ANC WASTE DUMPING NEWSLETTER

no 7

SEPTEMBER - NOVEMBER.

DEADLINE FOR THE NEXT NEWSLETTER IS JANUARY 10th.

The newsletter is £2 for 5 issues, printed about every two months.
ANC Waste Dumping Newsletter, 71, Overstone Road, London, W.6.

PUBLIC INQUIRY - NOVEMBER 24th.

There will be a public inquiry dealing with the applications to test drill at Wymeswold and at Ratcliffe on Soar. The two applications will be dealt with at the same inquiry to be held on November 24th at Loughborough Town Hall. Local groups have decided to take part in the inquiry - Loughborough FoE, Nottingham Safe Energy Group, N.W. Leicester Foe and Leicester anti-dumping group. They wrote to the DoE with three requests -
That the date be put back, as there was only seven weeks notice of the inquiry, which did not give sufficient time to prepare a case, or to call expert witnesses.
That there be a pre-inquiry meeting.
That at least part of the inquiry be held closer to Nottingham, to enable local people to attend.
All three requests have beeen refused. The groups opposing the application are very unhappy at the DoE's attitude - they seem to want to get the inquiry out of the way as soon as possible. The terms of reference have been restricted to planning considerations.
There is to a public inquiry in January into the Proposed test drilling

Please send a letter objecting to the proposed test drilling. You should include your reasons for opposition. Send letters immediately to:
Chief Executive, Charnwood Borough Council, Southfields, Loughborough.

Further information: Ed Darby, 51 Barrow Rd., Quorn, Loughborough, Leics. [illegible]

DRILLING...

Applications to test drill have been lodged in the areas of Tewkesbury in Gloucestershire and at Pershore in Worcestershire.
Groups in the Evesham area are hopeful for a refusal of the application as they have been campaigning - they have held a series of public meetings in the last few weeks, and are organizing a public opinion poll. They are also lobbying councillors, writing letters objecting to the drilling taking place.

Boreholes inquiry procedure attacked

Some of the objectors at last year's controversial public inquiry into test drilling at Loch Doon for possible future disposal of nuclear waste have questioned the inquiry's legality, and urged that its findings be published immediately

Dumfries and Galloway Friends of the Earth, who were among the objectors at the five-week inquiry that ended in March 1980, say the public were told repeatedly beforehand that the inquiry would specifically exclude the wider issue of Government plans for the disposal of radioactive waste.

Yet much of the evidence presented by experts for the Scottish Development Department and the UK Atomic Energy Authority discussed the Government's radioactive waste disposal research programme.

The group feel many people may have stayed away from the inquiry because they had been warned, by the Scottish Secretary, Mr Younger, and at pre-inquiry meetings, that the scope would be limited strictly to the formal planning issue of permission for boreholes and the siting of caravans.

The group yesterday urged Mr Younger to publish the findings of the reporter, Mr William Campbell, immediately, and before announcing his own decision, in order to clarify whether or not Mr Campbell took into account the evidence on the research programme.

A spokesman for the SDD said last night: "The SDD made its statement at the public inquiry as an explanatory statement and the wider issues were included simply so that the public inquiry could be seen in context. The result was not that the inquiry's scope was widened, and the extension of the SDD evidence was never intended to achieve that effect."

Mr Younger is still considering his decision.

The Inquiry in Somersset will start on February 5th. The inquiry will consider the test bore planning applications at Puriton and Brent Knowle. The County Council's refusal to consider the IGS's applications has been treated by the DoE as a straight refusal. The Council intend to have the County Solicitor read a statement rebuffing the Inquiry. They consider the method used by NERC to further their research programme is not correct. They fear that the use of this type of unobjectionable planning application will close the options for the location of a repositary at too early a stage.
Contact SANA, 1, Riverside, Combwich, Bridgewater.

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The magazine Undercurrents reports:

ANC Progress

Meanwhile the anti-nuclear Campaign's annual conference in Sheffield – ANC's new HQ – attracted nearly 200 activists from local anti-nuclear groups around the country. A lot of progress seems to have been made by the local groups on specific issues (like waste transport, nuclear free zones, trade union links), and the ANC, after a shaky start, now seems to have found its role as a co-ordinating agency. The early conflicts between national groups have abated somewhat, although not everyone is happy with the way ANC is organised. No Nukes Music, for example, were a bit pissed at not winning a seat on the ANC council this year.

Although ANC is committed to supporting alternatives to nuclear, it has been less successful in promoting them practically. NATTA has made far more headway in this direction.

The big issue for the future is of course the Sizewell PWR. It's a very different situation to Torness: There is already a Magnox there and the 'greenfield' struggles that have been waged in Cornwall seem much less likely to be successful strategies for Sizewell.

Friends of the Earth are holding a workshop on the Pressurized Water Reactor on November 14 at the Town and Country Planning Association, 17 Carlton House Terrace, London W1. The morning will concentrate on information about the PWR, while the afternoon will consider possible strategies for the Sizewell Inquiry. To book, send an SAE to PWR workshop, Renee Chudleigh, FOE, 9 Poland St, London W1. Cost is £2.50, payable at the door.

Grants Given

A scientific study into the suitability of embedding medium-level nuclear waste in cement as a means of containing it prior to disposal is being carried out at Aberdeen University.

The Department of the Environment has awarded £49,308 to Dr. F.P. Glasser of the University's Chemistry Department — to undertake research work on the potential of cement matrices for the immobilisation of the waste. The work will continue for at least 5 years.

The Waste Dumping Group met all day Sunday,September 27th.The minutes of the meeting are very long and,as they are being printed as part of the ANC general report,it seems unecessary to reprint them here.All afiliated groups will receive the general report shortly.The suggested activities of the group,as well as applications for funds from ANC will be discussed at the next ANC Steering Committe meeting in December,and there will be a report on that in the next newsletter. If you have any further suggestions you would like discussed please send them to the newsletter address by December 1st.

The following statement was drawn up at the Waste Dumping Workshop,after being submitted in draft form by Pete Riley from Evesham.

As a result of the pressure applied on government during the summer,a meeting between Sir Kelvin Spencer and Walter Marshall was arranged for Oct.26th.The joint statement from all anti-dumping groups was suggested to reinforce the anti dumping case.

