26

wise

international stop uranium mining news

june 83

KEEP IT IN THE GROUND

Dear friends,

KIITG no 26 has come and Lin has gone... Five years she has been working for WISE and KIITG, putting all her energy into the struggle against uranium mining and for a safer world.
Establishment people don't work like that nor are established institutions willing to support this kind of work. WISE did not succeed to raise money for Lin's salary.
So the only thing we can do is to thank Lin for all that she has done for WISE and the anti-nuclear movement -- including such a wonderful project as Keep It In The Ground.
All the other things which Lin did and the wonderful atmosphere she brought into this office cannot be expressed in a few sentences.
Lin gave her uranium archives, files and addresses to us so that we can go on producing KIITG. She helped us with this issue and we hope that we will be able to keep KIITG alive.
We - that means: Els, Frédérique and Anke from the Amsterdam office.
Els and Frédérique are both dutch volunteers; Anke is a volunteer from the German organization 'Peace for Reconciliation'.

We will do our best and hope to produce KIITG as a quarterly publication While editing this number of KIITG, we realized again how important the anti-uranium mining struggle is and we hope to be able to go on with each other's strength and support.
We don't want to give up KIITG.....
Welcome to number 26!!!

In solidarity,

anke, els, frédérique

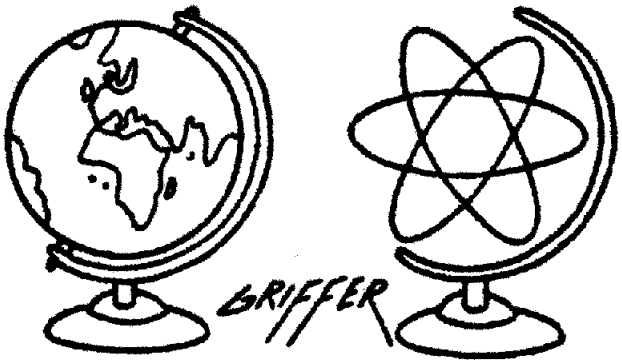
Table of contents

KEEP IT IN THE GROUND is the international anti-uranium mining newsletter published by WISE. An annual subscription costs f30 (or equivalent). This covers 4 issues. Please make post giro payments over to 4088285.

Donations are not only welcome but needed

This issue has been produced by the WISE-Amsterdam team, edited by Els Duin, Frédérique Schopenhauer and Anke Plättner

WORLD URANIUM ROUND-UP



WORLD URANIUM ROUND-UP: AUSTRALIA HAS THE PLUMS?

The uranium mining industry always tries to put a brave face on its problems. Its optimism is, however, wearing thin, as the latest figures on new projects indicates. According to the January 1983 issue of the Engineering and Mining Journal (EMJ), America's major mining monthly, only two and a half billion dollars was budgetted last year for uranium plant expansion (or new construction), and of this, some is still a twinkle in the eye, since some of the 15 projects have been indefenitily postponed.
Looking at the figures, one striking fact emerges almost immediately: for the first time, Australia is now the number one nation, when it comes to new uranium developments. A total of $1,224.2 (US-dollars) is budgetted for five mines from 1983-1986. These are--in order of incended start-up date--:

+ Honeymoon MIM,AAR and Teton Mining (South Austr.)
  (expansion to 450 mt/yr by 1985)

+ Lake Way Delhi Int., VAM (West Austr.) $52.2 million

+ Yeelirrie WMC/Urangesellschaft (West Austr.) $360 million

+ Jabiluka Pancontinental/Getty Oil $525 million

+ Beverley JV Oilmin, Transoil, Petromin, Western Nuclear et al. $300 million

Within days of a new right-wing Labor government taking power in Australia (and within months of new state labour governments in South Australia and Western Australia) it's become clear that the former ALP policy against new uranium mines is shipwrecked. If the above projects don't go ahead, it won't be for want of trying but simply because (as in the case of Jabiluka) overseas customers are lacking or (in the case of Yeelirrie, for example) necessary capital investment isn't forthcoming.

So far as North America is concerned, planned expansion through the eighties will call on only $1,100 million in new investment and nearly half of this is for Gulf Mineral Resources Mount Taylor mine which was recently--to relieve on the part of the Navajos and other native Americans threatened by this massive project--put on ice. Otherwise the biggest expansions will be at Elliot Lake in Canada, where Rio Algom (RTZ's Canadian subsidiary) is to rehabilitate its Stanleigh mine at a cost of $200 million, and Denison Mines is to build a new mill at a cost of quarter of a billion dollars.
Conoco has also announced a small research and development leaching project without announcing any costs.

Apart from these projects, America can only come up with $150 million proposed of new investment to expand mining at the Sierra Pintada deposit in Argentina--an expansion still only at the proposal stage.
Knock out America and Australia and there are only five new uranium plants claiming new investment in 1982.

In Europe:

Spain Enusa's Salamanca mine in its development stage for which

$65 million is required to start up in 1985.

Yugoslavia Rudinikurana Zirovski's mine at Ljubljana, for which the notorious Fluor corporation is constructor, and which required an additional $40 million of investment.

Sweden LKAB's Pleutajokk mine for which a figure hasn't been set: hardly surprising as it's on indefinite hold, thanks to local and national opposition to mining.

In Africa:

Only $45 million was budgetted last year--for the new Mounana plant in Gabon operated by COMUF (Gabon govt. 25%; Imetal--through Mokta currently holds about 33%).

Asia India's government owned Uranium Corporation is to open a mine in one to two years at Bhatin at an initial cost of $3 million.

Now don't be deceived. This list doesn't show further capital investment which might be made during 1983; nor some increases in investments agreed before 1982 or deferred investments made prior to last year. However if we look at mine projects covered by these exigencies, here's the picture:

In North America:

Canada Amok's Cluff Lake mine is about to enter its second phase of development at a cost of C$85 million. Gulf Minerals' Rabbit Lake mine will proceed to its development and ore-processing phase in 1984. Key Lake Mining Corporation's Key Lake deposit (50% owned by Sask. Min. Dev. Corp. and one-third by Uranerz of the FRG) if getting on stream, to produce 3.000 tons a year uranium oxide at a cost of C$290 million.

However, both Brinco/Edison Development's Kitts-Michelin project in Labrador, and Esso Resources/Numac/Bow Vallay's Midwest Lake development have been postponed indefinitely.

Amerika Rocky Mountain Energy and Mono Power are considering in-situ leaching on their Converse County property in Wyoming--but only $20 million has been earmarked as capital outlay. Silver King Mines are developing their Morton Ranch property in the same state, while Union Carbide hopes this year to develop its Lisbon Valley mine, near Moab in Utah.

Elsewhere in the world, you've got to take a microscope to pick out the new developments.

In Chile Minera Los Pozos de Mantoverde is evaluating an orebody at Chanaral at a cost of $60 million.

In Colombia the government company IAN is plodding along at Berlin (sic) in Caldas province--with no target date for compeltion.

Mexico has a new mine under development at Sierra de Pena Blanca, in Chihuahua province, but it will only produce 200 tons a year of uranium.

Portugal's ENU mine at Nisa and Castello Branco, in Alentejo province is only at the feasibility stage (where Cogema is doing the feases).

Agip Nucleare is currently stimied in getting its small mine at Norazza underway in Italy.

As well as the Salamanca mine, Spain's ENUSA (together with Fosforica Espanol) plans to open a unit to recover uranium from Phosphoroc acid in 1985, but it will produce only a tiny amount--some 75 tons a year.

Sonarem in Algeria's Hoggar Mountains has started feasibility studies for its 1.000-1.000 tons a year mine; Gabon's Lordleyon mine--a joint project of Cogema, Keko (Korea electric company) and the Gabonese government--might get underway in the 80's but only $89 million has so far been laid out.

Niger has feasibility studies underway for three new mines--at Azelik, Arni and Imouraren, but nothing concrete (!) is planned until the 1990's.

In the Central African Republic, the Soc. de l'Uranium Centraficain, together with the French CEA, has been considering mining at Bakouma since 1978, but a feasibility study by Alusuisse, plus the downturn in the world uranium market, will mean the project is postponed for some years.

This only leaves South Africa in the (w)reckoning. The only new developments in the apartheid state area new mine at Welkom (Eastern Gold Holdings) at a cost of $542 million--not due till 1992; extra output from Randfontein's Westonaria mine in the Transvaal, and three new shafts at Vaal Reefs Orkney mine, also in the Transvaal.
These expansions are of course, associated with gold mining, as there is efectively no uranium mining, as such, in South Africa.

The overall picture, therefore, is of an industry cutting its cloth to match a suit which is becoming increasingly threadbare. Whereas--two years ago-- US mines were the main ones affected by the industry's depression, now there is not one country, except Australia, which hasn't had to make cut-backs.

The big irony is, that Australia should now have a government which is, theoretically, opposed to uranium mining. But Australian governments are used to riding paradoxes. It was under the former Labor regime of Whitlam that many of the uranium contracts were signed which have sustained the antipodean uranium industry over the last decade. And--would you believe it--Australia's Minister for the Army in the first world war, was a conscientious objector!

by Roger Moody

Main sources for this article are: E & MJ, January 1983 and Mining survey in Mining Magazine, January 1983. Also: accumulated company profiles from the Gulliver File (to be published this year).

AUSTRALIA

AUSTRALIAN URANIUM POLITICS

Before and after the Labor Party won the elections in March 1983

"The country as a whole has had no real need for nuclear power, and doesn't look like having any for the foreseeable future", as was said by the director of the Edlow International Australia PTY LTD during a lecture at the Australian uranium symposium held last september. 1)
However, at the same symposium the business manager of the Western Mining Corporation remembered the Australian politics since 1976 which intended to build up an own nuclear industry.

"The Liberal/National Party Government which was returned to office in November 1976 has always maintained that we should strive to increase the degree of processing in mineral exports for, I believe, at least the following reasons: to increase the value of experts, to increase the employment prospects with respect to a given quantity of material mined, to provide a spectrum of vocations more like that of a developed country rather that a developing country, and to counter criticisms taht with the expanding export of easily won minerals in their most simple form the Australian continent will be nothing more than a quarry for other industrialised nations. These thoughts were no doubt behind the government's statements on the further processing of uranium and I quote from a background paper issue in 1977: The development of mining and milling of uranium will provide an opportunity for further development of new associated industrial activity. The government has always been clear in the expression of its desire to see our mineral exports processed to the maximum extend practicable in Australia. The development of uranium hexafluoride and enrichment industries are both possibilities for Australia. The development of industrial capacity of this kind and at an appropriate magnitude in Australia would provide benefits and economic stimulus which will far exceed those derived from mining and milling alone.
An additional stimulue to further processing in Australia comes from the external observation that Australia comes from the external observation that Australia has not only a surplus of metallic minerals but also a surplus of energy minerals. Non Australians have also observed that our uranium resources are exceptionally large and therefore it would be logical to minimise the worldwide transport of uranium products by at least enriching in Australia, a country with stable

government and institutions and an impeccable background in nuclear non-proliferation. In a balanced market for conversion and enrichment we have in the past and no doubt will in the future be influenced by buyers seeking a diversification of supply with the development of additional facilities, particularly in the Pacific Basin. We have space and perhaps environmental tolerances that could not be tolerated in more desely populated parts of the world." 2)

This politics were always in line with the wishes of the Liberals. They always promoted uranium mining and export for whatever foreign company has capital to invest. The emphasis in the Liberal policy on commercial viability and the indecent haste with which they firts tried to move on gaining the enrichment phase of the nuclear fuel cycle in Australia, gives away their priorities. Since the Australian Labor Party (ALP) has been in opposition they have been pressured internally, by its members and from the outside by the growing strength of the anti-uranium movement, to adopt a no-mining and -export policy. After much internal debate and the call from large sections of the party to oppose the Liberals green light for mining, it was laid down that the Labor government will declare a moratorium on uranium mining and treatment in Australia, repudiate any commitment of a non-Labor government to the mining, processing or export of Australia's uranium and not to permit the mining, processing or export of uranium pursuant to agreements entered into contrary to ALP policy.
However, by 1982 facing the prospect of going to the polls in a recession the weakening of the policy in terms of how the Fraser government had set up the market in the industry, the ALP acceded to pressure from conservative forces which saw the anti-uranium policy not as a vote catcher.

