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A U.S.-TYPE LIGHT WATER REACTOR FOR NORTH KOREA?

THE LEGAL REALITIES

Victor Gilinsky and William Manning

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On July 19, 1993, after a second round of talks in Geneva on resolving the "nuclear issue," the United States and North Korea issued a brief joint communique that included the following paragraph:

Both sides recognize the desirability of the DPRK's intention to replace its graphite-moderated reactors and associated nuclear facilities with light water moderated reactors. As part of a final resolution of the nuclear issue, and on the premise that a solution related to the provision of light water moderated reactors (LWRs) is achievable, the USA is prepared to support the introduction of LWRs and to explore with the DPRK ways in which LWRs could be obtained.

We can only guess at North Korea's motives in raising the LWR matter, and its apparent specific interest in U.S. technology. More remarkable is that, despite the obvious drawbacks, the U.S. has evidently not rejected the idea, perhaps seeing in it the possibility of replacing North Korea's reactors with others which are easier to safeguard. This paper addresses the premise of the communique paragraph: is a solution based on supplying an LWR, in particular one of U.S. design, achievable under current law? And, what would be the price, in terms of the effect on U.S. and international legal antiproliferation framework, of such a result?

Putting aside, for the moment, the question of whether this proposal makes sense in terms of preventing the spread of nuclear weapons -- or even in terms of North Korea's economic needs -- we need to address three questions related to U.S. law: Can the U.S. export nuclear parts and technology to North Korea? Can such an export take place come from a third country that has obtained the technology from the U.S.? And, what are the legal and practical bars to financing a multi-billion dollar project, in particular for the U.S.?

Because nothing can work without financing, we start with that. Paying For The Reactor: Can the U.S. Participate?

North Korea cannot afford to buy a nuclear power plant on its own. For all practical purposes the country is bankrupt. Industrial production has dropped dramatically and North Korea has halted payment on its \$5 billion exterior debt. The remittances made by the Korean community in Japan are now one of the principal sources of foreign currency. Neither of North Korea's historical backers, China and Russia, are likely to provide aid on the scale needed for an LWR project. This means that it would have to be financed by some combination of multilateral aid institutions, which is unlikely, or by the suppliers.

Insofar as the United States is concerned, there are a number of significant legal barriers to providing aid to North Korea:

1. The Foreign Assistance Act provides that no foreign assistance may be given to any Communist country. Only five countries currently fall within that category: North Korea, Mongolia, China, Cuba, Vietnam and Tibet. While the President can waive this prohibition, to do so he must make a formal finding that (a) such assistance is vital to U.S. security, (b) the recipient is not controlled by the international Communist conspiracy, and (c) such assistance will further promote the independence of the recipient from international communism. North Korea has apparently amended its constitution to drop reference to Marxism-Leninism. This would not likely affect the operation of U.S.

statutes, and would certainly not affect the operation of those in which North Korea is specifically named. It is doubtful that a waiver could be granted unless there were a fundamental change in North Korea's regime.

2. The Export-Import Bank of the United States, the principal government agency providing funding and guarantees for exports from the U.S., is prohibited from extending credit for, or guaranteeing, any export to any Marxist-Leninist country, including North Korea. The President can waive this prohibition but only if he determines that the country in question has ceased to be a "Marxist-Leninist" country, that is, no longer maintains a centrally planned economy based on the principles of Marxist-Leninism and is no longer economically and militarily dependent on the USSR or any other Marxist-Leninist country. Again, the nature of North Korea's regime makes such a waiver unlikely.

Any Exim Bank loan or guarantee for a nuclear export must be approved by the Board of Directors of the Bank unless, prior to making the loan or issuing the guarantee, the Bank submits a detailed report on the proposed transaction to Congress, thereby giving Congress an opportunity to disallow the transaction. Moreover, no loans may be made or guarantees extended on behalf of any country that the Secretary of State finds has violated, abrogated or terminated IAEA safeguards on its nuclear installations. The President can waive this provision but only if he determines that such waiver is in the national interest and if he gives advance notice to Congress.

