



SCRAM

The Anti Nuclear & Safe Energy Journal



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SACKED! - FOR SAFETY DOUBTS - p3



SEA DUMPING HALTED... FOR HOW LONG?

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Rosyth Womens' Peace Camp,
Limpetness, Rosyth, Fife.

Dear SCRAM

We set up the Rosyth Womens' Peace Camp on May 22nd, in time for the International Womens' Day for Disarmament on May 24th. We came to create a new focus for the Scottish Peace Movement and to draw peoples' attention to the nuclear threat on their own doorstep: the area is riddled with Military bases — Rosyth Naval Base itself refits Polaris Nuclear Submarines (each refit costs £105 million). It is also very likely that Trident will come here.

Pitreavie Castle, two miles away, houses the second Polaris 'Button' in a 120ft. bunker. This would be used after the NATO One bunker Northwood, in Middlesex, has been "vapourised". Pitreavie is also the Principal NATO Command Centre for Air and Surface Space between the North Sea and the North Pole. It has a considerable Air - Fighting Force which may include USAF F1-11s. The other principle military site in Fife is Crambie, a vast underground Ammunition Depot, 3 miles from here, about which little is known.

The Dockyard itself employs over 7,000 people, mostly from this area. The other major employers are Marconi Space and Defence and Ferranti. This dependence of so many people on military institutions is our biggest problem. We need to dispel the myth that the Peace Movement "threatens jobs", and spread information as to how military technology could be converted to socially useful purposes (see the Vickers and Lucas Workers' proposals). Fife Trade Unions are already working on their own

Comment.

BETTER ACTIVE TODAY THAN RADIOACTIVE TOMORROW

Recently there has been a marked trend towards despondency in the anti-nuclear movement. Following the election of a government firmly committed to a nuclear future there has been an increasing atmosphere of helplessness. The Sizewell Inquiry plods on to its predestined conclusion, CND has subtly shifted to calls for a nuclear freeze and the Peace Camps have been criticised for wasting time and money to no end.

Despite that, the fact still remains that actions speak louder than words. Greenpeace have been in the news recently and through their actions have gained far more support than they would have done had they just sat around mouthing theories. And in the case of sea dumping, the NUS have blacked the Atlantic Fisher, and will strike if the military are used to circumvent their blockade.

Direct Action works, not only in the physical sense, but also as a focus and a visible basis for support. If the movement is to succeed it needs popular support, and given the present political situation words are not enough to generate that support. The powers that be will crumple leaflets into the bin until the cows come home. They cannot disregard Direct Actions in the same fashion.

We must now begin to direct even more energy, money and resources towards equipping and executing nonviolent direct actions. Despite the forces ranged against us we can still win. The future lies with all of us; don't lose it by default.

This is a good place to thank all our friends and supporters who have given so generously to our '83 Appeal. We are very heartened that, while obviously the priority for most is to rid Britain and Europe of nuclear missiles, there is still support for a strong and persistent campaign against nuclear power.

We are still well short of the sum we really need to sustain our work and so welcome any further donations. Please also encourage your friends to consider subscribing to SCRAM and supporting our work. Thank you.

♀'s Action



"Alternative to Defence Expenditure" proposals.

We have so far had two Actions, the first was a Vigil on May 24th at the gates of the Base. The second Action was at the Rosyth Annual Opening Days, on July 9th and 10th. On Saturday 9th we did street theatre at the gates and gave out leaflets. That evening women from Glasgow, Edinburgh, Fife and Greenham gathered round the camp fire to discuss what action could be done inside the Base the next day.

We decided on a die-in as the most effective counter demonstration to this glorification of war and violence. 42 women mingled with the crowds on Sunday afternoon and converged on a cleared area at 3 p.m. just after a fighting display had finished.

We formed a large circle and sang the Hiroshima song and then we had our die-in. Two women chalked round the outlines of our bodies to represent the shadows of those vapourised at Hiroshima. One woman made our statement to the crowd

watching, and was arrested immediately. MoD police had arrived immediately on the scene but had not been able to break the strength of the circle of women. Now that we were "dead", however, we were dragged into three police vans and dumped outside the base. We then created havoc at the gates, whooping, singing, forming circles and snakes, until the woman still being held was released.

We are already planning our next action which will be a sponsored fast and vigil at the gates of the Base from midnight on Hiroshima day to midday on Nagasaki day, when we will walk from the base to the centre of Dunfermline with banners, to leaflet and to sing songs.

We also want to organise a major Scottish Peace Rally for October in Edinburgh, on the day that the Scottish MPs meet at the Assembly Rooms.

Please write or visit us to share ideas, hopes and fears. Women, please come and stay for a few days as we need your help and energy. Yours in Peace and Love, the Rosyth Women.

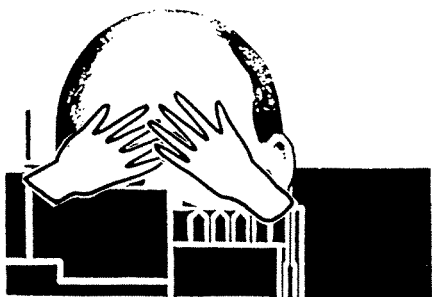
ITALIAN CONSULATE OCCUPIED

On 22nd July 25 people occupied the Italian Consulate in Edinburgh, in solidarity with the occupation that day at the Comiso Cruise missile site, Sicily. Protestors gained access to a large first floor room in the Consulate, while others distributed leaflets outside.

After approximately twenty minutes, over an hour, people left the consulate together and went to distribute leaflets in the centre of Edinburgh. Despite a sizeable police presence there were no arrests.

Contact: SCRAM, Nonviolent Direct Action Group. www.nvdb.org

SCRAM Journal August/September '83



see no , speak no , hear no EVIL

The Sizewell Inquiry, which has just finished its 2-month sitting in London, has already surpassed the 100-day Windscale Inquiry. Thousands of documents have been submitted and really the critical examination of the CEBG case for the Pressurised Water Reactor has only just begun. At the Inquiry the nuclear industry has projected a uniform enthusiasm for the PWR. Rob Edwards, co-ordinator of CND's case at the Inquiry and author of The Plutonium Connection: Sizewell 'B' and the Bomb (75p plus 20p from Smiling Sun) has been looking behind the scenes. He has found a disturbing authoritarian trend in the industry, suppressing dissident voices and curtailing essential scientific debate:-

John Taylor lives in a caravan right beside Windscale where he worked for 16 years. He is a victim of the nuclear industry, forced out, he believes, because of his attempts to improve safety conditions. Like Trevor Brown, Rodney Fordham and Ross Hesketh, he is one of the small but growing band of nuclear dissidents - employees whose conscience obliged them to speak out and who were severely punished for their pains.

John Taylor

1966: started work as an analytical chemist at the Windscale and Calder Hall nuclear works in Cumbria, now run by British Nuclear Fuels Ltd (BNFL).

1975: moved to the Technical Investigations Section of the Health Physics and Safety Department to work on a new generation of radiation dosimeters.

1979: wrote a 150-page report on the storage of spent fuel which concluded that it would be possible to reduce the amount of radioactive effluent discharged into the sea by improving measures for limiting fuel corrosion.

1980: wrote two reports on the radioactive contamination and laundering of factory clothing, one of which suggested a possible means of improving the washing process to reduce contamination and improve safety conditions for workers; the reports were rejected by BNFL.

1981: accused by management of writing reports that are "difficult to understand" and of misinterpreting data.

Jan. 1982: transferred to another job at Windscale, now renamed Sellafield.

June 1982: alleged to his director that there had been a "cover up" of his evidence and that the workforce was being exposed to more radiation than was necessary.

Aug. 1982: threatened to go public with his allegations; a few days later was asked to transfer to the Technical Records Section where he would be subject to security clearance.

Sept. 1982: resigned.

1983: took his case to an Industrial Tribunal, argued that he had, in effect, been unfairly dismissed, and lost.

John Taylor is 49, single and unemployed. "I am forced to conclude" he commented, that honestly seeking to perform an honest job is not required."

These individuals were all concerned with aspects of nuclear safety and all tried to raise their concerns in a proper and honest manner. The industry's reaction was to criticise their work, propose transfers and impose punitive sanctions.

The four men have a number of shared characteristics: self-confidence, a sometimes abrasive refusal to compromise, a healthy disrespect for authority and a passionate belief that they should work for the public good. They are all embittered by their experiences, alarmed at the extent of official secrecy, highly critical of the nature of scientific research in the industry and are deeply concerned about nuclear energy.

NEW PHENOMENON

Nuclear dissidents have become a familiar part of the public debate in the United States. But it is only recently that nuclear workers in Britain have expressed public doubts. These dissidents feel that the industry is becoming more authoritarian and less tolerant of criticism. They point to men like Sir Walter Marshall, until recently boss of the UK Atomic Energy Authority (UKAEA) and now chairman of the Central Electrical Generating Board (CEGB), as part of this trend.

Marshall surrounds himself with like-minded men: the former director of the UKAEA's Safety and Reliability Directorate John Collier, and their former press officer, Peter Vey, both followed Marshall to senior appointments at the CEGB. The new part-time chairman of the UKAEA, Sir Peter Hirsch, is also a "Marshall man". As many of them come, like Marshall, from Wales they have become known in the industry as "The Taffia".

More surprisingly the dissidents argue that the industry has become submissive to the will of government. According to Fordham, the UKAEA is now the "creature" of the Department of Energy, uncritically accepting official policies, many of which are inoperable. "The contact between the Department and the UKAEA is at the top level and nobody within the organisation dare tell the top man that anything is wrong" he said. "If they did, it would affect their career prospects."

Dr Ross Hesketh

1959: started work as a research physicist for the CEGB at Berkeley Nuclear Research Lab in Gloucestershire.

1981: wrote to *The Times* saying that proposed sale of plutonium to America would lead to nuclear weapons proliferation blurring the distinction between nuclear power and nuclear weapons, in which he had believed for 21 years; disciplined for using CEGB headed paper.

April 1982: published a detailed scientific paper which argued forcibly against the proposed sale to the US - a deal that now appears to have been dropped.

Oct. 1982: gave a paper to a conference on Sizewell which sought to prove that plutonium sent to America in the past had been used in American weapons in spite of government denials; and which urged that no more nuclear power stations be built until international proliferation safeguards had been radically overhauled.

Feb. 1983: on BBC radio accused the government of misleading the public over the uses of plutonium; a few days later, was summoned by the CEGB and accused of poor personal discipline.

April 1983: told the press that he had been subject to a CEGB "Kangaroo court" and was being tried for his views on plutonium.

May 1983: disciplined for talking to the press, threatened with dismissal and refused pay increase on the grounds that his work was "unsatisfactory".

June 1983: sacked, say the CEGB, for his refusal to move to a new job which he regarded as demotion.

Because he expressed publicly doubts about Britain's plutonium dealings Ross Hesketh, father of four, is now unemployed. He is helping CND put their case to the Sizewell Inquiry. "The nuclear industry is becoming more and more unsound" he said. "People can take this for a while, I can take it for a while, but there comes a point where you can't take it any longer. It's not what you're there for, not what you're living for and it leaves you feeling dirty."

POLITICAL PRESSURES

Tory government's enthusiasm for all things nuclear and its now complete dominance have clearly made the situation worse. Hesketh for example believes that his dismissal was "quite inevitable" from the start. "It's not the industry's fault that it is becoming anti-scientific" he said. "It is now and has been for a long

time under considerable pressure from successive governments."

Although each dissident believes that he had the support of colleagues too frightened to speak out, there is a question as to how representative they are of opinion within the industry. The debate over the proposed Pressurised Water Reactor (PWR) for Sizewell 'B' provides an answer.

There have been fierce battles over the reactor type Britain would adopt. The two main contenders being the American PWR and the British-designed Advanced Gas-cooled Reactor (AGR). But since the Sizewell Inquiry set in motion last year, there has been little public indication of the deep divisions within the industry. Ranks have closed and the anti-PWR lobby has been silenced.

PWR SAFETY DOUBTS

Rodney Fordham - himself a consistent critic of PWR safety ("They could too easily explode" he says) - believes that half the UKAEA staff are critical of the PWR. Even the head of the Northern Division, Tom Marsham, is said to be a PWR sceptic. Of course the UKAEA has been the main developer and promoter of the AGR so the government's rejection of this design is a severe blow. Combined with uncertainty over the fast breeder reactor it raises questions about the credibility and future of the Authority. The South of Scotland Electricity Board also has reservations about the PWR and promotes the AGR.

