

Mr. President:

The Senate Foreign Relations Committee today approved S. Res. 221, a resolution that was introduced by Senator Pastore and myself last July. This measure is designed to express the very deep sense of concern in the Senate and this country about the sale of nuclear enrichment and reprocessing facilities to non-nuclear weapons nations.

This past June, West Germany entered into an agreement with Brazil which could result in the construction of a plutonium reprocessing plant in Latin America. It was the first agreement to fully provide for construction of such a plant in a non-nuclear weapon country. The agreement was concluded despite the serious objections of the United States.

I believe our government was rightly concerned about the consequences of this transaction. Studies show that there is no economic justification for Brazil, whose nuclear energy industry is in infancy, to construct such a plant. Even in the United States, with scores of reactors in operation, we do not have a single plant licensed to reprocess plutonium for commercial uses.

There is a valid reason for delay in developing a commercial plutonium reprocessing industry for there is substantial doubt about the thoroughness of safeguards and physical security measures that have been proposed to govern these plants.

Why does Brazil want to assume the risks and the significant costs involved in building such a plant? No adequate economic justification has been provided and, since Brazil has never ratified the Non-Proliferation Treaty, there is cause to suspect their motives.

A second plutonium reprocessing transaction has now come to light. This is the agreement for transfer by France of a reprocessing facility to South Korea. In this case, the potential military motivation of the sale is even more obvious and more alarming. I hope that the leadership in South Korea understands that the US would view as an extremely serious matter any attempt to use this technology for production of an explosive device.

As a result of these transactions, and others that may follow involving the sale of similar equipment to Argentina, Pakistan or countries in the Middle East, the effectiveness of the regime to control nuclear weapons spread is now in question.

Once countries can manufacture plutonium in even modest quantities, they can without much difficulty take the added step of manufacturing an explosive device that is indistinguishable from a nuclear bomb.

What checks exist to prevent such action? Many countries have yet to ratify the Non-Proliferation Treaty. For such nations, there are no constraints other than the limitations placed by suppliers on available technology and the effectiveness of safeguards required by suppliers including those enforced by the International Atomic Energy Agency (IAEA).

The IAEA is now rushing to develop a program capable of preventing diversion of special nuclear materials from uranium enrichment and plutonium reprocessing equipment. But the effectiveness of these safeguards has not been fully tested. Many experts question whether this sensitive technology should be transferred to non-nuclear weapons countries under any circumstances. Others believe that a fully effective safeguards program can be devised only if these facilities are developed as large, regional, rather than smaller national plants,

and placed under multinational control.

A study of regional fuel cycle centers was, in fact, one of the recommendations of the NPT review conference earlier this year. Since that session, the United States has been meeting with other countries that supply nuclear equipment and technology to strengthen the controls over dissemination of technology for production of special nuclear materials. While some progress has not been made, this issue has still not received the high level attention it deserves among the nuclear suppliers, including the United States. It was argued, for example, that the failure of President Ford and Secretary Kissinger to mention the Brazilian sale when West German President Walter Scheel visited the United States last spring was interpreted by the West Germans as a signal that this was not an issue of major importance to the United States.

The purpose of the resolution approved by the Foreign Relations Committee today is to put the full weight of the Senate behind the effort to strengthen and <sup>broaden</sup> the IAEA safeguards program, and to urge the utmost restraint in the transfer of sensitive equipment and technology, including enrichment and reprocessing facilities until a fully effective program can be achieved. It is meant to tell all suppliers, including the French and West Germans, that unless regionalization of plants is provided through multinational centers, they should not provide reprocessing or enrichment equipment to any non-nuclear weapons state.

As unsatisfactory as the present international system to limit nuclear weapons proliferation may be, it has taken more than a decade to reach this point. Efforts during this period to ensure safeguards over the spread of nuclear technology were made with one principle objective in mind, -- to

prevent the chaos that would result if every nation decided to develop an independent nuclear weapons capability. The transfer of plutonium reprocessing and uranium enrichment facilities to non-nuclear weapons states now threatens to undermine all of the progress that has been made to this date. The result would be a new and a much more dangerous era for the United States and for the world community.

We cannot allow that to happen. I am hopeful that this resolution will therefore receive prompt and favorable consideration by the Senate.

Mr. President:

The Senate is today considering S. Res. 221, a resolution that was introduced by Senator Pastore and myself last July. This measure is designed to express the very deep sense of concern in the Senate, and ~~in~~ this country, about the sale of nuclear enrichment and reprocessing facilities to non-nuclear weapons nations.

This past June, West Germany entered into an agreement with Brazil which could result in the construction of a plutonium reprocessing plant in Latin America. It was the first agreement for construction of such a plant in a non-nuclear weapons country. The agreement was concluded despite the strong objections of the United States. I believe our government was rightly concerned about the consequences of this transaction. Studies show that there is no economic justification for Brazil, whose nuclear energy industry is in infancy, to construct such a plant. Even in the United States, with scores of reactors in operation, we have yet to license our first plant to reprocess plutonium for commercial uses. There is a valid reason for delay in developing a commercial plutonium reprocessing industry, for there is profound doubt about the adequacy of safeguards that have been proposed to govern these plants. Why does Brazil want to assume the risks and costs of such a plant. No adequate answer has been given, and since Brazil has never ratified the Non-Proliferation Treaty, there is every reason for suspicion.

A second plutonium reprocessing transaction has now come to light. This is the agreement for transfer by France of a reprocessing facility to South Korea. In this case, the potential military motivation of the sale is even more obvious and more alarming.

As a result of these transactions, and others that may follow involving the sale of similar equipment to countries like Argentina, Pakistan and, most especially, the Middle East, the entire regime to control nuclear weapons spread is now endangered.

