SCRAM ENERGY BULLETIN

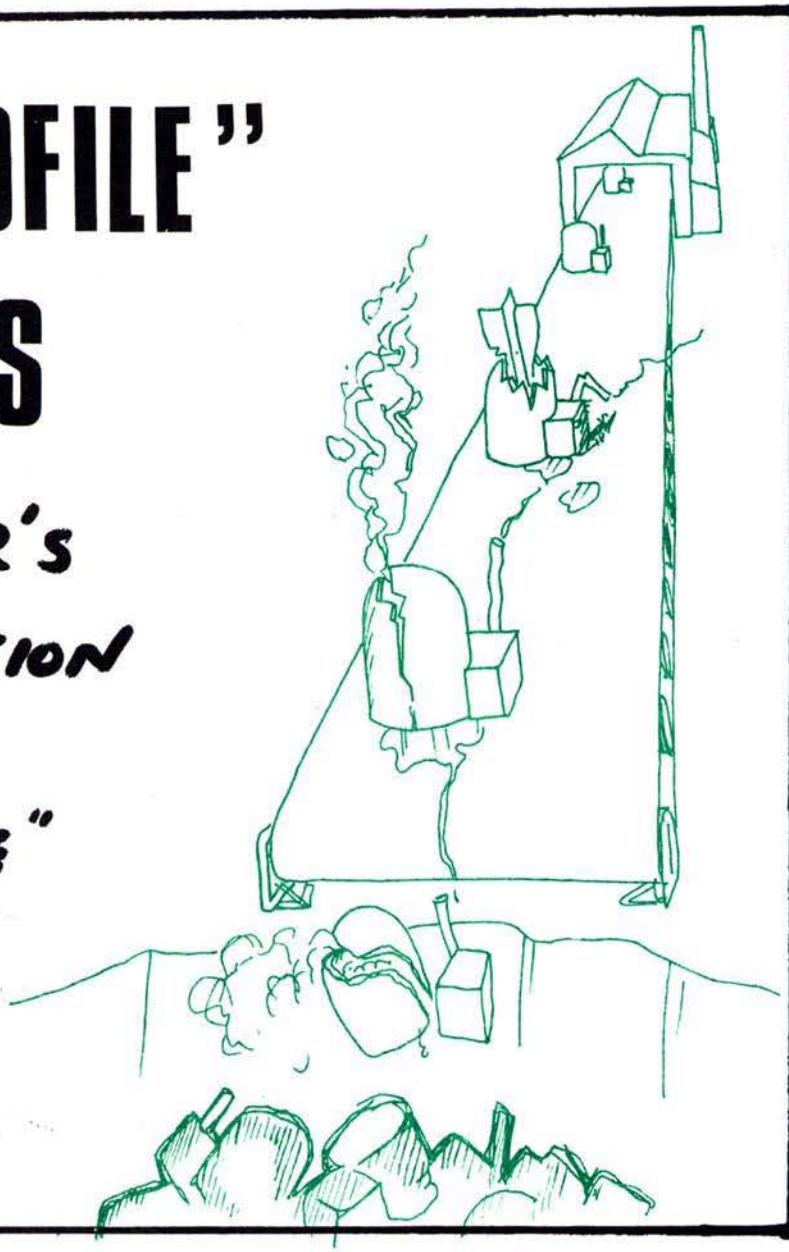
NUCLEAR POWER? NO THANKS

15p

No. 15 December/January, 1979/80

"LOW PROFILE" P.W.R.'S

THATCHER'S CONTRIBUTION TO THE "DISPOSABLE" SOCIETY



- CONSERVATION IS CHEAP!
- LOW-LEVEL RADIATION REPORT
- WINDSCALE WIDOWS FIGHT BACK
- THE PWR EXPLAINED - AND WHY WE MUST OPPOSE IT
- PLUS ALL THE NUCLEAR NEWS FROM HOME AND ABROAD

'SCRAM' MEANS TO SHUT DOWN A NUCLEAR REACTOR

ACCIDENT 'inevitable'

'An accident like that at Three Mile Island [TMI] was eventually inevitable' says the report of the Presidential Commission of inquiry published at the beginning of November. And the report slams the power companies and the Nuclear Regulatory Commission [NRC] for being 'unable to provide an acceptable level of safety for nuclear power.'

The Commission, headed by D.J. Kemeny, agreed that 'The NRC is a headless agency that lacks sense, direction and the vitality that is necessary to adminster safety proceedures on a day to day basis... We feel that a debating society is no way to run a ship.'

Speaking to a crowded press conference, Dr. Kemeny said they found that the NRC and the industry 'seemed to be hypnotised by their equipment.' And that the operators 'training' left them unprepared to deal with something as confusing as the circumstances in which they found themselves.

The 180 page report makes 44 recommendations, including:

- The abolition of the NRC and its replacement body.
- The renewal of operating licences every 4 or 5 years, subject to public hearings.
- The siting of all future nuclear power plants well away from population centres.
- Improvement of warning display panels in control rooms to make it easier to see what is going wrong - at one time during the accident 100 different alarms were sounding.
- Another overview committee on reactor safety.
- More and better research on health-related radiation effects including in particular the 'biological effects of low levels of ionising radiation'.
- There should be better supply of information to the public during emergencies.

Perhaps the most important points of this crucial report are that it recognises what SCRAM has always said - that major accidents are inevitable in pressurised water reactors at the moment. And it recognises that - despite any improvements to safety - there is still a high enough danger of accidents to consider the **closing down** of all reactors near **population centres.**

RADIATION & HEALTH -why the figures are wrong

The nuclear industry have always claimed that the 'routine' emissions of low-level radiation are harmless. But research now suggests that these claims are based on false assumptions, and that **any** addition to background levels of radiation could be harmful.

These views were discussed at a series of international symposia on low-level radiation. Sheila Durie of SCRAM here reports on the Edinburgh conference.

Over 80 people from a variety of occupations attended the conference held by the Medical Student's Council of Edinburgh University. The only group conspicuous by its absence was the National Radiological Protection Board (NRPB) which decides on the radiation protection standards for the general public and workers in the U.K. nuclear industry. They had been invited, but replied that they were 'disinclined to spend time contributing to yet another debate with people whose views had been repeatedly and authoritatively refuted.'

The general feeling of the conference was that the speakers were emphatically not of the calibre that should be so lightly dismissed. Who indeed has the authority in this field of Professor Karl Morgan, ex-Chairperson of the International Commission on Radiological Protection (ICRP), Director of the Health Physics Division of the Oakfield National Laboratory from 1943 to 1972, and who has been dubbed the 'father of health physics'?

It was the recent ICRP report number 26 which formed the main theme of Professor Morgan's talk. It is recommended that radiation exposure limits for certain organs be **increased**. He discussed the way in which radiation standards were set, and criticised ICRP for getting their science wrong. Their recommendations are based on the linear hypothesis - as the radiation dose is increased, the amount of damage also increases.

Professor Morgan said that 'the linear relationship may not be sufficiently conservative' and there is in fact a greater risk of cancer at low levels than at much higher levels. ICRP use evidence from the survivors of the Japanese atomic bombs (i.e. very high doses) and extrapolate downwards as to the effects at low levels.

But, as both Dr Alice Stewart and Professor Morgan pointed out, at large doses of radiation, people do not survive to die of cancer. They die first of psychological shock, burns or more importantly of diseases produced by damage to the immune-response system, e.g. pneumonia.

This is a theme that cropped up in much of what the speakers had to say. Dr Blackith talked of the practice of the ICRP and NRPB of setting the dose limits on the basis of the average member of the population, while there is much evidence to suggest that certain members of the population are more susceptible to radiation exposure than others, e.g. those with immunological problems.

That, he suggested, was why epidemiological studies are now showing increased rates of cancer in areas which have nuclear installations in them, such as the area around Windscale. It would appear that certain people in the area are receiving a substantial fraction of the ICRP limit. The nuclear industry is loudly disclaiming a link between Windscale and the increased rates of leukaemia in Lancashire. They say that the emissions from Windscale are within the natural variation in background radiation for different areas of the country, and therefore it seems unlikely these increases can be caused by these relatively low levels.