In 1978 nuclear engineer members of the Institute of Professional Civil Servants (IPCS) prepared a detailed technical critique of the UKAEA's major work, under Walter Marshall, on a key safety issue - the integrity of the PWR pressure vessel. The IPCS report said that the failure of nuclear pressure vessels "could lead to a large loss of lives and... jeopardise the role of nuclear power". They strongly criticised Marshall's study for underestimating the risks.

Trevor Brown

1948: started work as a chemist on atomic energy at Springfields near Preston.

1955-60: intimately involved in the development of Britain's H-bomb.

1961: sent to Atomic Weapons Research Establishment, Aldermaston, to improve safety conditions.

1973: elected Liberal county councillor for Newbury (East).

1976: constituents, some of them safety experts at Aldermaston, asked him to query delays in implementing safety procedures.

1977-78: petty harassment by his employers over councillor duties.

Aug. 1978: all work involving radioactivity at Aldermaston halted - 3 workers had two to four times the permitted levels of plutonium in their lungs.

Oct. 1978: official enquiry concluded that safety conditions at the site were inadequate. Many buildings closed.

1980: Brown again criticised safety conditions at Aldermaston, this time on BBC *Newsnight*; severely reprimanded for the "public expression of views on official matters".

1981: passed over for promotion, and threatened with transfer, he resigned.

So, despite correctly and legitimately raising justified doubts about plutonium safety Trevor Brown, father of three and recently a widower, is now unemployed. The National Council for Civil Liberties is taking his case to the European Court of Human Rights. "I wonder" he said, "whether I would not have done better had I been an upper class spy rather than a working class patriotic scientist."

TREVOR

RODNEY

ROSS

JOHN



REPORT SUPPRESSED

At least two of the IPCS authors retain their doubts. Dr Alan Quirk, a scientist in the Structural Mechanics Section of the Safety and Reliability Directorate, co-authored a report, codenamed SRD R224, challenging Marshall's assumptions on the likelihood of crack growth. The risk of a catastrophic rupture of the pressure vessel and the consequent release of large quantities of radioactivity could, he believes, be greater than previously estimated. Only after the suppression of this report was exposed (see *New Statesman* 4 and 25 March 1983) did the UKAEA provide a copy of SRD R224 to the Sizewell Inquiry.

The main author of the IPCS report was R T Ackroyd, now a manager in the Central Technical Services section of the UKAEA at Risley in Cheshire. He is a TUC-nominated member of the Advisory Committee on the Safety of Nuclear Installations (ACSNI) which advises the Health and Safety Executive.

PWR: MORE RADIATION

Minutes of a recent TUC meeting with ACSNI trade union representatives reveal that Ackroyd is concerned about the unpredictable effect of steam in the cooling systems of a PWR. He says there are "inevitable inadequacies" in the theoretical models used to predict the behaviour of the pressure vessel under extreme conditions and the risk of a major reactor accident is unacceptably high. Apparently he had to threaten a minority report in order to force ACSNI to state these doubts in its report on PWR safety last year.

He believes that PWRs are intrinsically more difficult to control under fault conditions, and more likely to cause significantly higher levels of radiation exposure amongst maintenance staff than AGRs. He advocates major design changes for the PWR, such as the use of a pre-stressed pressure vessel and the replacement of the zircaloy fuel cladding with stainless steel to avoid the problem of "fuel ballooning". He recognises that such modifications would substantially increase costs.

Rodney Fordham

1955: started work as a physicist for the UK Atomic Energy Authority.

1961: joined the Safeguards Division of the Authority's Health and Safety Branch (now the Safety and Reliability Directorate) as a senior safety engineer. Responsible for advising on the safety of 18 reactors.

1978: gravely concerned about the inadequate institutional and technical safety measures adopted or planned by the Authority, especially on fast reactors and the pressurised water reactor, requested transfer to non-nuclear safety work.

1982: invited to address the issues at the Sizewell Inquiry conference. UKAEA said his text would have to be vetted by the Authority; refused to accept this and felt unable to attend the conference. Simultaneously he was summoned by management and accused of "ineffectual" work - a charge he strongly rebutted.

Sept. 1982: feeling harassed and mistreated, he was forced into early retirement.

Rodney Fordham, father of two, is now unemployed. He is helping the Town and Country Planning Association with their critique of PWR safety at the Sizewell Inquiry. "It's very sad" he said "that people who encounter things that they find ethically unacceptable are doomed as a result. That should not be. That is social injustice of the worst kind."

WRONG DECISION LIKELY

Like other UKAEA employees, Ackroyd is forbidden to talk to the press. He certainly will not be giving evidence to the Sizewell Inquiry. In the light of the fate suffered by Fordham, Hesketh and others, and the UKAEA's official support for the PWR, he must feel anxious about his future in the industry. In the circumstances, his reticence, and that of other PWR critics still on the inside, is perfectly understandable. But the result is that we are all being deprived of the ability to make open and honest disagreements between experts being suppressed. That makes it all the more likely that the wrong decisions will be taken - decisions with potentially disastrous consequences.

Rob Edwards

Rob Edwards is the Scottish correspondent of the *New Statesman* and a version of this article has already appeared in the *New Statesman*.

Don't Laugh

Slow breeder reactor?

The Clinch River fast breeder reactor is in deep trouble again in the US Congress, and its chances of survival seem smaller than ever before. The House of Representatives have not given any funding for the project, after the current financial year ends in September, in their energy appropriations bill passed in June. The funding could be restored as the bill passes through the Senate, but last year the Senate saved Clinch River's funding by only one vote.

If the funding is cut, the project could still be saved later this year when the Reagan Administration is expected to propose a new plan calling for a larger contribution from private investors. However this doesn't look very likely to succeed. Private industry has so far committed itself to spend just \$150 million on the project which is expected to cost a total of \$4,000 million. \$1,500 million has already been spent.

Electrical Review, 24.6.83

Very Tweee !

IT'S ALL AN ACT

The new **Energy Act** has received Royal Assent. The Act allows existing and new private generators to use for the first time the public transmission and distribution system to transmit their electricity. It is hoped that this will encourage more industries to turn to Combined Heat and Power.

The Act obliges Electricity Boards to purchase electricity from private generators; allows any company to set up and supply electricity as a main business, removing existing statutory restrictions; and it obliges the Electricity Boards to adopt and support CHP schemes. The Act also allows private suppliers to get the full value for any electricity which they sell to the Boards.

The Tory Government are pledged to institute an Energy Efficiency Office to pull together the energy conservation efforts of a wide range of government departments, including the Department of Energy. But the plan seems to be nothing more than a job creation exercise for sign painters. There will be no real increase in the Government's commitment to the efficient use of energy.

USELESS "SIGNALS"

The emphasis will still be on encouraging people to respond to the market. The Government's main objective will be:-

"... to help industry and domestic consumers alike to respond sensibly to energy price signals."

This isn't much comfort for poorer fuel consumers whose immediate priority is paying fuel bills. In 1979, for example, it was reported that 37% of households in receipt of supplementary benefit were dependent on expensive electric central heating. Such households are also least likely to benefit from government grants for loft insulation, because they are unable even to afford their contribution towards the bill.

SCRAM Journal August/September '83

Nail in the coffin?

The South of Scotland Electricity Board are planning to rub salt into the wounds of the Scottish Coal Mining Industry by reducing the amount of coal they buy on the home market.

The National Coal Board's sales to the SSEB have already fallen from 7.8 million tonnes in 1981/82 to 5.5 million tonnes in 1982/83. (See SCRAM Journal No. 36). The SSEB have traditionally bought 90% of its coal from the NCB, but their contract comes up for renewal this September. They now want to cut that percentage to 80% and buy the rest from the world market.



HUGE STOCKPILES

The Electricity Board has recently been buying in more coal from Scottish pits than it needs. But with stockpiles now equivalent to 20 weeks of winter burning, this policy cannot continue. (There are 55 million tons of coal stockpiled nationally.) Inevitably, with the SSEB determined to cut their fuel costs more Scottish pits will lose their major customer and will face the axe.

Pressure for more closures has come recently from the Monopolies Commission. The pits most at risk are the 70 throughout Britain which lose more than £10 on every ton of coal they produce. Five of these are in Scotland. Apart from Cardowan, near Glasgow, which is scheduled to close with the loss of 1090 jobs, the others are Barony and Killoch in Ayrshire and Comrie and Frances in Fife. More nuclear power stations - whether Torness and Heysham II or the proposed Sizewell PWR - will savagely reduce the coal-burn with dramatic long-term social and economic consequences in the British coalfields.

Sunday Standard, 26.6.83 (RIP)

A Cosy Profit

N-Weapons businesses booming

The US Government is building more nuclear weapons than at any time since the early 1960's. Although the number of weapons in the US stockpile is classified, experts estimate that there are about 26,000 weapons, with a further 17,000 to be added over the next decade. Some of the new weapons will replace obsolete ones, but the total stockpile will rise to about 32,000.

At least 15 types of warheads are now being produced, including the W-76 for the Trident missile, the W-78 for the Minuteman III missile and the W-87 for the MX missile.

news

Death Deals

Fuelling the French Bomb?

Plutonium in the core of the Superphenix fast breeder reactor under construction at Malville in Southern France, will come from Italy, West Germany, Belgium, and the Netherlands, as well as France. This plutonium is not subject to international safeguards and could be used for nuclear weapons production. Forty-five kilos of fissile plutonium have already been sold to Cogema for its fast breeder programme by the Dutch utility PZEM.

According to Commissariat à l'Energie Atomique (CEA) Chairperson Michel Pecqueur, "France has two kinds of nuclear materials: those that are free for any use, and those that can be used only for peaceful purposes under international agreements." Examples of the latter are natural uranium from Australia and enriched uranium from the United States. Nuclear materials used or produced in the core or blanket of the Superphenix belong to the former, free-use category and are not subject to 'peaceful' use on-straints. "France has the option," Pecqueur says, "to use the free materials for our military programmes."

Pu FOR SEVERAL DOZEN BOMBS

France's planned nuclear weapons modernisation programme will require large quantities of high-grade plutonium. The idea of producing military plutonium in the Superphenix is seductive indeed. The blanket of a breeder reactor is the best place to produce bomb-grade Pu-239 in a large quantity, because it doesn't disrupt the operation of the reactor. A breeder converts "useless" plutonium (mostly Pu-240) in its core into "useful" plutonium (high in fissile Pu-239) in its blanket of U-238. Superphenix could produce a third of a tonne of weapons plutonium per year in its blanket - enough for several dozen bombs.

WISE, 10.5.83

For further information on fuelling the French Bomb read "Cogema Agreement: Sweden contributes to France's Nuclear Weapons" by Jorgen Nielson from WISE - Copenhagen, Ryesgade 19, 2200 Copenhagen. £1 incl. p&p.

The weapons are built by private industry at seven government-owned factories around the USA. Research is done and checked at three state laboratories. Then they are evaluated at the Nevada test site. There were 19 announced tests last year, the highest total since 1970. The entire programme is run by the Energy Department, and not the Pentagon as is widely assumed. Its 1984 budget for weapons will rise from \$5.5 billion to \$6.8 billion.

Private companies involved in weapons include Bendix which makes non-nuclear components; Du Pont which operates a tritium plant; General Electric; Monsanto; Rockwell which runs a plutonium production plant; and Union Carbide which makes uranium and metal components.

No Nuclear News, June/July 1983

NIREXcess.

Waste piles up

The Government is ready to take urgent action to deal with the 35,000 cubic metres of 'intermediate' radioactive waste currently being stored in Britain. Most of the intermediate waste is kept at Windscale, where there have been several reported leakages. One leakage which started in 1979 from one of the stainless steel tanks is still unrepaired. Some of the waste, however is stored at power station sites.

Every year the nuclear industry creates 2,000 cubic metres of intermediate waste. The 3rd annual report by the Radioactive Waste Management Advisory Committee says that this waste has now become an urgent problem and it should be stored underground. The Department of the Environment appear to have accepted the conclusions of the report, and are regarding the problem of 'safely' storing the waste with urgency.

100 FEET DOWN...

Dr. Stanley Bowie, a nuclear geologist, who resigned from the Committee ten

months ago, says that the waste should be at least 100 feet underground:

"The problems with storing it at ground level are that it might leak, that the containers could be fractured if there was a war, or that a plane could crash into it. The consequences would be disastrous."