"We have been actively involved for several years in opposing the Department of the Environment's proposals for research into the disposal of high-level nuclear waste underground. We remain convinced that the unmonitored and irreversible dumping of nuclear waste anywhere in Britain, or at sea, is morally and scientifically unacceptable. The overwhelming support of local populations for this view has increased our resolve to make certain that these proposals never reach fruition.

It is eighteen months since the first public enquiry into test drilling was held, in Ayr; it is twelve months since the similar enquiry in the Cheviots; and still no decisions have been announced. Moreover it is two years since the programme was extended to England and Wales and there has been no further action.

We believe that these continuing delays in announcing decisions and timetables are wholly undemocratic.

Scientific opinion has consistently pointed out that test drillings will not provide hard evidence as to the safety or otherwise of the underground disposal method. And it now appears that even the Government's own Radioactive Waste Management Advisory Committee (Second Annual Report 1981) is veering away from this method of disposal; whilst the Chairman of the UKAEA, Dr Marshall, has on three occasions publicly suggested that monitored long-term storage of high-activity waste is a more likely solution than dumping underground.

The message to the Government from us all is simple: -

1. The deliberate use of delay will not weaken our opposition to the programme.

2. The only honest course left to the Government is to abandon this discredited programme and to present new proposals for high-level waste management for scrutiny by the scientific community and the public.

3. The Government should also implement the recommendation of the Flowers Commissioners that there should be no expansion of the nuclear power programme until the problem of high-activity waste disposal has been solved."

The statement has been signed by seventeen groups in dumping areas. It was issued to the press as well as being sent to various individuals such as Walter Marshall.The Scottish Conservation Soc. has since sent it to the local MP who will be asking questions in Parliament. So far there has been no feedback from this.

ATOMIC WASTE - THE COOLING OFF PERIOD

We are not in the prophecy business at Cumberland Owl, and it gived us no pleasure to say that we told you so, but if further proof were needed that Windscale is to become the ultimate repositary for nuclear waste, Dr Walter Marshall, Chairman of the UKAEA, (September 25th) provided a further and very significant piece in 'Nuclear Waste - Whose Backyard?' in Owl 3.
In a surprisingly frank admission that the glass block programme is beset by intractable problems of residual problems from the fission products, which means that the blocks cannot be put away safely in granite vaults, Dr Marshall comes up with a brilliant solution.
'Leave it on the surface,' he declares cheerfully, 'for a hundred years.' He goes on, 'A hundred years is a nice round figure to give it time to cool down.'
But Walter does not mention the location of the cooling ponds for this century-long cooling off process. Does anyone seriously doubt that Sellafield is to be the chosen site for this legacy of the world's nuclear obsession?
We can see that no expense is spared, no publicity stunt unexplored, to condition the people of West Cumberland into the belief that the nuclear industry is the only one which will ensure the survival of the Whitehaven area.
Who is going to say no to further expansion of nuclear facilities at Sellafield, when BNFL dominates the whole economic, industrial and political life of West Cumberland?

From Cumberland Owl, Sept/Oct.

WINDSCALE

WORST LEAK SINCE '57

RADIOACTIVITY LEVELS at Windscale exceeded control limits for the first time since 1957, following a leak of Iodine 131 from the plant on October 7.

The leak occurred during the re-processing of Magnox fuel elements, and although the plant was closed down for 24 hours no public warning was issued until four days after the event.

An inquiry is underway, but it appears that the fuel rods were not cooled sufficiently before they went into re-processing.

The Anti-Nuclear campaign has called for the contaminated milk from local farms to be destroyed, and for the chemical separation plant, from which the leak originated, to be shut down until there is a full and open public inquiry into BNFL's safety precautions.

The ANC are not alone in criticising BNFL's management of Windscale. The Nuclear Installations Inspectorate reported this year that the plant's safety is "not wholly satisfactory", and that there is "cause for concern because of the implications of multiple failures of safety precautions."

Leukaemia Doubled

BNFL told *Undercurrents* that there were 'enormous amounts of exaggeration' surrounding the subject of radiation hazards. We quoted them a report from the Lancet which states that the incidence of leukaemia in Lancashire had "almost doubled, and in two districts nearly trebled, between two consecutive six-year periods, beginning in 1965. This represents a larger increase than mortality data suggests has occurred nationally in the same period". BNFL commented " "You're wrong there", and claimed that this evidence had since been refuted.

The North Lancashire area, they said, was one of heavy industrial activity, and the carcinogens in the Irish Sea "could be due to chemical industries".

As if to underline the concern surrounding this incident, the *Quarterly Statement on Nuclear Incidents* just published by the Health and Safety Executive ascribes the blame for nearly all of them to "the human factor".

At Windscale one man was found to have contaminated hands and feet after putting on a previously contaminated boot. At Harwell, there was a leak following a transfer of radioactive liquid into a storage tank: a review of the methods used concluded that these were 'insufficiently reliable to ensure safe operation'. At Windscale again, a health physics monitor working in the decontamination unit received a dose which at first was thought to be 'slightly in excess' of the permissible level. Safety procedures were 're-emphasised to the personnel concerned'.

It's the same story at Berkeley and Hunterston -- the solution in all cases of contamination is said to lie in 're-emphasising' safety procedures. But how much more 're-emphasising' is needed before BNFL come to see that the *whole process* is inherently unsafe?

EX-NUCLEAR WORKER TELLS INSIDE STORY

Eurochemic is a reprocessing plant in Belgium which functioned from 1966-1974. The government is now considering re-opening it and for this reason K.G. Paulus, a former worker who left the plant in 1972 has published an alarming and informative story which illustrates very well his belief that the plant must remain closed. The inefficiency of mechanical systems together with human inefficiency is shown to be a highly dangerous combination. The need for constant repairs and replacements gives rise to huge quantities of contaminated waste and still greater risk to workers. Further, it is clear that so-called safety precautions are a myth when considered in principle. Dampness, for example, makes it impossible to measure the level of radioactivity, but repair workers are required to wear three layers of 'protective' clothing, resulting in sweating, which renders the level of radioactivity in the body measurably lower or undetectable when subjected to the required check. This is also the case with the routine hand-check, which is carried out immediately after washing. Even the light dampness after drying the hands is sufficient to mask contamination. Concerning the functioning of the plant at large, a critical accident is described in detail, followed by a convincing explanation as to why Eurochemic is a high risk in this context, due to the design of the equipment. The list of inadequacies in all areas appears to be endless and great emphasis is given to the large and often unnecessary amount of waste which is becoming increasingly difficult to store. The Dutch anti-nuclear monthly 'Allicht' printed a special issue, consisting entirely of K.G. Paulus' amazing revelations.