The last speaker was Sister Rosalie Bertell, she has approached the problem from a different direction. The risk of leukaemia increases with age at the rate of 5-6% per year. The risk of contracting leukaemia, for her subjects who had been exposed to trunk X-rays, was increased by 4-5%. So, the amount of radiation received from a heavy abdominal or spinal X-ray is equivalent to one year's ageing.

If there was one flaw in the conference, it was a lack of discussion about the politics involved in the whole debate. The only scientists to draw attention to this aspect was Professor Morgan, who slated the U.S. nuclear industry for its poor safety standards. If the present standards were to be **reduced** as he and other scientists recommended, Professor Morgan doubted if the nuclear industry could continue in operation.

The British nuclear establishment is not immune from Professor Morgan's critique. It was a pity that they declined to enter into the debate.

50 years ago...

Overcome the most obstinate RHEUMATISM

The National Physical Laboratory, Teddington, have certified the Radioactivity of the minerals employed.

A Proven and Acknowledged Remedy

FROM RADIO TIMES 7 JUNE 1929

URANIUM MINING IN DONEGAL?

Since the USA banned all exports of enriched uranium, the European Nuclear Industry has been looking for alternative sources of supply. One of the areas being considered is Fintown, Co. Donegal, Ireland. Anglo United, a Canadian company, have been conducting test drilling. It has been rumoured (by them) that the rock there contains 0.3 - 8 lb of Uranium ore per ton - 2lb of ore per ton is needed for a clear profit.

If plans go ahead, the uranium would be removed from the rock on site and transported in the form of yellow-cake to Springfields (near Preston) and then Chester to be enriched. For every ton of yellow-cake leaving Ireland, Fintown will be left with 100 tons of sand containing radium and radon gas, and 1000 gallons of radioactive liquid waste.

The protestors have produced a pamphlet 'Uranium Mining in Donegal'.
Contact is William Sida, Dooey North, Lettermacaward, Co. Donegal, Eire.

Another Silkwood?

American freeways are notoriously dangerous places to be, for some more than others, it appears.

Sister Rosalie Bertell, one of the speakers at the conferences on low-level radiation (there were 7 in Europe all together) was driving home from New York one afternoon. She was in the second fastest lane. A car overtook her, swerved in front of her, the driver threw a heavy metal object at the front of her car and drove off. Fortunately it missed the windscreen. Rosalie drew into the side. After a few minutes, a policeman drew up, asked what had happened, said he would radio in about the incident and she would be contacted. Rosalie couldn't tell him very much.

The police car and the man were bogus. When Rosalie went to inquire about the incident, the police were puzzled. They had received no report.

Is it coincidence that Rosalie should be attacked before a very important tour - a women who does a great deal of anti-nuclear campaigning in the States? Or was the (armed) "policeman" there to ascertain how much she remembered?

uranium

The uranium mining workshop at the A.N.C. launching conference in London decided to reconvene in Manchester on Jan. 19th 1980. Exact details are being organised by Roger Moody of CIMRA (92 Plimsoll Rd, London N4; Tel. 01-226-3479), and will hopefully be available by before Christmas. Subjects for discussion will be, amongst others, a public education programme, the role of British based multinationals, and how best to put pressure on them, and uranium exploration in Britain and Ireland, (especially Orkney and Donegal).

Simon Taylor at SCRAM Edinburgh is drawing up an agenda, so please contact him if you've any ideas, points for discussion etc... The meeting is open to all interested persons.

SCRAM+

AntiNuclear CAMPAIGN!

The nationally co-ordinated Anti-Nuclear Campaign was officially launched on 24th Nov. at a London conferences chaired by Arthur Scargill. Over 500 people - individuals and group delegates - took part in the conference, which was the biggest working meeting of anti-nuclear activists in Britain so far.

The morning session was taken up by platform speeches from several 'big names' in the international movement.

The afternoon session was filled by workshops - each lasting all afternoon, and was probably more productive. Although some workshops didn't seem to really get off the ground, several were very useful, and national networks have now been set up for all groups concerned with waste dumping, waste transport, uranium mining and radiation and health.

The setting up and structure of the ANC has been surrounded by much debate and controversy. SCRAM Edinburgh has taken part in it so far because we believe it is more productive to join it and give it a positive input, than to condemn it before it starts.

We believe it is vital to improve liaison between groups. A national information gathering and co-ordinating body is equally important. We hope the ANC will fulfill these roles. As things are it is necessary to have a London lobby - like it or not, London is still where most decisions are made. We do not accept the criticism that a London organisation will automatically take over the Scottish movement. This will only happen if we in Scotland refuse to take part in it. But there is a tendency for Londoners to think that nothing happens outside London, and we call on the Steering Commitee to be particularly aware of this. We trust, at least, that meetings will move round the country - people had to travel over 700 miles from Orkney to get to London.

There is also the danger that the campaign may get too media conscious. As far as the press were concerned, the conference was Arthur Scargill's opening speech. Lessons have to be learnt from this. The ANC should be a back-up support for groups, and a high-level lobby. It must not become a personality cult and any attempts to make it so will have to be firmly squashed. No one person is crucial to the ANC or its formation.

There have been arguments about the political composition of ANC platforms. These arguments probably represent the political breadth of the movement - nuclear power can kill anyone, so it's not surprising the movement contains people of all shades of opinion. Arguing over our differences merely plays into the nuclear lobby's hands. We are too diverse a campaign to agree over all points - we must concentrate on the points of agreement and build from there.

The ANC is a major attempt to bring the many groups together, not for common policy, but for liaison. We urge all groups to take an active part in ensuring this is what it does, and to make it fully representative. We do see dangers n its structure but fail to see how boycotting it can help. Thus we are taking part in it at the moment to help determine the direction it takes.

Our position will be under constant review. To help us we ask readers to write in with their views, and we will be devoting a page in the next issue to letters on the subject. [n.b. short and legible letters are more likely to be printed in full]. We - and the ANC - look forward to hearing from you.

ANC INTERIM STEERING COMMITTEE

Arthur Scargill, Miners' Hall, Barnsley.
Val Stevens, 35 Chantry Rd, Moseley, Birmingham.
Tony Webb, 9 Poland St., London W1.
Mike Holderness, 128 Bethnal Green Rd., London.
Jonathon Porritt, 57 Hamilton Terrace, London.
Sybil Cock, 9 Grove Dwellings, Adelina Grove, London E1.
Hugh Norman, 23 Bisley Rd, Stroud, Gloucs.
Ian Welsh, 63 St. Oswald St, Lancaster.
Len Taltz, 16 Nethergreen Rd., Sheffield.
Brian Revell, 36 Kings Rd, Reading.
Martin Goldshmidt, 26 Rolls Court Ave, London SE24.
Mary Scott, 2a Ainslie Place, Edinburgh 3.
Jim Garrison, 9 Marion Close, Cambridge.
Martin Spense, 115 Westgate Rd, Newcastle-upon-Tyne 1.

NEWS ROUND-UP

PLEASE CAN WE HAVE OUR URANIUM BACK, PLEASE?

The UK Atomic Energy Authority (AEA) has lost 7 tons of 'extremely toxic' uranium over the last year. The loss was discovered during the annual stock-check by the AEA and British Nuclear Fuels Ltd. It is valued at over £¼ million.

In fact, nearly 27 tons of uranium is totally unaccounted for - but there was an inexplicable 'gain' of 19 tons at Windscale, so the AEA have decided to offset the two and call it a total of 7 tons lost.

A spokesperson explained to the BBC that the uranium hadn't actually been lost - it was still in the system, just that they 'weren't sure where'. The AEA have ruled out an inquiry, pointing out that the figures were even worse last year when almost 10 tons were lost.

Although the amount is only a small fraction of the total uranium handled over the year, 7 tons is a worrying quantity of uranium. It means there is no check against thefts, and it makes one wonder if the AEA are competent to do stock control for an ice-cream factory, let alone the British Nuclear Programme.

[Daily Telegraph 3/11]

EAST ANGLIA

East Anglia was almost wiped off the map by plutonium in 1956, according to ex-officers of the USAF base at Lakenheath, Suffolk.