Once countries can manufacture plutonium in even modest quantities, they can without much difficulty take the added step of manufacturing an explosive device that is indistinguishable from a nuclear bomb.

What kind of checks exist to prevent such action? Many countries have yet to ratify the Non-Proliferation Treaty. For such nations, there are no constraints other than the limitations on available technology and the effectiveness of safeguards enforced by the International Atomic Energy Agency.

The I.A.E.A. is rushing to develop a program capable of preventing diversion of special nuclear materials from uranium enrichment and plutonium reprocessing equipment. But the effectiveness of these safeguards has not been tested adequately, and many experts question whether a fully effective program could be devised unless the plants themselves were regionalized and placed under multinational control.

Regional control was, in fact, one of the recommendations of the NPT review conference earlier this year. Since that session, the United States, together with other countries that supply nuclear equipment and technology, have been meeting to attempt to strengthen the controls over dissemination of technology for production of special nuclear materials. While some progress has been made, in many countries, including the United States, this issue has still not received the high level consideration it deserves.

The purpose of the resolution before the Senate today is to put the full weight of the Senate behind the effort to strengthen the safeguard program and

to urge the utmost restraint in the transfer of advanced equipment and technology until a fully effective program has been achieved. It is meant to tell the French and the West Germans that unless regionalization of plants is provided with multilateral control, they should not provide reprocessing equipment to Brazil and South Korea.

It has taken more than a decade to secure approval by a majority of nations of the Non-Proliferation Treaty, and to ensure that adequate safeguards are applied to the transfer of nuclear reactors. These efforts were made with one principle objective in mind -- to prevent the chaos that would result if every nation decided to develop an independent nuclear weapons capability. In the absence of effective controls, the transfer of plutonium separation and uranium enrichment facilities now threatens to undermine all of the progress that has been made to this point and to create a new era of instability.

We cannot allow that to happen. I am hopeful that this resolution will therefore receive unanimous approval by the Senate.



or other uses that would jeopardize world peace and security.

Mr. MONDALE. Mr. President, I am today submitting a revised version of a resolution—Senate Resolution 188—which I submitted in the Senate a week ago. This resolution expresses the opposition of the Senate to the proposed sales of uranium enrichment and plutonium reprocessing plants to nonnuclear weapons countries.

Since the resolution was first proposed, 20 Members of the Senate have joined as cosponsors of the modified version. A number of other Senators, while they have chosen not to cosponsor, have made clear to me their strong support for the objectives of this measure.

The reason that there is such deep concern over the transfer of enrichment and reprocessing equipment is that there is no effective international system of control over the spread of nuclear weapons capability once countries acquire the means to produce plutonium. Furthermore, there is no reason for the sale of plutonium separation plants since they have not proven to be commercially viable even in the United States.

David Lilienthal, in an article which appeared in the June 20 New York Times warned:

The world should be made aware that any nation that sets out to extract plutonium from the ashes of an ostensibly innocent electric atomic reactor, is on its way to making bombs.

West Germany is currently negotiating with Brazil for the sale of enrichment and reprocessing facilities. This would be the first such sale ever to take place. German officials contend that the sale represents a major breakthrough toward improved safeguards since it includes requirements that are more restrictive than those currently imposed by the International Atomic Energy Agency.

But despite these requirements, which reportedly contain a provision that both the plutonium separation plant and the technology supplied by West Germany will be subject to international safeguards, Brazil has not signed the Non-Proliferation Treaty which would insure that "indigenously developed" technology for plutonium production would not be applied to weapons manufacture. And after the Brazilian engineers are trained in the design and operation of the German facility, they would almost certainly be in a position to produce a plant of their own.

That is why I had hoped that it might be possible to bring my resolution to a vote in the Senate before the West German-Brazilian contract was signed. Time pressures now make the chances of that happening remote.

I have nevertheless been extremely encouraged by the interest of both the chairman, Senator PASTORE, and the ranking minority member, Senator BAKER, of the Joint Committee on Atomic Energy in further action on this issue as soon as possible.

As evidence of the need for such action I ask unanimous consent that the article

by David Lilienthal from the New York Times be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

IF THIS CONTINUES, THE COCKROACH WILL INHERIT THE EARTH

(By David E. Lilienthal)

After dropping nuclear bombs on Hiroshima and Nagasaki almost thirty years ago, America has kept faith with her pledge to seek a slowing up and eventually an end to the worldwide arms race. The internationalization of the dangerous aspects of the atom by the elimination of rivalry between nations as proposed by this country in 1945 has certainly not been achieved, but a surprisingly good start has been made.

Through American leadership—principally that of Senator John O. Pastore of the Joint Committee on Atomic Energy—an international safeguard agency was created, the International Atomic Energy Agency, and for years has functioned quite effectively. Again through American leadership, the nonproliferation treaty, limiting the number of nations already producing nuclear weapons, has been adopted, and thus far lived up to by many nations.

In recent months, however, recognition of the baleful consequences of intense commercial rivalry in the sale of atomic plants ostensibly purchased for electricity production makes it imperative that America now step forward and sponsor a new initiative and make a new and equally bold proposal.

In recent years and months there has been a widespread increase in the number of plants built or under contract throughout the world to produce atomic heat to be transformed into electric energy.

This could be all to the good: the world needs a new hazard-free source of energy. It is often stated that those electric-producing atomic plants are virtually synonymous with plants to produce atomic bombs. This is not true. On the contrary, these plants can be so designed and so operated that the atomic materials will be of questionable value for an atomic explosion or bomb.

Indeed, the most economical design and operation of a plant, whose primary end product is electricity, is one that automatically poisons or denatures the fuel, making it of little value for a bomb. After the atomic fuel has been squeezed of most of its usefulness for electricity, it self-poisons itself; the atomic chain reaction—the heat process—would stop so that atomic ashes must then be removed from the reactor and fresh fuel inserted.

