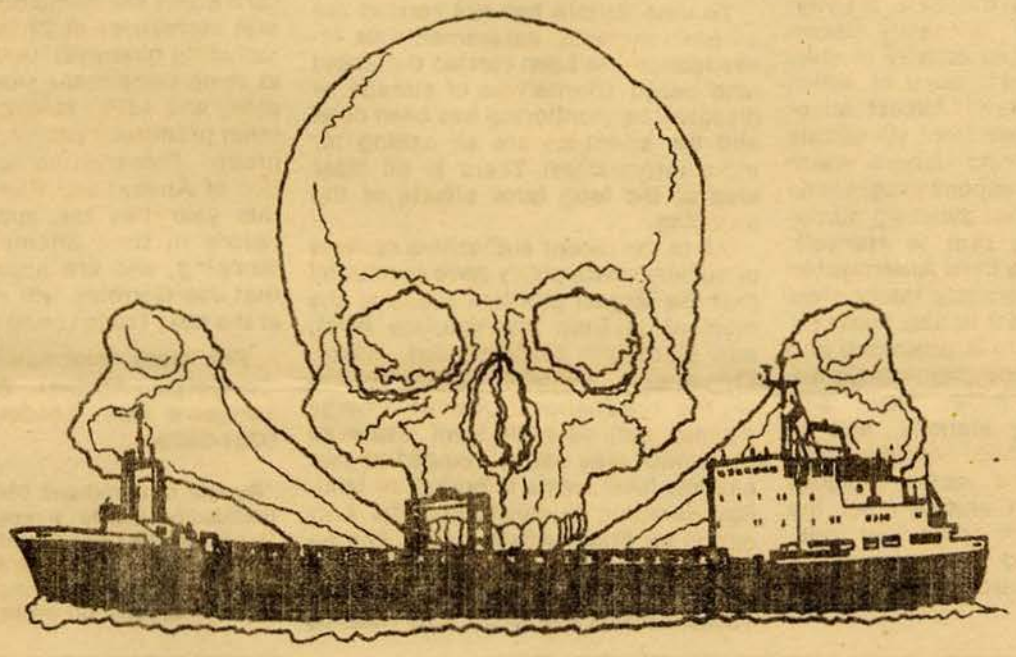
A.N.C WASTE DUMPING newsletter no. 6.

JULY — AUGUST . 1981.

SEPTEMBER 26th and 27th (Sat and Sun)
ANC Campaign Conference andAGM in
SHEFFIELD

The Waste Dumping Group will be meeting on Sunday from 10 a.m. onwards. The 'official business' of the ANC lasts till 5.3o on Saturday,so after that those who are taking part in the waste dumping workshop on Sunday could meet to draw up a plan for Sunday,if that seems necessary.It very much depends how many people come as to how organized it has ot be .
If you are coming and need accomodation,the deadline for accomodation requirements is September 3rd.All communications to:The Confernce Secreatary, c/oANC National Office,P.O.Box 216,Sheffield S1 1BD. Tel:0742 754691.

If you didn't affiliate to the ANC this doesn't debar you from attending the workshop etc - everyone is very welcome.



The deadline for the next issue is : OCTOBER 20th

Newsletter address: 71,Overstone Road,Hammersmith,London,W.6.

Dumping at Sea

Each July the Atomic Energy Authority [AEA] organises a shipload of nuclear waste for dumping in the Atlantic. Last year the matter gained a certain prominence. A train-load of waste en route to the docks at Sharpness, on the Severn near Bristol, was held up for a few hours by anti-nuclear groups. It gained a lot of publicity, and cost those involved a few days in jail and fines of £2,500. The money was collected from a generous public—who gave every indication of supporting both the cause and the action. Attempts to stop the dumping out at sea by the Greenpeace boat 'Rainbow Warrior' in previous years also attracted sympathetic attention, yet the AEA have every intention of carrying out the dumping again this year.

Since 1975 the amount of radioactivity dumped by Britain has more than doubled — yet almost every other country has stopped. Germany in 1967, Italy, Sweden and France in 1969, and the US in 1970. In 1979 Britain contributed a massive 98% of the total radioactivity dumped, but only 37% of the total weight — the other countries shield their waste much much more.

The AEA likes to imply that the waste comes from hospitals, industry and other 'acceptable' sources, but this is not so. A 1979 official report* said "the alpha activity is mainly plutonium: with some higher actinides and uranium: and the beta activity, apart from tritium, is mainly fission products and induced activity in steel reactor components", none of which are used in hospitals! Almost all of the plutonium comes from Windscale or from nearby Drigg, where waste from the nuclear weapons programme of the 1950s is stored awaiting dumping. The waste is sent to Harwell, where it joins waste from Aldermaston for packaging in concrete inside steel drums. It is then sent to Sharpness for loading. Other waste is processed and packaged at the Radiochemical Centre in Amersham, Hinkley Point and Trawsfyndd power stations, and at Rosyth and Chatham nuclear submarine bases. The waste includes large quantities of sludge from the cooling ponds, from spent fuel rods, and the liquid and air filters which protect the environment around nuclear sites.

International Regulations

There are international controls governing the dumping of waste at sea, principally the London Dumping Convention of 1972. To comply with these regulations the Ministry of Agriculture, Fisheries and Food must ensure that there is:- a detailed 'environmental and ecological assessment' of the dumping areas: a 'justification as against land based alternatives' for the dumping: and 'monitoring of the conditions of the seas'. The dumping should only go ahead if this information gives 'an adequate scientific basis' to assess the consequences of the dumping on marine life.