The Omaha World-Herald quotes them as saying that a USAF B47 bomber crashed on the base, and flames from its fuel tanks engulfed the base's store of nuclear war heads.

It is claimed that the heat severely damaged the bombs and came near to setting off the TNT charges which trigger the nuclear explosion.

USAF personnel were told to evacuate their families, but there was no attempt to evacuate the British civilian population.

The Pentagon has denied the incident. But this is hardly surprising as, in the words of a former Strategic Air Command Officer there 'Orders came down to keep 'nukes' out of the records. Officially they did not exist. When someone asked why people fled the base, we told them there was live ammunition in the burning airplane.'

NUCLEAR HYDRO POWER

The North of Scotland Hydro-Electric Board have identified a site for a nuclear power station at Stakeness, near Banff, Grampian. Although the site was abandoned in favour of a Peterhead Site, the Board have now said they want to retain the site for possible construction in the 80's.

Meantime, the District Council have agreed to refuse planning permission to anyone developing withing 2 miles of the potential site without permission from the Nuclear Inspectorate.

The Banff-Buchan Nuclear Opposition is calling for all local people to write to protest to the Director of Planning, Town House, Banff. The group's contact address is Hillhead of Lethenty, Fyvie. Tel. Fyvie 485. They are calling for a decision to build an oil or gas fired plant at the site.

DIRECT ACTION

On Saturday the 24th of November SCRAM (North East) carried out a symbolic nuclear funeral procession. About fifty people took part altogether and around fifteen of them dressed up in suitable funeral garments and carried a coffin and a dustbin of 'nuclear waste'.

A lot of Aberdeen shoppers saw the procession as it proceeded along Union Street, the main street in Aberdeen. The dustbin of 'nuclear waste' was then presented to the Conservative Club.

The funeral procession was organised to draw attention to the dangers of nuclear waste dumping which is of particular relevance in this part of the country as Deeside is one of the sites which has been chosen for the possible dumping of nuclear waste.

The dustbin was presented to the Conservative Club because of the Tory Government's plans for a rapid expansion of nuclear power.

The procession was very impressive and attracted plenty of attention from people on the streets. Hopefully a few who saw the procession and read the leaflet, which was given out will maybe stop and think or will start to talk with family and friends about the folly of nuclear power. If even one or two did that, then the procession was a success.

[photo Ian Baird]

US bans all new nuclear plant

US MORATORIUM

The US has announced a total moratorium on all new nuclear plants. The ban will last at least until the Nuclear Regulatory Commission have considered changes in their safety policies. Chairperson Joseph Hendrie said 'this could last for a year or more, or maybe even two years.

The ban follows the results of the presidential commission of enquiry on the Three Mile Island accident (reyiew page), which called for sweeping reforms - including the disbandment of the pro-nuclear NRC itself.

It will mean that 4 reactors planned to go on stream (be switched on) this month will not now be given operating licences. A further 88 are under construction, some of which will be affected.

Mr. Hendrie also said that the NRC might now consider shutting down some operating reactors near big cities because of the dangers of another such accident.

[Scotsman & Fin. Times 6/11]

KILL THEM ALL!

Professor Sir Frederick Warner, one of the assessors at the Windscale inquiry, has said that the inquiry was a waste of money which would be better spent equipping an armed riot police force to stifle opposition.

In an almost incredible speech at Whitehaven, the 'impartial' advisor to Mr. Justic Parker at the inquiry said 'I wonder if the Windscale inquiry did anything?

'While it was on, there was a demonstration at Flamville in France. The French called out 10,000 riot police and one demonstrator was killed.

'That exercise cost about £200,000, whereas we spent £3 millions on the inquiry - it seems the French spent their money much more effectively.' The result of murdering objectors to nuclear power, he said, was that the French now had 'a super programme of building lots of nuclear reactors.'

Professor Warner is a Fellow of the Royal Society, and an advisor to the National Radiological Protection Board. At the inquiry he was the 'indepdendent' expert called in to help the judge in his assessment of the different evidence. With such views, is it any wonder that the inquiry decided as it did?

[Whitehaven News 8/11]

Wow!

In 1978-79 £131.9 million tax payer's money went to the UK AEA for 'research and development' while £2.4 million went on alternative energy research. But next year the government plan a massive increase on alternative research - they'll be spending all of £6.9 millions.

(Hansard)

WASTE DUMPS UNSAFE

Two US waste dump sites have had to be closed because of safety violations. The dump in Washington State was closed in September because the waste being shipped in was improperly packaged.

Then in October several drums of radioactive waste were found buried 40 feet outside the dump site at Beatty, Nevada. They were accidentally discovered by a US Geological Survey team which was tunneling in the area as part of a monitoring programme. So far no explanation for this has been found - nor is it known when they were buried there.

The only other commercial US dump, in South Carolina, has said it cannot take any extra waste, and the government is now planning to ask governors of at least 12 states to provide emergency temporary storage sites.

(Boston Globe 21/10)

WASTE TRANSPORT

Swedish nuclear and navigation experts have condemned the British ship transporting nuclear waste from Sweden to Windscale as unsafe.

The 17 year old cargo ship, the Leven Fisher, carried its load of 300 tons of waste in September, the third trip this year. But as it left, Mr. Paul Ek, head of nuclear materials in the Swedish Nuclear Energy Inspectorate, declared: 'When we build a ship for the transport of nuclear materials it will not look like the Leven Fisher'. He pointed out that the ship has no special safety measures and is an ordinary coastal carrier. He called for better navigation equipment and better manoeuvrability.

The waste travels to Windscale through the English Channel - the busiest and one of the most accident prone sea areas in the world.

Sweden is now calling for a safety network set up between northern countries to monitor the progress of such shipments.

[N. W. Evening Mail 13/9]

INFERTILITY

The sperm count of the average American male has more than halved over the past 25 years. Research by fertility experts in Texas has shown a drop from 350 million sperms per ejaculation in 1951 to 171 million today.

Although there is no immediate danger - the fertility level is around 20 million - no cause has yet been pin-pointed. At the moment scientists have ruled out radiation exposure as 'highly theoretical'. (infertility is one of the side effects of radiation). They are currently investigating instead the possibility that poly-unsaturated margarine - now eaten by more people - has a substance which may reduce fertility.

[Sunday Times 18/11]

EEC

The EEC is expected to announce loans shortly of £1 billion for the research and development of nuclear power

DEMONSTRATIONS

TORNESS ACTION

20 people from the Severnside Anti Nuclear Alliance visited Torness on 29th October. They erected a 24ft. scaffolding, which they chained to the front gates of the site of the proposed reactor. They then climbed to the top of it, and chained themselves to it.

They stayed there all day until a major police operaton with arc lights, a mechanical excavator and oxy-acetylene burners got them down (see photo).

The demonstration was to continue the protest against Torness and to draw attention to the proposed reactor at Portskewett. The alliance expect the date of the public enquiry for this to be announced soon.

The Severnside Alliance is also expecting an application for waste dumping test bores in the area to be announced soon.

Some 2,000 demonstrators attempted a non-violent occupation of the Seabrook construction site in New Hampshire on October 6th, but were driven back by police with tear gas and water hoses. Instead they blocked the main entrance gate to the site, stopping construction for 3 days.

Twenty-one people were arrested and hundreds of demonstrators went with them to the court chanting 'All of us or none of us' and 'We all cut the fence.'

The Coalition for Direct Action at Seabrook said direct action would continue. There will be a further attempt at occupation of the reactor next Spring.

(No Nuclear News Oct.)