In line with that point of view the National Conference of the ALP altered in July last year the hard line anti-uranium policy that the party had adopted in 1977 The new policy, which will allow existing contracts to continue under strict conditions, claimed to strengthen the old policy by making it more 'workable'. Critics claimed that it was in fact a crudely disguised pro-uranium document. The anti-uranium fraction within the Labor party believed it had agreed to an unworkable document and that if elected to office a Labor government would be so restricted by policy detail, the mining and export of uranium would have to cease. 3)
The question is if they will be right. What the policy basically states now is that uranium mines will be 'phased out'. gradually rather than suddenly. No new mines which solely produce uranium shall be given the go-ahead. This section of the policy was implemented in the case of Honeymoon and Beverley. Existing contracts such as those for the Ranger mine in the Northern Territory will be permitted to be fulfilled. In the case of Ranger, that will mean production into 1996. Worse still is the example of South Australia's Roxby Downs Mine. In all likelihood, Roxby will be mined. (see apart story.)
Further confusing the Labor stand on uranium, Deputy Prime Minister Lionel Bowen said in a statement in Darwin during the election campaign that the ALP was 'not against' uranium development, and would not hinder development of the Jabilunka and Koongarra mines in the Northern Territory. *"If they've got contracts, they can go ahead. Our policy"*, he said, *"is for the mines to continue."* In fact, the ALP would support stepped-up exploration for uranium in the Territory, a state where uranium is a sensitive issue, and dominated the election campaign there.

Also disappointing is the fact, besides the fact that the new policy was adopted by a slim margin of 53 to 46, that the former ALP leader is replaced by the strongly pro-uranium Hawke and Hawke's right-wing dominated cabinet. The announcement that extreme right-wing unions, who have not been affiliated

to the ALP for 30 years, and now set to rejoin the party is further evidence of the stiffening conservative grip on the party. Perhaps Bob Hawke saviour will be the poor state of the industry. Mister Peter Stork of the ORATOM consulting, an associated company of Nuexco Exchange Corporation in America, has predicted that current stockpiles will satisfy demand into the 1990's. The ALP has also said that it will not bless any contracts signed at a rate of less than Austr. $35 per pound. (The current world price is Austr. $21.75.) Using these arguments Hawke will hope to avoid any 'messy' decisions on uranium.

However, there are bright spots to ALP policy. It seems now extremely unlikely that an enrichment plant will be established, at least during Labor's reign. The new Labor policy is unequivocably opposed to stages of the nuclear fuel cycle, other than uranium mines being situated in Australia. And at any rate the plant has been troubled in its search for a home by strong grassroots opposition. 4)

Notes:
1) *Public opinion and the influence of political groups. Roger Pescott, September 6, 1982.*
2) *Australia's nuclear fuel cycle ambitions. I.J. Duncn, September 6 1982.*
3) *See note 1.*
4) *WISE-Glen Aplin, Australia.*

AUSTRALIAN LABOR GOVERNMENT CONTINUES ROXBY MINE

Roxby Downs, a mixed deposit of uranium, copper, gold, silver and rare earths, is being developed by the Western Mining Corporation and British Petroleum. It is potentially the largest uranium mine in the world: the yellowcake output of Australian uranium mines ranges from 3.500 to 176.000 tons compared to the Roxby 1.200.000 tons.
As the hard line anti-uranium policy of the Australian Labor Party (ALP) altered in July 1982 (see: Australian uranium politics) led John Bannon to guarantee the Western Mining Corporation that the ALP would not oppose the Roxby Downs development well before the State election of last year. Although the amended policy says that "phasing out" of the industry will involve strict imposition of conditions which may well prove costly to the companies concerned, although it still remains opposed to any other stage of the nuclear fuel cycle, the willingness to consider the export of *"uranium mined incidently to the mining of other minerals on a case by case basis and on the criteria of whether in the opinion of a Labour government the mining of such minerals is in the national interest"*, means the Roxby deposit can go ahead. (1)

The predicted output of Roxby Downs was a significant factor in the change to ALP uranium mining policy in July 1982. According to the Western Mining Cor. the contents and value of the minerals are as follows:

	Tons (mill.)	Value (mill. $)
Uranium	1.2	79.000
Copper	32.0	48.000
Gold	1200.0	14.000

(note: 55% of the value of the 'copper' mine is from the 'associated' uranium!)

According to the South Australian Bannon government, Roxby will provide a boost to the State's economy, creating employment and increasing money flow. But Roxby is extremely capital intensive: $330.000 for each job created. And the large corporations already have too much control over the economy, job opportunities, working conditions and environment in South Australia. If Roxby exports become a major part of the economy, South Australians will be significantly affected by fluctuations in copper and gold prices, and decisions made in the board rooms of BP and WMC. (2)
The government and the companies made an agreement which means that the State will provide services costing at least $50 million. The State will receive royalties from the project. Two problems arise however: the royalties are calculated according to the profit margin, and when the companies actually start paying.

All the minerals are intimately mixed within the ore body and must be mined together. The companies say that selective mining is uneconomic. The selective milling and extraction can take place on the surface. This will increase the amount of tailings, its level of radioactivity and the health risk to workers. Besides that it will significantly increase the environmental damage to the site. 400 Hectares of tailing (about 150 football fields worth) will be left in the desert

in mounds up to 30 metres high. These tailings will be radioactively dangerous for 100.000s of years and will contaminate the area. (3)

Western Mining Corporation started exploration work around Roxby Downs in 1975 without consulting the Kokatha people, the traditional landowners for over the past 10.000 years. Instead of simply asking the people, on whose land exploration would occur, WMC came to the conclusion *"that the Kokatha people had been effectively rendered a non-viable group"*.

In January 1981 the Kokatha people approached Roxby Management services to make official their existence. In October 1981 the Southern Lands Council (SLC) a network of Aboriginal communities was formed. It consisted of the Oodinatatta community, the Kokatha peoples committee, the Adnjamathanha Landrights group and the Yalata community. The SLC called for a moratorium on exploration work at Roxby Downs until 'satisfactory arrangements' could be made to protect Aboriginal sites. At the same time an Aboriginal survey team found evidence of damage to sacred sites: at the Whenan Shaft, the main extraction shaft for the pilot project, one site has been irreversibly damaged. It was only one of the ten damaged sacred sites. There are also roads being built through the area regardless of the effect on sites and several mound springs are possibly damaged by the lowering of the level of the Great Artesian Basin.

The Kokatha people claim that their survey is included into the Environmental Impact Statement, that all the known sacred sites will be fenced off, that a ranger will be employed, paid by RMS, and agreed to by the Committee, to look after the sites and that some roads will be rerouted and the damaged sites will be repaired. (4)
A spokesperson for the Kokatha people's Committee, Richard Reid, said that the Aboriginal people *"have the primary interest in the land, based on prior occupation and permanent spiritual attachment to it; mining companies and other Europeans have the temporary and secondary interest based only on economic values"*.

At a meeting in Melbourne in February, the Coalition for Nuclear Free Australia decided to make Roxby Downs a focus of local and national anti-nuclear activities this year. (5)

Notes: 1. *Campaign against nuclear energy newsletter, march 1983*
2. *Tribune, april 6, 1983*
3. *Campaign against nuclear energy newsletter, may 1983*
4. *Same as 1*
5. *Same as 2*

HONEYMOON CLOSED

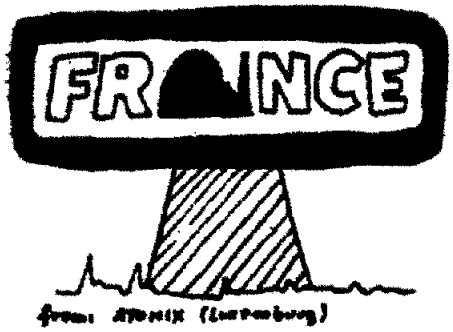
The State Labor government of Australia has decided not to allow uranium mining at Honeymoon and Beverley in the state's north-east. The South Australian Minister for Mines and Energy, Ron Payne, said cabinet took into account economic, social, environment and safety aspects of the mine. But he allowed the development partners to keep a lease on the site to preserve their investment. The decision does not rule out mining some time in the future.
Other reasons were that Roxby Downs would proceed and that widespread community concern existed about the 'acid leaching' method of extracting uranium from the mines. Both Payne and Peter Walsh, federal Minister for Resources and Energy, made great play out of the depressed state of the uranium mining industry. Senator Walsh reportedly stated that the decision

could have been made for economic reasons alone. He pointed to the fact that an export price fo $40 per pound would be needed to justify an export license. The Fraser government, he said, would have had to close the mine to be consistent.

Source: Tribune, no. 2276, march 30, 1983.

BAN ON FRENCH URANIUM EXPORT

Australian Minister for Energy, Senator Peter Walsh, told the Australian Senate April 22 that export licenses would not be granted for uranium exports to France as long as France continued to test nuclear weapons in the South Pacific. Walsh was replying to a question concerning the proposed Ben Lomond Mine in Queensland, which is 100 percent owned by the French company, Minatome Australia Pty Ltd. Minatome is 67 percent owned by the French government. Even if uranium from Ben Lomond was only used in nuclear power stations, it would allow uranium from other countries to be used in the French nuclear weapons expansion plan.



The Ben Lomond project has also been a subject of controversy because of its disgraceful safety record. The mine's safety officer Graham Legge found radon gas levels which, on six occasions between June 1979 and January 1980, were above safety levels. On October 11, 1979 radon gas was 160 times above the legal level. Minatome described Legge's findings as of "scientific interest only" and refused to stop work.

Senator Walsh's commitment is in line with Australian Labor Party policy. The Minister for Foreign Affairs, Bill Hayden, has formally protested the latest French nuclear tests at Moruroa, Tahiti. At least two tests have been conducted this year.

The Australian decision to ban uranium export to France raised protests from the European Economic Commission (EEC). According to EEC sources in Brussels, Mr. Hayden was given a "friendly presentation of certain realities" over Labors stand.
Under the guidelines of the EEC, all EEC countries must be treated equally by trading partners or face sanctions.
An Australian ban on uranium exports to France would thus be discriminatory, according to the EEC officials and Australian contracts for primary produce-mainly beef and wheat - would be reconsidered. This threat clearly emanates from the socialist government of France itself. The ban on French exports - despite some severe waeknesses - is one of the few firm stands adopted by Labor in its international relations policies since coming to power.