To date Britain has not carried out an environmental assessment: no investigation has been carried out about land based alternatives of storage or disposal: no monitoring has been done and the scientists are all calling for more information! **There is no clear idea of the long term effects of the dumping.**

All of the recent authoritive reviews of nuclear waste policy have concluded that the largest problem posed at the moment is from intermediate level, and plutonium contaminated, waste. This is exactly what is dumped at sea — the International Atomic Energy Agency defines high level waste as that which may not be dumped at sea, and low level waste is buried on land. Sea dumping is considered the only option for intermediate waste. The industry plans to increase the amount dumped at sea by 30-40 times by the 1990s. To this end BNFL has recently applied for a £100m expansion at Windscale, much of which is to process and package waste for dumping at sea.

Abroad

Abroad the signs are worrying: Japan has recently announced its intention to dump, citing European experience as justification! The move has been strongly resisted by other Pacific nations and environmentalists in Japan. If Britain continues to blatantly flout international controls other countries faced with a similar problem may decide to join in. The US Navy have to withdraw an old Polaris nuclear submarine each time they introduce a new Trident. Two such submarines were laid up in 1979, but their propulsion reactors present a problem. Land burial is an expensive and unattractive option, so they are seeking permission to dump them in the deep ocean. As more subs are decommissioned, the pressure is going to increase. There is also the possibility of high level waste being buried on or under the sea bed.

Last year, Greenpeace collected signatures for a statement of concern about sea dumping from the general secretaries of 24 trade unions — including nine with members involved at some stage of the sea dumping process, and MPs, scientists and many other prominent people. A trade union group: Preservation and Conservation of Animal and Plant Life (PCAP) this year has the support of eight unions in their attempt to stop sea dumping, and are apparently hoping that Joe Gormley will raise the issue at the next Trade Union Congress.

For more information contact the Campaign Against Sea Dumping, Longacre Hall, London Road, Bath, 0761-33084

*Review of Command 884; the Control of Radioactive Waste, a report by an 'expert Group' to the Department of the Environment, HMSO, 1979, £1.35. It should be read and criticised as it is going to lead to a new White paper on waste policy.

THE following statement was made by French oceanographer JACQUES-YVES COUSTEAU in Paris on 8th July: "On behalf of the 160,000 members of the Cousteau foundation, I protest once more against the sea dumping of nuclear waste, and more specifically against the dumping off Cape Finistere planned this year by the British government. It is time to stop considering the sea as the universal garbage can."

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WEEK of ACTION AGAINST THE GEM

SHARPNESS DIARY

Wed.8th.- a grpup occupied a tower in Bristol.
Thurs.9th.- a small international demonstration outside the UKAEA HQ in London.France,Spain,Japan and Ireland accompanied England in the demo.
Sat.10th.- a small demo outside Amersham radio-chemical centre in Amersham an d a march in Bridgewater.
Mon.13th.- A lurid green King Neptune visited Harwell and asked to speak to the person in charge.We are not sure what was said.
Sat.11th.- BANG rolled oil drums decorated with radiatiom symbpls and marked 'radioactive' through the main shopping areas of Bridgewater.
Sun.12th. The march from Berkeley Power Station to Sharpness Docks was supported by several hundred protestors, including groups from as far afield as Scotland,and warched by several hundred more. The march was enlivened by the presence of a red devil from the European theatre of war ;a 'health physics'squad in white boiler suits collecting contaminated bodies which were set alight in a mini funeral pyre at Sharpness and 4 coffin bearers illustrating the risks of radioactive cmaterialiTm. march came to a halt outside the locked gate of the docks,where two mediaeval knights battered the gates in mock attack. Peacefully the crowd returned to Sharpness to eat,hear speakers,music,watch films and have a ceilidh in the evening.The demonstration was marked by its peacefulness humour and good organisation - thanks to Bristol anti nuclear group.

So what next?

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AS the ship,the Gem,prepared to unload the barrels of waste,Greenpeace people were there bobbing about in inflatables.They hoped to stop the drums being dropped into the water but they found that the Gem crew was prepared to risk hitting them with the 2 ton drums - independant observers said the crew even seemed to aim at the people in the inflatables.It was considered too dangerous to continue that tactic,so on day two they towed out an inflatable with the intention of catching a barrel as it fell into the sea.But the Gem crew hit the launch that towed the inflatable with a drum,and destroyed an engine.The crew went on to use grappling hooks to pull up the inflatable out of the water,and they then started tp aim the grappling hooks at people.At this point,Greenpeace decided to stop as the Gem crew were acting so violently someone could be killed,and the only tactic left was to be violent back.Greenpeace and independant observers considered the violence to be excessive and unwarranted.They will be continuing to oppose sea dumping but in other ways - Greenpeace U.K. is at 36,Graham Street,London N1 8LL.01.251.3020.

DUTCH ACTIVISTS DELAY WASTE DUMPING

The Dutch environmental organizations, "Nature and Environment" and "Greenpeace" have succeeded in preventing the dumping of radioactive waste in the Atlantic at least for 1981.

They did so by filing legal suit against a license issued by the Dutch Minister of Environment and Public Health for the dumping of 2500 barrels containing radioactive waste in the Atlantic Ocean (between Spain and England).

The dumping was scheduled to take place this month. While the case is being heard, the license has been suspended and no waste may be dumped. This process will take several months and by then weather conditions should delay dumping until next spring at the earliest.
Belgium and Switzerland who dump waste from the Dutch ship will not be able to dump either.

Something that will not go away

Plutonium-241 is building up off the Cumbrian coast. Anthony Tucker argues that controls are needed urgently

THE annual report on radioactive discharges for 1980, published a few days ago by BNFL, shows that the amount of plutonium-241 discharged into the sea fell from 40,000 curies in 1979 to around 20,000 curies in 1980.

Plutonium-241, unlike other isotopes of plutonium, is not subject to authorisation limits — that is to say it can be discharged at will. In the past is has been but, according to "official" statements by the Department of the Environment and others, control may be necessary perhaps in 1983 or later. The dramatic voluntary reduction reported by BNFL could be the beginning of, or a ploy to avoid, a real squeeze. There is a serious 241 problem!