The Government proposes that the first underground storage facility should be available in five years. NIREX (the Nuclear Industry Radio-active Waste Executive) is expected to identify several locations in Britain where intermediate waste could be stored safely. The experts seem to think that when this is done, the Government will allow test-drilling to go ahead.

... IN CLAY

Dr. Bowie says that in his opinion the safest place for storage of intermediate waste would be clay. The main clay belts in the UK are in England from Yorkshire to Lyme Regis and in Scotland a clay belt runs from Helensburgh to Stonehaven and another runs from Girvan to Edinburgh.

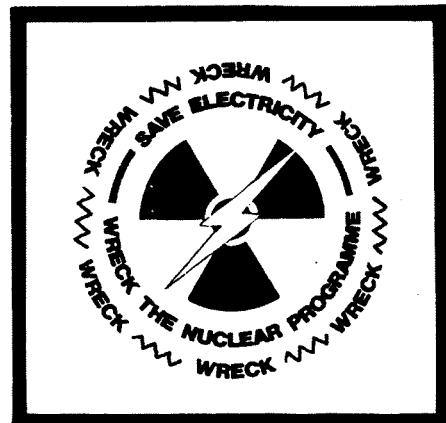
Isn't London built on clay too?

Sunday Standard 26.6.83 [RIP]

news.000

140 Arrested.

On June 4th, 5,000 people demonstrated their opposition and commitment to cancel the 99% complete Shoreham nuclear reactor (Long Island, U.S.A.).



The action, organised by the Stop Shoreham Campaign, began with a march through town led by the "Flame of Life", a lantern symbolising on-going local opposition throughout a recent 100-day vigil at the gates of the station.

Next day 150 people participated in a nonviolent sit-in at the 3 main gates. 140 people were arrested and later released. This action marked the end of the vigil, but while the constant presence is over, people plan to continue with a weekly Saturday vigil until the station is cancelled.

Opposition to Shoreham - now 10 years late and 10 times over budget - has, persisted for years. Long Island people have signed petitions, lobbied their representatives, testified, sued, written letters, distributed information and demonstrated.

The biggest obstacle for Shoreham is that before it can operate it requires a License. This requires an emergency plan for the area accepted by Nuclear Regulatory Commission (NRC).

However the county government conducted a study showing the plan impossible for the heavily-populated area surrounding the reactor. The builders, Long Island Lighting Company (LILCO) have disregarded this and the three bodies are now involved in a raging procedural battle.

Meanwhile, the local campaigners remain dedicated to the reactor's cancellation. A spokesperson said:-

"We believe it is also important to keep up direct citizen pressure through demonstrations of this sort. We have taken this action at this time to show that many of us remain totally committed to preventing Shoreham from opening. While we support the legislative and legal actions against the plants operating we realise that there is a reasonable chance that those measures will fail. We're serving notice on LILCO with these actions that the legislature and intervenor's actions are not the end of the struggle."

WISE, June '83.

SCRAM Journal August/September '83

SIZEWELL DIARY

The CEBG's latest medium term capital investment plan shows that they believe it would be "prudent" to obtain government approval to enable it to make a start on eight nuclear power stations, including Sizewell B, by 1990. This doesn't commit either the Board or the Government to the timing or the reactor-type, but shows that the Board clearly has a programme of PWR's in mind. Mr Baker of the CEBG indicated that the investment plan had been assembled on the basis of 'replicated' PWR's each costing £1,228 million.

Jumping the gun.

One of these future PWR's could be built at Druridge Bay in Northumberland. In April it was revealed that the Board are in the process of buying a 700 acre farm near Widdrington village. Northumberland County Planning Chairperson, Councillor Ian Swithenbank said he was stunned at these revelations "I find it objectionable that while the Sizewell Inquiry is at such an early stage, with the future of PWR's at stake, the Board should be buying up land and making detailed investigations at Druridge Bay. The Board seemed to be working on the basis that the Sizewell Inquiry is a foregone conclusion."

Coal Prices Stable — NCB.

Mr. Parker, director of Central Planning at the National Coal Board, told the inquiry that coal demand in Europe has been static since 1973, despite the rise in oil prices. There is considerable over-capacity and new sources from Poland, Columbia and South Africa will ensure that prices remain competitive for the foreseeable future. Mr. Parker said that he could not accept the CEBG's arguments that new uses for coal in synthetic oil and gas production would increase demand. Assumptions about rising coal prices are central to the CEBG's case for Sizewell B. The NCB is not formally objecting to Sizewell, but Mr. Parker's evidence has clearly helped to undermine the CEBG's case....

An interesting point about generating costs came out of the cross examination of Mr. Baker of the CEBG. He announced that the Board had published a document called "Analysis of Generating Costs", which showed that **Magnox generating costs have always been higher than coal**, using current government discount rates of 5 per cent. So another myth about nuclear electricity has been officially killed off.

60 unresolved hazards.

The Nuclear Installations Inspectorate have given their evidence to the inquiry, in which they say that there are sixty-odd safety issues that remain unresolved, that must be resolved before a license can be given to Sizewell B. In particular, there are six major issues that will involve significant design changes, and another three that are borderline. 'Significant' is defined as those costing between £5 and £15 million to resolve, so these problems could add up to £90 million to the cost of the reactor. Such an addition to the cost of the reactor would, in the view of the National Nuclear Corporation, bring the economics of the Sizewell project into question.

"No Adjournment" — Final.

Friends of the Earth applied for an indefinite adjournment of the safety portion of the inquiry, back in January, until the NII has all the information it needs from the CEBG to make a decision on the licensing of the Sizewell B design. The NII is not expected to be able to do this until late 1984 or 1985. Whether or not the PWR meets British Safety Standards would seem to be an important part of the inquiry, but this cannot be established until the design is safe enough to license. In June FoE finally got their reply. Sir Frank Layfield, the inquiry Inspector decided not to allow the adjournment. So the inquiry will fail to test the Sizewell PWR against British Safety Standards as has been promised by successive Government Ministers.

All mixed up....

Finally back to John Baker, who was also cross-examined by CND. He admitted that Plutonium from Britain's civil and military nuclear reactors is not kept physically separate; but, he insisted, that this does not mean that civil plutonium is used to make bombs.... The waste for 'civil' reactors and the military reactors at Calder Hall and Chapelcross are reprocessed together at Windscale. After reprocessing it is impossible to identify which plutonium comes from which reactor, but the Board say they know by calculation how much belongs to them.

Subscribe to "Reactions".

Normally we would cover an issue like the Sizewell Inquiry in much greater depth, but there is an excellent magazine called Sizewell Reactions being produced fortnightly by the East Anglian Alliance against Nuclear Power. Individuals can subscribe to Sizewell Reactions for £5. Write to EAAANP 2 St. Helens St. Ipswich.

ATLANTIC FISHER CAUGHT.

WASTE DUMPING DEMONSTRATIONS 1983

The 25-nation meeting of the London Dumping Convention this February voted for a 2 year moratorium on the ocean dumping of radioactive wastes. Britain immediately announced that it would ignore the ban. So anti-sea dumping groups prepared their campaigns to oppose the annual dump.

In previous years nonviolent actions have been mounted at Sharpness docks on the Severn estuary; and at the Atlantic dump site. Greenpeace have attempted to physically stop the dumping from the Gem. To counter Greenpeace, NIREX (Nuclear Industry Radioactive Waste Executive — a consortium including UKAEA, BNFL & the Electricity Boards) decided to modify a bigger ship — Atlantic Fisher, to enable the crew to dump waste barrels through the hull rather than over the side from special platforms. This conversion was announced the week before the LDC, and the figure of £500,000 was mentioned for the modifications.

Much has happened since the LDC meeting; of the countries which dump nuclear waste into the oceans, Switzerland has decided to stop next year, Belgium is to get the UK to dump its waste, Holland and Spain have stopped and Japan is to abide by the ruling. In March the National Union of Seamen demanded a ban on dumping, and in April they received the support of the transport unions — NUR, ASLEF & TGWU.

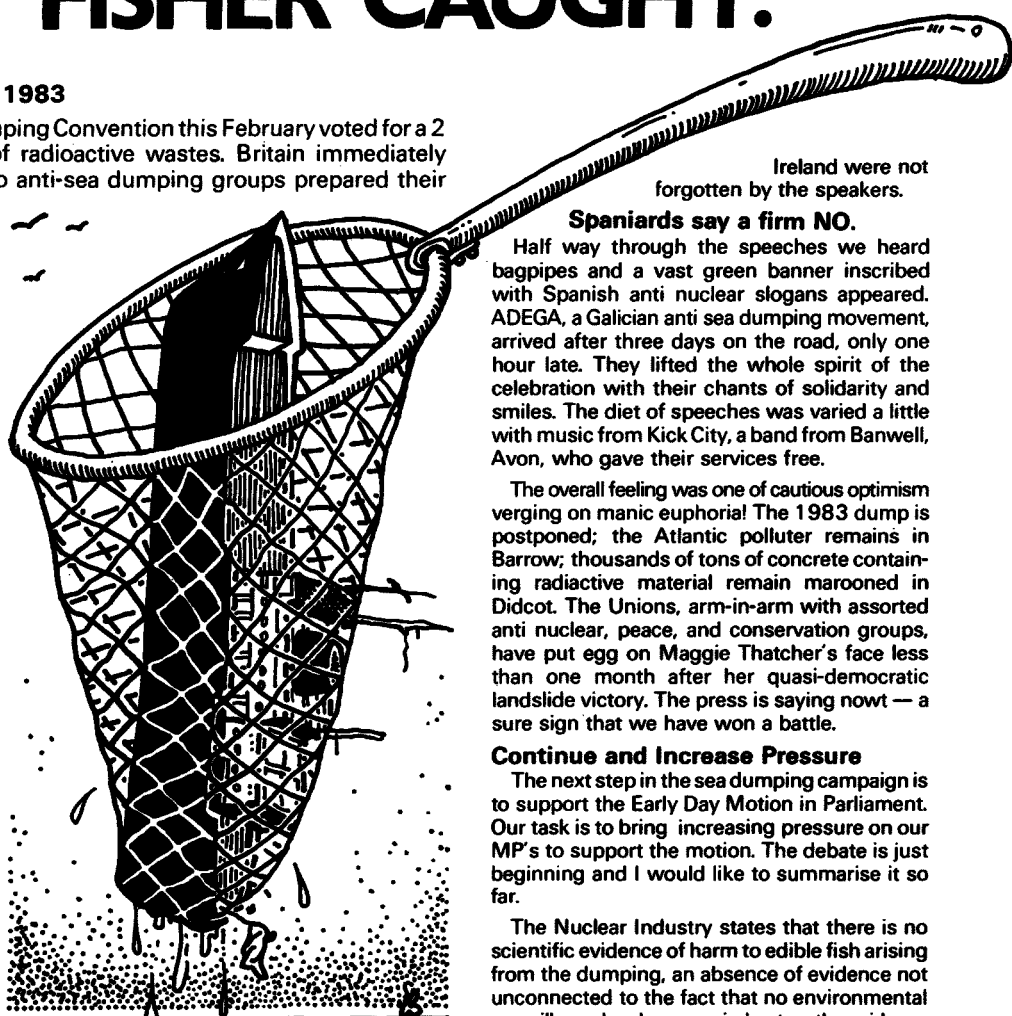
Seafarers Black Waste Ship

On the 21st June, nine members of the NUS obeyed the Union's call and refused to sign up with the Atlantic Fisher docked at Barrow-in-Furness; the Union 'rewarded' the men by placing them at the top of their future jobs list. This was done because jobs are rather rare and "a Thatcherite DHSS official may take a hard line with some of the nine" for not accepting the first job chance said John Nelson, NUS National Officer. Mr. Nelson, NUS National Officer indicated that Spain is very disturbed about Britain's refusal to accept a 2 year moratorium. He was quoted in the Daily Telegraph as saying "I am given to understand from Spanish affiliates that the Spanish Navy is prepared to send out vessels to prevent the dumping if necessary".