The major weakness or the Australian Labor Party policy is that it can only effectively stop contracts between an Australian supplier and the French government directly. It cannot control the secondary shipment of uranium through an intermediary. No government has been able to exert control over uranium and determine its ultimate destination once it leaves the country of origin. Thus, Australia can export uranium to a power supply facility in the US which then decides to resell the Australian material or for that matter some of its own uranium from other sources - to France. This is one of the fundamental flaws in the argument that any government - whether Labor or Liberal - can control the end-use of uranium once it has been exported.

Source: Tribune (Australia), 27 April 83 and 11 May 1983

CANADA

CODDLED BUT NOT CONTROLLED

Terrence J. Downey of the University of Waterloo has recently written a paper about Canada's uranium industry and its relationship with the federal government. The Spring issue of the Nuclear Free Press publishes his main conclusions:
It is pointed out that, while the uranium industry is virtually a creation of the federal government, Ottawa has never used its leverage to control the industry or to plan its developments based on sensible future markets.
To have a look back in history:
The federal government took over Eldorado, then Canada's only uranium producer during the second World War, when Canadian uranium was needed for development of the atomic bomb. Eldorado was initially given an absolute monopoly on exploration, mining, and sale of uranium. But by 1948, the Americans wanted more ore for their burgeoning weapons program. Eager to meet American needs, Ottawa decided to end the Eldorado monopoly and open the field to private enterprise. They offered risk-free cost-plus contracts to private sector producers and indeed, the government's policies had the intended effect of stimulating these private sectors.
By the mid-fifties a flourishing industry was busily digging up uranium for American bombs. But in 1959, the US said it would not renew its contracts beyond the 1962 expiry, having found its own mammoth uranium deposit at Ambrosia Lake, New Mexico. The disaster was at hand. Between 1963 and 1973, the federal government designed to keep the industry afloat at some minimal level. In the early 1970's the market showed some signs of recovery. But continuing instability prompted the federal government to intervene once again on behalf of the uranium sector. The result was a secret international uranium cartel, which indicates the federal government's willingness to participate in market manipulation on behalf of the industry. And there are also other examples of federal government aid to the industry: assistance to prospector; over a million dollars in research on processing, the results of which were then presented free of charge to the industry; and periodic gifts of various sorts to Eldorado.
So it is obvious that the uranium mining industry has been dependent on government aid from the very first and thus we can hardly be surprised if the industry seeks additional aid during the coming hard times.

Source: Nuclear Free Press, Spring 83, and "Government and the Canadian Uranium Industry", Terrence J. Downey, University of Waterloo.

CANADA'S URANIUM MINING

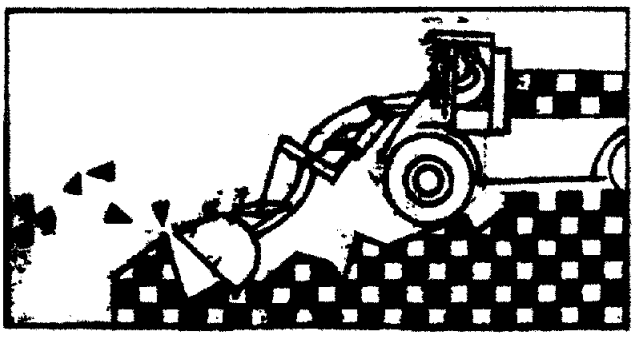
Canada's uranium and refining industries are undergoing a period of breakneck expansion. Here's a brief survey of current developments:

+ Dension Mines at Elliot Lake - since 1976, milling capacity has more than doubled. The mines themselves have also been expanded, and work continues on the re-activated Stanrock mine. (The production of U-308 yellowcake has grown from about 3.7 million pounds in 1979 to 6 million pounds in 1982.)
+ Rio Algom (same company as Rio Tinto Zinc) at Elliot Lake has completed additional work on its Quirke mine and re-opened its Panel Mine. Rio's Stanleigh Mine is expected to open in 1984 (capacity of 2 million pounds). Output of uranium oxide has grown from about 4.5 million pounds in 1979 to 6.8 million pounds in 1981.
+ Rabbit Lake in Northern Saskatchewan continues to produce at the rate of about 5 million pounds per year. This mine will be depleted in 1985.
+ Cluff Lake in Northern Saskatchewan began production in 1980, now producing at the rate of 4 million pounds a year.
+ Key Lake in Northern Saskatchewan is one of the largest and richest ore bodies in the world. Production which is expected to reach a mammoth 12 million pounds will start this year. (See Key Lake story.)
+ Eldorado Nuclear Ltd., Canada's only uranium refiner, is almost tripling its uranium hexafluoride (UF6) capacity, from 10 million pounds to 28 million pounds a year. The production of uranium hexafluoride is the first stage in enrichment of uranium used for light water nuclear reactors, a design not found in Canada. The entire production is therefore destined for export.

All the yellowcake produced at the above mines will be used to produce UO_3 in Blind River in northern Ontario and UF_6 in Port Hope, Ontario. 14,000 tons of a total of 18,000 tons UF_6 is destined for export. The remaining production of 4 million pounds of UO_2 will supply the domestic CANDU heavy water reactors.

The lost production from the closed Eldorado Beaverlodge Mine at Uranium City and the Faraday Mine in Bancroft, Ontario, will not be missed amid the growth fever which grips the industry as a whole. Total Canadian output which stood at 14 million pounds in 1980, is estimated to be doubled by 1985. However, the market for uranium is not good. Market prices have gone down from US$40 a pound in 1979 to US$25 a pound. (The spot market has fallen as low as US$17 a pound). The industry talked about a short term recession in the uranium market due to a slowdown in nuclear reactor construction. The turn-around was expected by 1985 but, now, the time line has been extended once again.

Nuclear power will be back in full swing in the 1990's we are told, and then Canada, as the world's second largest uranium producer (20 percent of total world production) and the world's largest uranium exporter, will be well-situated to reap profits from its wise investments.
In fact, however, utilities everywhere now recognize that slow growth in electrical demand is not a temporary but a permanent feature. The disastrous economics of nuclear power have become increasingly obvious, and the public antipathy has become greater, not less, as Three Mile Island recedes into history.



Ultimately, the soaring growth curve of Canadian mining and refining capacity is bound to collide with the collapsing market. When it does, the question is whether governments will move to protect the industry, through stockpiling, a producer cartel, and other subsidies, as they have done in the past, or whether they will concede the permanent decline of the industry and take steps to protect the workers and the environment in the wake of widespread shutdowns.

What is the role of the safe energy movement in all of this? There are a number of items on the agenda:

+ To expose the continuing history of subsidy to uranium industry
+ to counter industry propaganda about long-term prospects for a market turn-around
+ to work for the compensation, re-training and re-location of workers who will be displayed by the industry shut-down. Aid to entire communities may be necessary
+ to work on the strictest possible standards for mine de-commissioning and permanent management of the tailings which have already been created
+ and to continue in the meantime to expose the link between Canadian uranium exports and the proliferation of nuclear arms.

Source: Nuclear Free Press, Spring issue, analysis by Clifford Maynes.

CANADIAN REPORT SUPPORTS CONCERNS OF ANTI-NUCLEAR ACTIVISTS

A report released in March by Canada's Atomic Energy Control Board (AECB) supports anti-nuclear group's concerns about the hazards of uranium mining. The report, entitled *Risk Estimates for the Health Effects of Alpha Radiation*, was prepared by consultants Duncan C. Thomas and K.G. McNeill. This comprehensive evaluation of uranium mining in a number of different countries shows, beyond a doubt, that low-level radiation can interact with other factors such as smoking, dust exposure, and age, to markedly increase the chances of lung and other forms of cancer in miners. The synergistic effect of different factors is one of the major conclusions of the report.

Proponents of the uranium industry have brushed aside the effects of low-level radiation--claiming that ventilation in an underground mine will remove the hazard. But the Thomas-McNeill report indicates that as many as sixteen out of every one hundred miners have a high probability of dying from cancer if they smoke. The

risk is lower for non-smokers.

The report goes on to point out the need for continued monitoring of exposure to all forms of radiation for all workers associated with the uranium industry. Dosimeter badges are supposed to be the individual's way of measuring exposure, but the report shows weaknesses in this method. In fact, the lack of enforcement for use of dosimeter badges and their casual treatment by the industry in general has been the subject of much discussion by the opponents of the uranium industry.

For Saskatchewan miners, particularly those working at the soon-to-be-opened Key Lake Mine, the implications of this report are serious. And anti-nuclear activists in Saskatchewan are finding the report useful as an organizing tool. Key Lake, in the north of Saskatchewan, is one of the world's most concentrated ore bodies. There, the hazards of radon gas exposure can be expected to be especially high. The situation at Key Lake is aggravated further as it is to be an open pit mine--a method of mining never before used in the type of formation existing at Key Lake. The report contradicts the conclusion of the Key Lake Board of Inquiry when it stated *".... the low levels of radiation emitted at the site do not pose any particular hazard to the environment or to the health and safety on or outside the project site."*

The Key Lake Board of Inquiry claims that they would not hesitate to shut down the mine if there were any health risks to workers. Yet construction at Key Lake continues. In addition, the Saskatchewan provincial government has invested one-fifth of a planned $100 million to expand phase II of the Cluff Lake mine and approved the Collins Bay mine which will export uranium to U.S. Westinghouse nuclear plants as part of the 1981 penalty resulting from uranium price manipulations. All this despite a letter sent last year by the Legislative Secretary of the Saskatchewan Premier which said, *"at present our government has no plans to use public funds to buy or expand in the area of uranium development. We respect the wishes of Saskatchewan communities and will not impose uranium development on any community opposing it."*

But Saskatchewan communities <u>are</u> opposing. There has been especially strong opposition to the Collins Bay mine from a native community across the lake which is concerned about what radioactive uranium tailings will do to its fishing. (*"Perhaps"*, said Jim Harding, writing for the *Nuclear Free Press*, *"the Premier did not know that there are Indian and Metis communities in northern Saskatchewan when he had the letter sent...."*). And the Inter-Church Uranium Committee (ICUC), which is using the Thomas-McNeill report to bolster its arguments, is organizing community opposition to uranium mining in the region.

Copies of the Thomas-McNeill report, "Risk Estimates for the Health Effects of Alpha Radiation", are available from the Atomic Energy Control Board, P.O. box 1046, Ottawa, Canada K1P 5S9.

Contact: Inter-Church Uranium Committee, Box 7724, Saskatoon, Canada S7K 4R4. Tel: (306) 934-3030.
and: The Nuclear Free Press, c/o CPIRG-Peterborough, Trent University Peterborough, Ontario K9J 7B8. Tel: (705) 748-1554

WORLD'S LARGEST URANIUM MINE POSES UNPRECEDENTED THREATS

Key Lake, the world's largest and richest uranium mine, is expected to begin production in September of this year. The Key Lake deposit, located in northern Saskatchewan, Canada, consists of two huge and ultra-rich ore bodies, with concentrations of up to 60%! There are no precedents in the world for mining, milling, storing or managing the tailing for uranium ore of such high grade. (Normal concentrations for "high-grade" uranium ore are 3 to 4% and ore with as little as 0.4% concentration is being mined.) At Key Lake, cabs will be lined with a certain thickness of lead to shield miners from gamma radiation, high levels of radium in the tailings are to be extracted and buried separately from the rest of the tailings, and many

other extra precautions will have to be taken. The very rich part of the ore is located at the centre of the body, and will not be encountered immediately.