Technically plutonium-241 is a nuisance, a product of long-term irradiation of fuels, a contaminant, therefore, of clean plutonium-239 needed for various purposes, but hard to separate. And, from the freedom given for the discharge of this particular isotope when controls were formulated in the fifties through the sixties, its potential hazard was not seen. Because it is what is known as a beta-emitter rather than an alpha-emitter like plut-239 (alpha particles are the most damaging form of radiation in tissue incorporated materials), its biological hazard was rated fairly low. Perhaps it was also assumed by those in command of our radiological destiny that plutonium-241 would disperse through the oceans and disappear.

Such mistakes are common but incredible, since the essential problems of sediment fixation and biological concentration were identified as a potential hazard for heavy metals of many kinds back in the late 1950s. What ever that means about assessment at the time, the result over the past decade, has been increasingly large uncontrolled annual discharges of plut-241 into the sea. A paper published in Nature gives the accumulated total as 381,527 curies to the end of 1980, corrected for decay at the plut-241 half-life of 14.7 years. Virtually the whole of this output is retained in the top few centimetres of sea-bed sediment within a few miles of the point of discharge.

That is potentially serious in its own right for, quite apart from contamination of food chains, sediments move shoreward, materials on the shore dry out, and dried out materials can easily be resuspended as particles in the atmosphere. But there is a worse aspect of the problem. Plutonium-241 decays to Americium-241 which has a half-life of 433 years and which, in turn, decays to Neptunium-237 which has a half-life of around 2 million years. Both of these isotopes are alpha-emitters. That is to say they are among the most biologically hazardous of materials. Americium-241 is a bone and liver-seeking isotope, in some ways similar to plut-239, but with bizarre and unexpected characteristics, such as concentration in the skull and jaw bone. Virtually nothing is known about its specific effects in humans. The relevant experiment, it seems, is only just beginning.

As the article in Nature shows, the accumulated plutonium-241 off the Cumbrian coast is now large enough to produce significant amounts of Americium-241. When added to *authorised* discharges of Americium-241 there would seem to be about 18,000 curies now retained in near-coast sediments.

This is not something that will go away. The BNFL report on discharges makes light of the hazard by pointing out that the 20,000 curies of plut-241 that went out of the pipeline in 1980 will, after about 100 years, have decayed to about 100 curies of Americium. Not much you might think. Yet measured against the index of, say, allowable maximum inhalation in occupational exposure over a year of around one-tenth of a millionth of a curie, it looks quite significant.

But this is still misleading. The production of Americium-241 from plut already retained in sediments is now almost 600 curies a year and rising. Equilibrium with decay will be reached toward the end of next century when annual production from the sediment deposits will be about 1,300 curies. Remember; this is material with a half-life approaching 500 years. But then it goes on, decaying into yet another alpha-emitting radionuclide, Neptunium-237. Perhaps that is appropriate for a marine deposit. Its half-life is over 2 million years and even then reaches forward into yet more daughter products which are potentially hazardous.

The DoE talks about possible controls in the years ahead: the industry does not mention them. What about applying some real controls now? There is an uneasy feeling about the whole 241 story for it suggests that, by accident, the convenience of industry has been given unjustified priority over good practice in radioactive waste management.

References: Annual report on Radioactive Discharges 1980: BNFL 1981. Annual Survey of Radioactive Discharges 1979: Department of the Environment, Scottish Office and Welsh Office; 1980. J. P. Day and J. E. Cross: Americium-241 from the decay of Plutonium-241 in the Irish Sea: Nature vol 292: 5818, pp 43-45, July 1981.

The significance of Barrow in Furness on the international map of the nuclear fuel cycle cannot be over-emphasised. Through that port on the Cumbria coast comes the bulk of spent nuclear fuel from Japan, Sweden and a host of European countries who pay huge sums of money to this country for the privilege of using Windscale as the dustbin for their embarrassing and politically sensitive nuclear "waste".

Without such a convenient and accommodating dumping ground, only the French facility at Cap de la Hague would be available to accept this dangerous material. But now, with its own storage facilities full to capacity, six serious accidents occurring in the past 12 months, and an increasingly militant trade union demanding temporary closure of the plant for urgently required overhaul, the Barrow campaign begins to assume something like its real significance. Hamper the nuclear steamroller at Barrow and the effects will be felt throughout the nuclear industry. Already, British Nuclear Fuels Ltd. (BNFL) have little chance of being able to honour their contracts for light water reactor fuel reprocessing. Facilities have yet to be built and the technology to be employed in treating such fuel on a commercial basis has yet to be proven.

Apart from the effect any such delays will have on the contracts BNFL have secured thus far, confidence in the British nuclear industry would be shaken still further and would seriously undermine the already tottering public acceptability of this hybrid, secretive and protected industry which, on even the most conservative calculations, is killing a small number of people every year with radioactive discharges to the Irish Sea.

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Legal Action at Barrow

British Nuclear Fuels Ltd. [BNFL] are being taken to court by the Barrow and District Action Group [BADAG]. The action is over BNFL's development of port facilities at Barrow docks to handle foreign spent nuclear fuel on its way to Windscale. BADAG was formed in January 1980 to fight the importation of foreign nuclear waste through Barrow. Simon Starkie and Terry Smith of the group explain the background to the legal action.

Barrow, situated on the tip of the Furness penninsula in SW Cumbria, is the chief port of entry into the UK for foreign nuclear waste. The port is a series of dock basins, with BNFL presently using a temporary berth in Buccleuch dock. They are however developing a permanent base in Ramsden dock.

The first realisation that BNFL were to develop a permanent base at Barrow came in the summer of 1979. On November 14th 1979 a report, arising from concern at the lack of information coming from BNFL about their intentions, was presented by the town's planning officer to the planning committee. It concluded that planning permission would be required for development of Ramsden dock. However, in January 1980 the town clerk, Mr. Robinson, submitted a recommendation to the planning committee that permission was not required. He took BNFL's view that they already had 'deemed' planning permission. The recommendation was accepted by the town council.