So, Atlantic Fisher remained in dock and phase one of the opposition was complete. Nevertheless, the anti dumping groups had organised a demonstration at Sharpness for Sunday July 3rd. Richard Lawson of the Campaign Against Sea Dumping describes the demonstration and suggests how to take the campaign on from here:-

Brilliant sunshine, calm seas and good spirits as we put the CASD inflatable into the muddy waters of the Severn Estuary and set off to meet the Greenpeace ship 'Cedarlea'. How much more pleasant it is to greet this triumphant vessel of Peace, than to have to demonstrate against the huge bulk of the Atlantic Polluter! The Cedarlea was not allowed into Sharpness dock (it is reserved for destroyers, not defenders, of the environment) so inflatables were launched and the three dinghies ran to Sharpness.

Not many on the demo — most had decided not to come because the Atlantic Polluter wasn't due — but the usual Sharpness demo sun was there as well as a large Welsh dragon on its way to Sizewell. Speakers included: NUR, ASLEF, TGWU, Anti Sizewell Campaign, FoE, Greenpeace and CASD. Ross Hesketh, the nuclear scientist recently sacked by the CEBG because of his disclosures concerning the UK-US plutonium deals, also spoke (see page 3). Absent comrades from SCRAM, Sea Shepherd and HOPE in



Ireland were not forgotten by the speakers.

Spaniards say a firm NO.

Half way through the speeches we heard bagpipes and a vast green banner inscribed with Spanish anti nuclear slogans appeared. ADEGA, a Galician anti sea dumping movement, arrived after three days on the road, only one hour late. They lifted the whole spirit of the celebration with their chants of solidarity and smiles. The diet of speeches was varied a little with music from Kick City, a band from Banwell, Avon, who gave their services free.

The overall feeling was one of cautious optimism verging on manic euphoria! The 1983 dump is postponed; the Atlantic polluter remains in Barrow; thousands of tons of concrete containing radioactive material remain marooned in Didcot. The Unions, arm-in-arm with assorted anti nuclear, peace, and conservation groups, have put egg on Maggie Thatcher's face less than one month after her quasi-democratic landslide victory. The press is saying nowt — a sure sign that we have won a battle.

Continue and Increase Pressure

The next step in the sea dumping campaign is to support the Early Day Motion in Parliament. Our task is to bring increasing pressure on our MP's to support the motion. The debate is just beginning and I would like to summarise it so far.

The Nuclear Industry states that there is no scientific evidence of harm to edible fish arising from the dumping, an absence of evidence not unconnected to the fact that no environmental surveillance has been carried out — the evidence is theoretical, derived from computer models using incomplete oceanographic concepts. As the (theoretical) likelihood of contamination is small, the Authorities see no need to check by observation — scientific methodology turned on its head!

Atlantic Dumpsite: "Cesspool".

One of the more telling arguments taken from a report, on the evaluation of the dump site by the Nuclear Energy Association for the OECD, is the admission that "the partial or complete destruction of local benthic fauna (sea bottom animals) cannot be excluded". It is an ecological law that if one life form is destroyed, its place will be taken by another; the European dumping site may become a reservoir of rapidly mutating bacteria which could provide a cess pool of diseases for all ocean life. While this possibility remains uninvestigated any continuation of the dump must be regarded as unscientific, criminal recklessness.

Legally, the absence of any scientific evidence means that the dump is not covered by the Dumping at Sea Act 1974; it has been condemned by the UN Geneva Conference (1958), the European Parliament (1983), the London Dumping Convention (1983) and the Melbourne Agreement (1981/2). The latter strongly opposed Japanese dumping in the Pacific and one of the signatories was Margaret Thatcher. Dumping in the Pacific is strongly opposed, yet dumping in the Atlantic is "the only environmentally acceptable route"! The reason for this is they haven't yet built a facility to store the waste — but they appear to be "urgently" searching for a permanent disposal site on land now (see news pages).

Richard Lawson

Other anti dumping actions included: Spanish & Belgian protestors chained themselves to the headquarters of the UKAEA in London on 6th July as a protest against the authority's dumping plans — 22 were arrested.

British embassies and Consulates were blocked in New Zealand, Belgium, Denmark and the Netherlands on 11th July, the day the UK dumping was supposed to begin. 150,000 people demonstrated in Spain and dustbins were emptied on the doorsteps of a least eight UK Embassies and Consulates. British Airways head office and the office of a British bank, both in Madrid, had windows broken.

Support for the opposition stand has come from: France — the CFDT seamen's union has called on the French government to send a boat to stop the dumping;

Ireland — one boat is expected to take part in protests;

Spain — two boats are expected;

The Merchant Navy Officers' Association has told its 11 members not to sail the Atlantic Fisher from Barrow;

Jacques Yves Cousteau sent a message of support to the NUS.

Stop Press: The barrels of radioactive waste waiting, at Didcot in Oxfordshire, for transporting to Sharpness were eventually moved after the local Oxford Friends of the Earth group brought them to the attention of the public. 400 drums of waste were left unguarded in Didcot railway station due to the action by the transport workers. They were moved by the army to Bicester ordnance depot, 25 miles away, where they will remain until they can be taken back to Harwell. Anyone want several trainloads of radioactive garbage?

The National Union of Seamen, has written to the two Belgian rail unions asking them to back the British transport unions' action against sea dumping. The Atlantic Fisher has been booked by the Swiss and Belgians to dump their waste later in the year.

FULL HOUSE.

appropriate technology...

For nearly ten years appropriate energy activists have been inspired by the example set by the **Centre for Alternative Technology** — "The Quarry" near Maccynlleth in N. Wales. Now, with the opening of the new **Friends of the Earth Office** near The Angel in London and the imminent completion of the **Future City Home** in Bristol, we have practical examples of low-energy, super-insulated, rehabilitated buildings in cities.

We reproduce here the section through the FoE office at 377 City Road, London EC1 (01-837 0731) showing warm air recovery, internal insulation, triple glazing and so on. No doubt if you gave warning they would be happy to show you round. A recent **FoE Bulletin** has full details. Send a donation for details.

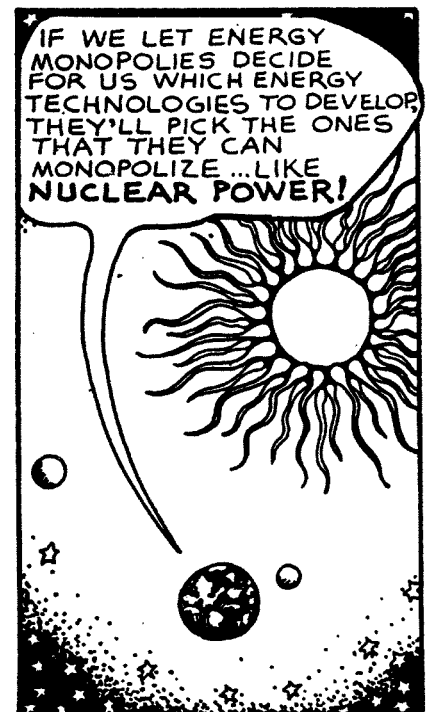
Below Sally Eaves describes how a vision is coming into being right in the heart of Bristol:-

UCAT - The Urban Centre for Appropriate Technology - originally came together as a group in the Autumn of 1979. Membership is largely based in Bristol, but the group is supported by individuals and groups from all over the country. UCAT is part of the Society for Environmental Improvement, a registered charity, and is the companion project to the National Centre for Alternative Technology in Machynlleth, Wales. The Urban Centre takes the practical knowledge and experience of NCAT as its starting point and is working to interpret and extend both the technology and the philosophy to suit the urban situation.

The first problem the group faced was to find a site suitable for:- a practical exhibition of Appropriate Technology; an environmental bookshop; workshops; whole-food café and so on. Such sites are not to be had easily in the inner city, certainly not on the financial terms the group could afford. Finally the group settled for a somewhat different arrangement from the one originally envisaged. An environmental bookshop (The **Greenleaf Bookshop**) and small coffee shop cum whole-food café took shape in an elegant if slightly crumbling building in an up-and-coming street very near the centre of town. The practical exhibition will be on the other side of the town centre in the Windmill

Hill/Bedminster district. A small terrace of dilapidated houses, typical of much of the run down housing stock in the area, has been leased to the group by the City Council. Some of this terrace has been handed over to a housing co-op (under the auspices of a local housing association), but the end house of the terrace has been the focus of a vigorous building programme. The house is being rehabilitated to show just how far you can convert a standard terrace house to maximise use of renewable energy e.g. from the sun - with changes in design, solar panels, a special "greenhouse effect" window - to minimise heat loss, insulation, double and triple glazing, a ventilation system incorporating a heat exchanger have been installed.

Much work, both in fundraising and administration, and on the practical side has been done by volunteers. In 1982 a "YOPs" team did a lot of the basic building work and now in 1983 the project has moved into a new phase. Taking advantage of MSC funding UCAT took on about a dozen **Community Programme** workers. Skilled carpenters, architects and builders, with back up administrative assistance have moved the practical side of the project forward towards a projected opening date at the end of the summer. An **Energy Information Service** giving free energy advice to local residents is now in operation.



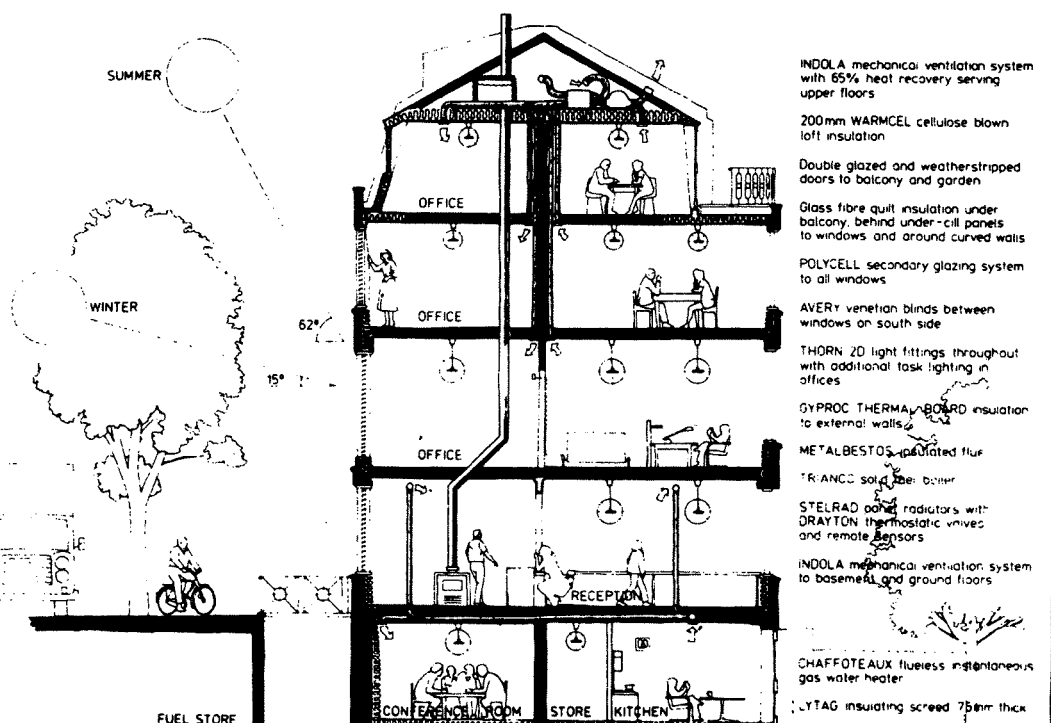
The project is the first of its kind in the country. It hopes to make a significant impact on the attitudes and energy use of households in the Bedminster area, and act as a stimulus and focus to change in a much wider community. It is particularly relevant in a decayed inner city area, where it can illustrate new ways of working together, and, to a modest degree, both provide jobs and improve the environment.

Sally Eaves

Contact: UCAT, 82 Colston Street, Bristol BS1 5BB. Tel. 0272 25485.



The Friends of the Earth office, LONDON



wACEted

Jobs? Just an excuse for reflation

Proposals for increasing government spending on energy conservation have been squashed in a move reeking of political dogmatism.

In a secret briefing sent to all its election candidates in May, the Conservative Party attempted to discredit the recent report by the Association for the Conservation of Energy entitled "Jobs and Energy Conservation", (see SCRAM Journal 36).

The Tory briefing rejects the findings of the report - that a national energy conservation programme could create 155,000 new jobs - as simply "an excuse to reflate the economy". The findings of the report were raised at Prime Minister's Question Time by Liberal leader David Steel, but were rudely dismissed. So Bill Doughty, chairperson of the Governing Council of ACE, wrote to Mrs Thatcher to find out why she rejected the report out of hand. Mrs Thatcher replied:

"I simply do not believe that spending public money on this scale is the way to create lasting jobs. A key step in providing the conditions for an orderly and sustained rise in output and employment is the eradication of inflation. Our progress towards achieving that is due in large part to our efforts to contain the PSBR."