Key Lake is being developed by the Key Lake Mining Corporation (KLMC), 50% owned by the provincial government's Saskatchewan Mining Development Corporation. Eldorado owns 18%, and 32% is owned by the West German company, Uranerz, which is actually working the site. The first of the two ore bodies to be mined is the Gaertner ore body; the Deilmann ore body is expected to last for 15 years on a year-round, 20-hour-a-day basis. A "semi-dry" method for tailings management is to be used even though the system has never been proven with uranium in this particular climate. This will leave the tailings in a huge mound, which the company is supposed to cover with 12 feet of till before vegetating.

There has been a great rush to begin exploiting the Key Lake deposit as quickly as possible. In 1977, a government inquiry (the Bayda Inquiry) was considering whether Saskatchewan ought to develop its rich uranium, and most environmentalists assumed that a moratorium on uranium mining development would be enforced until the inquiry was completed. But in the meantime, the Saskatchewan Department of Mineral Resources granted permission to the KLMC to drain nine lakes in the area of Key Lake as the first step towards development. The permission was illegal--the Environment Minister had not signed the document --but the lakes were drained anyway.

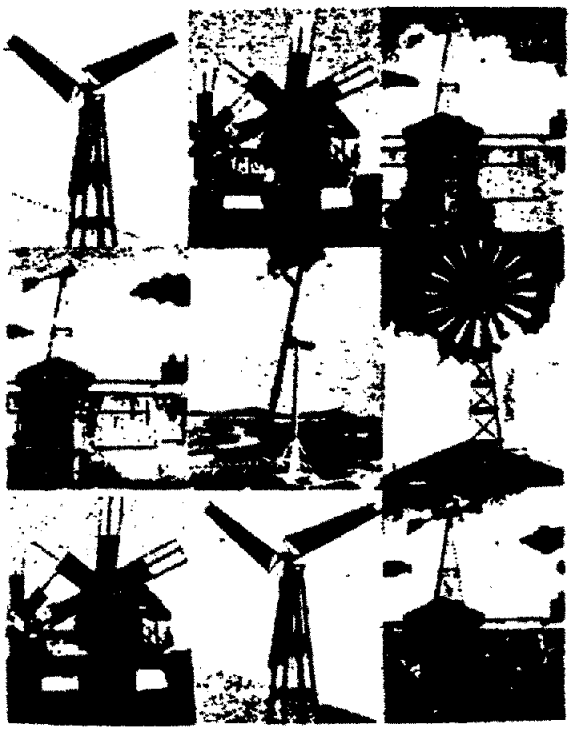
In 1980, an inquiry was called on Key Lake. The public almost unanimously boycotted the inquiry, for fear of legitimizing the project which the government intented to approve regardless. In March 1981, following the publication of a pathetically inadequate report, the government approved the Key Lake Mine.

Almost immediately, work started on "dewatering" the groundwater (the lakes had already been drained). Even during the Key Lake inquiry, work had been allowed to continue to get everything ready for actual pumping. After warnings from Environment Canada of high radionuclide levels in the groundwater, the license to pump was limited to three months. But the KLMC--in a what-you-don't-see-won't-hurt-you attitude (Key Lake is far away in the northern wilderness)--continued pumping after the license expired. When this was discovered, the company was brought before the courts, pleaded guilty and fined $500!

Miners and recent visitors to the site report that the mine is very nearly ready to go. Indeed, the overburden has been removed, and ore is being stockpiled. Activists who are following the situation closely say that *"development of the Gaertner ore body at Key Lake now appears unstoppable"*, but *"there is still time for us to stop the second, Deilmann, ore body from ever coming on stream."*

Source: Maisie Shell, Nuclear Free Press, Winter 1982.

Contact: Inter-Church Uranium Committee, Box 7724, Saskatoon, Saskatchewan, Canada.
Regina Group for a Non-Nuclear Society, 2135 McIntyre Street, Regina, Saskatchewan, S4P 2R7, Canada.



Now available as colored postcard. Order from your nearest WISE-relay.

JAPAN TO JOIN FRANCE AND CANADA IN JOINT URANIUM MINING VENTURE

The Japanese Power and Nuclear Fuel Development Corporation (DONEN) has decided to participate in the international

joint development projects of Dawn Lake Mine in northern Saskatchewan. Canada. DONEN already has three other mining rights in Canada.
Canadian, French and U.S. affiliated petroleum companies have already been involved in joint explorations there. Originally, the ownership interests were shared as follows:

+ The SMDC (Saskatchewan Mining and Development Company	54.6%
+ The ASAMERA (US Affiliated Petroleum Drilling Company)	26.9%
+ COGEMA (French Nuclear Public Corporation)	11 %
+ ROMC (Reserve Oil Mining Company of the US)	7.5%

The two US firms dropped their interest in the Dawn Lake Mine because of current low prices for uranium (see page) stagnation of uranium supply and demand and high interest rates. Japan was invited to join the deal because it is the biggest importer of Canadian uranium and because DONEN (like Cogema) can use interest-free money. More than 17,000 tons of uranium reserves have been charted at the site and production content higher than 1% is hoped for (average content is 0.5%).

The following tentative agreement has been made:

+ Japan and France share 20%-30% of the stocks respectively
+ The new enterprise will be an international joint venture of Japan, France and Canada.

Source: Journal of Environmental and Energy issues in Japan, Jan/Feb 83.

Contact: Friends of the Earth, 1-51-8 Yuyogi, Shibuya-ku, Tokyo, Japan.

USA

NORTHERN STATE COUNTIES OF THE US FIGHTING URANIUM MINERS

The U.S. uranium mining industry attempting to exploit new regions that appear promising, is finding itself on the defensive wherever it goes.

By Al Gedicks.

The U.S. uranium industry, retreating from its traditional mining areas of the Southwest and West, has been confronted recently by new bans against uranium mining in New Jersey, Vermont and British Columbia.

Plans to explore for uranium in northern California's Los Padres National Forest were dropped recently after vigorous opposition from environmental and Native American groups.

In response to these setbacks, the industry has issued a "call to arms" and is moving to overcome similar resistance in the Lake Superior region of Minnesota, Wisconsin and Michigan. E.A. Lang, vice president of Rocky Mountain Energy co., declared in a recent address to the American Mining Congress that *"we in the uranium industry can no longer stand back and expect the utilities to fight our fight. All of mining is subject to attack from the same direction--those opposed to mining, those opposed to growth, those opposed to big business. We are all a part of it. Our future depends on winning".*

Some of the biggest uranium producers in the world, including Exxon, Ker-McGee, Western Nuclear, Anaconda, Urangesellschaft (West Germany) and Minatome (France), have leased mineral rights to hundreds of thousands of acres in the Lake Superior region. A report for the Department of Energy (DOE) notes that *"this vast expanse is bound to become one of the principal exploration areas of the future".*
In Michigan and Wisconsin the industry has found allies in state bureaucracies. The Michigan Departments of Natural Resources and Public Health have released a report recommending that Gov. William Milliken lift the ban on mineral leasing of state land for uranium mining,

imposed in 1980 after four counties in the Upper Peninsula passed resolutions banning uranium exploration.
Property owners had complained bitterly about mining crews going onto their land without notification, cutting trees and clearing roads.
If Milliken lifts the ban, uranium companies will begin leasing more than 400,000 acres of state-owned lands. Several citizens groups have challenged the DOE report's conclusions.

The Upper Country Peace Alliance in Houghton says that *"despite industry's claim that they have 'cleaned up their act', the evidence shows that the mining and milling of radioactive ores continues to pose substantial dangers to public health.*
In areas where such mining has occurred, underground water reservoirs have been contaminated, air has been polluted by radioactive radon gas, radioactivity has been spread throughout the food chain, and residents have been confronted with a legacy of poorly managed radioactive mine tailings".

In Wisconsin, the secrecy of uranium companies in negotiating leases and withholding drilling results from the public has aroused environmental and Indian tribal concerns. Significant parts of areas identified as uranium 'hot spots' by the DOE lie on or adjacent to Indian lands. Kerr-McGee has approached Potawatomi tribal leaders in Wisconsin several times for permission to explore on reservation lands. Tribal chairman James Thunder says: *"Indians are not about to become the guinea pigs for the nuclear industry in the 1980s as the Navajo and Pueblo Indians were in the 1950s".*

Despite Potawatomi opposition, Kerr-McGee quietly bought mineral rights to more than 22% of the reservation from the Chicago and North Western Railroad. The tribe was never informed of the purchase by Kerr-McGee or the U.S. Bureau of Indian Affairs. After the tribe retained counsel, Kerr-McGee offered to withdraw its options on Potawatomi lands.

Regulations allowing mining companies to keep their drilling results confidential were written by a "consensus group" comprised of lawyers for the uranium companies and state and local agencies. The regulations were opposed by 17 environmental groups. They objected to provisions which allegedly allow contamination of groundwater by mining wastes place the burden of proof of contamination on individual citizens, disregard radiation hazards, and let companies condemn land for mine waste.

Roscoe Churchill, a retired school principal and president of the Rusk County Citizens Action Group, pointed out that citizens who were supposedly represented in the "consensus" had no active part in drafting the mining rules.

As concern has mounted over exploration in northern Wisconsin, several companies have insisted they are exploring for base metals (copper, nickel, zinc) and not uranium. But, says Gertrude Dixon, research director for the League Against Nuclear Dangers, *"The fact that copper, not uranium mining, is presently under consideration does not rule out the very real threat of radiation exposure. Mining companies leases in the area specifically do permit the development, mining, milling and marketing of uranium when it is found physically associated with other minerals, metals or ores. Uranium is almost always found in such deposits".*

Citizens of Grant, in Rush County, joined more than 50 other townships in adopting a moratorium on all mining. Al Reineman,

an elected supervisor for the town of Round Lake, near a potential vanadium-uranium deposit, emphasizes that *"local municipalities are the only place where people in the area still have a voice. We have tried on the state level, but we don't have the lobbying influence of the large corporations. The legislators can change all the laws they want, but the mining companies will have to come to northern Wisconsin for the minerals. We will be here. They can't snow job us anymore"*

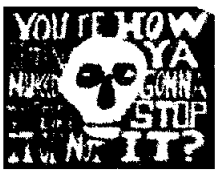
MINNESOTA CONSIDERS URANIUM BILL

The Uranium Development Act (Senate File No. 97), a bill designed by the Minnesota Coalition on Uranium, was introduced in the state Senate on January 12, 1983. The bill would stop all uranium development, beyond exploratory drilling, until a series of studies has been made concerning the health, safety, environmental and economic impacts of uranium development. The subject areas for study include: effects on surface and ground water; occupational health and safety; air emissions and air quality; land reclamation, including agricultural uses; problems associated with disposal of tailings, including effects on air and water quality and low level radiation; the economic impact on communities (the boom/bust cycle) and the state; costs of regulation and monitoring; impact of costs on the budget and revenues of the state and communities; health risks and costs to present and future generations.
Currently there is no mechanism for regulating uranium development between exploratory drilling and full scale mining.
Moreover, the regulations governing mining operations, because they cover non-radioactive minerals, do not take into account the radioactive properties of uranium.