Council Support

Simultaneously, the Political Ecology Research Group published a commissioned report on the Hazards associated with the transport of nuclear fuels.* Its main conclusion was that if a ship caught fire in port, and if that fire could not be controlled, then there was potential for a disaster equal to that of a major reactor accident.

BADAG has campaigned hard to bring the issue of nuclear waste to public attention. In co-operation with Greenpeace we have carried out a series of direct actions against waste transport boats. It is not unrealistic to say we now have majority support in the town.

Following several months of successful direct actions, our policy changed to one of political persuasion within the town council and among local trade unions and the Labour group. First signs were encouraging, however, underhand dealings of certain councillors were to ensure that the issue was not raised in council.

On June 3 1980, Barrow town council voted 19 to 16 in favour of a natural gas terminal at Barrow. Thus within a small area there were to be a nuclear waste installation, a nuclear submarine yard, and a gas terminal. The UKAEA's Safety & Reliability Directorate reporting on the dangers of the gas terminal said an accident involving gas condensates "could possibly result in a fire engulfment of a ship unloading nuclear fuel flasks at the British Nuclear Fuel's facility within the same basin". The warning went unheeded.

Legal Advice

Early this year BADAG took legal advice which showed the best option to be over a 'declaration order' that planning permission for BNFL's port development is needed. The requirement for planning permission depends on the site's previous history. Is it considered 'operational land', that is land always used for the purpose of shipping of related matters?, or has it ever been considered surplus to the Dock Board's own requirements? The British Transport Docks Board (a statutory body) are the lessors of the land in question. But evidence has come to light to suggest it was land for which the Docks Board had no further use, and that there had been discussions with various groups for the site to be used as a marina, for housing and other projects.

Three Barrow residents have been named as plaintiffs in the action against BNFL for a declaration that planning permission is required for their proposed activities which has no here-to-fore been obtained.

Papers filing a law suit on behalf of the 3 plaintiffs were served on May 13 naming BNFL as defendants. The day before, May 12, Barrow town council after a lively debate voted 23 to 8 for the motion that "The Council's objections to the transportation of spent nuclear fuels through urban areas in general be made known to the responsible authorities and particular objection be made to the continued use of Barrow as the flask handling depot and rail link for the transportation of the fuel to Windscale." One wonders why it has taken them so long to bring the issues to discussion and whether imminent legal action may not have had some small part to play.

*Investigation into the hazards associated with the maritime transport of spent nuclear reactor fuel to the British Isles, and investigation into the hazards associated with the interaction at Barrow of BNF, British Gas and Vickers. From PERG, 34 Cowley Road, Oxford.

Appeal

The Law Suit against BNFL will cost around £10,000. A nationwide fund raising campaign has been launched. Please send all donations made payable to BARROW RIGHTS FUND, c/o Secretary, Jean Emery, 29 Longreins Road, Barrow-in-Furness, Cumbria. Thanks.

Windscale widows in £96,000 payout

By WILLIAM HUNTER

THE relatives of two Windscale workers who allegedly died from the effects of radiation and a third who suffered ill health are to receive £96,000 damages.

British Nuclear Fuels agreed the out of court settlement yesterday but continued to deny liability.

Experts are divided over whether radiation at the Windscale works in Cumbria was to blame.

The largest payment of £60,000 goes to Mrs Sarah Southward, whose husband Geoffrey was a health physics monitor at Windscale until he died of leukemia in 1975, aged 49.

Mrs Ena Simpson receives £21,000. Her husband John died from cancer of the pancreas at the age of 57 after 27 years as a process worker.

Mr John William Lofthouse, who still works for BNFL, receives £15,000. He has suffered cataracts in both eyes and had his left kidney removed because of a tumour.

Pandora issued the following press statement on June 2nd.

"On 26th and 27th April the new Chairman of the UK Atomic Energy Authority made some important statements regarding radioactive waste disposal the textual accuracy of which has been checked by Pandora with the AEA itself.

"Dr Walter Marshall then said that no radioactive waste would be buried for at least 100 years "for good technical reasons" even if a safe dumping ground were discovered. He also stated that he was impressing his views upon Ministers and Civil Servants.

"A hundred years' postponement is not nearly enough for Pandora but is at least a welcome step in the right direction - if it represents a genuine change of policy.

"But Dr Marshall does not make Government policy and, after more than a month, Government has not commented on his views. Pandora now calls upon it to do so. The borehole programme is clearly in disarray. Eighteen months after the Ayrshire borehole Enquiry there is still no decision, nor is there regarding the Cheviots Enquiry. What sort of programme is that ?

"The people of North and Central Wales, still potentially at risk from this programme, have a right to know how matters stand following Dr Marshall's statements. Confident of public support and of the soundness of its policy Pandora feels no need for public campaigning at present but will continue to keep a watchful eye upon developments."

PARLIAMENTARY QUESTION

Nuclear waste disposal

13 May 1981

Mr Gordon Wilson asked the Secretary of State for Scotland if he would discontinue the programme of test boring in Scotland, and if he would give an undertaking that no nuclear waste would be dumped there for 100 years.

Mr Rifkind: The Government must ensure the continuation of a responsible long-term research programme in the UK into possible methods of disposing of high-level radioactive waste, of which geological disposal may be one. Meanwhile, there is no proposal to dispose of such waste in Scotland or elsewhere in the UK.

HIGH LEVEL TALK

The Scottish National Party issued the following statement on 19th May -

After the pledge by Dr. Walter Marshall, Chairman of the U.K.A.E.A., that no nuclear waste would be dumped in Scotland for "at least one hundred years", Mr. Gordon Wilson M.P., Chairman of the SNP has sought an official statement from the Government to back up the pledge.