That spent fuel (ashes) from an innocent electric plant is now the chief threat. It is devilishly radioactive; it is an awesome mess and no thief or terrorist can touch it and live. But the wastes still contain a certain amount of plutonium, the essence of a bomb, and uranium. No one yet has come up with a foolproof, commercially profitable and workable means of processing the spent ashes of an electric-producing reactor. A major American firm has just written off as a failure such a multimillion-dollar plant. A military plutonium plant for which I was responsible as Atomic Energy Commission chairman, did work but for a military reactor to make plutonium, expense is of no consequence.

The world should be made aware that any nation that sets out to extract plutonium from the ashes of an ostensibly innocent electric atomic reactor, is on its way to making bombs. No one should be deceived by declarations that its purposes are peaceful.

I suggest that the next step to enable the International Atomic Energy Agency to cope with the dangers of a spread of military uses of the atom is that the agency be the sole

# SENATE RESOLUTION 199—SUBMISSION OF A RESOLUTION RELATIVE TO NUCLEAR WEAPONS PROLIFERATION

(Referred jointly to the Joint Committee on Atomic Energy and the Committee on Foreign Relations, by unanimous consent.)

Mr. MONDALE (for himself, Mr. ABOUREZK, Mr. LEAHY, Mr. MOSS, Mr. CHURCH, Mr. CLARK, Mr. CULVER, Mr. CASE, Mr. BURDICK, Mr. HASKELL, Mr. WILLIAMS, Mr. HARTKE, Mr. BAYH, Mr. NELSON, Mr. GLENN, Mr. BIDEN, Mr. CRANSTON, Mr. HATHAWAY, Mr. HUMPHREY, Mr. JACKSON, and Mr. RIBICOFF) submitted the following resolution:

Whereas the Senate of the United States ratified the Treaty on the Nonproliferation of Nuclear Weapons (NPT) in recognition of the devastation associated with a nuclear war and of the need to make every effort to avert the dangers of such a war;

Whereas the parties to the Treaty expressed a common belief that the proliferation of nuclear weapons would seriously increase the danger of nuclear war;

Whereas the United States and other parties to the Treaty pledged to accept specified safeguards regarding the transfer to non-nuclear weapons States of special nuclear materials and facilities for the processing, use, or production of such materials;

Whereas the proposed sales of nuclear enrichment and reprocessing plants to non-nuclear weapons States, cast serious doubts on the scope and comprehensiveness of existing safeguards over the proliferation of nuclear weapons capability;

Whereas the Senate of the United States is particularly concerned about the consequences of transactions that could lead to the production of plutonium and other special materials by non-nuclear weapon States in Latin America, in the Middle East, and in Asia;—

Whereas the Senate believes that improved safeguards are urgently needed to prevent the theft or diversion of plutonium and other special nuclear materials to weapons manufacture: Now, therefore, be it

Resolved that the Senate of the United States strongly requests and urges the President to seek through the highest level consultations with other suppliers of nuclear equipment and technology an immediate suspension of the transfer of nuclear enrichment and reprocessing facilities, and technology to permit time for the negotiation of an agreement regarding additional safeguards to substantially reduce the risk of diversion or theft of plutonium and other special nuclear materials to military



June 26, 1975

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processor of the spent fuel from the "safe" atomic power plants. The agency should be the operator of the separation plants, plants that still lie in the future. Those wastes are now being stored but safely disposing of them is still an unsolved and neglected technical problem. The agency should also have an exclusive mandate over fabrication of plutonium.

It is definitely not the atomic electric plant but the purification or recycling of its ashes that constitutes the threat of a further acceleration of the atomic weapons race. And over these wastes and their processing the agency, at present, has no control.

The only sure way to provide such control is to give the agency a monopoly over the extraction of these dangerous materials in its own internationally manned plants in several places in the world. A demonstration plant near Vienna, the home of the agency, might be a good place to start.

It was rivalry between nations that led the United States, in the Acheson-Lilienthal report of 1946, to propose an international agency to monopolize those aspects of the atom described as dangerous. We then concluded that inspection alone would not be a sufficient safeguard, for reasons agreed to by distinguished scientists and engineers.

But now it is the rivalry and competition between salesmen or processing and recycling plants that is most dangerous and could only be guarded against by an international agency having a monopoly of that processing operation.

This bare outline of a proposal may prove to be more acceptable as a basis for international action than was the nonproliferation treaty, for example. The proposal is timely since processing of this ghastly radioactive waste material is presently neither technically operable nor profitable, and is not likely to be in the near future.

These deadly wastes are accumulating at an alarming rate throughout the United States in over fifty atomic power plants, and in many plants elsewhere in the world.

The citizenry of all countries will not indefinitely accept official assurances that all is well. Storing is no longer sensible, tolerable, and in another five years will be an international and national scandal.

Mr. MANSFIELD subsequently said: Mr. President, I ask unanimous consent that a resolution submitted by Senator MONDALE and others, relative to international nuclear safeguards, be referred jointly to the Joint Committee on Atomic Energy and the Committee on Foreign Relations.

The PRESIDING OFFICER. Without objection, it is so ordered.

Dwight Porter

7/2/75 Wall St Journal

Gov. Wasingtz on the  
enrichment problem.

1) passport & 150 docs?

ans) no spec dt - ltr per 1973

2) Was Brazil report other things such  
as enrichment/reprocessing

ans) yes

3) Agency involved - then AEC

Symington & pza are that the  
US should turn down Brazil  
report & that it should  
then be picked up by Germany.

Just state why Wasingtz should  
not be involved.