The Senate sponsor of the bill is Charles Davis, chairperson of the Environmental Protection Subcommittee of the Agriculture and Natural Resources Committee. Senator Davis has worked closely with the Minnesota Coalition on Uranium, a broadbased coalition of more than 27 organizations (including Northern Sun Alliance) and numerous individuals. Support for the bill is needed from the environmental protection/safe energy community. Without passage of this bill, future uranium development in the state could go unchecked for a considerable amount of time.

Contact: Barbara Johnson, Minnesota Coalition on Uranium, 618 E-22 nd str., Minneapolis, MN 55404, US.

Source: Northern Sun News, March 1983.



NAMIBIA

NAMIBIAN URANIUM TRANSPORTS THROUGH THE U.S.

According to the American Nuclear Regulatory Commission (NRC) the US imports about 55,350 kg. yellowcake per year for enrichment from Namibia. Namibian yellowcake amounts to 3% of their annual imports. Of this 77% is exported and the remaining 23% is kept for use in the US.
The destination of the imports vary according to contracts, some of the material is just converted into uranium hexafluoride and exported, but some is converted, enriched and fabricated into fuel pellets. This is a confusing nuclear trail to say the least.
A spokesperson of the NRC noted that uranium entering the US as yellowcake would be shipped to Metropolis III (Allied Chemical) or Gore, Okla. (Kerr-McGee) for conversion to uranium hexafluoride. This material goes on to Paducah, KY. or Oak Ridge, Tenn. for enrichment.
Fuel fabrication is done in Wilmington, N.C. (General Electric), Columbia, S.C. (Westinghouse), Richland, Wash., Lynchburg, Va. or Windsor, Conn. The NRC also mentioned that the uranium hexafluoride from Canada usually enters through the Port of Huron in Michigan.

Obviously a part of the Namibian yellowcake is converted into UF6 in Canada itself. The yellowcake is transported to Canada in large freighters indentifiable by their macho-mythical names like Thorswave, Thor One and Thorscap. It is unloaded at the Port of Montreal and then shipped to Eldorado Nuclear in Port Hope, Ontario, located on Lake Ontario. Here, the yellowcake is converted into UF6. Since Canada does not have an enrichment plant, the UF6 must be shipped to the US-facilities. As uranium hexafluoride is highly volatile, it is normally shipped as a solid. Analysis by 'The Waste Paper', based on government reports, shows that these shipments can be lethal out to a distance of three miles in an accident involving a fire. The hazard is primarily chemical in nature to fluorine which, when combined with moisture, becomes a deadly hydrofluoric acid.
Under normal transport, UF6 is shipped in metal cylinders. In an accident involving a fire, the solid UF6 would melt at

a low temperature - 147° F. As it melted, a colorless liquid would be produced. This liquid would fill the cylinder and build up pressure until it exploded, releasing a toxic cloud.
Unlike other radioactive materials, the escaping UF6 would be visible as a white cloud. The concentrated materials would then be carried whatever way the wind was blowing. Although the probability of a fire is low--fire occurs in 1% of all rail accidents and 1.6% of all truck accidents--the consequences would be devastating.

Namibia holds 26% of the world's supply. The chief exploiter of the Namibian ore is Rio Tinto Zinc (RTZ) of the United Kingdom. RTZ has contracted to sell 8,200 tons of Namibian yellowcake between 1977 and 1985 to a Japanese utility. This yellowcake is converted to UF6 and enriched in Canada and the US.
Whether the resulting cargo of enriched uranium travels to Japan by crossing the continental US or by returning to traverse Canada, is unknown to 'The Waste Paper'. Any tips from readers on this would be appreciated.

Source: The Waste Paper, vol. 4, no. 2 and vol. 5, no. 1.

SOUTH AFRICAN YELLOWCAKE SPILLED ON ITS WAY TO THE US

An accident involving spilled yellowcake in Baltimore harbour in late February has graphically shown the international nature of the nuclear trade. The "SA Constantia", a South African flag ship,

arrived in U.S.'s Baltimore harbour on February 18 with some of its 200 55-gallon drums of South African yellowcake spilled. The accident happened at high sea, but the "Constantia" waited until it reached Baltimore before it called in a private crew to clean up the accident. However, the dockworkers who were to unload the ship were not convinced that the cargo was safe. Two crews of International Longshoreman Association (ILA) Local 333 refused to unload the cargo, despite promises of four times their regular pay for "hazardous duty".

It is believed the uranium was headed to Metropolis, Illinois to be converted into uranium hexafloride (UF6) for eventual use in a Japanese nuclear reactor. Mitsubishi Corporation of Japan has contracted with the apartheid government to obtain South African uranium, have it shipped to the U.S. to convert it to UF6, and have it re-exported to the Kansai Electric Power co. in Osaka, Japan.

In 1981, according to the Nuclear Regulatory Commission, over 1 million kg of raw South African uranium were imported into the U.S. for use in domestic reactors or for re-export. It is possible, however, that the "Constantia's" uranium actually originated in Namibia, the territory illegally occupied by the South African military. The NRC makes no distinction between uranium coming from Namibia and uranium coming from South Africa, labeling it all "South African". Imports of Namibian uranium are in direct violation of United Nations Decree Number One, passed by the General Assembly in 1974, which calls for the cessation of the exploitation of Namibia's resources.

A group called the Coalition to Stop South African Uranium in Baltimore has been formed to halt these imports into that port. The coalition is working with the Washington Office on Africa, a national church and trade union-sponsored lobby, which has launched a campaign to stop all U.S.-South Africa nuclear ties.

Contact: Ken Zinn, Washington Office on Africa, 110 Maryland Avenue, NE, Washington, DC 20002, USA. Tel.: (202) 546-7961.

BRITAIN TO HALT PURCHASES OF NAMIBIAN URANIUM

Britain has decided to halt purchases of Namibian Uranium beginning at the end of 1984 - when the contract with the RTZ

controlled Rössing mine expires. The Central Electricity Generating Board (CEGB) has purchased half of Britain's uranium requirement from this mine and since 1978 has ignored the United Nations Decree banning the import of Namibian natural resources while the territory is under South African occupation. The main reason for the decision not to renew the contract seems to be due to the present size of the uranium stockpile in Britain. The exact size is secret but it is estimated to be about 10,000 tonnes while the annual consumption is only 1,500 tonnes. An additional 2,500 tonnes of Namibian uranium yellowcake is to be delivered under the existing contract. The British Civil Uranium Procurement Organization, worried that Britain was becoming overly dependent on the RTZ mine, has signed a new contract with Australia. The contract for uranium supplies will begin in the late 1980's.

PARTIZANS, 213 Liverpool Rd., London

ACTIONS

DEMONSTRATORS PROTEST ARRIVAL OF SOUTH AFRICAN URANIUM IN US HARBOR

On Tuesday, May 10, forty demonstrators protested the arrival of the South African ship "S.A. Constantia" at a harbor in Baltimore, Maryland--on the east coast of the United States. The protestors, members of the Coalition to Stop South African/ Namibian Uranium in Baltimore, said the "Constantia" was transporting Namibian uranium in violation of U.N. sanctions that prohibit South Africa from exporting occupied Namibia's natural resources. The group was also protesting Baltimore Gas and Electric Company's (BG&E) practice of buying South African/Namibian uranium to fuel its Calvert Cliff nuclear plant. Coalition members said that according to the U.S. Department of Energy (DOE) sources, BG&E was the largest US buyer of South African uranium in 1981. The "Constantia" had previously been a target of the Coalition's protests when it arrived in Baltimore last February with a spilled cargo of yellowcake.

Namibia has the world's largest open-pit uranium mine, the Rossing mine, which produces 5,000 tons of uranium per year, generating $400 million per year in sales. The Republic of South Africa has occupied Namibia since the end of World War I when Namibia, then called Southwest Africa, was a former German colony. In 1966 the United Nations declared South Africa in illegal occupation of Namibia, and in 1974 the U.N. Council of Namibia enacted the Decree No. 1 which prohibits the mining, production, sale or export of natural resources without the approval of the Council of Namibia. Today South Africa imposes its apartheid rule on Namibia and considers its resources their own.

Contact: Coalition to Stop South African/ Namibian Uranium in Baltimore, Box 313, Morgan State University, Baltimore, MD 21239 USA.

CANADIAN CHURCH GROUP CALLS FOR A HALT TO SOUTH KOREAN URANIUM SALE

The Inter-Church Uranium Committee (ICUC) ha called for a halt to the sale of Canadian uranium to South Korea. The ICUC, a group in Saskatchewan, Canada, has been active in educating Canadians both to the dangers of uranium mining and to the use of Canadian uranium. Now they are drawing attention to the contracts the Saskatchewan Mining Development Corporation (SMDC) and the Saskatchewan provincial government have signed with the Korea Electric Power Corporation for the long-term supply of uranium. Under those contracts, deliveries are to begin in 1983, with the uranium being refined at Port Hope, Ontario, then sent to France or the U.S. for enrichment before going to Korea. The ICUC opposes the contracts on several grounds, including the South Korean government's commitment to the development of nuclear weapons and the highly repressive nature of that government. The ICUC charges that it is likely the government will use nuclear technology as a means of further strengthening its military rule. To substantiate their charges, the group points to a chronology of attempts and threats by the South Korean government to attain nuclear weapons. The group also points to an Oct. 1978 report, published by the subcommittee on International Organizations of the U.S. Congress, which stated that South Korea was engaging in a clandestine nuclear

weapons program. And at about the same time that report was published, a Ford Foundation study estimated that within a decade, the South Korean government could build up to 36 plutonium bombs a year, just using the waste uranium from the nuclear power plants South Korea expected to have constructed by then. Concerns about proliferation, says the ICUC, are heightened further by the fact that South Korea is essentially a police state where opportunities for citizens to question or protest nuclear policies, or any other government policies, are non-existant.

For further information and background, contact: Inter-Church Uranium Council, Box 7724, Saskatoon, Canada S7K 4R4. Tel: 306/934-3030.

In addition to pointing out the health hazards of uranium mining, ICUC has consistently pointed out that these sales of uranium are not simply business deals. Sales to countries like South Korea and Argentina will lead to proliferation of nuclear arms. Sales to Japan 'may come back to haunt us' if Japan is allowed to dump reactor wastes into the Pacific, where currents flow directly to the "best fishing areas on the west coast of Canada and Alaska". And sales to New Brunswick (eastern Canada) could contaminate the Saint John region around the Point Lepreau plant, which has serious design flaws and, according to the ICUC, is more likely to have a loss-of-coolant accident than any other reactor in Canada.

DISSIDENT SHAREHOLDERS TAKE OVER RTZ MEETING

Seventy dissident shareholders took over the RTZ Annual General Meeting (AGM) in London on May 26 and bombarded the directors with three hours of questions and declarations. Protestors included members of Partizans, the Namibia Support Committee, the National Federation of Aboriginal Land Councils, Judy Monk from the Aboriginal Mining Information Center in Melbourne, Australia, a native Mapuche from South America and Shorty O'Neill, the Aboriginal Consult to Europe. They were joined by Bryn Davies, representative of the Greater London Council which holds more than four million pounds worth of Rio Tinto Zinc shares. Davies attacked the company's operations worldwide for willful disregard of human rights.

