

Westlakes Research Institute



Science Insights lecture



Thursday 11 October 2007, 12:30 – 1:15 pm

Westlakes Research Institute Lecture Theatre

Kyshtym and Windscale: a double anniversary

Steve Jones

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Honorary Professor of Environmental and Occupational Toxicology, UCLAN

This last fortnight has seen the 50th anniversaries of two separate, but important, nuclear accidents.

The first occurred at 16:20 local time on 29 September 1957 in the southern Urals, then part of the Soviet Union, when loss of coolant to a storage tank containing high level liquid wastes in a nitrate-acetate solution at the Mayak nuclear complex resulted in a chemical explosion. This is the "Kyshtym accident".

The second developed from the early hours of the morning on 10 October 1957, during a procedure intended to release stored Wigner energy from the graphite core of an air-cooled plutonium production reactor ('Pile 1') at the Windscale site. Temperatures in part of the core rose above the intended levels, and by about 4 pm in the afternoon it was apparent that both graphite and uranium fuel elements were involved in a fire in part of the core; strenuous efforts to control the fire culminated with the flooding of the core with water at 9 am on 11 October, and the fire being extinguished by that evening. This is the "Windscale Pile Fire".

The Windscale Pile Fire was the subject of intense public and media interest at the time, and a great deal of information about its causes and effects were published in the following years. By contrast, the occurrence of the Kyshtym accident only became known to the Western scientific community in the late 1970s, and it is only during the 1990s that clear information about its causes and effects became known.

Steve's lecture will summarise and compare what is known about the two accidents, concentrating on their environmental effects, countermeasures taken at the time, and their legacies.

If you would like to attend please e-mail reception@westlakes.ac.uk, or telephone 01946 514000

TO FIND WESTLAKES RESEARCH INSTITUTE ON WESTLAKES SCIENCE AND TECHNOLOGY PARK

On leaving the A595 onto the Westlakes Science and Technology Park take the first left at the roundabout signed Crow Park Way. Then take the first right and continue until you reach a T-junction, turn left and the Westlakes Research Institute (WRI) building appears on your left-hand side.

Parking is available to the rear and on both sides of the building.

TO CALL WRI RECEPTION DIAL 01946 514000