3. The Overseas Private Investment Corporation, which insures foreign investments by U.S. persons, and the bilateral development aid program of the U.S. government, targeted at worst aspects of poverty in third world countries are both subject to explicit prohibitions on aid to countries engaged in a consistent pattern of gross violations of human rights.

Not only is direct U.S. financial aid to North Korea prohibited but the U.S. government cannot support financial assistance to North Korea from a variety of multinational financial institutions:

1. The American Executive Directors of the International Bank for Reconstruction and Development, the International Development Association, the International Finance Corporation, the Inter-American Development Bank, the African Development Fund, the Asian Development Bank, the African Development Bank, the European Bank for Reconstruction and Development, and the International Monetary Fund are required to oppose loans or assistance to governments which are engaged in "a pattern of gross violations of internationally recognized human rights." The Administration is required to consult with the relevant

Congressional committees prior to changing its policies with regard to countries with a poor human rights record. In light of North Korea's human rights record and its designation as a "terrorist country," a loan or guaranty to North Korea, at least in so far as the United States is concerned, would require formal action by the Administration.

2. The American Executive Director of the International Monetary Fund is also directed to actively oppose the use of any Fund facility by any "Communist dictatorship" unless the Secretary of the Treasury can certify to Congress that such a use would correct that country's balance of payments position, would reduce inefficient labor and capital rigidities and advance market-oriented forces, and be in the best economic interest of the majority of the people in that country. It is doubtful that these findings could be made in the case of North Korea. The complexity of these restrictions, the fact that North Korea is unlikely to modify its policies in a fashion which would permit a waiver of these prohibitions, and the political costs of overriding these restrictions make it exceedingly unlikely that the U.S. will provide financial assistance for the reactor.

Exporting The Reactor

The applicable export controls make the proposition even less likely. The least of these is that any export to North Korea would have to be specially licensed by the Secretary of the Treasury. Since 1950, trade with North Korea has been prohibited under the Trading With the Enemy Act of 1917, absent a special Treasury Department license. This prohibition may be relaxed or terminated by the President at any time without Congressional consultation or review, though not without political cost. It should be noted that the Department of State authorization bill presently before Congress would require the President to make an explicit finding that North Korea continues to be a party to, and is in full compliance with, the Treaty on the Non-Proliferation of Nuclear Weapons before any trade with that country can take place.

The more formidable export controls are those specifically applicable to nuclear equipment and fuel. No nuclear reactor or technology can be exported from the United States unless there is an Agreement for Cooperation between the United States and the recipient country and the export satisfies the export control requirements of the Nuclear Non-Proliferation Act of 1978. An Agreement for Cooperation with an officially non-nuclear-weapon state such as North Korea must contain, among other provisions, the following:

(1) an undertaking to maintain safeguards on all nuclear material and equipment exported from the United States;

(2) an undertaking to maintain IAEA safeguards on all nuclear materials under the control of the recipient;

(3) a guaranty by the recipient that no nuclear material or equipment obtained from the U.S. will be used for nuclear explosives research or other military purpose; and,

(4) an agreement that the U.S. will have the right to require the return of any equipment or nuclear material in the event that the recipient detonates a nuclear device or terminates or abrogates an agreement providing for IAEA safeguards. While the President can exempt an Agreement for Cooperation from the requirement that it contain particular statutory requirements (provided that he finds that the inclusion of such requirements would be seriously prejudicial to U.S. non-proliferation objectives or would jeopardize U.S. security), he cannot waive the requirement that there be an Agreement for Cooperation in place. This means that no export of equipment or nuclear fuel from the United States could be made until such an agreement had been negotiated. Needless to say, that could be a lengthy process.

Assuming that an Agreement for Cooperation with North Korea is in place, any export of a nuclear power plant, equipment, or fuel would have to be licensed by the U.S. Nuclear Regulatory Commission. At the outset, it should be noted that the NRC's regulations list North Korea as one of the four countries to which nuclear exports are embargoed. Presumably, the NRC would respond favorably to an Executive Branch request to either waive the embargo or drop North Korea from the list of embargoed countries. It is possible that the Commission would conclude that a rule-making proceeding is needed to modify the list of embargoed countries.