This year's meeting was scheduled for 2:30 p.m., an unprecedent break with tradition. Usually RTZ AGMs begin in the morning. The Chairperson of RTZ, Sir Anthony Tuke, claimed this was to facilitate critical discussion: protestors claimed it was to preempt media coverage the day after. At last year's AGM, police were called in to throw out dissident shareholders who took over the platform when Anthony Tuke arbitrarily closed the meeting after only 1½ hours. This year, the directors of RTZ were clearly determined to avoid any repetition of 1982's adverse publicity.

Abandoning the customary address to shareholders, Tuke launched into discussion of the annual report just 10 minutes after the meeting opened. From then until 6 o'clock, critics launched an unabated attack on the company's practices in Australia, Namibia, New Zealand, North and Central America, Europe and Britain.

At 6 o'clock, Chairperson Tuke once again abruptly closed the meeting before questioning was completed at which point dissidents called for a vote on closure. The dissidents lost by 49 to 58 million (the number of postal proxies held by the chair). Protestors then tore up their annual reports and stormed out of the Europa Hotel.

Said Roger-Moody, Partizans, " *This is the first time the AGM of a mining company has been totally dominated by its critics. Even so, many areas were not covered before Tuke once again pulled down the shutters on discussion. Most notably was his refusal to take any questions on the uranium trade—RTZ is the world's biggest private producer— on grounds that this was 'commercial information'. Since Tuke also ruled out much other discussion, for example on investments in Chili and the U.N.'s condemnation of RTZ in Namibia, the AGM developed from the company's point of view into a lengthy maneuver to keep us good humored but dissatisfied. Tuke avoided confronting any of the major questions on health dangers from uranium, recognition*

of aboriginal landrights and the use of RTZ uranium in nuclear weapons."

Partizans is now proposing a change of tactics before next years AGM. *" We're in danger,"* said Roger Moody, *"of being repressively tolerated—of just being a spectacle that draws conventional shareholders who still vote with the company so that nothing changes. Nonetheless, we think it's important to keep some presence at AGM's. This year for the first time ever, we discovered ordinary shareholders quite unconnected with us getting to their feet to raise awkward questions. One of them, from West Germany, told us afterwards that while he didn't approve all our extremist tactics, he was very disturbed at the discrepancy between RTZ's public declarations and what he believed the company was doing."*

Partizans is now trying to raise funds to publish the taped proceedings of the 1983 AGM and issue a cassette of selected highlights for anti-nuclear concerned shareholders and landrights groups worldwide.

We got this story from Roger Moody, Partizans, 21f Liverpool Road, London N1, U.K.

TAIWAN

URENCO THE GREAT PROLIFERATOR

In the beginning of January 1983, only a short time after the United Nations' resolution (end of December 82) had demanded a change of the Treaty of Almelo --prohibiting any further uranium mining in Namibia for URENCO--, wild rumours were spread about a Taiwan order for URENCO involving 4000 tonnes of enriched uranium. West Germany, it is known, wants to supply Taiwan with a fourth nuclear plant. Considering Taiwan's demand for a guaranteed delivery by the same country of the necessary enriched uranium, West Germany advised URENCO to negotiate with Taiwan about the order.

For the Britisch and German governments the order did not seem to be much of a problem. For the Dutch government, however, the delivery of submarines to Taiwan earlier in 1982 was still an embarassing item. Because of this, URENCO-Taiwan news filled the Dutch newspapers in January. The Secretaries of Economic and Foreign Affairs (van Aerdenne and van den Broek) were sceptical about the order but appeared to have ready a solution for the future.

There is an additional important political complication. The Netherlands officially recognize The People's Republic of China and not Taiwan. In the second place, Taiwan is not an IAEA member. Nor, thirdly, does it subscribe to the NPT. For the Netherlands it would mean negotiating with a country they do not officially recognize.
What is furthermore absolutely lacking is the guarantee that the uranium will be used for peaceful matters only. It is a public secret that Taiwan has very close relations with South Africa and Israel.

But quite soon after the news was issued all Taiwanese press agencies denied actual negotiations with URENCO. The discussions, it was said, had an informative character.
What the director of the Department of Nuclear Energy of the Taiwan Power Company did confirm, was the fact that he signed a contract with the British concern Rio Tinto Zinc Company (RTZ) in december 1982 for the supply of 4000 tonnes of

enriched uranium. This over a period of 15 years, starting in 1989. A spokesperson of the Dutch Department of Economic Affairs denied however having had anything to do with the transaction.
Following these events, the Joint Committee was requested to allow URENCO-Taiwan discussions. The Joint Committee consists of three leading officials, one from each Troika country. It functions as a testing-board. The knowledge that RTZ has ties with the German enterprise Nukem (via an 18% share) however do make the British contract rather likely.
Nukem is for 20% within Uranit, the German URENCO branch.

A very bad case all in all, because the full 4000 tonnes of uranium of course come from Namibia, where RTZ mines it illegally.
What could well be a third piece of evidence is that Taiwan has a relatively larger nuclear energy program than most other countries. Already in 1956 Taipower established a commission to evaluate nuclear energy in Taiwan. In 1968 the American construction company Bechtel made a study on building nuclear plants in Taiwan. In the same year Taiwan entered the Non Proliferation Treaty in spite of many denials. But it was expelled by the United Nations in 1971 and with it lost its membership of the IAEA.
In 1978 the first two nuclear plants were put into operation supplying Taiwan with 16% of its electricity. The first one is situated in Chingshan (north of Taipeh). It is a boiling water reactor of 636 mW, supplied by General Electric and Westinghouse. The second is in Kuoshen (south of Chingshan), two 950 mW reactors, a co-production of Bechtel, General Electric and Westinghouse. The waste is stored in concrete shafts near the Orchidee islands (south of Taiwan) where primitive non-Chinese mountain tribes are the inhabitants.
Also in 1978 a third plant was in construction in Kaohsiung (in the South) for two 907 mW power water reactors from, once more, Westinghouse.
With the U.S. guarantee for a bilateral agreement on uranium supply, Taiwan knows that its nuclear energy program is ensured for a long time from now and that could explain the denial about negotiations with URENCO. The energy program of Taiwan for the future includes 9 more nuclear plants towards the year 2000. Taiwan in that case would be one of the world's largest importers of enriched uranium.

Furthermore, it is obvious that URENCO is in need of the 4000 tonnes order, in spite of their own denials of an economic fallback. URENCO will have to deal more and more with foreign competition, as it has no longer the monopoly on the ultracentrifuge technique. France and the U.S. have developed--and are developing--similar techniques, the U.S. even with a far greater capacity than URENCO.
A familiar story develops itself once again. Western countries develop nuclear power techniques, sell them to the Third

World, make big profits and try to steal eachothers contracts on 'how to help the poor.' Although Taiwan might soon be more nuclear than poor.

NIGER

CAVE-IN OF WORLD URANIUM MARKET IS HEAVY BLOW TO NIGER'S ECONOMY.

The brutal collapse of the world uranium market has meant another notch pulled in on the already tight belt that encircles the economy of this landlocked West African republic. Niger's austere military dictatorship depends almost completely for its foreign reserves on revenues from two huge French-run mines in the Sahara. The outlook is uncertain.
Take the figures for the latest budget. (The nation's currency is the franc of the Communauté Financière Africaine, which is equal to 2 French centimes.) The brief uranium boom peaked two years ago when Niger received 35 billion CFA (more than $100 million) in revenues, enabling it to finance one third of the budget.

This year revenues will not reach 9 billion CFA. The domestic budget last year was 93 billion CFA. This year it is down to 81 billion CFA, a decline in real terms, given inflation of 15%, of at least a quarter. As a result, cash available for investment has shrunk from 26 billion CFA last year to the present 7 billion CFA.

This means that Niger, which averaged an 8-percent growth rate for the latter half of the 1970s, has to budget for what might be an optimistic zero figure in the coming year.

Uranium-fueled prosperity is over, but whether for a decade or forever, Nigerois and French cannot be sure. But now the president, Colonel Seyni Kountché, is rallying his 6 million citizens in an effort to make Niger less dependent on the world outside.

A decade ago a devastating drought destroyed hundreds of thousands of cattle and killed an unknown number of people in the Sahelian belt that separates the Sahara from the savanna.

The uranium boom money produced a luxury hotel on the Niger River next to the Pont Kennedy, a convention hall, a large extension to the desert road network, expensive building for the mining and solar energy industries. Niger still contrives to provide a free health service of sorts, and only recently were well-to-do parents made to contribute to the fees of their children at university. Otherwise, schooling is free.

Source: International Herald Tribune, 12-12-1982.

EXPLOSION IN SOUTH AFRICAN URANIUM MINE KILLS 16 MINERS

On Friday, April 8, an explosion in the Beisa uranium mine in South Africa killed 16 miners. The explosion, which occurred at a depth of 450 meters, released methane gas. On April 11, 508 of 4.000 black miners were fired for refusing to re-enter the mine after the explosion. The newly opened Beisa mine, at Welkom, is the first primary uranium mine in South Africa. (The buld of South African uranium output is recovered as a by-product of gold mining.) The Beisa mine is owned by GENCOR.

Contact: WISE-Amsterdam, Czaar Peterstraat 1, Amsterdam. The Netherlands.

TAILINGS

MALAYSIANS FIGHT INDISCRIMINATE DUMPING OF RAD-WASTES

In November 1982, a Malaysian citizen lodged a complaint with the Consumers' Association of Penang (CAP). The citizen lived near a large dump of radioactive tantalum ore and it was affecting the health of his family. A subsequent study by CAP showed there were places at the

dump where the level of radiation was as high as 1,600 to 2,200 millirads per year--far above the 170 millirems established by the International Commission on Radiological Protection (ICRP) as recommended average dose to the public in addition to natural and medical exposure (see Box). Based on the results of the study, CAP launched a campaign which has now resulted in the tantalum ore dump being relocated.

Tantalum is a metallic element used in electric-light filaments, electrolytic capacitators, and nuclear reactor parts. It is not radioactive itself, but tantalum ore contains uranium and thorium, both highly radioactive elements. A few years ago there was a great rush for tantalum ore in Malaysia, especially in the State of Penang. Now, however, the market for the ore has subsided and it is no longer profitable to mine it. Many prospectors, left with large deposits of it, are indiscriminately dumping it in many places. The dump which was investigated by CAP is at Hill Railway Road. It contains approx. 3,000 tons of tantalum ore in an area of about ½ sq. km. and is situated in the heart of a residential area.

Now CAP is preparing legal action against the owner of the dump, and the citizen who first filed the complaint with CAP is suing the government for negligence in the matter. His two children have suffered from persistant skin problems, bronchitis and asthma. One of the children, a five-year-old who has been exposed to radiation from the dump for about 3 years, is the worst affected. According to a doctor who attended him, he feels extremely weak, coughs, vomits, sweats a lot and has skin rashes on both arms and legs. He breaths heavily and sometimes has difficulty breathing at all.

In addition to the high readings in the dump itself--where local children were known to play--CAP found that the average radiation level inside residents houses in the dump area was about 750 millirads. This means that the incidence of bone marrow cancers in the area will most likely double in about 4 to 5 years, and the incidence of lung cancers, large intestine cancers, and pancreas cancers will double in about 18 to 20 years.

The legal action which CAP is undertaking is virtually the first of its kind in Malaysia and will probably set a precedent for other cases. In addition, the action could go a long way toward educating Malaysians, who know little about the dangers of radiation. This is especially important at this time as the Malaysian government is beginning to develop a nuclear power program. (Malaysia has had a research reactor in operation since 1981.)