However, Mr. Wilson said that he was not happy with the answer from Mr. Malcolm Rifkind. Mr. Wilson said "Mr. Rifkind's reply on behalf of the Govt. did not clearly state that there would be no waste dumped in Scotland during the next century, instead the words he used were..."meanwhile there is no proposal to dispose of such waste in Scotland'."

"This reply is nowhere near as definitive as Dr. Marshall's statement which Mr. Rifkind's answer has now devalued."

"I would urge the Scottish people not to be lulled into a false sense of security over the issue. The campaign against nuclear expansion and nuclear waste dumping should be strengthened if anything."

"This turn of events does illustrate however, that ground can be gained if popular opinion is brought to bear on Governments. The SNP will be keeping up the pressure on the nuclear issue and we hope that others will also."

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GOVERNMENT U-TURN ON NUCLEAR WASTE

The second annual report of the Radioactive Waste Management Advisory Committee stated that 'Serious consideration should be given to the possibility that containment in an engineered storage system, either above ground or sub-surface, for which technology already exists, might be the best way to deal with solidified high-level wastes for at least 50 years and possibly much longer'.

This is, of course what the anti nuclear movement has been attempting to persuade the Government for some time.

At a Press Conference in Bridgwater following the release of the report, Tom King confirmed that this was the new Government line.

Is this our first major victory ? Unfortunately, it probably isn't. There has been no suggestion that the borehole programme will be stopped, indeed, the

SANA

Government has already tendered for the drilling contracts (see New Scientist, 21st May, p. 478) at the Loch Doon and Cheviot Hill sites - even before the inquiry results have been published !

If the Government is now really interested in surface storage for 50 - 100 years, then there is obviously no need for the test borehole programme - at very great expense to the taxpayer - for a very long time.

So until the Government is forthcoming with a statement on the future of the test drilling programme we cannot be sure that this whole episode is not just a ploy to counter the strong opposition in the drilling areas thus enabling them to push on with the planning appeals.

EVESHAM MEETING OF ANTI NUCLEAR WASTE DUMPING GROUPS

The main decision at this meeting was to press all authorities and persons of any importance to pressure the Government to make a full statement on its intentions concerning their waste dumping policy. Contact Press, Councillors, MPs and Dr. Marsh - all of the UKAEA, 11 Charles Street, London, S.W.1.

Row over N-waste

About 100 firms have offered tenders for the treatment, packaging, transport and disposal of nuclear waste before the results of public inquiries into proposed test bores in the Cheviot Hills, Northumberland, and Mullwharchar mountain, Ayrshire.

But despite the fact that tenders were invited the Department of the Environment said yesterday that there was no question of any contract being drawn up for a particular site before the results of the two inquiries were known.

The Department's spokesman said that if the inquiries gave permission for drilling the Government must be in the best position to carry out the work.

PARLIAMENTARY QUESTION

Northumberland National Park

5 May 1981

Dr David Clark asked the Secretary of State for the Environment when he expected to take a decision on the inspector's report of the inquiry into the dumping of nuclear waste in the Northumberland National Park.

Mr Giles Shaw: The inspector is still preparing his report of the inquiry which followed a refusal of planning permission to carry out geological test drilling in the Northumberland National Park. A decision cannot be expected for some time yet

The newsletter has come out a bit late this time - we were waiting because there was a possibility that the result of the Mullwarchar inquiry would be announced before the summer recess of Parliament - but it wasn't.

There probably won't be an announcement until MP's come back from their holidays in October.

RADIOACTIVE WASTE MANAGEMENT ADVISORY COMMITTEE.SECOND ANNUAL REPORT.

(available from HMSO.£3.50)

The Committee, which was established as one consequence of the Flowers Report, has the status of an independent body providing advice to the Government on all aspects of radioactive waste management policy; it reports to the Secretary for the Environment and the Secretaries of State for Wales and Scotland.

The Chairman, Sir Denys Wilkinson, is a nuclear physicist and Vice-Chancellor of Sussex University. There are 18 further members. Of these 11 are from Industry or the Universities, mostly the latter; they include, from Wales, Prof D R Williams of UWIST. In addition 4 further members represent the nuclear and electricity industries; and 3 more represent the trade unions in those industries.

The composition of the independent sector is skewed in a way which is very common - and, for some of us, rather worrying - in the nuclear Establishment. Of these 11, 7 are physicists or chemists; there is one biologist; radiobiology, genetics and medicine are not specifically represented. Nor is there any representation from bodies such as FOE.

There are also the Assessors, drawn from the Ministries of Agriculture, Energy, Environment; the Scottish and Welsh Offices; HSE, NRPB and NERC. Their role is unclear; perhaps they are concerned with the Art of the Possible.

Although the most important theme of the Second Report is high-activity waste management it deals with several other matters as well; amongst them are Caesium-137 discharges from Windscale, intermediate level wastes arising from a PWR programme, Defence wastes (which tells nothing) and a little on the sea disposal programme. There is an important chapter, inevitably less factual, on the evolution of an over-all waste management strategy.

Here we can deal only with such matters as concern Pandora. It should therefore be said that this Report is essential study for anybody seriously concerned with any aspect of radioactive waste management. The Third Report, when it appears, will deal further with high activity waste and also with reactor decommissioning; clearly it will be no less important. The eventual emergence of a waste management strategy which is both safe and socially acceptable greatly depends on the freedom with which members of the public are able to form considered judgements on works such as these. The study of abstracts, such as this of Pandora's, forms no adequate substitute:

The abstract contained in Pandora's newsletter is not included for reasons of space , but the following parts are included as they may be of interestto groups and people trying to work out what as going on. Pandora - Don arnott,Rhiewport Hall,Berriew,nr Welshpool.Powys.

Page 24 of the report says:

"Three waste management options are considered below. They are:-

Early disposal (i.e. the emplacement of wastes without the intention of retrieval) takes place within a few years of reprocessing.

Storage leading to disposal. The waste is stored for a lengthy period (some 50 - 150 years) prior to disposal. The timing of the disposal will be decided on technical and environmental grounds

Long Term storage. The waste is stored for the order of 1000 years and can be retrieved for disposal."