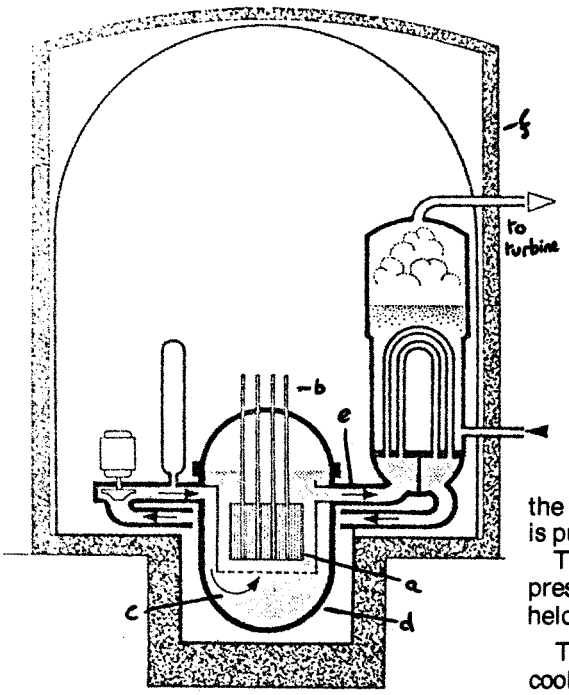
1,045 people were arrested in a demonstration at the New York Stock Exchange of October 29th. Grace Hedemann, press co-ordinator for the action, said 'it was an effort to show people who think they have no control over multi-national companies that they can do something. We targetted 61 companies most heavily invested in the nuclear industry.'

Despite scattered complaints about the police, they were mostly friendly and easy-going. The officer in charge of the police commented that 'there wasn't a nasty demonstrator in the bunch', and at one point was seen clapping his hands to one of the demonstrators' songs.

(New York Times 30/10]

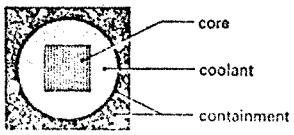
THE PRESSURISED WATER

THE FACTS- how it works, why the industry hid safety reports, & what's cracking the French up



SCHEMATIC DIAGRAM of the PWR

Key
a - reactor core
b - moderating rods
c - coolant water
d - pressure vessel
e - 'hot leg'
f - containment building



The Pressurised Water Reactor (PWR) was developed to power US Navy submarines, to avoid the large quantities of oxygen needed to burn oil. The USS 'Nautilus' became the world's first nuclear submarines in 1954 - 3 years later its reactor was taken out and used to build the first US nuclear power station. An efficient sales routine has made the PWR the world's most popular reactor.

From the outside the PWR looks like any other nuclear reactor, and the operating principles are the same. Inside a central reactor core neutrons are bombarded at uranium dioxide atoms, causing them to fisssion (split), releasing heat energy and splitting more atoms. The energy is taken away by the coolant water (or gas in an AGR), and used to convert more water into steam to drive a turbine. The coolant is then recirculated.

In the PWR, pellets of uranium dioxide fuel are contained in 'fuel rods' of a zirconium alloy.

To prevent the reaction becoming too fast and getting out of control, it has to be 'moderated'. In the AGR, graphite is used to absorb excess neutons. The PWR uses water - the fuel rods are actually immersed in the coolant water. This leads to the main danger of the PWR - overheating.

Hot water from the reactor leaves by a pipe known as the 'hot leg', and through pipes immersed in low pressure water. The high pressure water in the pipes cannot boil, but the low pressure water outside does, producing steam to drive the turbines. The 'primary coolant' water is pumped back into the reactor.

The core and coolant are kept within a pressure vessel of welded steel with a lid held down on top by a ring of heavy bolts.

The danger comes if a pipe in the coolant bursts, bolts, on the lid give, or if a pressure safety valve sticks open (as at Three Mile Island). When this happens the high pressure blows the coolant out of the leak very quickly, and as this happens the pressure decreases and the water around the fuel rods boils and turns to steam. this is a 'loss of coolant' accident.

Even if the automatic shut-down scrams the reactor immediately the residue heat, if uncooled, will melt the fuel rods containing it and a 'melt-down' or 'Chine Syndrome' will occur. We won't know what can happen in a melt-down until it occurs.

To prevent this, the reactors are equipped with Emergency Core Cooling systems (ECCS) - currently 3 per reactor.

So far very impressive. But all life has its drawbacks - and the main drawback about the ECCS is that they tend not to work. No-one really knows why, and very little research is available on the reasons. An experimental reactor was built in the US to destroy itself and test the ECCS, but it overran its cost so much that by the time it was built no-one had the heart to destroy it, and the tests weren't made.

In 1971 research was done using small-scale models - in each of 6 tests the ECCS failed to get water into the core. Other safety studies have been censored by Atomic Energy Commission officials.

The situation at the moment is that pipes are cracking in the French PWR's. The bolts are cracking on at least one Japanese PWR, and the ECCS cannot be relied on in an emergency. A US PWR has avoided a melt-down by the narrowest of margins.

THE HAZARDS OF SAFETY REPORTS

SCRAM EXCLUSIVE

A recent request from SCRAM to the Nuclear Installations Inspectorate (NII) brought a substantial tome by return of post. Was this the long-awaited Preliminary Safety Report on the Torness AGR station? (Or even the AGR Generic Safety Studies?) The actual document was apparently much less interesting: the second part of a three part report produced in 1977, entitled 'A report by the Health and Safety Executive to the Secretary of State for Energy on a review of the generic safety issues of Pressurised Water Reactors'.

The NII is the UK authority responsible for evaluating the hazards of nuclear reactors and for issuing operating licences to the Electricity Boards. Since the NII is renowned for withholding reports on the grounds that they contain "proprietary" information given "in confidence", and since FoE have been pressing for the release of this report since they learned of its existence (it does not appear on the NII publications list), a brief appraisal seems appropriate. Although the NII point out that the report represents their views at the time (1976/77), their Safety Assessment Principles recently published imply no radical changes in approach.

The NII dfine the 'generic' safety aspects as features which are "inherent in the concept" of the Pressurised Water Reactor (PWR), or "likely in practice, to be common to any alternative options". Their method of assessment was to select a particular PWR station, Trojan (USA), and to scrutinise safety studies prepared by its designers, Westinghouse, plus those of a German PWR design company. "Independent" individuals were also consulted, but these remain nameless.

LIMITS OF KNOWLEDGE

If a realistic assessment is to be made of reactor hazards, it is essential to identify all the possible ways in which the equipment can fail - known as 'failure modes' - some of which are more dangerous than others. Obviously, with nuclear technology this is a demanding task, and the NII cite several instances where particular failure modes have been overlooked by the PWR designers. This of course begs the question whether the NII themselves have in fact discovered every failure mode, and underlines the need for thorough independent scrutiny. It is also disturbing that although the designers are critiised by the NII for not considering simultaneous, or almost simultaneous, failusre (which can cause unique effects), the NII have recently been accused of the same omission. The evaluation of these 'combination events' is known to be at the very limit of current mathematical knowledge. contd. on page 3

REACTOR: ...introducing THE ZIRCONIUM CONNECTION

all they're cracked up to be

Certain vital parts in the French PWRs are cracked. The first cracks were found in 1978 at the Framatome factory at Chalôns sur Saone. The cracks were up to 8 mm long by 6 mm deep.

Following this, further checks were made and cracks were found in the pipes carrying the coolant water. A main French Trades Union, the CFDT has pointed out that if nothing is done, these cracks will inevitably get worse and become very dangerous. Other reactors have now been found to have cracks.

But, cracked or not, the French nuclear programme rolls on...

but not without opposition from people inside and outwith the industry.

The workers at Tricastin and Gravelines (the two reactors nearest completion) went on strike in early October and refused to load the reactors with their first fuel rods. They demanded a full investigation into the cracks to ensure maximum safety in operation. The electricity board was forced to delay the fuel loading.

RADIOACTIVITY LEAK

Following the discoveries at the Framatome factory, it was revealed on 25 October that the PWR reactors at Bugey showed cracks in the steam generator pressure plates and at the» primary circit collars of the pressure vessel. This led to a leak of the primary circuit into the secondary circuit, and a consequent increase of radiactivity in the turbine hall.

The response of the electricity board was characteristic: 'Either bugey keeps going or we will have a cold winter'. The French government has ordered a general clampdown on publishing information about the nuclear industry. This is their response to public statements by the unions at the affected stations.

This clampdown can be felt here - no further news has reached us via the usual media about the 'fissure' incidents. How does this augur for a possible British PWR programme?

INTERNATIONAL IMPLICATIONS

The 'French syndrome' will have international consequences. Export orders to South Africa for French PWR's are already in jeopardy.

