclear on the limited information still available whether, in today’s terms, it would be categorised as an accident.]	No specific record is now available of any enquiry or follow-up action.
9	1963	RAF base in Lincolnshire	A rear trolley of a nuclear weapon transport became unhitched. There was no damage to any nuclear weapon.	No specific record is now available of any enquiry or follow-up action.
10	1963	Lincolnshire/South Yorkshire	Brake failure on a nuclear weapon load carrier. There was no damage to any nuclear weapon.	No specific record is now available of any enquiry or follow-up action.
11	March 1974	Cyprus	A spurious radiation monitor alarm. There was no damage to any nuclear weapon.	Modification was necessary to the pre-use check procedure of the monitor.
12	November 1974	Base in Germany	Hoist cable of a jib crane slipped on its drum and allowed a WE177 in its container to fall a short distance onto its trolley. There was no damage to any nuclear weapon.	No specific record is now available of any enquiry or follow-up action.
13	1982	At sea	Damage to some nuclear weapon containers during transfer. There was no damage to any nuclear weapon.	In the light of these occurrences, CINCFLEET made a number of recommendations regarding weapon transfers.
14	May 1984	Base in Germany	A WE 177 nuclear weapon in its container was being moved on a trolley. The container had not been correctly secured and fell about 1 metre from the trolley during transit. The weapon casing suffered superficial damage from a toolbox which was fitted as standard to the inside of the container.	As a result of this occurrence, the toolbox was removed from all WE177 weapon containers.
15	June 1985	Near Glasgow	Brake failure on a nuclear weapon load carrier. There was no damage to any nuclear weapon.	No specific record is now available of any enquiry or follow-up action.

16	December 1987	Royal Naval Armament Depot (RNAD) Coulport	Human error on the part of a crane driver following the development of a defect on a crane led to a missile colliding with trailer supports. There was no damage to any nuclear weapon.	After an enquiry, substantial changes in management responsibilities, training, command and control and consultation with the Royal Navy were implemented.
17	August 1988	Off Hong Kong	Minor collision of a non-UK vessel with a moored UK vessel which was carrying nuclear weapons. There was no damage to any nuclear weapon.	No specific record is now available of any enquiry or follow-up action.
18	September 1988	Somerset	A road traffic accident involving an unloaded nuclear weapon convoy. There was no damage to any nuclear weapon.	No specific record is now available of any enquiry or follow-up action.
19	December 1991	M25 in Hertfordshire	Mechanical failure of a RAF nuclear weapon load carrier. There was no damage to any nuclear weapon.	No specific record is now available of any enquiry or follow-up action.

## **NOTES**

In addition to the false alarm in Cyprus recorded at serial 11, which was the only such case specifically mentioned in the Oxburgh report, MoD is aware of a further 6 false alarms reported during the period covered by the report, one of which was also in Cyprus.

Work carried out after the Strategic Defence Review also identified one further event early in 1960 which was not referred to by Oxburgh but has some similarities with incidents listed above:

In January 1960, a component in a Red Beard weapon on board an aircraft carrier at sea jammed following its removal for routine testing. The component was removed for examination. There was an initial concern that the assembly might have overheated but Atomic Weapons Research Establishment were able to determine that this had not been the case and that there were no safety implications. The problem on the carrier was caused by incorrect manufacture of the support equipment used to remove the component. This was subsequently corrected and there was no recurrence.