There follows, on the next two pages, a summary of the advantages and disadvantages of each. This, since it is in tabular form, is beyond summary. The first option, early disposal, is not favoured by the Committee; indeed they exclude it as not feasible in the present state of knowledge. As between the remaining two: on safety there is little to choose, on feasibility and flexibility the long-term option wins. But on costs the Committee, in the view of this writer, has foozled the argument: for whilst, on storage leading to disposal it observes, correctly enough, that the longer the storage the less the cost of disposal (i.e. by borehole or other means) it entirely fails to point out that the additional cost of a repository of this sort would not arise at all if the long-term store ultimately became the disposal site, as envisaged on P 23. (Pandora's position is intermediate: we advocate monitored storage until the short-lived component has decayed, i.e. 500 - 600 years.)

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It is easy to identify internal inconsistencies in these quotation, or, alternatively, to point out an almost Pandora-ish tone of some of the propositions. It is easy to say that there is something in the Report for every point of view. So there is: Mr Tom King, introducing it in the House (June 10th) chose to pussyfoot. He departed as little as possible from the status quo ante and the DoE's Press Statement did no better.

Nevertheless if these quotations are carefully read as a whole the trend is unmistakeable. It is towards longer timescales and the referral of ultimate decisions to a remoter future. The Flowers Commissioners' concern for our our remoter descendants' willingness to supervise the waste, which has begged the question for so long, has in effect been discarded. There is also to be noted the dawning of a fundamental reality about which I will quote my letter to Dr Marshall: " It is very difficult to believe that, with a storage repository in being and assuming it works, anybody is going to drag the stuff out in a hundred years' time merely to put it somewhere else."

It is only necessary to recall the timescales of 1979 which set us all by the ears (10 years for the geological research, a demonstration repository in the 90s etc) to see how far things have moved: to see also that, whilst applications to drill may still arrive in Wales or elsewhere they cannot possibly be predicated on the assumptions of Ayr. Were that to happen any Council, with no assistance needed from us, would make mincemeat of the attempt; what one would have would be not so much an opposition as a riot. It is therefore reasonable to assume that no such attempt will be made; that applications, if and when they come, will be on a new basis requiring fresh consideration.

As for the inconsistencies in the Report: if the Wilkinson Committee's function were critical rather than advisory it would no doubt boldly point out what we all know: that we - others too - are decades behind in our radioactive waste management needs; that the present position is essentially stopgap; that much fundamental research remains to be done; and that final decisions cannot be taken because they are impossible to take and unlikely to become possible during our lifetimes. In such circumstances no Committee can be entirely up-to-date, or even entirely coherent, in what it writes (the Second Report must have gone to press, or at least was finalised, before Dr Marshall's statements).

If the problem is now to be openly accepted by all as very long term it follows that we ourselves cannot expect final victory. (Such events are rare in human affairs anyway and much usually turns on how final is final.) On the other hand the trend is firmly in the direction we have always favoured and to that extent should be supported. In this we, and even more so Madryn, are entitled to feel confident that we can influence matters. We have already done so.

So what do we do now ?

Purely personally I would like to put the following matters for discussion.

1. The disposal of high-activity waste is not an issue of principle and there is a sense in which it diverts attention from the very real issues of principle which attend the whole nuclear question.

It is not an issue of principle because there is ultimately no choice involved beyond the safest possible solutions to the disposal problem. Arguments about whether the waste should be there at all come thirty years too late. Nor is the problem greatly exacerbated by such ongoing programme of nuclear power as we are actually likely to see - as distinct from what is fantasised about. Phasing out the programme would set a date beyond which the problem would get no worse; but this date would be in the very remote future and would in no way solve the problem which confronts us in the present.

Our task can only be to point out what we regard as dangerous or unacceptable; but in the ultimate we can only work towards convergence of viewpoints.

2. Convergence means the evolution of the safest possible scientific solutions acceptable to public opinion. We should not countenance that irreversible disposal should ever become a matter "essentially for political determination" (Second Report, P 20) because we surely know what that is all too likely to mean.

The ongoing political problem is one of making sound decisions stick whatever government is in power. There is the constitutional difficulty that no government is bound by its predecessor. I personally believe this difficulty to be phantom because it involves the unspoken assumption that governments are all-powerful. They are not.

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Peter Taylor of the Political Ecology Research Group reviews two years of work with Greenpeace

When Pete Wilkinson of Greenpeace UK approached the Political Ecology Research Group (PERG) over one year ago to produce a scientific analysis of the hazards of spent nuclear fuel shipments, we were somewhat surprised, for, until then, PERG's expertise had been primarily used in the scientific support of inquiries, structure plans, court cases and commissions. How could we be of use to an environmental organisation that was not only campaign orientated, but also committed to direct action? We were further surprised (and relieved) to receive a free reign as to what we would produce and how it was to be presented and published. Greenpeace wanted scientific facts to back up its campaign against spent nuclear fuel shipments, but it would respect our judgment on scientific standards.

This enlightened approach has forged close links and a firm friendship, along with an understanding that although scientific analysis may not provide the hardhitting headlines and black-and-white material that is the stuff of publicity campaigns, to be adequately informed in those grey areas of risks and benefits, potential impacts, etc., is invaluable for the vital political work of public meetings, council committees and trade unions.

In addition to the spent nuclear fuel study, PERG has also reviewed the safety of plutonium nitrate shipments, dumping of nuclear wastes in the deep ocean, coastal discharges from UK power plants, and reprocessing. Whereas spent nuclear fuel shipments pose an obvious and well-attested hazard (despite establishment cries to the contrary), marine dumping and coastal discharges present more subtle and longer term dangers, often calculated on the basis of untested assumptions of radio-ecology. Nevertheless, there is sufficient cause for concern evident in a review of the scientific literature on coastal discharges, and, if not on immediate levels of ocean dumping, then certainly on projected activities.