State Dept might be over US  
known + Wasingtz.

Symington) Who let Wasingtz know 150 —  
Brazil Gov or State Dept?

jobs involved —

4 ea. rctr all the  
n abv 750 jobs invold  
4 ea yr ~~for~~ <sup>for</sup> appx a  
5-6 yrs. period.

Q. How many rctrs invold —

ans 8 rctrs — (15-20K jobs)

Q Rptr by Molyneux Brgs - Post Aired -  
8 applys mtg in India —

Q Sinc <sup>no</sup> company in a  
Sinc mjr applys or rctr  
eggs, did US govt contact  
w/ it —

Context?

Ans not to bck or mi Kowly

Seymour

Watkins was Mgr of the  
W. group from wh by contact  
w/ Brgs —

no techlge intchng sinc 1969  
blown Watkins + Silman

Give life + row HLT  
 if any is that at the  
 Honda into the only  
 applying - me  
 IAEA was in, yet,  
 they a spd +  
 right within  
 activity in the  
 area.

Syngenta would  
 look + see the  
 meter closed

Ammonia should not  
 be mixed with  
 IAEA in a regular  
 body.

[ans] IAEA is not a  
 row body.

applying with not together  
 + present results +  
IAEA.

Syngenta  
 H2L is on plastic into + the US  
 bag is set up  
 up as a metal  
 power in the water  
 hemisphere.

Porter

IAEA imperfect + cannot do  
 more than the money it  
 has [gotten or sources]

In Rpting + Bd. or going  
 ahead from 34 mbr stg.  
US is present mbr  
on the board.

In forming or in play, DATA  
is a trig mechanism  
the en - should  
tell on who  
was preter in smtg  
+ to cancel abt —  
bt it cant tell the  
who who + do.

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DATA had.

Porter - ~~Amber + the bdy shd~~  
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~~forming or US play -~~ 1

Europe County trug + Sov. Uranium —  
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plum

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cutting we see to red  
+ x chag black and melog  
bbt or oyle + plum. so my en  
pkz a comb.

Symington Cusackings  
— Spd prftln

— Lenta or 2 AAA — what other  
milling steps shld b + Ka?

— See last  
page  
for  
comment  
by Bethel  
of Washington

Porter

2 AAA only with oxygen <sup>in history</sup> ~~also~~  
~~mta~~ ~~mta~~ he got up a  
mzr or possibly be  
allowing ins pctr

Symington

"we are poor or  
faggdlyng while  
Rome burns"

Biden

If US had gone ahead  
by dyl wldnt  
it be the  
abltg + imz cntlty?

Porter

Yes - if US had  
pld + Brazil - w/out  
? the US cntlty wld  
be pracd a m  
efclv sfqd.

wn US judz itself  
our or mkt - we  
also loz a boye r



cancel + effect  
spending.

Porter

the leg or the ability  
+ inflor + effect play in this area  
is almost as  
strong as the  
leg or job.

Biden

Should we be actively  
planning + making sure  
we don't let the  
firing in disarray?

Porter

Yes -  
but also we'd be  
on assistance + helping  
countries maybe by  
helping them achieve  
in agriculture + oil  
than much power.

Biden

what do we do  
definitely + prevent  
end result or  
a bomb bag  
maybe from  
planning? What is  
the spending war like?

Porter

US entering into  
cooperation agreement - also  
a central agreement which



ppcbyn + rnz w  
agmt.

cod by US agmt  
in perpty

wz algt to IAEA  
n sfyding rlyz -  
~~opstn~~

~~so long as entry abys~~  
~~ba IAEA agmt~~  
~~if US is in sfy~~  
~~wz sfy we h~~

IAEA wd rpt vidlyz  
immedly + Board  
whr it cl d b but  
bfr Scoty Cael.

Symptom why did Brazil turn down  
Washington deal: ?

- 1) US gov cl d nt  
fm its own  
pdicty fctlyz  
stfy Brazil  
nydz for fuel  
for retny
- 2) wd nt pod techlog  
4 enr chnt plant

Biden

Any spec inputs  
+ point kindly  
for long term  
into nuclear weapons?

Porter

System is designed +  
point the type  
of risk for occurring.  
However, system is not  
perfect.

NA

Biden

Any way + go  
in security +  
in agreement?

Porter

Given how in obligation  
+ good safety  
as a signifier of  
the NPT.

Biden

I. the only secure  
system + prevent  
the diversion into  
weapons is 4 the  
US + become the  
proliferator.

W. Phillips

Balhel

Aguzuz Kpr infand  
born n a frand -  
infand byz bñ  
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intrfc blon pr<sup>sum</sup>  
H<sub>2</sub>O retr. - effg -

interf. is a fuel  
rod  $\rightarrow \frac{1}{\rho} \frac{d\rho}{dt} (K)$  in  
ea. reactor. Inozz

(1) Uranium

(2) Wasle kryn pdcz

(3) plutonium

so long as <sup>mtbl</sup> running on  
a fuel rod, it can't  
bl + end into a  
bomb

? what is life —  
span of ea.  
full road.

Don agnity + see

och lyfter ut mig

made of signs

Control over roads

made an implicit  
part, as well as

Keeping an inventory of  
the aut prod in the supply of  
the products.

control must start w/ a physical control of the fuel rods. w/ this in mind our fav. for pure plant. [pec. must b. self plant itself]

Regul representing entities which must  
be under control of non-national  
entities.