In light of North Korea's track record with IAEA safeguards, the NRC export licensing proceeding may present certain difficulties. While the Executive Branch Departments are generally permitted to focus on the foreign policy benefits of allowing a particular export, the NRC is charged with making a finding "based on a reasonable evaluation of the assurances provided and other information available to the Federal Government" that the statutory criteria governing nuclear exports have been met. Because of the quasi-judicial nature of the Commission's proceedings, and because the Commissioners are always aware of the possibility of having to defend their decision before Congressional committees, they are likely to be fairly strict in applying the criteria.

The criteria which are likely to give the greatest difficulty to the Commission are the following:

1. The requirement that the Commission find that IAEA safeguards "will be applied" to the nuclear fuel and equipment exported, as well as to any plutonium produced through the use of such material and equipment. This is an explicit finding that there is every reason to believe that safeguards will be applied to the reactor throughout its several decade useful life, and in perpetuity to all the fuel that goes through it. In light of North Korea's on-again, off-again application of safeguards at its present nuclear facilities, it would seem that there would have to be substantial changes in North Korean policies, personnel or institutions before the Commission would have a basis for asserting that it expects North Korea to abide by its commitment to apply safeguards.

2. The requirement for a Commission finding that no nuclear fuel or equipment exported "will be used" for nuclear explosives research. Once again, North Korea's refusal to apply IAEA safeguards, as well as the recent experience with the Iraqi nuclear bomb program, would seem to make it difficult for the Commission to assert that it expects the North Koreans not to make use of the exported fuel and equipment for nuclear explosives research.

3. The requirement that the NRC determine that no nuclear fuel exported to North Korea and no plutonium formed through irradiation of that fuel "will be reprocessed" or altered in form or content without the prior approval of the United States. North Korea's propensity, since 1945, for taking large risks to achieve goals of dubious rationality should give the Commission reason to pause before answering in the affirmative. Is it likely that the North Korean regime, if it perceived itself to be threatened, would, in the absence of a major change, ask for U.S. permission prior to reprocessing its spent fuel to obtain plutonium for bomb use?

The requirement for an export license may be waived if the Secretary of State determines that the proposed export will not be inimical to the common defense and security or that any export in the category in which the proposed export belongs would not be inimical to the common defense and security because it lacks significance for nuclear explosive purposes. A nuclear reactor and nuclear fuel could not reasonably be described as lacking nuclear explosives significance as they are the source of plutonium, one of the two nuclear explosives used in bombs.

If the Commission does not approve an export license application, the President may, after reviewing the Commission's decision, nonetheless authorize the export by means of an Executive order if he determines that withholding the proposed export would be "seriously prejudicial to the achievement of United States non-proliferation objectives, or would otherwise jeopardize the

common defense and security." The statute provides that the President's action is subject to review by Congress, which is given sixty days during which to disallow the export by means of a concurrent resolution.

In order to authorize an export, the Commission must also find that IAEA safeguards are being maintained with regard to all nuclear activities in North Korea at the time of the export. North Korea's reluctance to permit IAEA inspections to take place, and its refusal to permit broader inspections of suspected nuclear sites (not to mention the IAEA's experience with Iraq), will raise the question of whether North Korea has, in fact, disclosed the existence of all its nuclear facilities even after it has promised to do so. While the Commission may be persuaded by the intelligence agencies that all present North Korean nuclear facilities have been identified, it will be difficult, in the absence of changes in North Korea, for the Commission to explain the grounds for its confidence that all nuclear facilities in North Korea will be subject to IAEA safeguards in the future.

In view of the foregoing legal requirements, there is significant doubt that the Nuclear Regulatory Commission would approve the exportation of a nuclear power plant, components and fuel to North Korea. If the export application were not approved by the NRC, it is likely that granting a waiver of one or more of the nuclear export licensing criteria would entail significant political costs for the Administration unless there were a wide consensus on the desirability of authorizing the export of a nuclear power plant to North Korea.