Contact:

Allicht, Postbus 8107,
5004 GC Tilburg,
tel: 40/12.28.19

Netherlands

New row looms over N-waste

ATOMIC energy chiefs want to find more sites to dump radioactive waste on land in Britain, it was revealed yesterday. But the UK Atomic Energy Authority plans look certain to spark a new row on top of existing controversies over nuclear waste dumping.

Authority leaders said yesterday they want one new site for thousands of tons of "intermediate" level waste building up at power stations and other nuclear centres.

This is too radioactive to be disposed of in the authority's regular sea dump or at one existing land site at Drigg, near Windscale, Cumbria.

UKAEA leaders also want a second new site to take low-level waste like that dumped at Drigg.

The proposals were unveiled as the authority published their annual report for 1980/81.

Dr Lewis Roberts, director of the authority's Atomic Energy Research Establishment at Harwell, Oxfordshire, said he wanted to seek planning consent for one new site within three years.

The other would be applied for within six years. He hoped to have the first site in operation by around 1987 and the second by the end of the decade.

Dr Roberts named no potential sites, but said research drilling by the Institute of Geological Sciences had already been carried out at Harwell in the last 18 months.

He stressed that Harwell was not a definite site proposal but said the drilling there had found potentially suitable clay for intermediate waste disposal a few thousand feet down.

By DAVID TUDBALL

Radioactive waste comes in three broad categories — low, intermediate and high level. Low-level waste at Drigg is buried in trenches, but Dr Roberts said the intermediate waste would have to be buried much farther underground.

Atomic energy chiefs have already run into major controversies over sea dumping of low-level waste — which Dr Roberts said would continue — and research drilling for eventual disposal of the most highly radioactive wastes.

Dounreay waste disposal

A proposal which would allow non-active waste from Dounreay to be dumped in local refuse tips has been turned down by Caithness District Council.

Members of the authority's environmental health committee rejected the request from the UKAEA following lengthy discussion on the matter at their meeting on Monday.

The councillors, however, were divided on the controversial issue. Some felt they should accept the domestic and industrial waste from canteens and offices provided it was monitored but others maintained that the council should refuse to take it as there was a risk of active waste getting into the tips through human error or negligence.

But in the end the issue was resolved by a show of hands which resulted in a 6-5 vote in favour of the plan being refused.

The crucial factor in the talks was that the Authority's representatives, Dr John Griffiths, health and safety, and Mr D. A. Wilcock, works civil engineer, could not give a guarantee that radioactive material would not accidentally get into the public refuse areas.

Addressing the committee Dr Griffiths said: "We can monitor certain items and guarantee they are free from contamination but it is not a practical proposition to give an absolute guarantee.

"Our equipment will detect any dangerous source of radiation but to give a guarantee that every item in a rubbish sack is non-active simply from a monitoring procedure is not on. The collection technique and the segregation is the safeguard."

Wick councillor Andy Murray claimed, however, that there was an element of complacency and carelessness in the way the organisation was run.

And to back up his statement Mr Murray, a Dounreay employee, said that one of the tea-bars on the site was in a non-active area and yet it was discovered recently that part of the carpet was contaminated.

In addition, he alleged that active material had been known to get into skips which had been designed for non-active waste.

Although the proposal was rejected at this meeting, it was later passed at a meeting of the full council.

Following a proposal made by Sweden, an international co-operative project to study the use of hard crystalline rock for isolating nuclear waste from the biosphere will be conducted in the Stripa mine, located in central Sweden. This mine had been used from 1976 until 1978 by the Swedish Nuclear Fuel Safety Project (KBS) and others.

During 1980, NEA arranged the "Stripa Project" to be carried out in this facility over four years starting in 1981 with the participation of several NEA Member countries.

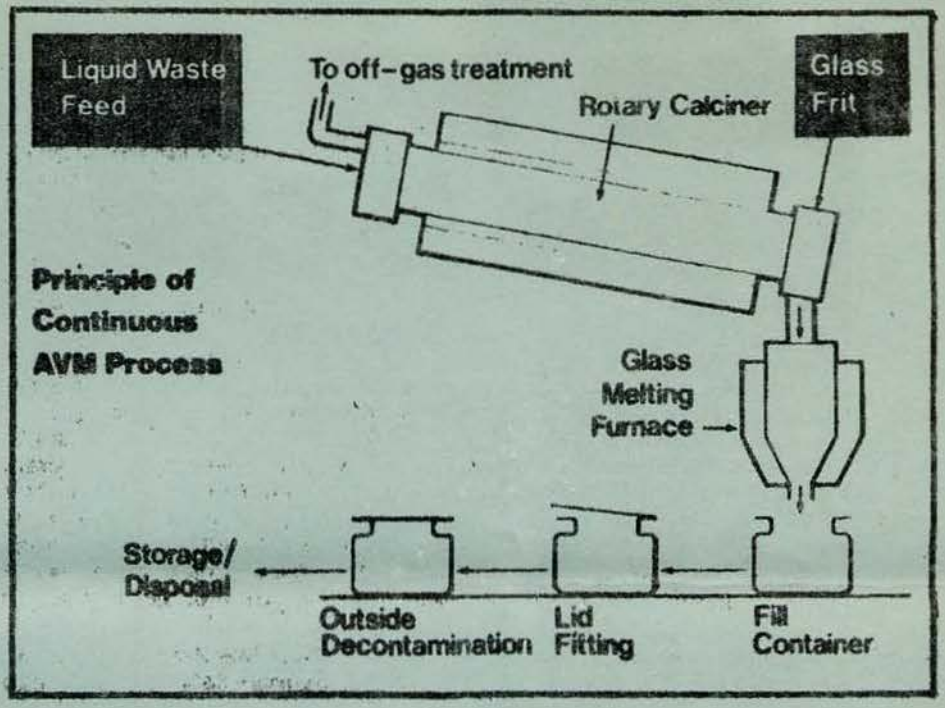
As of 31st December 1980, the following countries had indicated their intention to participate in the Project: Finland, Japan, Sweden, Switzerland and the United States. In addition, Canada, France, the Federal Republic of Germany, Spain and the United Kingdom had expressed interest in being associated with the Project.