SPENDING PRIORITIES

Mrs Thatcher seems keen enough to spend massive sums of public money to create lasting nuclear waste, but is incapable of seeing energy conservation as an investment, which would save the country millions of pounds in the future. She goes on to say that:-

"To show that investment in energy conservation creates jobs it is necessary to demonstrate that it is more labour intensive than other kinds of spending."

Dead right Mrs Thatcher. Perhaps she's building Trident and Torness just to find out how labour intensive they are.

New Statesman

Water good idea

Hydro Plans

Not to be out-done by their northern partners (see last SCRAM Journal), the South of Scotland Electricity Board are planning a tiny 2MW hydro-electric power station at Drumjohn in Galloway. It will be an extension to the existing 197MW Galloway hydro-scheme, and will cost around £1 million. The turbine-generator will be in an underground turbine house, and the tailrace will be connected to the existing pipeline from Loch Doon as it crosses the valley floor. Construction will begin as soon as planning permission is granted by the Regional Council, and it could be operating by 1985. The SSEB concede that hydro schemes like this are highly cost-effective but point to their generous surplus of generating capacity when further schemes are suggested.

Bouncing into bed

Leap for Fluidised-Beds

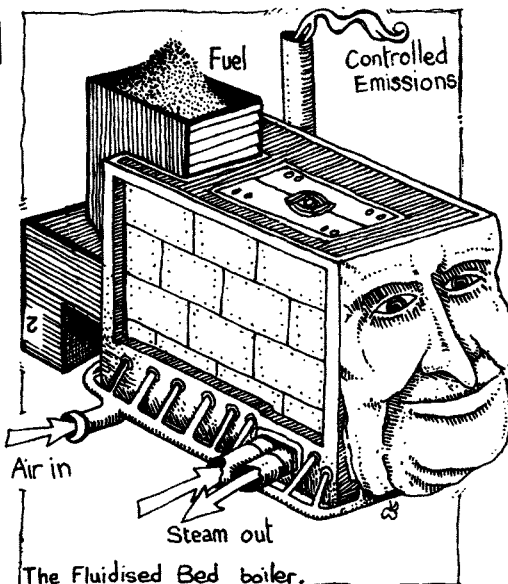
Wallsend Slipway Engineering, a subsidiary of British Shipbuilders, have just sold the first fully-automatic fluidised-bed, coal-fired, horizontal shell boiler to be installed in this country. The Tyneside firm installed the 1.5MW boiler for its client South Yorkshire Passenger Transport Executive in May. They also have orders for four more; two will go to the GKN steel works near Wrexham, and one each to Dunlop factories at Grimsby and Liverpool.

Fluidised-bed techniques involve self-sustaining combustion through a bed of sand, which is fluidised by air blown at high velocity. The fully automatic system sets a new standard for coal burning and rivals oil and gas for cleanliness and efficiency.

CLEAN SWEDES

Meanwhile, in Sweden a 15MW fluidised-bed power station is being tested and is succeeding in reaching targets set for cleanliness and efficiency. The fluidised-bed technique interests the Swedes because, amongst other things, a chemical reaction occurs between the dolomite of limestone and the coal, which captures the sulphur that would normally escape into the atmosphere and contribute to acid rain.

According to the manager of the power station at Oresund, near Malmo, its efficiency has reached 99 per cent, compared with the usual 30 per cent. Normal sulphur



emissions have been cut by 90 per cent. The utility that set up the plan, Sydkraft, will probably be the first customer for a commercial fluidised bed, as they need several more coal-fired power stations by the early 1990's.

Apart from the attraction of built-in emission control, fluidised beds can burn a vast range of solid fuels, including fuels that would not be economical in a conventional power station. But only the building of a commercial plant will verify that it can cut costs. Fluidised-beds can also be fitted to existing power stations to replace oil or conventional coal burners.

Technology, 30.5.83
New Scientist, 30.6.83



Acid Rain

West Germany is trying to drag its partners in the EEC towards a common strategy to combat acid rain. Together with Switzerland and supported by Denmark, they have drawn up a plan to put pressure on countries like Britain, that are reluctant to spend money on reducing the sulphur emissions from their industrial plants and power stations that cause acid rain. (See last issue p.7)

The West Germans have taken the lead after discovering that many of their forests, including the Black Forest, appear to be dying from acid poisoning. New laws controlling sulphur emissions will be adopted in Germany in July.

"REDUCE EMISSIONS"

The German plan calls for a 30 per cent reduction in sulphur emissions by 1993, and an extension of the monitoring of "transboundary air pollution" across Europe. It also calls for the development

of flue gas desulphurisation and fluidised-bed combustion as ways of removing sulphur fumes before they leave power station chimneys.

Unfortunately the Germans failed to get a commitment from the other signatories of the United Nations convention on long-range transboundary air pollution to their plan, but the EEC's council of environment ministers are thinking about it.

New Scientist, 9 & 23.6.83

Following the article "Acid Drops" in last issue we have received a very informative and well produced booklet "ACIDIFICATION - A Boundless Threat to Our Environment." 40 pages long and with many colour photos it forcefully states the concerns of the Swedish Environmental Protection Board. They will send you one free on request.

Statens Naturvårdsverk, Information -
Box 1302, S-171 25 SOLNA, Sweden.
(Incorrect address in last issue.)



With the help of a title borrowed from Tynecastle CND (See SCRAM No. 30) the Greater London Council have launched a campaign to show that there is an alternative to the wasted skills and resources caused by mass unemployment. **Pete Roche** has been studying their booklet "Jobs for a Change" alongside the report of a European meeting last year on alternative economic strategies.

London has 400,000 people on the dole, yet looking around London it is not difficult to see things which need to be done. For each week that a Londoner is unemployed the economy loses £250 - the value of what she or he could have produced plus the cost of the dole. The GLC's Economic Policy Group are guided not just by the market but also by social need. But their policy is not about bailing out bankrupt companies for short term jobs at any price. First the GLC will only help firms which allow its workers to join trade unions and which pay reasonable wages. Secondly the management must negotiate a plan with the GLC and the trade unions for reorganising the business.

TIME TO CHOOSE, a grassroots study guide on the nuclear arms race from a Christian perspective. Martha Keys Baker, Alan Kreider, Val Nobbs, Donald Scott and Mike Sweatman, Celebration. £3.95 (+ 40p.)

This book is a study guide meant for Christians within the peace movement, although I myself feel it would be useful also to people of other denominations and even to the most hardened aesthetes. Being a study guide, the book is split into twelve different study sessions under three headings:-

Part one - the **Nuclear Option**, takes you through (in great detail) the effects of nuclear war in this country and our civil defence (?) preparations and the attitudes of people to these today.

Part two - **Swords into Ploughshares**, criticises the 'just' war, gives a history of Christian pacifism and studies the adherents of non-nuclear defence.

Part three - **Paths to Peacemaking**, studies the means and ends of pacifist Christianity including an interview with Father George Zabelka, chaplain to the flight-crew of the Enola Gay.

The book is meant to appeal to Protestants and Catholics alike and is totally ecumenical including an interview with the famous evangelist preacher Billy Graham as well as quotes from Pope John Paul II.

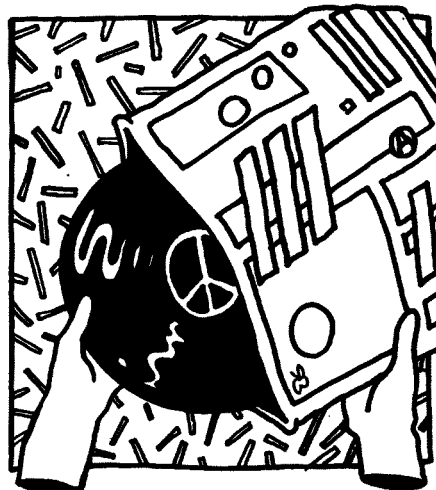
Thomas Leslie

TECHNOLOGY CENTRES

The GLC's Enterprise Board will give financial support to trade unions to prepare their own plans for a company in advance of redundancies. The plan can then be the basis for an effective campaign of resistance. This campaign is also backed up by new training facilities and a network of technology centres. These centres are based at several of London's Polytechnics, and are staffed by people who can help trade unionists and community groups with technical research.

CONVERT 'DEFENCE INDUSTRIES'

25,000 jobs in London are dependent on the defence industry. Jobs are disappearing in this industry all the time as improvements in productivity are called for. 200 jobs are under threat at a Thorn EMI explosives factory in Hayes. The trade unionists there believe that their jobs could be saved by investment in new products in other London factories in the Thorn empire. Many of the workers became interested in alternative products, not just because of the threat of redundancy, but also by seeing what their pro-



Check it

There is a new single out by Pete Zero and the Options called Disposable Tissues. You won't hear this on 'Top of the Pops', but you will find Pete Zero and the Options playing on the back of a lorry for CND. Pete Zero arrives via the notorious but disbanded 'Resisters', and the young East End theatre group, Controlled Attack's anti-war panto 'Who Dares Grins'. All profits from the single go to Peace Camps. Available at the CND bookshop, Finsbury Park London N4 or from Rough Trade Records.

reviews...

ducts did during the Falklands War. The GLC believe that they can help to show that there are ways in which the arms industry can be converted to socially useful production.

SOLUTIONS TO FUEL POVERTY

Thousands of people in London suffer because heating is too expensive. In 1981 over 32,000 Londoners had their electricity disconnected, and one third of council tenants had damp houses. Yet with thousands of building workers on the dole, there is no shortage of skill to insulate their houses. The pamphlet is highly critical of nuclear power, and shows how tenants and shop stewards from the borough housing departments' direct works are drawing up their own energy plans, and campaigning for combined heat and power stations.

The GLC have seen the connection between unemployment, converting the arms industry to socially useful production and developing local energy plans. However the pamphlet doesn't just argue for the defeat of monetarism. A change in the colour of the government wouldn't be enough, we also need to strengthen people's organising power in workplaces and communities.

It is a breath of fresh air to read such a pamphlet, published by a progressive local authority. I hope it will build up into a gale and blow through the whole Labour movement, so that we can all start campaigning for socially useful work now.

DISCUSSING STRATEGIES

The second pamphlet, "What Chance for Jobs", is more theoretical, and reports on a conference held between various European radical and socialist party activists on 'Alternative Economic Strategies'. The subjects covered include the origins of the unemployment crisis, how technological change can destroy jobs, and how we can develop a labour-intensive economy.

It basically follows the same themes as the GLC pamphlet and shows how socialists are beginning to realise that socialism isn't about just producing more and more, but is about meeting social needs. One point which emerged several times was that the nuclear industry has no place in an Alternative Economic Strategy. It does not fit in with the decentralised regional development which is now being demanded throughout Europe.

ENERGY CHOICES

Alternative technology has a stable job-creating impact locally, and makes far better use of the millions of pounds which need to be spent to convert Europe from an oil based economy. Another proposal is that the burden of tax should be shifted from wages to capital and raw materials including energy. This would stimulate labour intensive industries and penalise energy intensive ones.

If you are interested in European discussion of how an alternative economic strategy might work - without nuclear power - then this is a useful pamphlet to stimulate ideas and discussion.

Pete Roche

Jobs for a Change, GLC Economic Policy Group. Smiling Sun M/O 90p (+ 25p).

What Chance for Jobs? Agenor 88 £1 (+ 20p).

Londoners at Risk

Londoners are rightly concerned about nuclear waste. Trainloads of hot radioactive spent fuel rattle round the North London Line from Bradwell and Sizewell 'A' and across West London from Dungeness 'A' and 'B'. This growing concern is one of the reasons why the Greater London Council (GLC) has formally objected to the proposed Sizewell 'B' PWR. In addition the Council decided to host an International Conference this April on transportation of spent nuclear fuel through cities.

COSTLY WHITEWASH

I think the GLC blundered badly by passing all the conference arrangements to a private firm of Scientific Consultants. The resulting conference — "Urban Transportation of Irradiated Fuel" barely addressed the doubts and questions raised by this subject. At a cost of £110,000 the conference featured a series of po-faced men mainly from the international nuclear regulatory agencies. They all droned on about the regulations and standards which are supposed to protect the public. No place was given for a critical assessment of these regulations or the testing of nuclear flasks or the potential hazard from a major accident. "Don't worry — uncle scientist and godfather regulator will ensure your safety" was the message.