Authorizing a Reexport by Another Country

If an export from the United States is effectively impossible in view of the legal and political difficulties such a proposal would encounter, is an export of U.S.-type LWR technology to North Korea possible from an overseas manufacturer, and could the requisite financing be arranged? European assistance tied to a European export is conceivable but unlikely. That leaves Japan and South Korea as the most plausible sources of aid. Both countries obviously have a great interest in pacifying the North Korean regime. Japan might package its aid as a form of war reparations; it is not clear whether this would make the aid more or less politically acceptable in Japan. South Korea would have the greatest incentive to provide the financing as it could reasonably expect to inherit the reactor in the event of Korean reunification. South Korea has not itself manufactured reactors, but it owns several U.S.-type nuclear plants and South Korean firms have had responsibility for large parts of some of the construction projects. South Korea could probably handle an LWR project in the North, perhaps with some outside assistance.

What would be the restrictions on the use of U.S. nuclear technology? Under its Agreements for Cooperation, the United States retains the right to approve any retransfer of a nuclear power plant, or nuclear equipment, fuel or technology exported from the United States. The statutorily prescribed standard for approving a retransfer of equipment, fuel or technology is considerably less demanding than that which would be required for an export as the Secretary of Energy is required only to determine that the retransfer "will not be inimical to the common defense and security." The Department of State has lead responsibility for determining U.S. policy with regard to such retransfers although the decision to approve such an arrangement is formally made by the Secretary of Energy. The Department of Defense, the Nuclear Regulatory Commission, and the Arms Control and Disarmament Agency must be consulted before a subsequent arrangement is entered into.

From the perspective of the Executive Branch, it would be simpler, and politically less risky, to authorize the reexport of U.S.-provided nuclear technology, components and fuel to North Korea than to try to export these items directly from the United States. Nonetheless, authorization of a retransfer would require an overt act of approval by the U.S. As we have not investigated the domestic legislation of the other potential suppliers, we are not expressing any views on the feasibility of such retransfer from that perspective. We would only note that if South Korea is persuaded that providing an LWR to North Korea is the best means of getting North Korea to abandon its nuclear bomb program, it would find it relatively easy to authorize the necessary exports to North Korea.

If South Korea, for example, wanted the assistance of U.S. engineering firms, this would also require U.S. government approval. Under current Department of Energy interpretations of federal regulations, any engineering services which would be provided by U.S. companies in connection with the export of a power reactor to North Korea would require a license from Department of Energy. Under the premise that the President had made a decision to support the supply of an LWR to North Korea, such an approval would presumably be forthcoming.

Many nuclear vendors and suppliers have expressed concern about the liabilities that could arise from the equipment and services provided to countries, such as the Commonwealth of Independent States, whose political and legal systems are in flux. This is obviously a significant concern which could deter many suppliers from participating in a project such as a North Korean LWR. To deal with this concern, North Korea would have to enact legislation governing claims arising out of nuclear accidents and any contracts between North Korea and its suppliers would have to address the scope of their potential liability to the North

Korean state. Presumably, any country entering into an agreement to provide nuclear assistance to North Korea would also want to limit its exposure to liability. Does it make sense to give North Korea an LWR?

In considering whether it makes sense to stretch laws and regulations in order to give North Korea an LWR -- and, as a practical matter, it would be a gift -- it is vital to get back to basics. The "nuclear issue" to which the joint communique refers obliquely concerns North Korea's failure to meet its obligations as a signatory of the Nonproliferation Treaty. So far as we can tell, and as is widely believed, North Korea has been cheating with the obvious purpose of obtaining plutonium for nuclear weapons. It now resists inspection of waste sites by the International Atomic Energy Agency, apparently because such inspections would demonstrate that North Korea has, in fact, made false declarations to the Agency. When pressed by the IAEA, North Korea gave notice of its withdrawal from the Nuclear Non-Proliferation Treaty ("NPT") within 90 days.