Aug. 23: 3000 people demonstrated against test drilling for nuclear waste disposal in Kynnefjäll, Sweden. Local people have blocked access to test site for 450 days and nights since April 1980. Contact: Bengt Nyberg, Gefater 3163, S-66 800 Ed, SWEDEN

Vitrification

In Britain and Europe the favoured method of solidification is the conversion of the liquid waste into a borosilicate glass. This process is known as vitrification.

Although British research into vitrification began in 1955, the technology is still in its infancy. In the 1960's, the nuclear industry, ever optimistic of its ability to solve technological problems, stopped all research for seven years, only to find their process was unsatisfactory. The industry has now developed the HARVEST process, which is at the stage of a full-scale plant using non-radioactive simulated waste. But this process, the result of nearly twenty years of work, is to be abandoned. British Nuclear Fuels Ltd. have recently announced their plans to build a plant at Windscale, based on the French AVM (Atelier de Vitrification de Marcoule) design.



Most of the plants around the world are experimental, based on a single batch process. For example, the HARVEST plant feeds the 'simulated' liquid waste and the glass-forming materials directly into an electrically heated steel pot where they melt to form a glass. The French system, on which the Windscale plant is to be based, is essentially a three stage, continuous process (see diagram). Firstly the waste is evaporated and heated to produce a granular product known as calcine. The calcine is highly radioactive. In the second stage, it is mixed with the glass-forming chemicals in a special furnace, and the liquid glass is poured directly into metal canisters which are then sealed and stored in air-cooled caves.

Synroc

An alternative process to vitrification is the incorporation of the liquid waste into a synthetic rock, known as synroc. In both America and Australia, research into these new minerals is taking place. In Europe little interest has been shown, largely because the development of synroc is still at the initial stages and the nuclear industry believes that a solution to the waste problem needs to be found now.

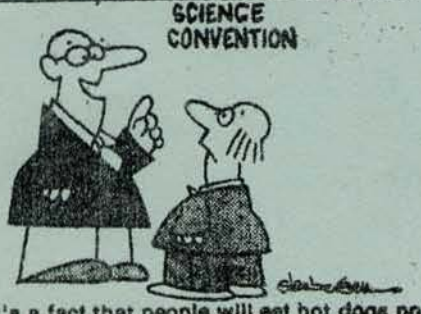
One of the most vocal proponents of synroc is Prof. Ringwood of the Australian National University. He has developed a synroc which consists of three titanium-bearing minerals that occur in nature. Ancient samples of these minerals containing uranium and thorium have, it has been estimated, been exposed to far more irradiation from alpha particles than the synroc containing radioactive waste will ever be exposed to. These samples have retained their original structure and Ringwood claims that the stability of the minerals could prove it to be a more satisfactory solution than the use of borosilicate glass. Ringwood also claims that his process will be cheaper. However, the European scientists disagree with him. The argument amongst scientists on the best method of solidification will only be finally resolved if and when the glass or synroc has remained stable for thousands of years.

Radwaste and Windscale

A letter by D. Savage and N. Chapman (*New Scientist*, vol 90, p 452) contains serious errors of fact that call for correction and raises broader issues which merit consideration. Their letter deals with the immobilisation of high-level radio-active wastes (HLW) in SYNROC, a titanate ceramic wasteform under development by the Australian National University and the Australian Atomic Energy Commission.

Savage and Chapman appear unaware of the basic motivation for developing an advanced wasteform possessing greatly superior resistance to leaching by groundwater than does borosilicate glass. They argue that in an ideal geological respository, the flow rates of water past waste are only likely to be of the order of 1 to 2 litres a year through a square metre cross-sectional area, and advocate leach tests which model these ideal conditions. The results are excessively flattering to the wasteform, and make minimal demands on its capacity to immobilise radioactive wastes.

In real life we must always consider the possibility, however remote, that large volumes of groundwater may breach the repository, owing to unsuspected hydrogeologic factors; for example, fractures caused by



"It's a fact that people will eat hot dogs no matter what you put in them. Which brings me to my idea for disposing of nuclear waste..."

tectonic activity, thermal stresses or human intrusion. In this event, the waste-form itself should function as an independent *immobilisation barrier* fully capable of preventing any significant access of radionuclides to the biosphere. Realistic leach testing should be designed to evaluate the performance of wasteforms under these conditions. This is the basis of our comparative testing of SYNROC and borosilicate glasses.

The authors attempt to denigrate these leach tests which show SYNROC to be vastly superior to borosilicate glasses. They state that our testing was performed under conditions "where the wasteform contacts infinite amounts of refluxing water, which is like suggesting that the wasteform should withstand disposal in a boiling waterfall". This statement is false. Our testing was closely based on the IAEA method, according to which the wasteform is contacted by small, fixed volumes of water for finite times (order of days), analysed for dissolved species, and then replaced by fresh batches of water. The IAEA method is widely used as a standard method for evaluating wasteform leachability.

Savage and Chapman also state "Different waste compositions can be accommodated simply by changing the glass composition. SYNROC has not proved to be as flexible, each waste composition requiring a separate mineral assemblage. The scale-up problems of this can be imagined." This statement is also false. The waste compositions accepted by SYNROC can be freely varied within the ranges of fission products and actinides produced by differing fuel cycles without altering its formulation. Likewise SYNROC can incorporate 5, 10, or 20 per cent of HLW without changing its formulation or substantially changing its leach characteristics.

They further state that SYNROC has not proven its capacity to incorporate the majority of fission products and actinide elements occurring in HLW. Wrong again! About 30 of the most important waste elements have been incorporated in SYNROC and there is no reason why the remaining minor elements should not be similarly introduced. With the possible exceptions of wastes containing large amounts of sodium and fluorine (for which additional tailoring is required), all elements which can be incorporated in glass can also be incorporated in SYNROC.