The case poses difficulties for CAP, however, as the organization is experiencing problems in obtaining expert opinion and testimony. As a result, CAP is requesting aid and information from groups worldwide who have already had experience in dealing with health problems related to nuclear development.

Contact: CAP, No. 27, Kelawei Road, Pulau Pinang, Malaysia. Tel: 63616 20361. All correspondence regarding the tantalum dump should quote CAP's reference: CAP/Tantalum/83/EG.

The permissible maximum exposure limit to individuals not employed by the nuclear industry is 500 millirems (5 rems or 5 milli-Sieverts). The 170 mrem figure mentioned in the article above is an average for the public as a whole. For beta and gamma radiation, one rad is about the same as one rem. For alpha radiation, one rem could be equivalent to 10-100 rems. Uranium is an alpha emitter and thorium a beta emitter. However, it is technically very difficult to measure alpha radiation, and probably what was measured at the Hill Railway Road site was only external gamma radiation from radiation decay products. This would mean that actual exposure is much higher than the 1,600-2,200 mrem figure indicates.

POKE

DRINKING LIQUID FROM URANIUM TAILINGS

Australia: In October 1982, the last drum of uranium yellowcake emerged from the treatment plant at the Mary Kath-

leen uranium mine (MKU) in Queensland, and the company which owns the mine embarked on a controversial course of 'rehabilitating' the mine site. Normal procedures require that the company neutralize the acid in tailings ponds by pouring in lime, drain off the liquid, and cover the tailings left with more lime and clay, to stop water from getting in an poisonous radon gas from getting out. But the company has decided not to use the lime--which would cost about $5 million--and has simply dug some deep trenches and is pouring the liquid into the ground. The company has also decided not to cover the 87 hectares of tailings and evaporations ponds with clay--but rather with broken rock from the mining operation. The Queensland government approved this operation, even though it knew that radon emissions from the 'rehabilitated' mine site would rise to 18 units a metre escaping through the broken rock. This is nine times higher than maximum levels approved by the U.S. Nuclear Regulatory Commission. The manager of the MKU mine, Terry Ward, who is largely responsible for the 'rehabilitation' program, has tried to reassure local people that the abandonned uranium mine will not pollute their water supplies by cupping his hands under the outlet of a bore, sunk to catch liquid seeping from a uranium tailings dam, and taking a long deep drink.

contact: FOE-Melbourne, 366 Smith St., Collingwood (Melbourne), Victoria 3066, Australia. Tel.: 03/419-8700.

HIGHER RADON LIMITS FOR TAILINGS PILES

If the US Environmental Protection Agency (EPA) and Department of Energy (DOE) have their way, abandoned uranium mill tailings piles along watercourses and in population centers will be left exactly where they are today.
EPA's final general environmental standards for cleanup and disposal of inactive tailings at 23 sites in the West and one in Pennsylvania would make stabilization-in-place of the nine most hazardous sites a priority over moving the piles to remote locations. If the proposal survives, it also would likely foreclose any option of relocating more isolated "medium" and "low" priority incative tailings piles.
DOE seems to have embraced stabilization-in-place for all inactive sites at its "prefered option" for remedial action, a move which has at least two western states where 12 of the 24 abandoned piles are located concerned that the ultimate cleanup and disposal of the piles will not be done properly.
There are indications that EPA's final incative-site standards, which are in draft form, will be published in the Federal Register. Final standards also would allow 10 times more radon emissions from reclaimed piles than was proposed by EPA in January 1981 and give DOE discretionary authority in cleaning up off-site contamination "only where a hazard is identified", and eliminate specific requirements for protection of ground water around tailings piles. The standards would reduce the effective life of design and stabilization to "at least 200 years" and permit larger amounts of residual radioactivity at decontaminated sites.

Environmental groups and citizens living in the vicinity of abandoned tailings expressed concern that the draft final standards would not insure that the abandoned mill wastes would be properly cleaned up to minimize or eliminate future maintenance of surveillance and protect the public health and environment.

A member of the Tuba City Citizens Committee for Uranium Radiation Control, Louise Yellowman, said she feared the effect EPA's final standards would have on the performance of the entire remedial action program. *"This apparently places not only the Tuba City rare metals pile in jeopardy, but also the high priority sites, such as Shiprock"*, she said. *"We don't want the (Navajo) tribe to have to spend its limited resources to clean these things up again in 20 years after it was done wrong because of weak standards"*.

DOE, working quietly behind the scenes, tried to convince EPA and the US Nuclear Regulatory Commission (NRC) that the

standards should be relaxed still further. *"The basic program need is to do the work at a minimum of cost and meet the minimum standards"*, a department official of DOE said, referring to EPA's 'minimum national standards'. *"Cost is not stated in the Act but the program and the efforts must be most effective"*, he said.
In fact, proposals by DOE's remedial action program office in Albuquerque to scrap all radon emission rate standards have been adopted by the agency's Office of Defense Wastes and Byproducts.

Source: Mine Talk, Summer/Fall 1982.

BACK-GROUND

URANIUM AND THE H-BOMB

The following is from an article by Dr. Gorden Edwards, "Fission Chips: Canada and the H-Bomb", which first appeared in the Spring 1983 issue of The Nuclear Free Press.

Over two-thirds of the Canadian uranium which is currently exported ends up in military stockpiles as "depleted uranium". This material is used directly as a nuclear explosive in H-Bombs. It is also used indirectly to breed the plutonium used to make the triggers of H-Bombs. Signed agreements, by which Canadian uranium is not supposed to be used for weapons, exist on paper only. There is no physical separation between the civilian and military aspects in the enrichment plants where Canadian uranium is processed, nor is there any segregation between Canadian and non-Canadian uranium. Depleted uranium is not even subject to international inspections or safeguards.

The reason for all of this is fundamental. Natural uranium is a blend of two isotopes, called U-235 and U-238. For use in light water reactors, the proportion of fissile U-235 has to be increased from 0.7% (in nature) to about 3%. To make a uranium bomb (like the Hiroshima bomb) the concentration of U-235 is increased from 0.7 percent to over 90 percent (in weaponsgrade uranium). This difficult and sophisticated operation is carried out in an enrichment plant, covering acres of ground and requiring as much energy as a large city.

At an enrichment plant, uranium from many different sources is blended together ... and gradually enriched by stages. At the 3 percent level of enrichment, the

appropriate amount is siphoned off and sent to various customers for use as reactor fuel. The rest continues to be enriched to weaponsgrade material. The only assurance that Canadian uranium is not making a net contribution to weapons production is careful bookkeeping. If so much Canadian uranium is "deposited", then so much low-enriched uranium should be "withdrawn". By keeping track of deposits and withdrawals, it can be determined whether or not significant quantities are being diverted for military purposes.

But there is a catch. The withdrawals are always less than the deposits, at least in the case of enrichment plants in the U.S., France and Britain. In fact, less than 20 percent or the Canadian uranium sent to each of these enrichment plants end up as reactor fuel, since it takes more than five pounds of natural uranium to produce one pound of low-enriched uranium. The remainder, which is mostly U-238, is left over as "depleted uranium". Since you cannot make a uranium bomb with depleted uranium, it is not classified as "strategic material" by the International Atomic Energy Agency (IAEA).

However, depleted uranium is one of the principal ingredients of H-bombs. In fact, about 50 percent of the explosive power of each H-bomb is due to the fissioning of U-238. To put it another way, almost half of the total destructive power in the combined nuclear arsenals of the world is due to depleted uranium. To understand this fact, it is important to note that an H-bomb is a three-stage

nuclear weapon: it is a fission-fusion-fission bomb. First a plutonium bomb (called the "trigger") is detonated. This detonation creates a temperature of more than 100 million degrees, which ignites a tremendously energetic nuclear fusion reaction (involving isotopes of hydrogen--hence the term "hydrogen bomb" or H-bomb). Then the third stage of the explosion occurs, as the energy of the fusion reaction causes fissioning to occur in a blanket of U-238 (depleted uranium) which encloses the entire weapon. Thus, for a country already having an H-bomb arsenal, depleted uranium is a powerful nuclear explosive--but for a country wishing to build its first atomic bombs, depleted uranium is not a nuclear explosive at all. Since the job of the IAEA is to prevent new countries from acquiring nuclear weapons, without interfering with the mass production of H-bombs by the existing nuclear powers, stocks of depleted uranium are never inspected or subject to safeguards by the IAEA.

Canada is the world's second largest producer of uranium, and over 80 percent of what is produced goes to enrichment plants in the U.S., France, Britain and the U.S.S.R. (Between 10% and 40% of Canadian uranium exports go to the U.S.S.R. for enrichment, depending on the year.) But Canada knows that depleted uranium has important military uses. For this reason, when the U.S.S.R. enriches Canadian uranium for Finland, Spain, Sweden or West Germany, the Canadian government insists that the depleted uranium must be sent to the customer along with the low-enriched fuel. The

Soviets are not allowed to maintain custody of the leftovers. Only the U.S., France, and Britain are trusted to keep Canadian depleted uranium at the sites of the enrichment plants, where it is added to already huge stockpiles of depleted urarium on hand. *When required for H-bombs, this stockpile is freely drawn upon.* Moreover, depleted uranium is used in the form of "target rods" in military reactors to produce the plutonium to make triggers for H-bombs. Even so, there is so much depleted uranium that alternative markets have been actively sought. In future, depleted uranium may be used as a casing for ordinary bullets, thereby increasing their penetrating power.

The Nuclear Free Press is a quarterly publication of Birch Bark Alliance, c/o OPIRG, Trent University, Peterborough, Ontario K9J 7B8 Canada.

Contact: Gordon Edwards, CCNR, P.O. Box 236, Snowdon Post Office, Montreal, Quebec H3X 3T4 Canada.

RADIATION

LICENSING OF RADON RELEASES FROM URANIUM MINES NOT REQUESTED

A report entitled *"Radon and radon progency concentrations in New Mexico's uranium mining and milling district"* from the radiation protections bureau of the New Mexico Environmental Improvement Division concludes that uranium mines are the primary causes of elevated levels of radon gas near Grants, N.M. The report discusses the results of two years of continous monitoring of radon and radon progency levels around the Anaconda, Homestake Mining and Kerr-McGee uranium mills and mines in the Ambrosia Lake/Grants mining area. The findings contradict a long-held industry view that elevated concentrations of radon in the area were primarily caused by sufficial outcrops of uranium ore.