The advantages of such in-depth analyses are twofold. Where the analysis does produce useful campaign material which backs up initial concern, it can provide the technical support to counter the propaganda campaigns of the nuclear lobby. This was vividly demonstrated in Barrow during the 1½ years of public and council debate over spent nuclear fuel shipments, which finally bore fruit with the opposition of Barrow's Town Council to the shipments—despite the fact that British Nuclear Fuels Ltd. were given *ample* opportunity to defend both their own position and their critique of PERG's work. When analyses are less clear cut and less amendable to public debate (e.g. discharges of plutonium to the Irish Sea), it can only help campaigners to be aware of pitfalls in arguments and to have a technical basis to their concern.

On a personal note, I have derived a great deal of encouragement (and enjoyment) from working with the staff of Greenpeace. An organisation that appreciates scientific advice *and* is committed to acting upon it, to doggedly following it up on the ground—directly, if necessary—is a rare animal. Long may it live!

Plutonium ship completes journey despite protests

On the 18th June the first shipment of plutonium nitrate from Dounreay arrived at the port of Workington bound for Windscale. Plutonium nitrate is derived from the operation of the experimental Fast Breeder Reactor (FBR) and needs to be treated at Windscale so that it can be used to make new fuel rods.

In 1976 the Flowers Commission found that the use of plutonium as a commercial fuel to generate electricity raised unprecedented issues. The movement of plutonium consignments present not just a threat to the environment in the event of an accidental spillage, but also present a target for terrorist attack. The possibilities of an early legitimation of the transit of plutonium were viewed with trepidation and the Commission recommended caution. They also recommended the fullest public debate of the risks and benefits before commitments were made.

Despite the Commission's recommendations, the Government has decided in advance that plutonium transport is legitimate. There has been no public debate. Those most at risk, in ports, fisheries along the route, and those with genuine concern about a 'plutonium fuel economy' have not been consulted. The only possible defence would be to say that the risks were so small as not to justify public consultation.

This is clearly not the case. The transport of plutonium brings physical risks at sea and in port, as well as dangers arising from acts of terrorism. Plutonium nitrate is not only radioactive, it is also a highly toxic chemical in liquid form. The main short term risks arise from the possibility of puncture of the flasks, resulting in dispersal of plutonium in aerosol form, such a risk being increased by the possibility of fire, either on board ship or in port. In the long term releases of plutonium into the marine environment could contribute to marine contamination and the possible closure of fisheries.

Police thwart nuclear blockade

POLICE yesterday foiled a last ditch attempt to stop a load of plutonium nitrate from leaving Workington Docks on the last stage of its journey from Dounreay nuclear power station in Scotland to the Windscale reprocessing plant in Cumbria.

The attempt was made by members of Greenpeace and the Workington Action Group against Nuclear Shipments. Three youths confronted the second of the lorries as they drove off in a police convoy, but were pushed aside as the driver edged forward.

Then more protesters tried to form themselves into a human barrier by using handcuffs and pieces of chain. But their plot failed because the chains were not long enough and they were bundled aside by police officers.

The protesters complained that excessive force had been used and a 36-year-old Workington mother injured her wrist where her handcuffs had bitten deep as she was pulled to one side.

NEW MEXICO

US nuclear dustbin

Five years ago the "Daily Mirror" coined the phrase "nuclear dustbin" for the Windscale reprocessing facility which went through the long and celebrated inquiry chaired by Justice Parker in 1977. The nuclear dustbin of the United States is a rather different creature, but equally controversial. It is WIPP, the Waste Isolation Pilot Plant, near Carlsbad in southern New Mexico.

Nuclear waste has for a long time been seen as the Achilles' heel of the nuclear industry. The United States and Britain differ in their approach to the problem. The British "solution" is reprocessing (at Windscale), and eventual disposal of the highly radioactive waste at various sites throughout Britain. American scientists are more sceptical of reprocessing, and the long-term storage of unreprocessed waste is considered a viable option. WIPP is the first in a planned series of such long-term storage sites.

Since the birth of the nuclear industry over thirty years ago, radioactive wastes have been accumulating throughout the US and it is estimated that there are now over 15,000 spent fuel assemblies from nuclear power plants alone. This figure is increasing at about 5,000 per annum. The "solution" to this problem is to bury the wastes in the salt-beds of New Mexico. The site covers almost 19,000 acres of rolling semi-desert country mainly used for grazing by the 100,000 Native American Indians and Chicanos who live within a 50-mile radius. Scheduled for completion by 1986, the disposal site will be in two salt beds at 2,150ft and 2,670ft below the surface, and has been assigned to take high-level military waste, transuranic wastes (ie radio active elements such as plutonium with atomic numbers higher than uranium), and 500 tons of high level nuclear reactor waste.

Critics of the WIPP project like Lauro Silva of the Florencia Land Rights Committee argue that the choice of New Mexico for the US's first permanent nuclear waste dump was not based on considerations of what might constitute a geologically stable site, but rather that the state was selected because its population was small, average incomes are low, and the citizens are seen as being politically weak and disorganised. Equally significantly critics argue that there are major physical problems with the site. Members of the scientific community, including the US Geological Survey, argue that salt is not a good medium for nuclear waste disposal. Heat from the nuclear waste could expand and move the salt; and water activity has dissolved and moved salt more than 900 feet vertically in the past. Potentially huge amounts of radioactive waste could move into the Pecos River and other waterways.

This potential contamination of land and water is a major threat to the socio-economic physical, and cultural survival of the people in the area, 60 per cent of whom do not speak English. Yet the government's draft Environmental Impact Statement was prepared only in English, so excluding over half the local population from the decision-making process. The first shafts are due to be sunk in June 1981, and the project, apparently under review during the last days of the Carter administration, has been given renewed impetus by President Reagan, who selected it, and the fast-breeder reactor programme, as almost the only programme to remain totally unscathed in his budget cuts.