Nuclear Industry absent

In spite of the completely pro-establishment bias of the conference the CEB, BR, BNFL and the MoD refused to participate. As the public bodies responsible for this traffic they are an absolute disgrace. Their unwillingness to engage in a serious dialogue on the pros and cons of nuclear waste transport and the potential hazard it poses only lead one to suspect they are hiding something. At best they displayed an unforgivable arrogance.

Tunnel Vision

That pillar of the establishment, Lord Flowers opened the conference. It is all quite safe, he said. The flasks only travel to 14 mph so what possible harm could they come to? It was a classic example of a narrow vision of the problem. Yes he blundered about the speed — they travel by road at 14 mph to the nearest station. Then they are mounted on special wagons and hitched to goods trains. But it's the fact that these goods trains pause for hours and days in busy marshalling yards like Willesden Junction and then travel at speed on the main line north to Windscale which gives cause for concern. That main line of course carries all sorts of other goods such as petroleum tankers, ammunition and so on.

Opportunities Lost

The potential for a major accident and its consequences were never adequately discussed. I feel that the GLC, by erring too much on the side of caution, lost a unique opportunity to bring together in a public forum concerned critics of the current procedures.

U.S. Study Suggests Alternatives

One person who did make a stimulating contribution was Dr. Marvin Resnikoff. He works with the Council on Economic Priorities, a New York-based public service research organisation who have recently published an incredibly important and informative book "The Next Nuclear Gamble: Transportation and storage of Nuclear Waste."

The CEP study's findings are equally valid for the UK. They recommend that government upgrade shipping cask testing facilities and physically test one cask of each design; develop casks and securing devices able to withstand a realistic accident; and improve emergency preparedness in local communities through which nuclear fuel is transported.

Gas-cooled storage

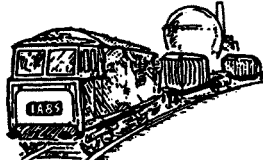
Marvin Resnikoff outlined the complete shift of emphasis that CEP propose — to store the spent fuel rods in dry stores beside the reactors 'till sufficiently cooled; and then to transport under improved safety conditions to a central permanent store. This eliminates reprocessing and all its attendant hazards including the physical concentration of the extremely toxic "high-level wastes."

Wylfa Dry-store exists!

Britain has the technology available to do this. A gas-cooled spent fuel store has been operating successfully at the Wylfa Magnox Station in Anglesey for some years. What is needed now is publication of the operating experience at the Wylfa Store and examination of dry storage adjacent to each reactor. This would lift the threat posed by current rail transportation of 'hot' nuclear fuel and eliminate the need for the plutonium factory at Windscale.

We have always pointed out that the only safe long-term solution is to shut down the reactors producing these radioactive waste products — that means the 'civil' nuclear power stations, the military plutonium reactors at Calder Hall and Chapelcross and the naval hunter-killer and Polaris submarine reactors. Neither this, not the dry storage proposals were on the agenda of the GLC conference. They should have been.

David Somervell



DON'T TAKE THE A-TRAIN - A Critical Examination of Nuclear Waste Transport is an invaluable pamphlet, written by Ian Welsh of Lancaster Half-Life, which SCRAM published in 1981. Recently re-printed it provides an excellent introduction to the potential hazards and exposes the assurances of the nuclear industry. Available from the **Smiling Sun, 11 Forth Street, Edinburgh 1** for 60p plus 20p post.

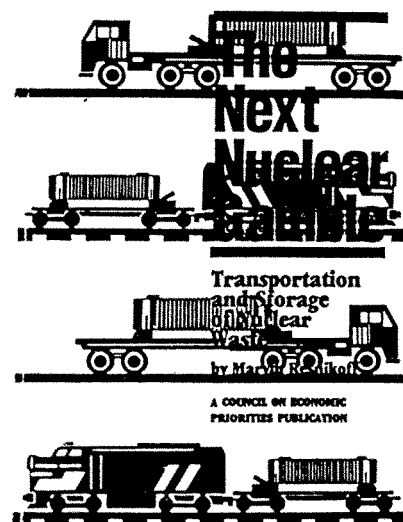
THE NEXT NUCLEAR GAMBLE: Transportation and Storage of Nuclear Waste, Dr. Marvin Resnikoff, CEP \$18.50 inc. post from CEP, 84 Fifth Avenue, New York, NY 10011. Both SCRAM AND LRWTC hold library copies for loan.

The **London Region Waste Transport Campaign** is in process of change. Margaret and Pete Savage-Jones who have done such a fantastic job these last three years are needing to pass on some of the responsibility along with the mass of information that has been gathered. We hope to be able to say in next issue who will continue their information resource and campaign work.

In the meantime you could send a few stamps for a copy of Margaret's last issue of the LRWTC newsletter — **ROUTING OUT** to R.O. 61A Strathleven Road, London SW2. Routing Out will continue and encourages people to send Waste Transport info (and donations) to the above address.

Transcripts of the **U.T.I.F. Conference** are available from Rick Kelly, GLC Scientific Advisor, County Hall, London SE1.

Details of activities in London From: **ALARM — All Londoners Against Radioactive Materials** — phone Miranda Miller 01-351 3618



Obituary

On June 18th **Stan Reid**, tireless activist in the Highland Anti-Nuclear Group, was tragically killed by a car while he was cycling home from Inverness to the Black Isle.

Originally from Belfast, Stan was 32 years old. He was a very special person, both in his capacity to care for others and his total commitment to the anti-nuclear cause — both in his personal lifestyle and his campaign activities.

His contribution to the anti-nuclear cause in Scotland cannot be overstated. Since 1978 he was both a dedicated and effective campaigner on issues including Torness, Dounreay, Waste Dumping, Alternative Energy, Plutonium Nitrate shipments and Rio Tinto Zinc. He was almost boundless in his energy to carry on, and to inspire others.

Stan effectively co-ordinated the campaign throughout the Highlands, and was an active member of the Scottish Anti-Nuclear Groups network. Latterly he was also active in C.N.D.

Stan was joint secretary of Inverness C.N.D., press officer for the Highland Anti-Nuclear Group and treasurer of Inverness District Labour Party. Both personally and campaign wise, Stan will be sadly missed.

Mary Scott

The Sheffield-based Anti-Nuclear Campaign (ANC) has been forced to retrench and close its office. Apparently organisational difficulties with the Anti-PWR Consortium compounded the financial problems facing the ANC. But the Steering Committee recently reaffirmed its determination to continue as a membership organisation.

Correspondence and mail orders should still be sent to the Sheffield postal address. More importantly the ANC will continue to intervene in the nuclear debate with the publication late summer of a new pamphlet by Don Arnott on PWR problems.

Contact:- ANC, PO Box 216, Sheffield S1 1BD.

DIARY

- 6th AUG **HIROSHIMA DAY** March and rally Dundee.
- 6th Arrival of various marches and 'Walk for Life' at Greenham Common.
- 6th - 9th **Rosyth Womens Peace Camp** Vigil and Fast. Go along and give your support? Contact 031-667-8673.
- 6th onwards **'Fast until Death for Life'** Greenham Common.
- 6th - 17th **March from Berlin to Geneva** organised by **Frauen für den Frieden** (Women for Peace) Contact Hildegard Klimmeck, Heyl strasse 5, 1000 Berlin-62.
- 9th **NAGASAKI DAY** — 38th anniversary of one instance of mass murder.
- 17th **The Legacy of Britain's A-bombs.** Meeting organised by local groups on the effects on service people during nuclear tests. All welcome — Queens Hall bar, 7.30 p.m.
- 20th **Edinburgh FLAG DAY** in aid of The **SMILING SUN** and **SCRAM**. Can you help? Phone 557-4283.
- 20th **Focus on Porton Down day.** Demonstrations nationwide to bring to peoples attention the animal exploitation for military research at Porton Down. Contact BUAV 01-734-2691.
- 27th **Celebration of Life** outside Allington Farm, breeding centre for Porton Down. Contact British Union for Abolition of Vivisection.
- 2nd SEPT **Peace - Is it a womens issue?** Public meeting as part of Book festival, 3 - 5 p.m. in the marquee in George Square, with authors of new Feminism / Nonviolence books. At 7 p.m., a discussion at Crosswinds, Tollcross on **Violence, Nonviolence and Women.** Women only.
- 3rd **Animal Rights Maidstone National** march against Charles River Inc. Worlds largest breeders for Animal vivisection. Contact Bill Croucher 0795-21045...



Little Black Rabbit was visiting some old friends on the Clyde Estuary the other week, and just remarking how dangerous it was crossing the roads these days with the terrible traffic - when she was nearly rubbed up the wrong way by a 10-ton truck! She could hardly believe her eyes, for the truck was just part of a huge convoy including five 10-ton trucks, motorcycles and armed guards.

Thinking that this must of course be a secret shipment of Chevaline warheads for the Faslane submarine base, Little Black Rabbit rushed to alert her relatives. Imagine her surprise when no one would believe her. 'Don't be silly' they said, 'we were given assurances by a nice man from the MoD that all such shipments would be made by sea. And anyway, it wouldn't be safe. Only the other day there was a fractured gas main on the road to Faslane. Imagine if that had blown up when this convoy was passing.'



No one, it seemed, could tell her anything about these convoys. Not the Scottish Office, nor the Chief Constable for Strathclyde, while the nice men from the MoD only blushed and asked her if she would like to sign a piece of paper.

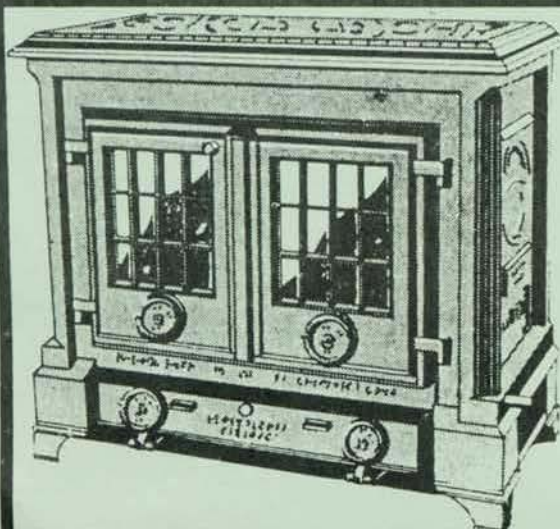
Finally, Little Black Rabbit had a flash of inspiration - she would ask her friends at a well known T.V. company to come and film a convoy for themselves. Needless to say, she was more than a little put out when, on seeing that the convoy belonged to the MoD, her friends just packed up and left, muttering something about 'D Notices', whatever they are!

So, Little Black Rabbit is back home now, and if you should hear anything about mysterious convoys on the roads - she doesn't want to know.

Little Black Rabbit xxx

- 10th **Nationwide Demonstrations** against animal abuse in schools. BUAV, Youth for animal rights Chard 5090.
- 10/11th **Scottish CND annual conference**, Dundee. Contact SCND.
- 17/18th **Sheffield Green-Peace festival.** Theme a "Respect for Life". Alternatives to Violence, death, exploitation and suffering. Workshops, talks, poets, stalls, theatre, clowning, juggling, crafts, dancers, music and more. Camping facilities too, Norfolk Park, Sheffield. Contact Sheffield Peace Action, c/o The Peace Shop, 51 Leopold St., Sheffield S. Yorks. Sheff 381251.

- 29th **Oppose the Plans for War. "Close down the City".** Plans to get people to strike for the day in protest against the financial and company institutions in London, to make the point that **human life is more important than money**, and more powerful. Details contact "Stop the City" c/o London Greenpeace, 6 Endsleigh St., WC1.
- 8/30th **Peace Camp in Glasgow**, hopefully in George Square. Finance and sponsoring of volunteers needed. Contact Centrepeace, 143 Stockwell St., Glasgow 041-552-8357.