However, David Howell, the Tory Minister for Energy, said in Parliament on 26 Nov. that he was studying the possibility of collaborating with the French 261, particularly on the fast breeder and PWR reactor types. When a question was asked on the cracks he simply said that the PWR would not be used without "well-tired and laid down safety procedures".

Reassurances will doubtless be forthcoming from the Nuclear Installations Inspectorate, in due course. Every nuclear state claims it has the safest programeme, but how can we believe these assertions when such fundamental faults as the cracks are discovered unexpectedly in the pressure vessel itself?

The vast majority of nuclear reactors in the world are operating with a fatal design flaw. The flaw is that no material exists which can safely clad the uranium fuel.

This is the conclusion reached in an important paper produced by Daniel Pisello, an American researcher.

The report, called the 'Zirconium Connection' points out that all PWRs currently use a zirconium alloy as cladding, Zircaloy. Zircaloy the report says, has the dangerous property of reacting explosively with water under a variety of conditions likely to occur in water-cooled reactors. There is no material which can be used to replace the zirconium effectively.

It accuses the NRC and the nuclear industry of deliverately concealing the problem from the public. 'The recent accident at Three Mile Island has brought to light both the design flaw and the extent of the cover-up.

At TMI hydrogen explosions occurred. and it was reported that a huge bubble of hydrogen gas had formed inside the reactor vessel.

Spokespeople for the utility company claimed ignorance on the subject of the origin of the hydrogen bubble as 'something that had not been foreseen when the reactor was designed'.

But the 'Zirconium Connection' quotes a report on reactor safety made in **Feb. 1969** as saying:

"The chemical reaction of the cladding with steam, which is supplied by the water remain-in the bottom of the primary vessel ... by the operation of the ECCS has three important effects. First, it furnishes energy, which can increase the heating rate of the core. Second, hydrogen, a reaction product is released to the containment structure. Third, the reaction also changes the character of the cladding."

The report also finds that there is a great danger of a zirconium fire in a spent fuel rod store.

Copies of the full report can be obtained from the author, 112 W. 87th Street, New York, New York 10024, USA.

STOP-PRESS

Gravelines I and Tricaston I have now been loaded with fuel rods. This was done by technicians from the Framatome factory, flying in the face of the unions who were refusing to do the job.

In addition they are going ahead with Dampierre I. There has been no reassurance that these reactors are not cracked.

One in particular, at Braud Saint-Louis, is known to be 'riddled with cracks' but the Electricity Board has no intention to stop fuelling.

There was a demonstration at Gravelines on Dec. 1st. This could lead to further actions at the time when these reactors are fully set in motion. We'll keep you posted.

Following the Three Mile Island accident, Japan has carried out safety checks on 3 of their PWR plants. In one reactor they discovered cracks in all of the 106 bolts fixing the control rod guiding pipes to the reactor core.

It was also disclosed that cooling problems similar to those which occurred at TMI had happened at least 3 times at the No.1 & 2 reactors of the Mihama plant between October 1971 and July 1973.

The Windscale File

British Nuclear Fuels Ltd. have admitted responsibility for the death of one of their workers at Windscale, and have given his family £67,000, plus costs, in an out of court settlement. The case has been seen as a test case, and various others will be coming up in the near future.

The worker, Malcolm Pattinson, died of leukaemia in 1971, aged 36. He worked in Windscale's radiation areas between 1957 and 1965. In 1970 his health began to deteriorate, and he became worried and left the plant. But he died a year later.

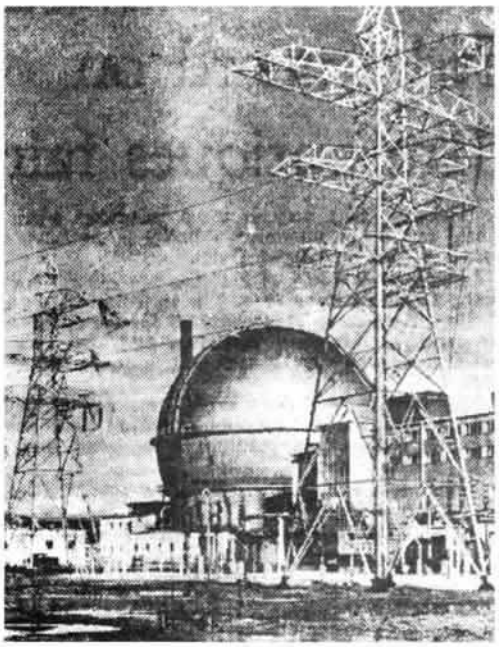
BNFL decided it was worth £67,000 for them to avoid an open court discussion on their safety standards - a discussion they might well have lost. In a prepared statement they said they were not certain that radiation hazards at work caused Mr. Pattinson's death; it is rather 'a matter of expert opinion on the balance on probability.'

And in a parallel case with the UK AEA, a £28,500 damages offer to another nuclear widow is to be rejected by the worker's union.

James Connor, who died of leukaemia in 1976 aged 38 also worked at Windscale during the early 60s. He was exposed to radiation at an 'incident' at Windscale's experimental AGR (Windscale reports almost weekly 'incidents' to parliament).

The award is being rejected by his union, the Association of Government Supervisors and Radio Officers, who believe a much higher award could be made.

Now solicitors are also considering the case of Mr. Higgins of Windscale who died of a heart attack. This case will be important, if it is taken up, as heart failure has never before been recognised as being caused by radiation exposure.



The plant at Windscale.

BUT NUCLEAR POWER EXPANDS!
(or tries to...)

BNFL have announced plans for a 50% expansion of Windscale. the plan is to build a new reprocessing plant on company-owned farmland. This would add a further 187 acres onto the 400 acres site.

A BNFL spokesperson blithely said that they expect permission to be granted without any sort of inquiry as they are 'merely' applying for a change of use of the land.'

They are also planning to treble their intake from Waswater Lake in Cumbria from 4 to 11 million gallons a day. Protestors are lobbying parliament over the issue, and a public inquiry opens at Whitehaven on January 15th.

NUCLEAR POWER LEAKS

Plutonium has been found on samples of grass outside the Windscale factory fence after another radiation leak. 30 workers have been checked for contamination.

The discovery was hushed up for over a month, and came to light at the quarterly meeting of the Windscale liaison committee in October. The amount is said to have been small.

The reprocessing plant has just restarted work following a fire (and leak) over four months ago. Some safety modifications have now been completed, but two more government safety and security investigations are still under way.

And the leak that was discovered from a waste storage tank 3 years ago is still going on. More than 20,000 gallons of radioactive liquid have now leaked from the silo, and the source of the leak has still not been found - despite assurances from BNFL in January 1978 that they would be able to locate it 'in the next month or two.'

STOP PRESS

ORKNEY STILL AT RISK

On November 28th the result of the Examination in public, held in March of this year, regarding uranium mining in Orkney was finally announced by the Scottish Office. It was due months ago, and it is difficult to see why it has taken so long, as it has effectively turned the clock back to the beginning of the year. It allows the Orkney Islands Council Structure Plan to retain its paragraphy forbidding uranium mining and extraction in Orkney, although the Examination Report itself recommended that this paragraph be deleted. However, the Secretary of State for Scotland reserves the right to overrule this prohibition if at any time it is judged 'in the national interest' to do so. Whose interest, Mr. Younger?