NEW MEXICO SUES GOVERNMENT AGENCIES OVER RAD-WASTES

Responding to public pressure, the Attorney General of the State of New Mexico (southwestern USA) decided in mid-May to go ahead with a lawsuit against the U.S. Departments of Energy (DOE) and Interior (DOI) over the Waste Isolation Pilot Project (WIPP). State officials began to consider legal action against the WIPP project in April when the two federal agencies made decisions concerning the WIPP project without consulting them. Citizen opposition to the project was so intense that in one week alone, the Attorney General's office received over 10,000 phone calls, postcards, letters and names on petitions, urging him to take "immediate legal action against the Department of Energy."

Contact: Citizens Against Radioactive Development (CARD), P.O. Box 555, Albuquerque, New Mexico 87103, USA. Tel: 505-842-1194.

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NUCLEAR DOUBLESPEAK.

The American National Council of Teachers of English awards an annual Doublespeak Award,given in recognition of the most appalling public use of the English language in the the previous year.This year's award has been given to the chief defender of the nuclear industry,the Nuclear Regulatory Commission.The teachers noted the Commission's invention of "a whole lexicon of jargon and euphemisms".Amongst those itemized:An explosion was described as an "Energetic disammbley". A reactor accident was described as "a normal aberration","an event", while contamination from plutonium was reported as "plutonium has taken up residence."

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The Pacific Concerns Resourse Centre has a lot of information avâilable about waste dumping,as listed below.

81. "Nuclear Games in the South Pacific," Dr. Graham Baines, The Ecologist, December 1971, 3 pages.

82. "Pacific Voices Speak Out: Not in our Ocean," statements on radioactive waste dumping, compiled by PCRC, January 1981, 5 pages.

83. "Radioactive Dumpsites in U.S. Coastal Waters: A Brief Synopsis," W. Jackson Davis, 2 pages.

84. "The Proposed Japanese Oceanic Nuclear Waste Disposal Program: A Critical Analysis," W. Jackson Davis, Ph.D., December 1980 (summary, introduction, and methods ONLY), 3 pages. (The complete 64-page report is also available--ask for #50.)

85. Resources on radioactive waste dumping available at or via PCRC, January 1981, 2 pages.

86. Graphics on radioactive waste dumping; outline and map of the proposed site; 4 pages.

From PCRC,PO BOX 27692,Honolulu, Hawaii 96827.
Quote the number of the report as well as the name.

Visit of Jackson Davis...

W.Jackson Davis Will be Visitting England between August I5th and 30th as part of an European visit to further the campaign against dumping at sea. If you would like to meet and talk with him, write to the newsletter address or phone 0I-74I-7698.

SCRAM have reprinted POISON IN OUR HILLS.
It is available from SCRAM,30. Frederick Street,Edinburgh EH2 2JR.
Price £1.80 + 25p p&p.

The book focuses on the Mullwharchar Inquiry, held earlier this year into the proposed nuclear waste test-boring in Ayrshire. This is the first time an independent report on a Public Inquiry has been published before the official recommendations. A two-hour recording on standard cassette tape is also available, consisting of snippets from the actual Inquiry proceedings.

The book is aimed at a wide readership, and the main text has been kept short. The background to the Inquiry, a discussion of the main issues, and an Inquiry 'diary' are condensed into about 40 pages. The Appendices are extensive and include previously confidential information on the nuclear waste programme.

Opinion Poll

A recent opinion poll by the Welsh Energy Survey on behalf of the Welsh Anti-Nuclear Alliance (WANA) shows that the Welsh people are overwhelmingly opposed to the burial of nuclear waste in their country. 82% of the 4.790 adults interviewed in 29 Welsh towns said that they disapproved. On the question of the current government's policy of expanding the nuclear power programme, only 25% supported it. 58% said they were against it and 16% had not made up their minds.

WANA, Hafren, Market Street, Lampeter, Dyfed.

Reprocessing contract between Cogema and SKBF available

A summary of the reprocessing contract between Cogema (La Hague and the Swedish SKBF, and the actual contract, have been made available for use by WISE readers.
The summary begins 'the Swedish contract belongs to a set of 32 identical contracts' — all of which are kept strictly secret. The five page summary is easier to read, but maybe you would like the full text ...
Cost (including postage): 8 dutch guulders (sea-mail) 18 guilders (airmail) from: WISE - Amsterdam

Islands at Risk

Edited by Frank Thompson, from KNO/HAND, 5 Mill Road, Stornoway, Isle of Lewis, PA 87 2TZ UK £1.20

This is a joint publication of Keep NATO Out and Hebrides Against Nuclear Dumping (KNO/HAND), 1980. The sixty page booklet covers the profound effects, which issues of national and international strategy have on two small communities. The possible relocation of a large NATO base from Iceland to Stornoway in Lewis, and the use of the Hebrides as a dumping ground for nuclear waste, are disturbing news for a community whose values, language and whole way of life are threatened by large-scale development. Chapters by local contributors trace the history of the use and abuse of the Western Isles by central government and examine what would happen to the islands if the threatened development were to go ahead.

Information Request On Spent Fuel Traffic

Sir Peter Parker, head of British Rail, has revealed that nuclear waste travels from the Continent by train through East Anglia. 50-tonne containers with radioactive spent nuclear fuel pass through the region on their way from the British Railroad docks at Harwich to the Windscale reprocessing factory in NW England.
Dock workers and the Seamen's Union have pleged their support for the East Anglian Alliance Against Nuclear Power in their concern over the traffic. The Alliance urgently requests anti-nuclear groups in Northern Europe to send them details of quantities, frequency and type of container along with details of any accidents or leaks or radiation hazards involving rail transport especially on route to Windscale.
Send In[illegible] ANP[illegible] Post Of[illegible] Higham, Colchester, England (020-637 241)