STATEMENT BY  
SENATOR STUART SYMINGTON (D-MO)  
CHAIRMAN OF THE SUBCOMMITTEE ON ARMS CONTROL,  
INTERNATIONAL ORGANIZATIONS AND SECURITY  
AGREEMENTS OF THE SENATE COMMITTEE ON  
FOREIGN RELATIONS  
ON THE WESTINGHOUSE NUCLEAR INVOLVEMENT  
ROOM 4221, DIRKSEN SENATE OFFICE BUILDING  
FRIDAY, JULY 18, 1975

WESTINGHOUSE NUCLEAR INVOLVEMENT

Mr. Chairman:

This morning the Subcommittee on Arms Control, International Organizations and Security Agreements of the Senate Committee on Foreign Relations resumes its inquiry into the problem of nuclear proliferation--a problem of unparalleled importance for the future security of the world, for if many more states and possibly even sub-national groups gain nuclear weapons, there will be no security for anyone, despite all efforts of the present nuclear weapons states to curb their arms race.

Yet with the recent conclusion of an unprecedented, multi-billion dollar nuclear deal between West Germany and Brazil, efforts at curbing nuclear weapons proliferation have definitely been set back.

This accord marks the first time that any nation capable of supplying nuclear materials has agreed to provide another nation with a complete fuel cycle--in other words, with all the equipment, fuel and technology needed to develop nuclear weapons -- and, moreover, the recipient nation has refused to ratify the Non-Proliferation Treaty; and, what is more, possesses extensive uranium deposits.

By the terms of this agreement Brazil has consented to inspection procedures in accordance with the provisions of the International Atomic Energy Agency; but it is now clearly apparent that if Brazil or any other nation which possesses a complete nuclear fuel cycle should decide to become a nuclear weapons power, there would be nothing the Agency could do to prevent such a development. It has no powers of either prevention or enforcement.

(MORE)

What this Subcommittee seeks to examine this morning are certain background aspects of the German-Brazilian accord, which as we understand, first involved negotiations between Brazil and the Westinghouse Electric Corporation and only later, companies in West Germany.

The Subcommittee also notes that last month the Department of State testified that the United States had tried to stop West Germany from concluding this potentially dangerous accord with Brazil, but could not succeed; yet later the same month, the Chancellor of West Germany stated at a news conference in Bonn that the American Government "has not expressed a word of criticism to us."

This morning's testimony should help us in understanding the position of the Westinghouse Corporation during the early delicate negotiations relating to Brazil's achievement of a full nuclear fuel cycle. We shall also examine developments in the nuclear field related to the Common Market's reported turn to the Soviet Union for enriched uranium which it has in the past purchased almost exclusively from the United States.

Next week this Subcommittee will receive testimony on these matters from Administration witnesses.

# # # # #



## To Fill a Need

# U.S. Quietly Allows Uranium Shipments To Soviet Union for Processing Into Fuel

By BARRY KRAMER

Staff Reporter of THE WALL STREET JOURNAL  
WASHINGTON—The United States alone is unable to meet the long-range needs of foreign nations for nuclear fuel. For political and commercial reasons, it has bowed to the inevitable—and is quietly allowing the shipment of American uranium to the Soviet Union for processing into fuel for power stations in other countries.

The cold war had prevented such shipments since the dawn of the atomic age. But the government recently decided that sending American uranium to the Russians for processing would "not be inimical to the common defense and security" of the U.S. and its allies.

So said a letter from the State Department last week informing the Nuclear Regulatory Commission that it could approve a license sought by Edlow International Co., Washington, D.C., to export 1.4 million pounds of uranium oxide, or yellow cake, milled from uranium ore dug from mines in Wyoming and New Mexico. The yellow cake is to be transformed into uranium hexafluoride in the United Kingdom, and the hexafluoride gas will be processed in Soviet enrichment facilities into pellets rich in uranium 235. This isotope provides the power for nuclear electric plants and for the atomic bomb. The ultimate customer is West Germany's Kraftwerk Union AG, the nuclear unit of Siemens AG.

### U.S. Okay Is Necessary

The Edlow shipment is the first publicly announced case in which U.S. uranium was permitted to go to the Soviet Union for enrichment. But industry sources say at least one other shipment, by Transnuclear Inc., White Plains, N.Y., is destined for the Soviet Union. The shipment is still in Britain.

A spokesman for Transnuclear, privately owned by French, West German and U.S. interests, confirms that last August it shipped about 400,000 pounds of U.S. yellow cake to British Nuclear Fuels Ltd. of the United Kingdom to be transformed into uranium hexafluoride. The place of enrichment was unspecified on the export license, but industry sources outside Transnuclear say it is the Soviet Union.

A Nuclear Regulatory Commission spokesman says Transnuclear hasn't asked for permission to have the uranium enriched in the U.S.S.R., but that such permission, if asked, would probably be granted. The eventual customer is the Italian utility, Agip S.p.A.

Under the Atomic Energy Act, it's illegal for American companies to produce nuclear material outside the U.S. unless the Nuclear Regulatory Commission approves. Requests

to deal with Communist countries are passed on by the NRC to the State Department and other agencies, which must determine whether the deals are in the national interest.

Also, under the U.S. agreement with the European nuclear community, Euratom, the U.S. must approve any such export of nuclear material from Euratom countries. The U.S. has routinely been approving of contracts by European nations to send non-U.S. uranium into the U.S.S.R. to be enriched. Approval also was granted for the Edlow shipment of U.S. uranium to Russia.

In fact, the growing number of Western enrichment contracts with the Soviets was the major reason the U.S. abandoned its ban on allowing U.S. uranium into Russia.

It's also clear from the change in policy that the U.S. no longer fears that the Soviet Union would steal American uranium if it got its hands on it. "If the Soviets are prepared to enrich uranium for civil use in the West, then you must conclude that they have produced all the enriched material they need," says a State Department official. Next to the U.S., the Soviets have the largest nuclear stockpile, and both nations already have an atomic overkill capacity, he adds.