FROM THE WORLD FAMOUS COALBROOKDALE IRON FOUNDRY FIRST ESTABLISHED BY ABRAHAM DARBY IN 1709 HAS NOW COME:

THE DARBY

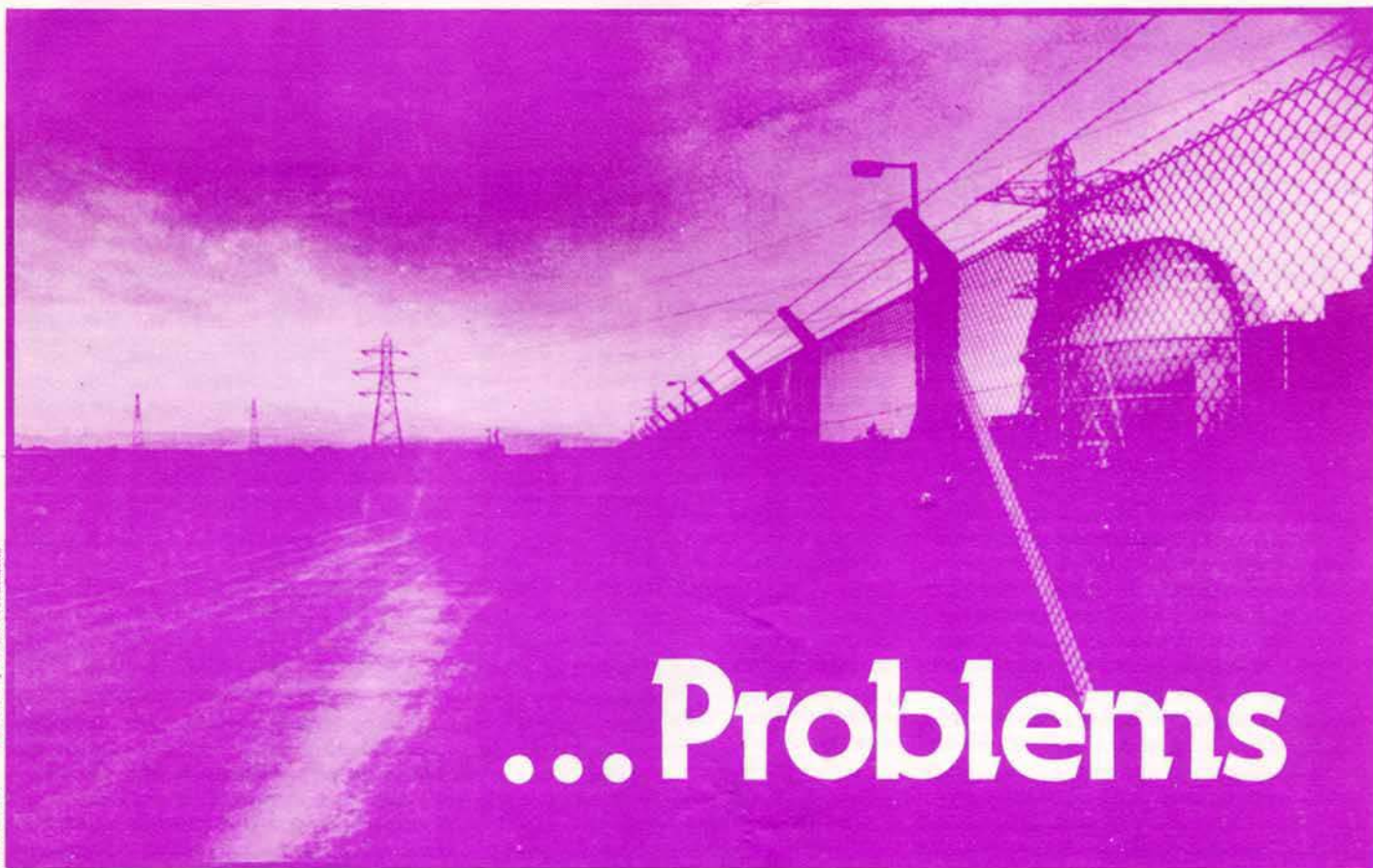
MULTI-FUEL STOVE

FOREST FIRE

50 ST MARYS ST. EDINBURGH. 031-556-9812.
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NUCLEAR POWER



Windscale
Picture by Mike Abrahams

...Problems

The nuclear dream of thirty years ago was that nuclear energy could be peacefully harnessed to provide cheap, plentiful electricity and bring growth and prosperity to the nation. A sense of technological euphoria prevailed – any problem could be overcome – and questions posed by such problems as radioactive waste were given a low priority. Knowledge about the ill-effects of radiation was very limited, but this deterred few of the experts.

Today, that image of a confident and expanding nuclear industry has long gone. Nuclear power is beset by critics from every walk of life. Public bodies such as the Royal Commission on Environmental Pollution and the Monopolies and Mergers Commission have published influential reports critical of nuclear safety

and economics. The Parliamentary Select Committee on Energy has found evidence of bad decision-making.

Growing numbers of academics have found gaping holes in the nuclear establishment's arguments on need, economics and safety. And some of the most damning criticisms have come from nuclear scientists themselves, whistle-blowing on inadequacies in the industry.

What has gone wrong? In this broadsheet, one of a series which examine various aspects of the nuclear controversy, we try to answer as factually as possible. We feel sure that once you know the facts, you will reach the same conclusion as us: the nuclear dream is rapidly becoming a nightmare. There are alternatives, but it will need concerted public pressure to bring them about.

The 'Energy Crisis' Myth

"A new renaissance might well be in sight, and the leisure hours which nuclear energy might bring to the great mass of the people may well lead to a twentieth century equivalent of the Golden Age of Elizabeth I." Atomic Power, 1955

As late as 1976 the UK Atomic Energy Authority was arguing that Britain needed to launch a massive nuclear power programme in order to avert a future 'energy crisis'. At that time, they said that Britain should build a further 80 nuclear reactors by the end of this century alone. This compares with only five reactors then under construction. But where is this energy crisis now?

- Growth in electricity demand has

collapsed from 6% a year in the '60s to less than 1% p.a. today. Energy demand as a whole has actually fallen substantially in the last ten years.

- The Central Electricity Generating Board (CEGB), faced with a surplus of over 60% in generating capacity has closed 35 coal-fired stations before the end of their useful life. The Scottish Boards have an over-capacity of a staggering 90%.
- There is little prospect of increased demand in the future because of the trend towards greater efficiency in the way energy is used. Several 'low-energy' scenarios forecast that, even with high levels of econ-

omic growth, Britain would use no more energy in the year 2025 than we do today. This is simply by using already proven energy conservation technologies.

"Nuclear energy is in trouble. The great dream that many of us had 30 years ago that nuclear energy would set us free has been turning to ashes."

Alvin Weinberg, former director of the US Oak Ridge National Laboratory and one of the fathers of nuclear power.

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They cannot justify their present nuclear reactor programme on the grounds of 'need'. So they turn to 'economic' arguments instead.

Nuclear Electricity Costs

Nuclear power was originally hailed as 'too cheap to meter', but this too has proved to be a fallacy. The first generation of 'Magnox' stations were generally agreed at the time to have been an economic disappointment. Originally designed for production of plutonium for nuclear weapons, the design proved too inefficient for electricity generation and too expensive to build. As a result, consumers in the '60s paid an extra £20 million per year for their electricity. The recent CEBG report 'Analysis of Generating Costs' admits that Magnox units always costs more than coal.

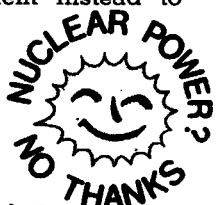
The next generation of British reactors were the AGRs (Advanced Gas-cooled Reactor), several times larger in output than the Magnox reactors. However, the AGR programme proved to be an engineering disaster; construction delays have ranged from 3-10 years, whole cost over-runs have been between 30 and 120%. Like the Magnox before them, the AGRs have become a financial burden on the consumer.

The Electricity Boards have only been able to present figures which

show 'nuclear' electricity to be cheaper than 'conventional' electricity by using an accounting system which, in the words of a Select Committee of MPS, "...is highly misleading as a guide to past investments and wholly useless for appraising future ones". Independent estimates show that if the Electricity Boards used a proper 'Current Cost' accounting convention, nuclear electricity would be shown to be at least 30% dearer than that from coal-fired stations. There is no reason to assume that future nuclear power stations will alter this assessment without also assuming improbable increases in the price of coal and optimistic improvements in the performance of nuclear technology.

The American Pressurised Water Reactor (PWR) design offers no better prospect of cheap electricity, if the US experience is to be our guide. Power utilities there have stopped ordering any new PWRs and one of the biggest public utilities, Tennessee Valley Authority, has halted its nuclear construction programme and switched its investment instead to energy conservation.

£\$



The Hidden Dangers

Nuclear power poses a unique threat to life and the environment: radiation. You cannot feel it, smell it or taste it, but radiation is deadly. It causes cancer, genetic damage to future generations or sterility. In very large doses it will kill outright in days from radiation sickness. The effects of lower doses may remain hidden for up to 30 years before being diagnosed as a cancer or leukaemia. There is no safe dose, however small.

Radiation is emitted when an unstable radioactive 'nuclide' spontaneously disintegrates. The Nuclear Fuel Chain generates massive amounts of these nuclides, some of which remain dangerously radioactive for hundreds of thousands of

"The majority of scientists had the same stupid attitude as I did... if you don't know the effects of low-level radiation, you don't stand in the way of progress."

Dr. John Gofman, discoverer of Uranium 233

years. Once released into the environment they can be concentrated in food-chains. So there can be no slip-ups; safeguards at every stage of the chain must be infallible.

Nuclear scientists and engineers argue that, given enough time and money, technology can be devised to make nuclear power safe. They say that the chances of a serious accident are extremely remote. But despite the 'white-coated' image which the industry likes to project, the actual track record is somewhat different:-

- The effects of radiation exposure have been consistently underestimated.
- Many technical problems, such as decommissioning of old reactors and disposal of radioactive wastes, remain unsolved.
- Time and again, nuclear scientists have failed to foresee problems or underestimated risks.
- Radioactivity is routinely released into the environment from nuclear power stations, uranium mines and processing factories. This is despite international controversy about the ill-effects of low-level radiation exposure.

The nuclear industry has consistently been more concerned with pushing through their reactor building programmes than with public safety or accountability. Their assertions that they can deal with any problems are simply a short-sighted technological arrogance.

"We became so concerned... that we can no longer work for the industry and keep our doubts to ourselves."

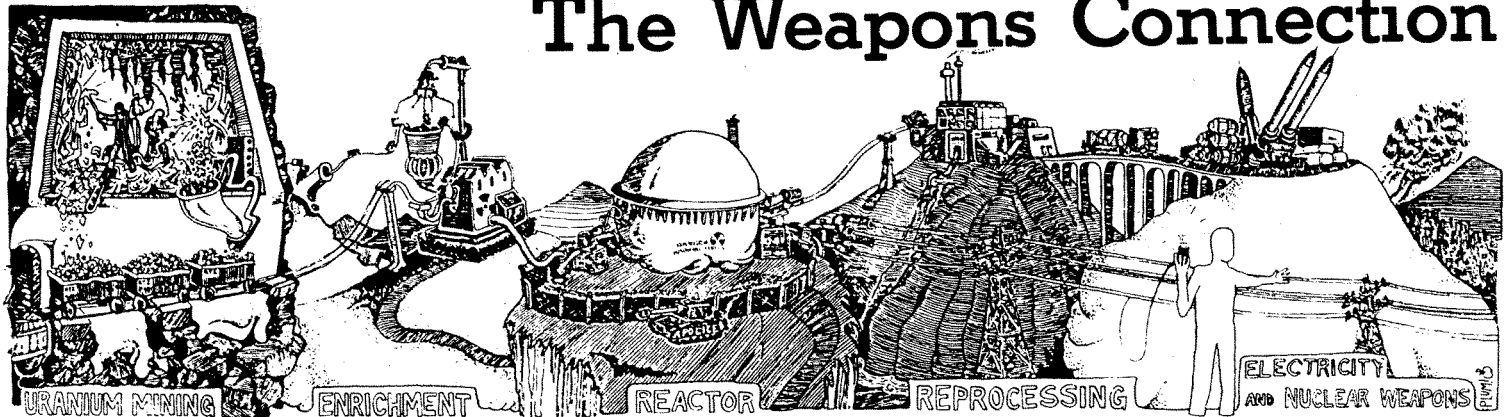
Gregory Minor, one of three US nuclear engineers who now campaign for the anti-nuclear lobby

Accidents Will Happen

Nuclear accidents have been common since the start of the nuclear programme, contrary to the image the industry likes to present:

- 1957 Windscale, UK. Eleven tons of uranium blazed in a plutonium production reactor leading to the contamination of 2 million litres of milk and 300 square miles of land. Estimated to have caused at least 20 deaths through cancers.
- 1958 Urals, USSR. 'Several hundred' deaths and thousands of square miles of land rendered uninhabitable following a spontaneous explosion at nuclear waste site.
- 1961 Idaho Falls, Idaho, USA. A small military reactor explodes killing three technicians. Their bodies have to be buried in lead-lined coffins.
- 1966 Detroit, Michigan, USA. Part of the core of an experimental Fast-Breeder Reactor overheats and melts. A full-scale meltdown is narrowly avoided.
- 1969 Rocky Flats, Colorado, USA. A fire burns the plutonium equivalent of 77 Nagasaki-sized bombs, scattering an undetermined amount of wind-born radioactive dust. Over 200 plutonium fires have occurred at this weapons production plant.
- 1972 West Valley, New York, USA. Explosion and contamination lead to closure of weapons plutonium production factory.
- 1975 Brown's Ferry, Alabama, USA. A candle, used by electricians checking air leaks in the maze of cables under the control room, starts a fire which burns for six hours. All emergency cooling systems are disabled.
- 1976 Windscale, UK. 500,000 gallons of radioactive liquid leak from underground storage tank. It is still leaking because it is unknown how to stop the leaks and because there is no alternative site to move the wastes to.
- 1977 Hinkley Point, UK. Burst pipe forces shutdown of reactor and disables back-up cooling system. Fire hoses have to be used to supply water to cool the reactor.
- 1979 Aldermaston, UK. Twelve people, including three laundry workers, are found to be contaminated with plutonium. Many weapons production buildings closed.
- 1979 Harrisburg, Pennsylvania, USA. Plans are laid to evacuate over half a million people as operators lose control over the Three Mile Island Pressurised Water Reactor following a loss of coolant accident. The week-long accident is the industry's worst yet.
- 1980 Cap La Hague, France. A serious fire at this reprocessing factory cuts out main and back-up electricity to coolant pumps supplying waste storage tanks. Major catastrophe only avoided by luck - the machinery was closed down for plutonium loading at the time.
- 1981 Windscale, UK. £96,000 compensation is paid out to the widows of three Windscale workers. Two of the workers died of cancer and one was blinded. To date, £220,000 damages have been paid to seven widows.
- 1981 Windscale, UK. Radioactive Iodine 131 released, leading to contamination of surrounding land. Concentration in milk supplies found to be hundreds of times higher than international limits.
- 1982 Ginna, New York, USA. An emergency is declared after a leak in the notorious steam generators leads to the formation of a steam bubble over the core. The accident bore worrying resemblances to Three Mile Island three years earlier.

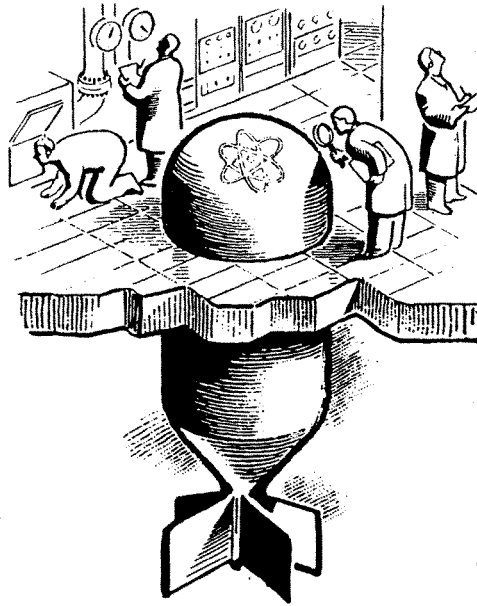
The Weapons Connection



'Atoms for Peace' was the American slogan used to sell nuclear power in an international commercial bonanza. But the sale of nuclear technology around the world has led to a growing number of governments using their 'civil' nuclear technology to make nuclear weapons.

In addition to the six nuclear weapons states - UK, USA, USSR, France, China and India, 24 countries have gained the technological expertise and the nuclear fuel to build nuclear weapons. Eight of the 24 - including Brazil, Argentina, South Africa, Israel, Egypt and Pakistan have not signed the Non-Proliferation Treaty (NPT), a treaty that attempts to control the spread of nuclear weapons.

- During the 1960s India built several reactors supplied by Canada, and in May 1974 they exploded an atomic device underground. India claims it tested the bomb for 'peaceful purposes'.



- Several countries have supplied Pakistan with nuclear technology. Apparently Libya is providing Pakistan with uranium, thus bypassing the need to obtain uranium from the West.

It is generally believed that Israel's experimental reactor at Dimona has already manufactured nuclear weapons. A double flash picked up by a US satellite passing over the South African Cape in 1979 probably signalled an atmospheric test carried out in conjunction with South Africa. Israel and South Africa are believed to be co-operating with Taiwan to build a wide range of nuclear weapons.

- Argentina has been supplied with reprocessing facilities by Germany, and is believed to be near to producing its own nuclear bomb.
- The Osirak reactor in Iraq was bombed by Israel to thwart Iraq's alleged attempts to develop nuclear weapons.

Nuclear Wastes: A Deadly Legacy

Radioactive wastes are produced at all stages of the Nuclear Fuel Chain, from the 'tailings' discarded in uranium mining to the highly radioactive wastes from the reprocessing of spent reactor fuel. Some of these wastes will remain deadly for over 100,000 years. There is no way in which they can be made non-radioactive and so some permanent solution must be found to store them safely. Due to complacency in the nuclear industry this remains, 30 years into the nuclear programme, one of their most intractable problems. Today, Britain's nuclear waste disposal programme is in disarray.

The 'test-drilling' programme, to discover the feasibility of disposal of wastes in rock formations deep in the mountains, has likewise been cancelled in the face of strong public opposition. It is now six years since the Royal Commission on Environmental Pollution concluded that:

'...a quite inadequate effort has been devoted to the problems of long-term waste management, ... there should be no substantial expansion of nuclear power until the feasibility of a method of safe disposal of high-level wastes for the

long-term future has been proven beyond reasonable doubt.'

But the nuclear expansion continues in spite of these warnings.

Now the industry has suddenly woken up to the problem of disposal of 'intermediate' active waste which is building up from the expanding nuclear programme. It has now been decided that a disposal site must be found within five years, but even this 'solution' must still resolve the problem of containment and monitoring of a disposal site for more than 300 years.

It has been the stated policy that 'high-active' wastes from the reprocessing of spent fuel rods would be 'solidified into glass blocks' before disposal deep in rock formations or under the sea-bed. After 20 year's development, the British 'Harvest' process for the production of these glass blocks has had to be abandoned. No country has yet succeeded in developing a proven system for the solidification of these wastes.

'If a problem is too difficult to solve, one cannot claim that it is solved by pointing to all the efforts made to solve it.'
Hannes Alven, Nobel Laureate

'Low-level' wastes have until now been tipped at a dump called Drigg near Windscale in Cumbria, dumped in barrels into the Atlantic or discharged directly into the sea. The industry say that this is all quite safe, but doubts are beginning to appear! Liquid waste discharged into the Irish Sea from Windscale reprocessing factory was supposed to be dispersed by currents and diluted. Instead, radioactivity is building up and the Irish Sea is now the most radioactive sea in the world.



At the London Dumping Convention in February 1983, a majority of 19 to 6 voted for a two-year ban on ocean dumping of radioactive wastes. This followed international concern about the environmental effects. The British Government, after voting against the ban, is now defying it. It is one of the few remaining countries still determined to dump at sea, accounting for a staggering 90% of the radioactivity dumped.

The Pressurised Water Reactor (PWR)



In 1979, the new Conservative Government announced its intention to build an American-style PWR to replace the British AGR design. It was this kind of reactor which was involved in the near-disaster at Three Mile Island. In a PWR, the heat generated by fission in the core is removed by circulating water at very high pressure - up to 400 atmospheres. It is this use of high pressure water which gives the PWR its special safety problems, its built-in flaw.

Because the coolant in a PWR is at such high pressures, even a small leak in the cooling circuit can lead to a rapid loss of coolant.

When this happens, the remaining coolant around the core begins to turn to steam, a very poor conductor of heat. If the reactor operators are unable to restore an adequate supply of water, the core will begin to melt and could burn through the containment vessel, with disastrous consequences. Even if a complete 'melt-down' is averted, lesser accidents can result in releases of large amounts of radiation into the environment.

The proposed Sizewell 'B' reactor is a PWR, although all future orders in the USA, home of the PWR, have been cancelled.

Safer, More Secure Alternatives

The nuclear dream of 30 years ago is shattered. To start a nuclear programme in the hope of building a new and better society could be excused as naïve over-confidence; but to continue with such a programme with the track record above is negligence bordering on megalomania. Worse still, there are far more appropriate ways to provide society's energy needs now and in the future:-

Energy Conservation. A determined and sustained government policy of promoting energy conservation, backed with money, would make enormous savings in energy demand. This would permanently improve the energy efficiency of buildings, providing warmer homes and workplaces at lower cost.

Coal. Reserves of coal in this country are estimated at 300 to 1000 years' supply. More efficient and less polluting use should be made of this coal

by burning it in fluidised-bed boilers and in local Combined Heat and Power stations. These use the waste heat from electricity generation to heat nearby houses, factories and offices.

Renewable Sources of Energy. Money saved from research on nuclear power should be diverted to development of wind, wave, solar and biomass energy. The long-term potential of these sources of energy is enormous: wave power alone could produce three times our present electricity consumption.

Advantages. Unlike nuclear power, these alternatives do not threaten our lives or the environment. Because they can be economic on a small scale, they can be made safer, be more easily understood and therefore, more compatible with open government. They would also provide large numbers of jobs in the construction and engineering sectors.

What YOU Can Do!

The nuclear programme can only be stopped if all those who are horrified by the hazards of nuclear power join together to actively oppose it. One of the great strengths of the anti-nuclear movement is its breadth of popular support: people concerned with erosion of civil liberties, with protecting the environment, with creating meaningful socially-useful jobs and those fighting for a world rid of nuclear weapons have all realised the threat that nuclear technologies represent. They are working to promote safer, saner and more appropriate energy solutions.

You can join in this movement too...by supporting SCRAM and by learning more about the issues. We have published a series of broad-sheets which we will gladly send you. And organisations listed here will gladly send you information on their work - but remember to send a donation towards the cost of material they send you.

Then, when you've learnt more, discuss the issue with friends. Write to your elected representatives. Urge your club, society, branch of trade union or political party to discuss the issue. Only concerted pressure will bring about the necessary changes.

One last word...while SCRAM opposes all nuclear technologies and works for nuclear disarmament and a Europe free of nuclear weapons, we believe it has never been more vital to sustain a strong campaign against nuclear power. We may in time roll back the Cold War mentality of militarism and manage to 'ban the bomb'; but until the nuclear reactors and their attendant industries are closed down and replaced by appropriate energy sources, the state will remain just a short step from nuclear weapons of mass destruction. Peace campaigners need to oppose nuclear power too!

About SCRAM

The Scottish Campaign to Resist the Atomic Menace was formed in 1975. Developing from opposition to the planned reactor at Torness, SCRAM works with groups throughout Britain opposing every aspect of the nuclear chain from uranium mining to nuclear weapons. Our aims are to inform the public about the hazards of the nuclear fuel chain; to oppose by nonviolent means all further nuclear developments in Scotland and elsewhere; and to press for a long-term energy strategy based on energy conservation and the use of renewable energy sources.

We publish the bi-monthly SCRAM Journal for the anti-nuclear, safe energy and disarmament movements. We run an extensive information service and have built up a large anti-nuclear library. SCRAM has published several pamphlets and a book. We have available for hire videos and tape-slide shows. There is also a large Mail Order Service which supplies all the latest campaign materials - with discounts to local groups.

We are funded entirely by subscriptions to the SCRAM Journal and donations. So, more than ever we depend on the practical and financial support of concerned individuals like you. Please consider joining SCRAM or sending us a donation. Thanks!

Contacts

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Tel: 01-837 0731

Friends of the Earth (Scotland) (FoES)
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Tel: 031-225 6906

Campaign for Nuclear Disarmament (CND)
11 Goodwin Street, London N4 3HQ.
Tel: 01-263 0977

Scottish Campaign for Nuclear Disarmament (SCND)
420 Sauchiehall Street, Glasgow G2 3JD.
Tel: 041-331 2878

Greenpeace
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