It would hardly be worth making an issue of these allegations were it not for the fact that other [illegible] associated with [illegible] immobilisation programmes have made similar unsubstantiated statements about SYNROC which are equally indefensible. Papers by Groves (*Radioactive Waste Management*, vol 1, p 1) and Tempest (*Nuclear Technology*, vol 52, p 415) fall in this latter category. One wonders why these scientists should be so anxious to denigrate a wasteform about which they obviously know so little.

The thermal conductivity and strength of SYNROC are about three times higher than glass. Although the production technology for SYNROC is at a much earlier stage of development than for glass, there are now sound engineering reasons to support the belief that disposal of high-level waste in SYNROC is likely to be both cheaper and radiologically safer to plant operators than glass production.

The Windscale reprocessing plant is estimated to cost about £1000 million pounds. The taxpayer is entitled to expect that the technology to be used has been evaluated rigorously and compared objectively with other technologies, including those currently under development. I doubt whether this latter obligation has been adequately fulfilled.

The Windscale plant will possess two French AVM melters operating in parallel to convert the wastes into borosilicate glass. The decision to employ this strategy may well be justified in current circumstances, since other technologies are not yet sufficiently advanced to be utilised. However, I venture to predict that by the time Windscale commences operation, its waste solidification plant will have become technologically obsolete, and glass may not be the wasteform preferred by society.

It might well be prudent for the management of Windscale to keep its options open and to design the plant so that its operation is sufficiently flexible to be compatible with technologies which are currently being developed with the objective of producing vastly improved wasteforms.

A. E. Ringwood FRS
The Australian National University Canberra ACT

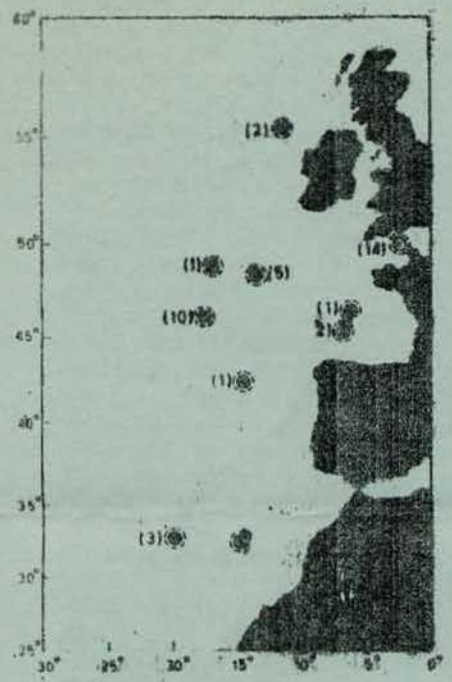
In March, tenders were invited from contractors interested in participating in the radioactive waste management research programme for 1982/83 — without awaiting the results of the Mullwharchar and Cheviots inquiries, and thus making a mockery of the inquiry process. Very detailed documents sent out to interested contractors included reference to the Mullwharchar, Cheviot, Somerset and Hereford/Worcestershire sites. MPs Alan Beith and Gordon Wilson asked questions in Parliament about these contracts and the pending inquiry results. From the replies, it would appear that contractors are being "lined up" beforehand for Mullwharchar but not for the Cheviots.

So what's going on? Despite the "no great urgency" line on high-level wastes, the very expensive test drilling programme is still continuing, with local public inquiries likely to cost £300,000 each, judging by previous experience.

At the inquiries, the UKAEA justified the test drilling programme precisely on the grounds of urgency. Government embarrassment, now that this urgency supposedly no longer exists, may partly explain the long delay in announcing the result of the Mullwharchar inquiry. However, the government is also undoubtedly waiting for the most politically convenient time to announce its decision, having become aware of the strength of local opposition to drilling, strongly apparent during the inquiries and currently instrumental in delaying the Wales and Hereford/Worcestershire applications.

The search for safe waste management technology is shockingly unadvanced, even after 25 years' research. The industry's claims that they are confident of finding a solution do not add up to actually doing so! The RWMAC advises that "it may be better to leave to future generations the flexibility of deciding how and when to dispose of the solidified waste, having ourselves carried out the research and development to provide them with information on the technical options." Let us not be fooled by such statements into thinking we would thus be doing future generations a favour. There may not, in fact, be a safe and economic solution to the problem of disposal of high-level nuclear wastes.

Sea disposal of radioactive waste



Sites in the North Atlantic where Britain has dumped radioactive waste. Figures give the number of years used

● Mrs Short asked what proportion of the radioactive waste dumped at sea in each year since 1975 had been (a) low level waste, (b) intermediate level waste and (c) high level waste.

Mr Buchanan-Smith: There are no precise definitions of high, intermediate and low level wastes. For the purposes of the London Dumping Convention only two categories of waste are used: high level wastes, defined by the International Atomic Energy Agency as unsuitable for dumping at sea, and lower level wastes which can be dumped provided special care is exercised. All the waste dumped at sea since 1975 has fallen within this latter category.

● Mrs Short asked whether the Minister had received any representations opposing the dumping of radioactive waste at sea, and from whom; and whether there had been any consequential discussions.

Mr Buchanan-Smith: Individuals and organisations write to my Department from time to time asking for information or expressing concern about the use of sea disposal for radioactive waste. During the current year, my Department has received comments and requests for information from Greenpeace and representations from one private individual specifically opposing the dumping of radioactive wastes at sea.