After enriching uranium for a French utility in 1971, the Soviet Union announced in 1973 that it would do so for any Western nation that asked. So far, France, Italy, West Germany, Belgium, Sweden, Spain, Austria and the United Kingdom have signed long-term enrichment contracts with the Soviets. Other contracts are being negotiated. Finland was already a customer.

The signed contracts cover more than 27 million so-called separative work units spread over several years, enough fuel to operate 225 thousand-megawatt power plants for one year. It's estimated that Europe now gets 40% of its nuclear fuel through the Soviet Union and the rest from the U.S. (By comparison, total U.S. enrichment capacity is about 17 million separative units.)

### The Jammed American Pipeline

The Soviets are believed to operate an enrichment facility in Siberia, northwest of Lake Baikal, using power from the giant Bratsk hydroelectric dam. Experts estimate that the facility produces 8,000 to 10,000 metric tons of separative work a year, about the same as each of the three enrichment plants operated by the U.S. Energy Research and Development Administration (ERDA, which with the NRC perform the functions of the former Atomic Energy Commission).

Like the U.S., the Soviets apparently have built up their nuclear-weapons stocks to such an extent that the enrichment facility is largely free to process nuclear fuel.

But unlike the Soviets', U.S. facilities are heavily committed to supplying nuclear plants here and abroad. The Russians' nuclear energy program is a small fraction of the size of the U.S.'s. As of last June 30, the U.S. stopped accepting new long-term contracts from utilities for nuclear fuel processing in the knowledge that the three ERDA facilities will be fully committed by the early 1980s.

Several U.S. companies are considering commercial nuclear enrichment ventures. But because of the difficulties currently faced by utilities in obtaining finances, no commitments have been made.

In Europe, the multibillion-dollar Eurodif project, whose main participants are France, Iran, Italy, Spain and Belgium, expects to be enriching nuclear fuel at an annual rate of 10.8 million separative work units by the early 1980s, and discussions are being held about a second plant. Urenco Ltd., owned by government and commercial interests in Great Britain, the Netherlands and West Germany, also operates two large pilot plants that produce 75,000 separative work units, and hopes to increase production to two million by 1980 and 10 million by 1985.

### Europeans and U.S. Reliability

Elsewhere, South Africans say they intend to get into the business, too, utilizing that country's large stores of uranium ore.

The desire of European nations to diversify the sources of their enriched uranium fuel is both practical and political. There's confusion about U.S. plans to increase production. The Arab oil embargo also has

shown the need for multiple sources of fuel.

Distrust of U.S. reliability in supplying nuclear fuel can be seen in the way Europeans bristled recently when NRC commissioners announced that they would personally review all "significant" shipments of nuclear materials abroad while they revamped commission safety requirements. The Europeans reacted angrily to what they considered a temporary ban on shipments, even though the NRC said the review would only mean a slight delay in some shipments.

"Such a decision, taken without prior consultation... is liable to threaten the orderly development of the (European Economic) Community's nuclear programs and gives rise to serious concern regarding the security of supply from the U.S.," Henri Simonet of the EEC said in a harshly worded cable to the U.S.'s ERDA.

Some countries, either because of political alignment or proximity to the Soviets, must deal with them. So if a U.S. nuclear-energy company wants to do business with these countries, it must have the option to go to the Soviet Union for enrichment services, State Department sources point out.

### Russian Deals: the Reasons

American companies began approaching government officials several years ago with that in mind. At least one company, General Electric, held discussions with the Russians two or three years ago, according to industry sources. (GE officials couldn't confirm the contact, but they note that the company isn't any longer in the enrichment business; so to them at least the question is moot.) To compete with foreign companies offering their customers enrichment services in the U.S.S.R., American companies have told the State Department they, too, must be able to offer the options. Cost alone isn't a major factor, though the price charged by the Russians is slightly less than that charged in the West.

Another reason to turn to the Russians is to maintain a balance of trade. West Germany, for instance, U.S. experts say, exports far more to the Soviet Union than it imports, and has apparently sought enrichment contracts in an effort to correct the trade imbalance. ("After all," comments one U.S. official, "there's only so many wooden dolls they can buy from the Soviet Union.")

So far, the Soviets have required their Western customers to supply their own uranium yellow cake. Countries that have asked for enriched Soviet uranium have been turned down. "The assumption is that they're hoarding their own uranium, or perhaps they just have outdated laws on the books like we had," says one State Department official.

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# Nuclear Power Campaign Is On

## Industry Advocates Try to Turn Tide of Opposition

By REGINALD STUART

The nuclear power industry, which has lost most of its influence in the Federal Government and is under increasing public criticism, has begun a strong campaign to try to turn the tide of opposition to atomic power. The campaign is starting at a time when Congress is considering major issues affecting the future of nuclear power in the United States.

At stake is nearly \$80-billion invested in nuclear-power generating facilities and manufacturing plants and equipment since the mid-1950's. Also at stake is \$100-billion expected to be spent during the next 10 years by the electric utility industry and the Government if the industry has its way.

Through its campaign, which officially began in Washington at a recent gathering of advocates at a Nuclear Power Assembly, the industry will argue that the nation must embrace nuclear power in its program to lessen dependence on foreign fuels, to meet the nation's energy needs and that the risks involved are not as great as some antinuclear people contend.

Craig Hosmer, a Republican who was a Representative



United Press International  
Craig Hosmer

from California in the House for more than 20 years and was a strong supporter of nuclear power as a member of the Congressional Joint Committee on Atomic Energy, has been recruited by the industry as its answer to Ralph Nader, the consumer advocate who has been waging a somewhat successful campaign with the support of various citizens' groups against nuclear power. Mr. Nader argues that nuclear power is unsafe and uneconomical. He is seeking to have future development halted and existing nuclear facilities phased out.