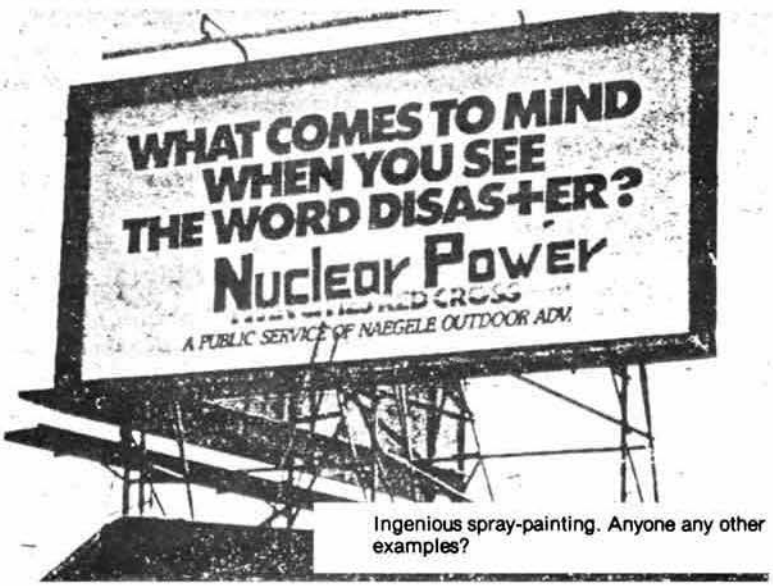
Poll 'No'

A thorough poll of East Lothian has found 90% opposition to the continuing work at Torness. The poll carries on from that conducted by the local paper in April and supports its conclusions.

The latest poll covered 7,000 voters over a period of three months. 10% were in favour of the continued development, 25% wanted ithalted mean- time until safety guarantees could be given, and 65% expressed themselves 'totally opposed' to the development.

The organisers said 'the survey demonstrates that a generation gap undoubtedly exists over nuclear power. The under-50 age group shows a resolute opposition to nuclear power. Social class and occupation is irrelevant.'

The original poll, by the East Lothian Courier (which found 90% totally opposed, see SCRAM 12) , was very suddenly dropped in mid-stream without any explanation given, after it became evident that local feeling was going to be totally against Torness.



Ingenious spray-painting. Anyone any other examples?

DENMARK

Despite pressure from the nuclear lobby, Denmark is still non-nuclear. Lili Wermus, a member of the OOA *Anti-nuclear group, here outlines the recent history and current plans of the organisation.

In the early seventies the Danish electricity companies declared that they wanted to introduce atomic energy in Denmark. This was the immediate cause for the creation in 1974 of the Danish anti-atomic power movement, the O.O.A. The original purpose of the OOA was to press a moratorium of 3 years, during which a very critical assessment of all problems connected to the use of atomic power energy was to take place in public. The purpose was furthermore to promote research in other sources of energy.

Today Denmark still doesn't have any nuclear power stations. However, the threat is there more than ever, because, like everywhere else, the electricity companies, with absolutely no view to other sources of energy, keep insisting that we will lack energy in a few years if we don't get nuclear energy....that we will freeze in the dark....and that our standard of living will go down etc. etc.

With the Harrisburg accident the OOA switched over to more radical demands: 1) Shut down Barsebaeck (a nuclear power station situated on Swedish ground just **12 miles** from Copenhagen); 2) Stop all atomic energy plans; 3) Energy plans without nuclear power.

Up till now, no Danish government has been willing to work out an alternative long-term plan. Therefore, at the OOA national meeting in May it was decided that the OOA was to start a campaign showing that we **can** manage without nuclear power. This idea is about to develop into the most ambitious campaign we have ever had.

ALTERNATIVES

The basis will be a leaflet of 12 pages indicating the possibilities of, among other things, coal, oil natural gas, sun, wind, bio fuel, high insulation of houses, energy conservation in household appliances and cars, combined heat and power. It isn't our intention to work out an alternative energy plan but we want to indicate that there are **plenty** of alternatives to nuclear power and that these alternatives, put together in the right way, are sufficient, safer, cheaper and cleaner than the use of atomic power energy.

The ambitious thing about this leaflet is that we intend to distribute it to **all** Danish households (about 2.4 million in number) and that it is to be distributed by the local groups (about 150 at the moment). However, not only are the groups to distribute the leaflet. The distribution is to be accompanied by a large variety of acitivities on a local basis: theatre, discussion evenings with slide shows and films, exhibitions etc. All sorts of activities which can draw people's attention to the leaflet and MAKE THEM READ IT! A number of cities and areas have been earmarked as first places of distribution, which will start at the beginning of November.

TWINDMIL

The OOA only has money to have the first edition of 400,000 copies printed. In the leaflet will be enclosed a banker's order asking people to contribute to the printing of the next edition. So what follows after the first 400,000 leaflets will be dependent on what people think about the idea. We call it "rolling economy".

The intended consequence of this campaign is to show people that we have many alternatives, of which solar power, wind power and biofuel have been successfully introduced in Denmark on local initiatives, and furthermore to create many more local groups, especially in the areas where there are none at all. It is our hope that we will manage to activate EVERYBODY who is against the introduction of nuclear power in Denmark with whatever good ideas they may have women's groups, artists of all kinds, environmental groups, politicians, journalists etc. etc.)

The planning of this campaign started in May and in August the Danish prime minister declared that we are to have a referendum on the nuclear power question. Nobody knows when but it looks like the OOA campaign is just perfect timing!

safety report contd. from p.6

One of the events identified as critical in the report is a Loss of Coolant Accident (LOCA). If this occurs, and the emergency core cooling system is not effective, then the reactor may melt down under its own self-generated heat, releasing radioactivity over a wide area. In this respect, a PWR is inherently difficult to analyse, because of the complex behaviour of water mixed with steam. Although a medium-sized test bed does exist in the USA, the industry relies largely on long involved calculations to estimate the course of events. This practice is known as 'computer modelling' - a real-life experiment has obvious drawbacks.

EXECUTIVE SUMMARY

A striking feature of the latest document - known as the 'Executive Summary' is the subtle change in wording when one compares it with the public summary document produced 2 years ago. For example, when considering a LOCA, the Executive Summary states: "The analysis....appears to be adequate but a variation could arise because of a failure of a few tubes in the steam generator. This... could well prevent coolant entering the core. The safety case presented (by the designer) is based ont he assumption that such an event is so unlikely as to justify it being disregarded. ....(BUT) it is concluded (by NII) that the failure of steam generator tubing **should** be considered... and the existence of several breached tubes should be included in the ... fault analysis."

By contrast, the public summary document reads: "The (computer) models themselves are judged adquately conservative... Attention should also be paid to the effects of a fault involving several steam generator tubes", and concludes: "The Inspectorate consider that there is no fundamental reason for regarding safety as an obstacle to the selection of a PWR for commercial electricity generation in Britain."

Several other problems also disappear during the production of the public summary, for example: "HSE policy... requires that the first few installations of any type would be located on sites remote from populated areas," or "The expected level of (radiation) exposure, particularly for certain groups of workers... will tend to be greater on water cooled reactors, including PWR, than on the gas cooled systems currently employed in the UK."

WASH OUT

This process of changing the emphasis while producing a summary is worth noting. It might explain why the US Nuclear Regulatory Commission last January abruptly withdrew its support of the Rasmussen reactor Safety Study (WASH-1400) (the one saying nuclear power is a lot safer than...). A policy statement was issued by the Commission:

"1. It withdraws any past endorsement of the Executive Summary.

2. It agrees that the peer review process followed in publishing WASH-1400 was inadequate and that proper peer review is fundamental to making sound technical decisions."

Finally, there is nothing in the latest PWR report which could justifiably be regarded as 'proprietary', or would merit the "Commercial in Confidence" originally printed on the front.

The third (technical) part of the report remains secret, and we await the Government's announcement of a PWR programme with some concern.

NUCLEAR POWER: the costs

The SSEB propose to spend at least £750 million of public money to build a nuclear power station at Torness in East Lothian. Their justification is based on their prediction that our consumption of electricity will rise to such an extent over the next decade that the present massive excess of generating capacity will be taken up. They say that they will not be able to fulfil their remit of providing a secure supply of electricity at the lowest possible cost unless they now build extra generating capacity.

In issue 12 we printed figures showing that nuclear generation is more expensive than coal. In this article, Dr. A. MacGregor of the Department of Mechanical Engineering at Napier College, Edinburgh, takes a detailed look at the costs of conservation, and comes to the conclusion that the SSEB is failing in its duty to provide electricity at the lowest cost.

NUCLEAR COSTS 70% MORE

Details of the relative capital costs of generating an extra kilowatt and reducing demand by a kilowatt, by means of house insulation, are given at the end of this article. For nuclear generation at Torness the figure is £1,767 per kilowatt, while for house insulation it is £960 per kilowatt. Thus the nuclear option which the SSEB have chosen is over 80% more expensive in **capital** cost alone that the conservation option.