Delegates from 40 countries arrived in London for the 6th meeting in Britain of the 1972 London Dumping Convention. The convention is traditionally a gentlemanly affair untroubled by public controversy. But this time, the Pacific Basin Nations were represented by a scientific observer, Dr Jackson Davis, and Greenpeace was present to lobby delegates. So there was a well-orchestrated note of dissent.
For the second year running, Greenpeace applied to get observor status. Britain have argued against this because they say if they open the convention to anyone, it will become unmanageable. But, as Greenpeace is the only environmental group applying, they were eventually granted restricted observor status.
Greenpeace then distributed a draft resolution - it calls for a halt to sea dumping until the following criteria be met:

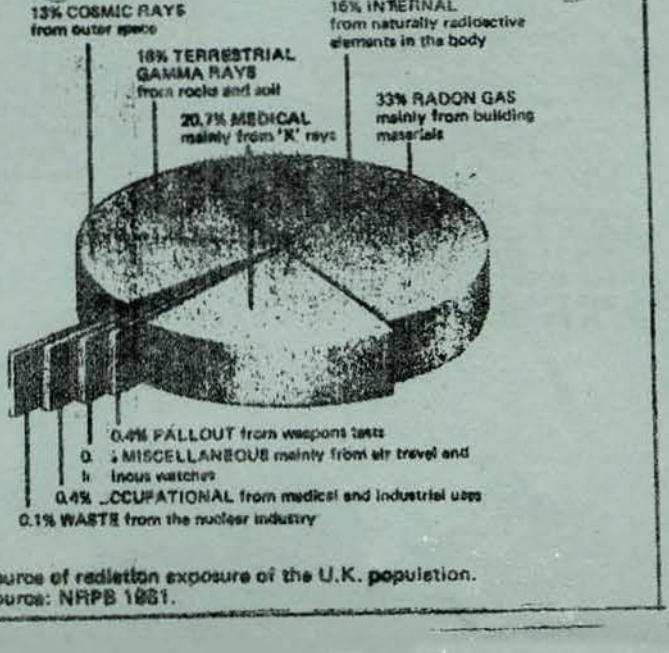
That there is proper monitoring and surveillance of dumping operationd.

That land based alternatives are investigated, in accordance with the rules of the London Dumping Convention (LDC)

That the inventory that the LDC called on the AEA to draw up of all sources of radioactivity that reach the sea be drawn up and published. It is impossible to set maximum limits on dumping activities until such an inventory is drawn up.

This draft resolution will be submitted next year as a full resolution, so in the meantime Greenpeace will be working and preparing for that.
Greenpeace, 36, Graham St., London N1 8LL.
01 251 3020.

Jackson Davis also presented a draft resolution calling for a ban on any new dumping operations (i.e. to ban the proposed Japanese dumping in the Pacific)
This too will be presented fully next year.



Source of radiation exposure of the U.K. population.
Source: NRPB 1981.

U.S. 5·9·81

The dumping of high-level radioactive wastes in the oceans, a practice the Environmental Protection Agency has long denied ever occurred, was more widespread than even many antinuclear critics have assumed. Recently discovered documents from the Atomic Energy Commission (now the Nuclear Regulatory Commission) disclose that during the 1950s, more than 1,000 drums of high-level nuclear wastes, normally buried underground, were sunk off the coasts of North America. The documents reveal that some of these wastes are among the most toxic materials generated in the nuclear fuel cycle and are at least forty times more radioactive than the low-level wastes previously known to have been dumped.

The dangers posed by these past dumping operations are compounded by the unsafe way in which the wastes were packaged. Nuclear byproducts, some of which will remain toxic for hundreds of thousands of years, were put into metal drums not designed to last more than three or four decades. It was assumed that these corroding drums would gradually disperse the wastes into the aquatic environment (which means the initial release period will occur in the 1980s and 1990s). However, some of the drums ruptured upon hitting the ocean floor, spilling their contents immediately. When ocean dumping ended in 1970, more than 89,000 of these radioactive time-release capsules had been deep-sixed at more than fifty offshore sites that ring our three coasts.

Despite the extent of the dumping, the E.P.A. sticks to its claim that only low-level wastes were dumped, posing no threat to man or the deep-sea environment. E.P.A. radiation scientist Robert Dyer says that the low levels of radiation the agency measured around the drums located on the Farallon Islands nuclear dump site, thirty miles west of San Francisco, support this contention. Yet at a Congressional hearing on the environmental impact of the dump site held last October in San Francisco, Dyer and other E.P.A. spokesmen admitted that of the 47,500 drums dumped in the area, their survey teams had inspected only 150. Dyer added that a quarter of those drums had already ruptured.

Jackson Davis, a professor of biology and environmental studies at the University of California at Santa Cruz, also testified at the hearing. Using data collected by the E.P.A., Davis had calculated that plutonium levels in ocean sediment cores from the Farallon Islands dump site were from eight to 2,208 times higher than expected and that the amount of plutonium in the flesh of edible fish was 188 times higher than expected.

Following Davis's testimony, Dr. Hal Ross, representing Project Tektite, a private oceanographic research group, testified that during a research trip near the islands, a Tektite diver had stumbled across similar drums in only 160 feet of water. Nearly all of these drums had ruptured. Tektite conducted several more dives and eventually found a total of seventy drums, some in water as shallow as sixty feet. Dyer later explained that this shallow-water dump site was probably the result of a typographical error, "the simple dropping of a zero from the depth designated for disposal." Ross discovered another possible explanation for the shallow underwater grave. Some of the captains who had run barges carrying drums filled with nuclear wastes told him that in inclement weather the drums were frequently unloaded in shallow water or wherever it was easiest to dump them.

This practice, known as "short-dumping," might also explain what happened to the 3,000 barrels of radioactive material, including plutonium, generated by Atomics International, now a division of Rockwell International. The waste, supposedly dumped between 1953 and 1961 in the Santa Cruz Channel, thirty-three miles from Los Angeles, has never been found by the underwater survey teams that have searched for it.

The military, whose own list of past dumping operations has never been made public, also secretly disposed of wastes at sea. Earlier this year, a retired Navy pilot, George Earle 4th, revealed that he had flown three missions aboard a B-17 bomber in 1947 to dispose of between six and eight tons of radioactive waste off the coast of New Jersey. One documented military dump took place about 150 miles off the Delaware-Maryland border, where the Navy "decommissioned" an entire nuclear reactor vessel. When Navy personnel went back to look for the reactor twenty years later, they were unable to find it. Other military dumpings took place in undisclosed locations. The procedures under which many of them were carried out are outlined in a license-renewal application of the Naval Radiological Defense Laboratory: "After each dump a thorough inspection is made of the dump area to ascertain that all containers have sunk. In the rare event of a floating radioactive waste container, it is sunk by gunfire."

So far, there has been no systematic attempt to monitor known dump sites for radioactive contamination of the surrounding environment. Last September, Representative Anderson introduced a bill to study the effects of past oceanic disposal of radioactive waste, but such legislation, if passed, would be meaningless without proper funding. The E.P.A. has never been given a formal budget to study the effects of this dumping; the five surveys the agency conducted between 1974 and 1978 were funded by $500,000 left over from other E.P.A. programs.