Mr. Hosmer, who retired from Congress last year, will head the American Nuclear En-

## Battle Raging Over Issues of Safety and Economy

ergy Council, an organization that will represent nuclear power plant manufacturers, engineers and electric utilities. The new organization, which will have a budget this year of about \$250,000, is a spin-off of the Atomic Industrial Forum, which represents a broader spectrum of nuclear power advocates.

George Gleason, who has been with the Atomic Industrial Forum for six years, will leave that organization soon to become general counsel and executive vice president of the council, which will be registered in Washington as a lobbying organization.

Meanwhile, the forum, which has increased its public relations budget this year to \$1.2-million from \$600,000, is changing its status to a trade association from an educational organization, allowing it more flexibility in its activities. Prior to establishment of the council, the forum had been the voice of advocates of nuclear power.

"We plan to demonstrate and persuade our decision makers that nuclear power is essential," Mr. Gleason said.

Continued on Page 22, Column 4



# Campaign for Nuclear Power Is Waged

Continued From Page 21

The council has the backing of many of the nation's electric utilities and their trade association, the Edison Electric Institute. Other prime backers are the Westinghouse Electric Corporation, the nation's largest manufacturer of nuclear plants, and the General Electric Company, second to Westinghouse in this field.

Although G.E. officials de-

clined to comment on the organization's role, Robert E. Kirby, chairman of Westinghouse, said the objective of the organization would be to "educate the people." He said:

"I think the new Congress is highly receptive to people making the most noise in their territory, and there's no question that people can get quite emotional over this. It's highly emotional, probably because nuclear energy was introduced to us as a bomb."

Proponents of nuclear power

are in trouble as far as influence with official agencies is concerned. Their situation was expressed in a recent statement by the Atomic Industrial Forum:

"Not since the nuclear industry came into being through enactment of the Atomic Energy Act of 1954 has the establishment that guides and regulates the industry been so thoroughly shaken up as it was in 1974."

The shake-up came in the Congressional elections, which brought 102 new faces to Congress, many with serious questions about nuclear power.

It is also reflected in the abolition of the Atomic Energy Commission, which prior to last year had almost exclusive authority over the research, development and regulation of nuclear power. Now those responsibilities are divided among the Nuclear Regulatory Commission, the Energy Research and Development Administration and several other agencies.

The Congressional Joint Committee on Atomic Energy, having lost Mr. Hosmer and another long-time nuclear advocate, Chet Holifield, who was a Democratic Representative from California, has had much of its say over nuclear matters stripped through reorganization of committees in Congress and reassignment of responsibilities.

Antinuclear forces have been taking full advantage of this new situation. In addition to state-level campaigns aimed at getting regulatory agencies to impose moratoriums on the construction of nuclear plants for generating electricity, they have been asking members of Congress, through personal visits and Congressional testimony, to turn thumbs down on three key issues that will determine whether the Government will embrace nuclear energy.

One issue deals with the use of plutonium as a substitute for uranium as a basic fuel for nuclear reactors.

Another issue concerns continuing the Government's involvement in a program that partially subsidizes the cost of insuring utilities against the event of a major reactor accident.

The third issue deals with continuing support for the nation's first demonstrator breeder reactor on the Clinch River in eastern Tennessee.

In recent weeks, several utilities have sent reports to members of legislatures in their states advocating that they endorse nuclear power. And a number of companies in the industry have issued public statements endorsing the nuclear concept.

# Going Nuclear

If you're looking for something to worry about, I have a suggestion. A great deal is going on just now that makes the diffusion of nuclear weapons around the world a very live possibility for the not-too-distant future. At present six countries—the

Meg Greenfield is deputy editor of the editorial page. This column appeared originally in Newsweek.

U.S., Russia, China, France, Britain and India—are known to possess nuclear explosives. A number of others—Canada, Israel and Japan, for instance—have the capability of producing nuclear weapons in fairly short order. And still others, some of whom have signed the treaty forswearing the acquisition of nuclear weapons and some of whom have not, are rapidly acquiring the technological plant and know-how that would permit them to produce explosives on some scale. These include, among others: Taiwan, South Korea, Brazil, Argentina, Pakistan, Spain, Iran and South Africa.

The vision of a world about to go irredeemably nuclear has, of course, been predicted with more hysteria than justification periodically over the past few decades. We know now that the acquisition of these weapons is more complicated than many people once supposed. And we also know that in some respects their possession can be both sobering and inhibiting.

A long time ago, Alexander the Great's heirs discovered that their formidable "special weapon"—the inexorably advancing human phalanx, supported by an awesome herd of elephants—in fact put them at a mortal disadvantage with the more lightly armed Roman legions. The phalanx was muscle-bound relative to the more mobile legionary, and the elephants, alas, were prone to stampede in a way at least as dangerous to their masters as to those they were supposed to be fighting. One doesn't want to push the analogy too far, but it is suggestive. It's not just that since Hiroshima and Nagasaki the superpowers have been afraid to use these weapons. It's also that their diplomacy and willingness to sustain political setbacks—whether in Cuba, Central Europe, Vietnam or the Middle East—have been profoundly conditioned by their fear of nuclear encounter. You can as soon reason with elephants as with unleashed nuclear weapons.

*"A brisk trade in nuclear power-generating equipment and technology is now going forward, hedged only by partial safeguards against misuse."*

Still, I don't think anyone can be complacent about the nuclear arsenals that now exist, let alone project their multiplication around the world as a source of international stability and restraint. And if you accept this premise, it is worth pondering the new circumstances that make the widespread acquisition of nuclear weapons over time increasingly likely. One is the prospective ripple effect of the precedent set by India in detonating its so-called "peaceful" device a year ago. Another is the impetus to acquire nuclear sources of energy, which has been accelerated by a newfound international awareness of the folly of relying on a steady supply of oil and other fossil fuels. A brisk trade in nuclear power-generating equipment and technology is now going forward, hedged only by partial safeguards against misuse. And unhappy this apparatus and information provide not only energy, but also a potential for producing nuclear weapons—a potential that could become available to unstable governments, insecure and threatened nations and even, in some circumstances, terrorist groups.

