Firing Spotlights Plutonium Exports

Paris. A nuclear scientist who claims that plutonium produced in Britain's civilian nuclear reactors has in the past been used to produce warheads for American nuclear weapons has been sacked from his research post with the Central Electricity Generating Board (CEGB), Britain's largest electrical utility.

The CEGB claims that the physicist, Ross Hesketh, 54, was dismissed for refusing to obey "proper management instructions" to accept a new position resulting from the reorganization of his laboratory. Hesketh says the reassignment would have stripped him of much of his current responsibilities and the new position was more suited to a "first-year research student."

However, Hesketh claims that the real reason he lost his job was the embarrassment that he had recently caused Britain's nuclear industry—including the CEGB—by his consistent questioning of official statements that there has never been any formal connection between nuclear energy produced for civilian use and nuclear weapons.

Last year, for example, Hesketh coauthored a letter to the *Guardian* newspaper with Martin Ryle, professor of astronomy at Cambridge University, claiming that detailed analysis of U.S. needs and the production of plutonium in the United Kingdom suggested that civil weapons grade plutonium had been exported to the United States, and that it had been used in the manufacture of nuclear weapons.

The letter led to a close questioning of official policy in the House of Commons, during which the British government firmly rejected the accusations. However, the controversy has come at a particularly sensitive time, since an extensive public inquiry is currently being held into the CEGB's plans to build a U.S.-style light water reactor at Sizewell in Suffolk, the first of a new generation of such reactors being planned by the British government. Critics have focused on the proliferation dangers caused by the plutonium that the reactors will produce.

Hesketh's challenge is based largely on a close reading of a Mutual Defense Agreement, signed by the United States and the United Kingdom in 1958 with an amendment added in 1959. Under this deal, the two countries agreed to a barter deal in which plutonium from Britain's "magnox" reactors would be exported to the United States, and in return, the United States would supply Britain with enriched uranium (the most likely purpose of which seems to have been to fuel Britain's nuclear submarines).

The key clause in the treaty, claims Hesketh, is one that states that "except as may be otherwise agreed for civil uses . . . the materials or equipment transferred . . . shall be used by the recipient party exclusively for the preparation or implementation of defense plans."

The British government argues that, despite the language of the treaty, it has been assured by the United States that the plutonium subsequently transferred was, in fact, used for various civilian purposes ranging from fueling the fast flux test facility at Hanford to the production of californium for medical purposes.

Hesketh challenges this statement at two levels. First, he argues that, in the apparent absence of any formal notification to the contrary, the United States is *required* by the agreement to use the plutonium received from the United Kingdom for military purposes. He points out, for example, that a report prepared by the Joint Committee on Atomic Energy soon after the agreement was signed argues that the exchange will provide the United States with "needed plutonium for its small weapons program."

Second, Hesketh challenges the accuracy of the U.S. statement about the way the plutonium has been used. He calculates that between 1964 and 1971—when the exchange of plutonium from civilian reactors was stopped, even though the agreement itself has remained in force—between three and four tonnes of plutonium were probably exported to the United States. Separate calculations conducted by members of a group known as Scientists Against Nuclear Arms suggests the figure could be even higher.

He suggests that this is considerably more than could have been put to the declared uses. In addition, Hesketh notes that, contrary to the assurance given to the British government, the U.S. Department of Energy has said in separate statements to congressional committees that all the plutonium used in the fast flux test reactor has come from the N reactor at Hanford.

Hesketh admits that his challenge to the government is based largely on circumstantial evidence. Nevertheless, his arguments have been widely used by critics of Britain's plans to expand its nuclear power program.

A pamphlet on the proposed Sizewell reactor published by the Campaign for Nuclear Disarmament (CND), for example, states straightforwardly that government spokesmen who argue that there is no connection between this program and nuclear weapons are "not telling the truth." Indeed, the pamphlet suggests that, even if the plutonium has not been used in weapons, the fact that it was bartered for enriched uranium—which the British government acknowledges to have used for military purposes—is itself in violation of this statement.

Official reaction to the CND charges has been strong. "No plutonium produced in CEGB reactors has been applied to weapons use either in the United Kingdom or elsewhere, and it is the policy of the government and of the CEGB that this situation should continue," John Baker, the chief witness for the utility, said during the opening week of the Sizewell inquiry.

Critics remain unconvinced. "If they have nothing to hide about the American deal, why do they not produce the evidence of the civilian uses of the plutonium directly, rather than hiding behind secondhand assurances from the U.S. Department of Energy, particularly since the whole spirit of the 1958 agreement was that Britain's plutonium was going to be put to military uses," said Robert Edwards, the author of the CND pamphlet and the organization's chief witness at the Sizewell inquiry.

Hesketh remains similarly unconvinced that his public criticism of the CEGB's statement is unrelated to his dismissal by the utility, which he joined in 1959. He headed a research group looking into the structural properties of material under irradiation. Hesketh had earlier been warned that he should stop talking to the press about his concerns. Last week, however, the CEGB rejected an appeal against his dismissal, and he is now planning to take his case to an industrial tribunal.—**David Dickson**