Given the Administration's environmental priorities, the prospects for adequate funding are uncertain, to say the least. Meanwhile, the agency is still being given funds ($500,000 in 1980) to re-examine the feasibility of using the ocean for the disposal of nuclear wastes, and the Federal government has spent more than $30 million to study the possibility of burying high-level wastes beneath the ocean floor.

Fish and the oceans they inhabit are globally shared resources. They respect no national boundary. Neither does the radioactivity they will inevitably bring back to us. Some of the high- and low-level radioactive wastes now leaking from underwater drums will remain toxic for 500,000 years, or 10,000 human generations. In the 1980s and 1990s, as the walls of these more than 89,000 drums begin to corrode, the rate at which radioactivity leaches into the ocean will rise considerably, accelerating the speed with which it contaminates our food and our children's food.

FURTHER INFORMATION:
PACIFIC CONCERNS RESOURCE CENTER
P.O. BOX 27692. HONOLULU, HAWAI.
967827

Land Storage Proposed for Japan N-Waste

AGANA, Guam (Reuter-Kyodo) — The president of the Marshall Islands Wednesday suggested Japan store its low level radioactive waste on one of his nuclear-scarred atolls rather than follow its plan to dump it in the Pacific Ocean.

President Amata Kabua made the proposal to a delegation of Japanese scientists during the third annual conference of Pacific Basin chief executives which focused on Japan's plan to dump the waste in the sea 800 miles north of Guam.

"Is it possible that a tragic misfortune which befell our people could be turned around to provide a safe, practical way to deal with a world problem and provide a form of economic recovery for people who have lost so much," he asked.

The Japanese delegation, led by Hiroshi Goto, deputy director of the Nuclear Safety Bureau, did not immediately accept Kabua's offer, preferring instead to study the proposal.

But a majority of the Micronesian leaders present would have to first approve the land storage plan in order for Kabua to formally extend the offer. Such agreement appeared extremely unlikely, as all executives roundly denounced Japan for wanting to dump any waste within the Pacific area.

Kabua said later he had proposed land storage to the scientists as an alternative to sea contamination.

'Won't Fit Program'

The Japanese Science and Technology Agency officials, commenting on the reported counterproposal of President Amata Kabua of the Marshall Islands to the Japanese plan to dump low-grade nuclear waste in the Pacific Ocean, said that there was no possibility of modifying Japan's original plan to dump the waste as suggested.

"Since the Japanese governments current program to dispose of low-level nuclear wastes is based on the plan to dump the waste on the bottom of the ocean, President Kabua's suggestion will not fit our program at all," one of the officials said.

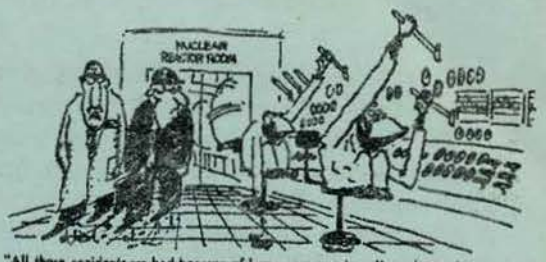
FRENCH ACTIVISTS PROTEST ARRIVAL OF SPENT JAPANESE FUEL

Violent incidents marked the arrival in Cherbourg, France in early August of the British ship, 'Pacific Crane'. The ship carried spent fuel from Japanese nuclear reactors destined for reprocessing at the La Hague reprocessing plant. Hundreds of ecologists, led by Ecologist Party leader Bruce Lalonde, clashed with police who used teargas grenades to clear a railroad track where the spent fuel was to be transported August 4.

On August 5, ecologists met with energy minister, Mr. Edmond Hervé. Mr. Hervé confirmed that reprocessing contracts with a dozen countries (Spain, Japan, Belgium, Sweden, Federal Republic of Germany and Egypt) would be upheld. He also said that irradiated fuel would continue to be delivered to the La Hague reprocessing plant and that expansion work at the plant would continue unabated. The CFDT also met with the energy minister Aug. 5th to request specifications on the parliamentary debate on energy scheduled for early October when parliament reconvenes. The CFDT demands that the debate be preceded by extensive consultations, that the public be truly informed, and that the debate be more extensive.

Meanwhile the French anti-nuclear movement continues to regain strength and move toward unity. Last week anti-nuclear activists met in Caen to found a common front against the nuclear policies of the French government. Activists say that even though the Socialist Party has a solid majority in parliament, it cannot permit itself to ignore a significant portion of the electorate.

Contact: La Crasse de la Manche
P.O. 6, 50104 Cherbourg, FRANCE



"All those accidents we had because of human error got pretty embarrassing . . . so we decided to do something about it!"

ANOTHER REPROCESSING PLANT CANCELLED IN GERMANY

On August 18 the Hessen government (central West Germany) announced that it will not grant permission to DWK (German Company for Reprocessing) to build a waste reprocessing plant at Diemelstadt/Volkmarsen. DWK had announced its plans for building the 350 ton/year plant in early June, 1981. Massive national and local opposition was quickly activiated; the same, strong opposition in Germany that stopped industry plans' to build a larger reprocessing plant at Gorleben over a year ago.

Although the cancellation of the reprocessing plant is a success to the anti-nuclear movement, it does not mean a total cancellation of all reprocessing plans. It is expected that the Hessen government will grant permission to build on another site, not far from Diemelstadt/Volkmarsen within a few months. Despite this fact, the regional anti-nuclear groups dissolved the planned, nationwide demonstration "Against a reprocessing plant at Diemelstadt/Volkmarsen or anywhere else", scheduled for Sept. 19,1981.

Contact: Anti-Atom-Büro, Auf dem Ort 10,
3549 Diemelstadt-Wethen, W. Germany, Tel:05694/737

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International forum on radioactive waste management

The third and final meeting of participants in a coordinated IAEA research programme on the migration and dispersal of radionuclides in the terrestrial environment was held at Keble College, Oxford, at the beginning of July.