When it is considered that house insulation costs nothing to run and will last the life of the house whereas an AGR power station needs fuelling, maintenance, waste disposal and finally, dismantling after its 20 year life, then the hard-headed, economic case for conservation rather than extra generation becomes overwhelming. Clearly the SSEB have failed in their duty to provide electricity at the lowest possible cost if they do not choose the less expensive option.

income families and pensioners living in poorly insulated, and often damp, all-electric houses is specially serious.

The mechanism whereby the Electricity Board could make capital available for reducing electrical demand should not be too difficult to devise. For example, the Board could issue vouchers to each of their customers. These vouchers would be exchangeable only for insulation goods and services. The value of the vouchers which each customer would receive would be in proportion to the amount of electricity they had consumed in the last few years, on the fairly reasonable assumption that the potential for reducing consumption is related to the amount consumed.

MORE JOBS

In addition to the straight economic arguments of £'s per kilowatt, house insulation cannot damage the environment, is absolutely safe, well proven and non-controversial, and, being less capital intensive, will provide more jobs per £ invested.

The SSEB may object that it is not their business to concern themselves with anything other than the generation and distribution of electricity. However, when that attitude means that the electricity they provide is a lot more expensive than it need be, then it is time to re-examine their remit. Moreover, the Board's decision to spend £750 million of public money on Torness, without any public consultation, means that each of their 1½ million customers will be forced to contribute an average of **£500** towards the power station, thus depriving them of capital which could have been used to insulate their houses. The plight of low

FIGURES

The Scottish Laboratory of the Building Research Establishment has compared the electricity consumption of two groups of electrically heated Scottish local authority houses. One group was moderately insulated, the other, poorly.

Over a year the better insulated houses consumed 2,750 electrical units (KWH) less than the others, an average saving of 0.314 KW. Thus to save a kilowatt it would be necessary to insulate 3.2 houses - estimated cost £960.

"The nuclear option is over 80% more expensive in capital cost alone than conservation"

In the year 1978/79 SSEB nuclear power stations operated at an average of 38% of their rated capacity. The board claim that this last year is an unfair year to take, as there were so many difficulties with their stations this year. But against this it can be pointed out that this average is for **all** nuclear power plants - the AGR's (Torness-type) in fact fared much worse than this. And there is no reassurance that the breakdowns will suddenly stop happening.

So if we assume that Torness operates at 38% of capacity, then the estimated average power sent out by it is 467,000 KW. Assuming 90% transmission efficiency, then the average power delivered is 420,000 KW.

Taking the estimated cost of Torness at £742 million (this will certainly rise above the thousand million mark though), the capital cost per kilowatt delivered from Torness would be £1,767 per KW.

BUILDING COSTS

By taking such low building cost, these figures may err in favour of the SSEB. And it also must be noted that the insulation survey noted that in addition to the electricity saved, the better insulated houses were also 15% warmer on average than the others. This has not been taken into account in these figures.

A public inquiry into Kyle and Carrick District Council's refusal to allow waste dumping test bores at Mullwharchar, Loch Doon, Ayrshire, will open in Ayr on February 19th. Evidence on waste dumping has been specifically excluded from the inquiry's remit, and the Scottish Conservation Society has announced it will be holding an alternative inquiry in the evenings, at which all evidence will be discussed. Other groups in the area are still to announce their plans. A full report on Mullwharchar will appear in the next issue.

(Photo - K.M. Andrews, Prestwick)

HELP SCRAM FIGHT FOR A SAFE AND SANE ENERGY FUTURE!

SCRAM is a member of the Torness Alliance, and works closely with many other organisations. We have links with all sectors of the community. We have two slide shows (with scripts) and three films which may be hired (SCRAM/BBC **Open Door** film, **On Site '79** and the Torness Alliance's **Together We Can Stop It**]. We have two exhibitions available - **Nuclear Power No Thanks** and **Coal, Conservation & Combined Heat and Power.** We can also usually provide speakers for (local) events.

MONEY

This month's money appeal opens on a cheerful note - we'd like to thank warmly the anonymous donor who gave us a very large cheque to keep us going. It made a large group of people extremely happy for a whole week. Thank you, whoever you are.

But we do still need a regular income. If you can't spare the time to do anti-nuclear work, but want to support us, can you spare money instead? A banker's order for any amount - however small, gives us a regular monthly income.

We also need a photo-copier. Preferrably colour, A2 size, totally up to date, 1000 copies a minute sort of thing. But failing that, we'll take anything that's going. And we're desperate for more typewriters - as loans or gifts. Can anyone help?

ANTI-NUCLEAR STREET THEATRE/ SONGS

Meets regularly - needs new members, musicians/fools/everybody welcome. Tel. Mary 441-6691 or Lee 443-2206 or SCRAM for details.

NUCLEAR POWER FOR BEGINNERS

Fortnightly series of teach-yourself sessions on nuclear energy. Films, a visit to your local power station and much MORE!

Starting: **SATURDAY DEC. 1st. 10.30am - 12.30pm** at 2a Ainslie Place.

Sat. Dec. 15th: **The British Nuclear Industry** - Background and history.
Sat. Jan. 12th: **How Radiation affects your Life** - Film 'Paul Jacobs and the Nuclear Gang'.
Sat. Jan. 26th: **The Pro-nuclear argument** - BNFL exhibition (?).
Sat. Feb. 9th: **Nuclear Waste** - What it is and how they want to dump it.
Sat. Feb. 23rd: **Uranium** - How it's mined and processed.
Sat. March 9th: **The Alternatives to Nuclear Power.**
Sat. March 23rd: **What do we want all this energy for?** - Political and social aspects.

MAKE MONEY WITH SCRAM!

Make money selling SCRAM magazine round pubs etc. Buy copies from us at 11p, sell at 15p. Bring unsold copies back for refund. Call into the office at Ainslie Place any day during office hours.

WHO IS SCRAM?

The Scottish Campaign to Resist the Atomic Menace (SCRAM) was established at a meeting at Torness Point in East Lothian in November 1975. 'SCRAM' in nuclear jargon means to shut a reactor down in emergency.

Our aims are:

1. **To inform the public of the present and proposed nuclear developments, and their social, political and environmental consequences.**
2. **To oppose by all nonviolent means the further development of nuclear power in Scotland and elsewhere.**
3. **To press for a long term energy strategy based on conservation and the use of renewable resources.**

SCRAM has no paid-up membership, and everyone who wants to help the campaign is welcome. Decisions are taken at weekly meetings which are open to anyone and are at 2 Ainslie Place, 7.15p.m., every Monday. We try to take decisions by consensus (general agreement) rather than votes.

We are funded solely by donations and scales of literature, so we depend on public approval to survive. We desperately need a regular income to rely on; so we ask supporters to fill in the Banker's Order form. It's painless - the manager does it for you - and allows to plan ahead; £5 a month from 200 people would give us £12,000 a year.

We also appreciate subscriptions to this magazine. To keep the price down we need a large subscription list. Subcribers make sure of getting each issue (before the shops), and get occasional bonuses. Buy one for your favourite politician or nuclear scientist today!

We take **adverts** - providing they're not sexist, racist or just plain sick.

Published by the **Scottish Campaign to Resist The Atomic Menace [SCRAM],** 2a Ainslie Place, Edinburgh 3 (031-225-7752).

Printed by Aberdeen People's Press, 163 King Street, Aberdeen. (0224)-29669).

Typesetting by SCP, 30 Grindlay Street, Edinburgh 3. (031-229-3353).

Distribution: Full Time Distribution, 27 Clerkenwell Close, London EC1 (01-251-4976). Edinburgh-Glasgow distribution by S & NBC, 47 Niddry Street, Edinburgh 1. (031-557-0133)

Next copydate - 21st January, 1980.

SUBSCRIBE NOW!

SCRAM ENERGY BULLETIN SUBSCRIPTION FORM

I wish to subscribe to the Energy Bulletin for 6 issues (1 year at the moment) starting with No...

Name.....