There are, I think, three very tough subjects we are going to have to

think about in relation to all this. One concerns the merit of American defense commitments abroad. These are currently held in great disfavor by many people, and in light of our Vietnam experience it is not hard to see why. But one key element is often missing from their argument. For whatever self-defeating ends our overseas commitments may have been put to in the past, they do not only rest on a desire to prop up friendly governments. They are also part of a bargain we have made—explicitly or implicitly—with many countries: our assumption of some degree of responsibility for their security is the price we pay for their forgoing nuclear weapons. In a world of dramatically diminished American overseas involvement, more countries will go nuclear—and more will breed more. In reaction we would likely become a much more heavily defended, security-obsessed state.

The second dilemma is not much easier, since it more or less involves getting a handle on original sin. I'm not referring to forbidden knowledge here: I don't think the nuclear nations have any more chance of keeping their knowledge to themselves than the Byzantines had of preserving

*"Today, you will notice, we have lots of flame throwers, but no Byzantines."*

forever the secret of chemical combustion that made their flame throwers the talk of the ninth century. Today, you will notice, we have lots of flame throwers, but no Byzantines. The point is that the basic technology, with its enormous potential for good as well as evil, will and *should* be spread, but there is no assurance people can be counted on to turn back its awful possibilities.

There is already cutthroat commercial competition, for instance, among some suppliers to shovel out this nuclear material in reckless ways. Shortsighted considerations of prestige are feeding the ambition of some non-nuclear nations to join the club—and as justification they can point to the evident inability of the superpowers to draw down their own stockpiles. The question is whether the international community can overwhelm the combination of self-concern, greed, insecurity and business-as-usual sloth that has thus far prevented the development of any consensus on controlling the dangers of nuclear spread.

The answer, it seems to me, depends on a third consideration: preserving and strengthening the nuclear taboo. As with gas warfare, you can make a coldly analytical case that nuclear weapons are not uniquely monstrous, one that rationalizes their use. But it seems to me critical that our intuitive resistance to such logic be maintained. One reason both the Indian initiative and the rush to nuclear technology of the past couple of years are so disturbing is that they threaten the momentum of a world-wide sense which had been building that nuclear warfare, like gas warfare, was out. Not that even this proposition is always so easy to sustain: for American policy-makers, who must one day assure our allies and adversaries that our will to use our "deterrent" is credible and the next day assure the world that nuclear warfare is unthinkable, the dilemma is total. In fact, the central tension of our nuclear-arms policy is between the need to take practical steps to make our arsenal more credible and controllable and the danger that in so doing we will make its use more acceptable and more likely.

You can say one thing for these considerations: if they become the subject of debate, they should confound the knee-jerk responses of left and right and spare us a rehash of arguments we have been hearing since World War II. That is the good news. The bad news is that the questions involved are as intractable and mean as they are urgent.

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Moscow to consider a ban on environmental warfare. This is the third round of these discussions.

## Nuclear Sale Still on

BONN—A spokesman for the Foreign Ministry said West Germany will go ahead with plans to sell a large package of nuclear installations to Brazil despite U.S. concern about possible use for weaponry. He said he was unaware of any American call, as reported by a State Department official, for further negotiations on security measures for the pact, which is to be signed next week.

WALTER F. MONDALE  
MINNESOTA

## United States Senate

WASHINGTON, D.C. 20510

June 20, 1975

Dear Colleague:

On June 18th I introduced a Senate resolution urging the President to seek an international moratorium on the sale of uranium enrichment and reprocessing equipment until effective safeguards can be implemented to prevent the spread of nuclear weapons capability. Enclosed you will find a copy of that proposal together with my introductory remarks.

The resolution was prompted by reports that Germany is on the verge of selling plutonium separation equipment to Brazil and that France is negotiating similar sales with Argentina and Pakistan.

The United States and other nuclear suppliers have until now refused to sell plutonium separation facilities to non-nuclear weapons countries because there are no effective safeguards to prevent recipient nations from manufacturing weapons once they have acquired the means to produce plutonium. In addition, the sheer problem of physical security in dealing with one of the most dangerous substances known to man led the Nuclear Regulatory Commission in the United States to recommend a 3-year delay on commercial plutonium separation. If we -- with three decades of experience in production of plutonium for military uses -- cannot safely authorize commercial plutonium manufacture, can we expect countries that are only now acquiring this advanced technology to adequately protect against the risk of theft by terrorists and other criminal elements?

I believe there is no question of greater importance to the hope of international peace and security than the consequences of the French and German sales. If they are completed as planned, the entire system of international control over atomic weapons proliferation could be jeopardized.

My resolution urges the President to make clear to other nuclear supplying countries the seriousness with which the Senate regards this issue. It calls upon him to seek immediate suspension of the sale of enrichment and reprocessing facilities until effective international safeguards have been implemented.

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Because I believe action is essential before June 27th -- when West Germany is scheduled to sign the contract with Brazil -- I hope that you will join me in cosponsoring the resolution. With the support of a majority in the Senate, I hope it might be taken up on the floor next week.

If you would like to cosponsor or if you have any questions, please don't hesitate to contact me or Gail Harrison of my staff at x5641. Given the time constraints, I would appreciate your response not later than noon Tuesday, June 24th.

With warm regards,

Sincerely,  
  
Walter F. Mondale



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