The programme has considered current knowledge regarding the storage and disposal of radioactive wastes under various conditions in the environment. The meetings have reviewed the mathematical models and data relevant to radionuclide migration in soils and in deep geological formations, and laboratory and field experiments aimed at demonstrating such migration. The results of the programme are to be published by the IAEA as a technical report later this year

Participants in the final meeting, which was hosted by AERE Harwell, the Institute of Geological Sciences and the National Radiological Protection Board, came from the UK, Canada, Czechoslovakia, France, Poland, Sweden and the United States. At the end of their meeting they paid a one-day visit to Harwell to see some of the work of the AEA and the IGS in the field of radioactive waste management.

Further information on the IAEA programme may be obtained from Dennis Kinsey, Chemical Technology Division, AERE Harwell, Didcot, Oxon OX11 0RA. Tel. 0235 24141, ext. 4149.

The people of the Pacific have called for a world-wide petition campaign against the French Nuclear Testing and the Japanese Government's nuclear waste dumping plan in the Pacific."It is only with your support that we can stop these nuclear activities so that our children can live in peace."
Please support the campaign by gathering as many signatures as possible for the following petition. Since the matter is quite urgent,the results of the first phase of the campaign will be compiled by March 1st,1981,the day designated as Nuclear-Free Pacific Day.T

Petition Jointly addressed to
the President of France and the Prime Minister of Japan

INTERNATIONAL PROTEST
AGAINST
FRENCH NUCLEAR TESTING AND
JAPANESE NUCLEAR WASTE DUMPING PLAN

We, the undersigned, charge that the French nuclear testing and the Japanese nuclear waste dumping plan in the Pacific are criminal acts of genocide committed against the Peoples of the Pacific.

In solidarity with the Peoples of the Pacific, we raise our strongest protest against these inhuman actions by the two governments.

We strongly urge that the governments of both Japan and France immediately cease and unconditionally abandon their nuclear testing and nuclear waste dumping plan.

NAME	AGE	ADDRESS	(COUNTRY)
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Please return to: JISHU-KOZA, 1-3-7 Mukogaoka, Bunkyo-ku, Tokyo, JAPAN

"Don't Make the Pacific a Nuclear Dumping Ground!" Part 2, September 2, 1981, A follow-up report on an earlier report on waste dumping (Jan. 21, 1981; PCRC resource no. 26). Contains reprints from AMPO, Japan-Asia Quarterly Review and Han-Genpatsu News on Belau's struggle for self-government and on the opposition to Japan's low-level waste dumping plans. 35 pages. Available from Jishu-Koza/ Japan, Stop the Pollution Export Committee, 1-3-7 Mukogaoka, Bunkyo-ku, Tokyo, Japan 113.

AERE-R 10178 *The development of a strategy for the management of high level radioactive wastes.* By H. Beale. July 1981. 34pp. HMSO £3·00. ISBN 0 70 580644 8

AERE-R 10043 *The movement of solutes through aqueous fissures in micro-porous rock during borehole experiments.* By E. Glueckauf. February, 1981. 34pp. HMSO. £3·00. ISBN 0 70 580793 2

AERE-R 10088 *Radioactive fallout in air and rain: Results to end of 1980.* By R.S. Cambray, E.M.R. Fisher, K. Playford, J.D. Eakins and D.H. Peirson. June 1981. 48pp. HMSO £3·00. ISBN 0 70 580983 8

Cutting techniques as related to decommissioning of nuclear facilities, 48 pp, OECD, February 1981; £3. ISBN 92 64 12169 2. *Decontamination methods as related to decommissioning of nuclear facilities,* 45 pp, OECD, March 1981, £2·80. ISBN 92 64 12200 1.

Atom 300 October 1981

POISON IN OUR HILLS

The peoples' report on the Mullwharchar waste dumping enquiry. Essential reading for anyone interested in opposing waste dumping — or public enquiries of any kind. £1.80 + 25p. p&p from Smiling Sun Shop, 37 West Nicolson St., Edinburgh.

Scottish Campaign to Resist the Atomic Menace
30 Frederick Street Edinburgh EH2 2JR 031 225-7752

Reprocessing/Waste

Windscale Fallout, Ian Breach, Penguin, 1978. Wide ranging review of the Windscale Public Inquiry, with an index by SCRAM. **90p + 30p.**

The Nuclear Controversy, Martin Stott & Peter Taylor, PERG/TCPA, 1980. A guide to the Windscale Inquiry, containing a wealth of information on reprocessing. **£8.95 + 50p.**

Near Miss - La Hague, Agenor, 1981. A good description of the fire at the French reprocessing plant at Cap La Hague followed by a discussion on the implications of reprocessing. **50p + 20p.**

Nuclear Waste, ISE, 1980. An introduction to reprocessing and nuclear waste disposal. **35p + 15p.**

Poison in our Hills, SCRAM, 1980. A fascinating insight into the first nuclear waste dump test-drilling inquiry on Mullwharchar. **£1.80 + 30p.**

The Mullwharchar Tapes, SCRAM, 1980. Two hours of the highlights from the most farcical inquiry to be held in this country yet. **£3.75 + 30p. Transcript 50p.**

Islands at Risk, KNO/HAND, 1980. A proposed NATO air-base and the possibility of nuclear waste disposal are disturbing prospects for the outer Hebrides. **£1.00 + 25**

Recent articles on waste dumping:
Sub-seabed Disposal of Nuclear Wastes.SCIENCE.18.9.81. Vol.213
Strategy for Radioactive waste Disposal in Crystalline Rocks.SCIENCE.17.7.81.
In Search of Nuclear Burial Grounds.New Scientist.13.8.81.
Davy Jones's Nuclear Locker (on low level sea dumping)New Scientist.23.7.81.

Available from newsletter address,please send sae and 15p per article to pay for copying.

"SITING OF RADIOACTIVE WASTE REPOSITORIES IN GEOLOGICAL FORMATIONS"
259 pages, OECD, May 1981
ISBN 92-64-02186-8
Available from OECD Sales Agents.

The Political Ecology Research Group has produced a (somewhat belated) report about the Windscale reactor accident in 1957. The report records what actually happened in the Windscale accident, and also includes a survey of official health statistics (including thyroid cancers mortality, other cancers, infant mortality) which resulted from the accident. It costs £3.50 and is available from PERG, 34 Cowley Road, Oxford.