Address.....

.....

.....Phone.....

I enclose Bankers Order/Cheque/Postal Order/ International Money Order for

We suggest £2 for ordinary sub; £3 for overseas; £6 for institutions. Minimum £1 sub. Any extra donations will be used solely for campaign work.

SUPPORT SCRAM!

SCRAM SUPPORTERS' DONATIONS BANKERS ORDER FORM

(Send this part to your bank)

Bank.....

Address.....

.....

Account No.....

Please pay on.....(1st payment) to Royal Bank of Scotland, Princes Street West Branch, 118 Princes Street, Edinburgh EH2 4BU. (83-36-00)
The sum of .....for credit to the account of SCRAM 265066 and make similar payments ..... (state frequency) up to ..... or until cancelled.

Signature.....

Date.....

Name.....
(Please print)

.....

Please send this part to SCRAM, 2a Ainslie Place, Edinburgh EH3 6AR.

Name.....

Address.....

.....

.....

I have sent a standing order to my bank which will give SCRAM £.....every.....(frequency) starting on.....and finishing on..... (or when I cancel it). I would/would not like part of it to pay for my sub to the Energy Bulletin.

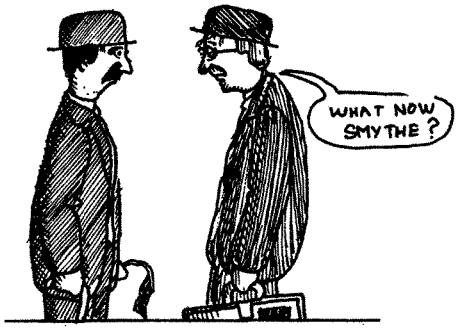
Can you write anything for this bulletin? If you can think of any articles you could write, or could help in any other way (eg paste-up, mailing copies, selling etc), please get in touch.

We also need NEWS. It's much easier to receive it than to chase it up. So tell us if you or your group is doing/has done anything of note (English anti-nuke groups in particular, please note).

Waste of Time?

Weren't we all led to believe that the UKAEA had been beavering away doing experiments on the vitrification of high-level radioactive waste? And don't they give the impression that small amounts of waste have been vitrified by the Harvest process?

Apparently a wrong impression. In a recent report by an expert group made to the Radioactive Waste Management Committee (Cmnd 884, DoE), it is clear that radioactive waste has never incorporated into glass. On page 97 of the report it states: 'an inactive pilot plant has produced batches of 500 kg of glass which, in the necessarily limited trials, has stood up well to subsequent radiation. A full scale active demonstration plant is planned to be in operation on a commercial scale by late 1980s.'



Are the UKAEA having more trouble with the Harvest process than is made public? And why should the nuclear power programme go ahead when they do not yet know if they can even attempt to vitrify the waste?

Scotland

On November 3rd there was a very lively and productive meeting in Glasgow to discuss future events and co-ordination etc, of the Scottish anti-nuclear campaigns. Glasgow Anti-Nuclear Group is to organise a big event next May (31st), and there are to be regular Scottish co-ordination meetings. The next Scottish groups meeting is being organised by SCRAM Dundee.

Xmas feast

There are a number of individuals who have expressed an interest in having a fast outside the front gates of Torness this Christmas. The proposal is that this should last 24 hours. Anyone interested in taking part, or having a sympathy fast in their own area, please contact Ian Holden, c/o SCRAM.

SANE

Sussex SANE (Students Against Nuclear Energy) are to hold a sponsored balloon race from Dungeness in May. The event is to demonstrate how radioactive gasses might travel from the reactor in the event of a leak. Sponsorship of a baloon costs 20p - and they claim the sponsor of the furthest reaching balloon will win a concrete fallout shelter to be built in their own backyard. Hmmm.

Details from SANE, c/o Students Union, Falmer House, Sussex University, Brighton.

For your Diary

Dec. 6-7 Premier of SCRAM film 'On Site 79' - Netherbow Arts Centre, 43 High St., Edinburgh. With Peter Watkins 'Punishment Park'.
Dec. 11 'On Site 79' at George Square Theatre Edinburgh.
SCRAM disco - West End Club, Princes St., 9p.m.
Dec. 25 Christmas fast at Torness (Provisional).
1980 (the decade they stopped nuclear power!)
Jan. 12 Scottish groups meeting, Dundee. Contact Logos Bookshop.
Consumer Campaign meeting, 2pm, Ainslie Place. All welcome.
Jan. 15 BNFL Wast Water inquiry opens (see p. 8)
Jan. 19 Uranium groups meeting - Manchester (see p. 3)
Jan. 24 BNFL Atoms for Energy exhibition opens in Edinburgh. Contact SCRAM for help with counter-action.
Jan. 26 General Lothian Groups meeting
Feb. 19 Mullwharchar inquiry opens.
May 31 (new date - now definite) Anti-nuclear rally in Glasgow.

SORRY

Inflation is likely to add at least £250 million to the cost of building Torness. Unfortunately it will also put 5p onto the cost of this magazine.

From next issue we'll have to increase our price to 20p. But to compensate the next issue will be bigger and will include a large feature on nuclear dumping in Britain - the arguments against test boring, the sites and the action.

Subscription rates will also have to be increased next year with the next increase in postal rates, so BUY NOW!

The price was last increased a year ago.

PUBLIC INVOLVEMENT

A paper spelling out ways of ensuring that the nuclear debate does not reach an 'unforseen' conclusion (i.e. non-nuclear), while appearing to give the public more say, has come into our hands.

It was presented by Brian Adkins, former head of the OECD Nuclear Energy Agency at an internal nuclear conference in Hamburg.

Entitled 'Public Involvement in Decision Making relating to Advanced Technologies such as Nuclear Power', it looks at ways of reducing the growing public opposition to nuclear power.

Adkins firstly considers referenda, but is unhappy with them because they can produce anti-nuclear votes. Public debates could be useful, but it was 'unfortunate' that those in Austria were televised because this 'doubtless attracted the opponents' to take part in the debate. (!)

Public enquiries aren't too good either; 'they have contributed to the current era of public controversy' and have been used 'as a platform for opposition protests.' What's more, 'they have often made it possible for almost anyone (the public?) to submit 'evidence' of supposed dangers'.

They also allow non-nuclear 'experts' to establish reputations. No 'experts are anti-nuclear, and anti-nuclear people who call themselves 'experts' are merely offering a 'distortion of reality.'

So what are we left with? Adkins suggests setting up 'Study Circles' for the public to learn about nuclear power. 'Experts' (his) would 'guide the circles in framing their recommendations.'

The only trouble here is that 'there will certainly be opponents of the experts' technologies, who may well have their own sources of expertise', so that debates may arise over 'the truth'. But this can be seen to by only accepting information from those with the right qualifications.

Study Circles would enable the public to have an 'information terminal into which they could feed their problems'. one of this nonsense about debate - just the 'answers'.

The problem is urgent, concludes Mr. Adkins. Anti-nuclear movements 'must be recognised as constituting a very real danger to the stability of society at every level.'

We've got them on the run, folks!

Advert

FoE Scotland has been in existence since April '79. A new full-time Co-ordinator, Adrian Watts, has just been appointed and he is based at Ainslie Place. In nine months we have gained nearly 300 fully paid-up members, with another 1000 still attached to local groups and FoE Ltd. Hopefully they will join us soon. Each member receives the new FoE Scotland quarterly newsletter. We have local groups and reps now in 26 towns.

Our first campaign was to get the otter protected in Scotland. Mostly through our efforts, over 10,000 bits of correspondence went to the Scottish Office, and the otter will be protected in Scotland by being added to the new 'vulnerable' category in the Government's new Wildlife and Countryside Bill. The next big campaign will be how best to tackle the Mullwharchar public enquiry on 19th February. Presently, over 300 people associated with our local groups in the Southwest are working out FoE Scotland's strategy.

The former Co-ordinator, Graeme Robertson, is now in charge of Habitat Scotland, FoE Scotland's sister research charity. Habitat Scotland itends to employ two or three people on specific environmental research projects.

Further details contact FoE (S), 2a Ainslie Place, Edinburgh.