The monitoring program was designed to determine if the state's regulations are being met and to provide recommen-

dations for any necessary changes in the New Mexico Radiation Protection Regulations. The results of the program showed that several monitoring stations in the Ambrosia Lake area exceeded in

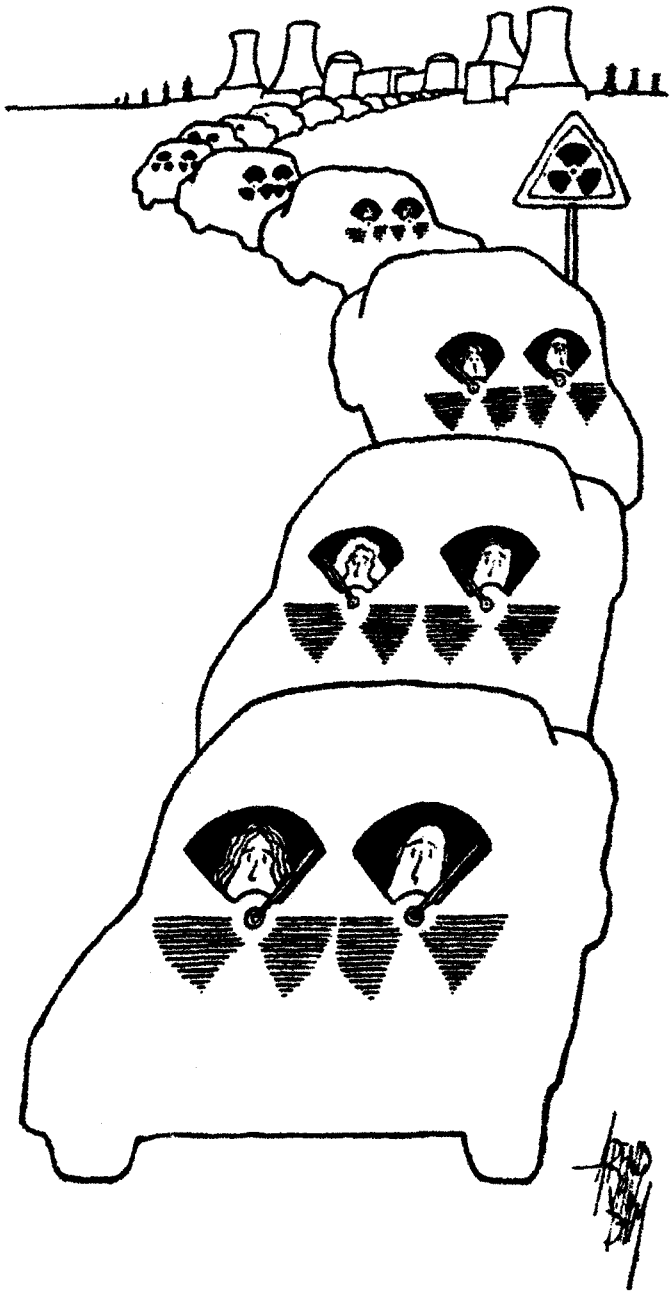
individual exposure limit of 3 picocuries of radon per liter of air (pCi/l) and the population exposure limit of 1pCi/l. Some stations exceeded both the individual and population exposure limit both years of the study (1978 and 1979).
The study found out that environmental factors, such as temperature inversions and wind patters, caused large seasonal fluctuations in radon concentrations at individual sampling locations.
For instance radon levels were higher in winter months due to the trapping of gases and dust at the earth's surface under layers of warm air. The highest one-site winter concentration exceeded 20 pCi/l in an area influenced by radon releases from several mine vents, according to Jere Millard, one of the authors of the study.

The Radiation Protection Bureau of the NMEID is recommending the licensing of uranium mines in the state.
The Southwest Research and Information Centre (SRIC) filed an amended petition to this in 1981, including the licensing of uranium mines in the state.
The original version proposed by SRIC in 1978, was challenged by the mining industry, which claimed that the New Mecixo Radiation Protection Act precluded NMEIB's adopting regulations which infringed on the authority of other state and federal agencies. The industry cited a provision of the Act which exempts from the Board's jurisdiction *'the mining, extraction, processing, storage or transportation of radioactive ores of uranium concentrates that are regulated by the US bureau of Mines or any other federal or state agency having authority, unless the authority is ceeded by such agency to the board'.*

The board failed to adopt SRIC's petition after hearings in May 1979.
SRIC's revised proposed regulation from 1981 included a provision that licensing of radon releases from uranium mines is not regulated by any existing state of federal agencies.

A copy of the study may be obtained from Southwest Research and Information Center
P.O.Box 4524,
Albuquerque, N.M. 87106

Source: Mine Talk, Summer/Fall 1982

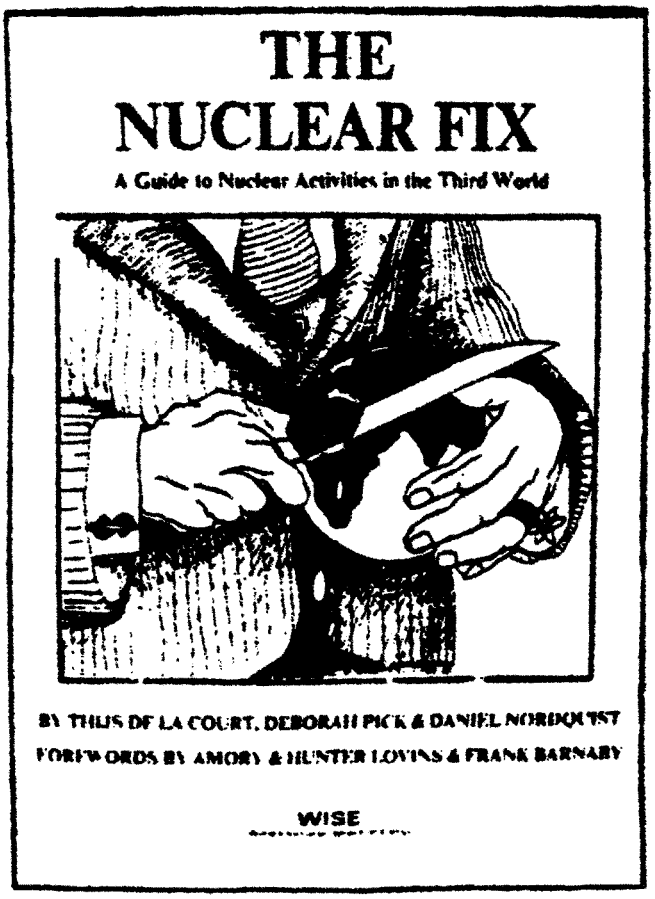


THE NUCLEAR FIX, the first book published by WISE, outlines the history, development and current status of nuclear activities in over 60 Third World countries in one handy volume.

What does the energy crisis mean for the Third World?
What is the impact of a nuclear power plant in a Third World country?
How many nuclear power plants are functioning and how many are being built in Third World countries?
What are the implications of nuclear proliferation for the safety of the world?
Why are so many Third World countries building nuclear facilities? For whom?

All these questions and many more are dealt with in the 'NUCLEAR FIX'.

Copies can be ordered from WISE-relays or from the international office in Amsterdam. Please specify English or Dutch edition. (German and Spanish editions will come out soon)
Price: $ 8.95 (US), $9.95 (CAN), ƒ 21 (Holl.)
Add $ 1.50 (US) or equivalent for postage.



NAMIBIA ONCE MORE

URANIUM THE WEST'S TIE TO SOUTH AFRICA

By Margie Ward

North American and European dependence upon uranium-rich South Africa and illegally occupied Namibia form a key link in the nuclear chain that binds the western bloc of nations to the racist colonial regime of South Africa. Recognizing the gravity of this, anti-nuclear and anti-apartheid forces are joining together throughout the western world.

To avoid global disaster, this movement must swell beyond its present strong grass-roots level to ensure complete diplomatic and financial withdrawal from South Africa and Namibia. It must openly support the international call for *free* elections in both countries.

Western economic, political and racial self-interest are squarely in opposition to a South African withdrawal from Namibia and to the Black liberation struggles in those two countries. Western self-interest is firmly in support of South Africa's design to destabilize the already independent nations of Angola, Mozambique and Zimbabwe. The west relies on South Africa's nuclear industry, made rich by virtual slave labor, a dearth of environmental and safety codes, and total disregard for the health and safety of black uranium miners and millions of people over whose land uranium is transported. In the case of uranium from Namibia, such transport is secret and illegal.

Nine years after the United Nation's Decree No. I, the billion dollar dealings with South Africa continue to pirate an estimated 26% of the world's uranium supply from Namibia. With no worldwide shortage of uranium and with other sources available, the western nations conspire for mutually beneficial contracts with the world's only legalized racist police state.

To overview the impact upon our own backyard, three instances can be cited: transportation of "apartheid uranium" across the

US; Northern States Power complicity; and Control Data's recent sale to South Africa.

According to DOE (US Department of Energy), Northern States Power (NSP) is one of ten American utilities which regularly use "apartheid uranium". It is also one of five utilities with whom Ronald Reagan arranged for the purchase of a total of 80 tons of enriched uranium stockpiled in Ohio. Contracted and paid for the South African government, this enriched uranium could not be returned to South Africa because of US compliance with the Nuclear Non-Proliferation Treaty. South Africa refuses to sign the Treaty. The Reagan administration actively pursues ways to defy the Treaty and the international arms embargo against South Africa.

In 1982 the US Commerce Department approved the shipment of a Cyber 170-750 computer from Control Data to the Council on Scientific and Industrial Research in South Africa. The transaction had been held up for more than a year because the US Defense and Arms Control spokespeople opposed its potential for greatly facilitating South Africa's nuclear weapons program. The shipment of this computer runs contrary to the Non-Proliferation Treaty.
These three government and industrial ties with nuclear South Africa are a minute fraction of the West's development and maintenance of nuclear South Africa and illegally-occupied Namibia. Since 1945, South Africa has been supplied with foreign exchange, technology, equipment, plants, fuel and expert scientists necessary for nuclear growth and near self-sufficiency in nuclear energy and weapons. Despite that nation's outspoken willingness to "use all means necessary" to defend its interests, the West continues to ally itself unequivocable with its white minority government.

There is an urgency to action! Pass the word to your neighbor. Organize educational programs. Support national legislation:
1) Rep. Rangel's (D-NY) *HR 1020* prohibiting nuclear exports to South Africa;
2) Rep. Howard Wolpe's *HR 1417* to close some loopholes in the NPT; and
3) *HR 1392*, co-sponsored by Minnesota's Rep. Oberstar, directed toward limiting US involvement in South Africa.
In the Minnesota Legislature Rep. Randy Staten and Senator Allan Spear have introduced bill dealing with investment of Minnesota monies. These bills will be acted on in 1984. They tie in with jobs and economic needs in the State.

For more details, speakers and films, call M. Ward (871-6858/870-1501) or M.E. Kaluz (871-7153) or write Minnesota Anti-Apartheid Legislative Coalition, P.O. Box 8717 Minneapolis, MN 55408.

RESOURCE

"GLOBAL FISSION: The Battle Over Nuclear Power"

Written by Jim Falk, Oxford University Press, Melbourne, 1982, 410 pp.

"During the 1970's", writes Falk, *"one immense technological programme representing one possible form of the future, began to be developed. Global in scale and staggering in its proposed proportions, the nuclear industry began to develop. But for the communities in which nuclear facilities began to be constructed, the novel physical hazards inherent in their operation ignite a controversy, and then a conflict, which has flared ever more intensely".*
This book is the first comprehensive history of the nuclear controversy. Using newspaper reports, literature produced from both sides of the controversy, scientific and industry journals, and interviews and discussions, Falk explores the rise of a new movement. He describes this movement as broad-based and international in scope and character and details its nature. Also he examines the political economy of the nuclear industry, the strategy used by that industry and the strategy used by the movement opposing it. It took Falk six years of research and involvement in environmental controversies to produce this book. It's well worth taking the time to read it.

Available from Oxford University Press, 7 Bowen Crescent, Melbourne, Australia for $14.95 (paper), $29.95 (hardback).