In retrospect, we can see that North Korea never approached its NPT responsibilities, which it accepted with its 1985 signature, straightforwardly. It dragged out the process of providing the IAEA with a list of declared facilities and initiating IAEA inspection. (It must be added that the IAEA allowed the process to drag on and, until a couple of years ago, gave the North Koreans every reason to think the international inspections were superficial and could be easily circumvented.) Fortunately, the IAEA did in time inspect carefully and identify discrepancies in North Korean accounts. Everyone is now on notice that the North Koreans are in violation of the NPT, although the Agency has so far only declared North Korea to be in noncompliance with its obligations to the IAEA.

Still, it is the first time this has ever happened. It is the first instance in which the IAEA has identified an illicit bomb program. (In the case of Iraq, the agency did not focus on this possibility until after the Gulf War.) It is also the first case of an NPT party threatening to withdraw from the Treaty. The North Korean situation is, as Robert Manning recently said, a "benchmark test" of the whole international system of treaties, agreements and understandings for preventing the spread of nuclear weapons.

In these circumstances, how does one reduce the possibilities of a North Korean bomb (assuming we are not too late) and at the same time make sure the rest of the world, including any other would-be bombmaker, learns the right lesson. Up to now, the U.S. and international emphasis has been on convincing the North Koreans to remain members of the NPT. The fear in official nuclear establishments is that a withdrawal from the NPT by North

Korea, especially coming so close to the 1995 NPT Review Conference, would be a serious blow to the goal of universal Treaty adherence. This accounts, in part, for the relatively soft line the United States has taken with North Korea. The emphasis has been on bringing North Korea back into compliance with its Treaty Obligations. This means cooperation with the IAEA, allowing special inspections of the disputed waste sites to proceed, and abiding by the bilateral North and South Korean declarations on maintaining the Korean Peninsula as a non-nuclear zone.

It is significant that there has been no hint in the discussions or communiques of imposing stricter than normal safeguards on North Korea because of its past violations. On the contrary, the joint communique speaks of "nondiscriminatory" application of IAEA inspections. In fact, North Korea is more or less being promised that past violations will be overlooked if it agrees to play by the rules from now on. Such sanctions as have been discussed have been mentioned only in the context of continued North Korean violations. It is not clear how far the U.S. will go in demanding that North Korea dismantle its nuclear bomb program. The message is that to protect the "NPT regime," the Treaty will be enforced prospectively, but not retrospectively.

Perhaps this is all that can realistically be accomplished in the context of the Treaty in view of its weakness. Still, wiping the slate clean of North Korea's past sins if it will only return to the fold gives the impression that universal adherence to the Treaty is being obtained at the cost of relaxing its enforcement. To go further, to reward the sinner, for example by providing an LWR, would in effect penalize those who have complied in good faith. It would seriously weaken the Treaty. Additionally, as the U.S. would have to be an overt accomplice to an LWR technology transfer to North Korea, if this is to happen, a further result of such an arrangement would inevitably an impression of U.S. weakness.

It is against this backdrop that we see the proposal to transfer LWRs to North Korea. We have not addressed the practical questions of whether it makes economic sense to introduce large reactors into North Korea. However, given North Korea's weak economy and the inefficient use of its current electricity supply, an expensive prestige project such as a large nuclear power plant does not seem a very sensible choice on these grounds, either. While North Korea may not be sensitive to market tests, that does not mean that we should not be, as well.

In any event, the transfer of an LWR to North Korea is an idea that should be put on the shelf until such time as North Korea has transformed itself into a much more open and responsible state. The notion that nuclear technology is an effective

pacifier for unruly countries should have died with the Atoms for Peace Program. It is both outdated and dangerous. REFERENCES

REFERENCES 1. Reuter's wire service, July 19, 1993.

2. The Foreign Assistance Act of 1961, as amended, 22 U.S.C.A. 2151 et seq., 2370(f).

3. Alexandre Y. Mansourov, "Bringing North Korea Back In: a Creeping Elite Revolution?,"

paper prepared for Michigan State University Conference, "Transformation in the Korean

Peninsula toward the 21st Century: Peace, Unity, and Progress," July 7-11, 1993.

4. One might get a different impression from a New York Times article of November 29,

1993, "U.S. Laws Catch Up to the New Russia," but that article deals only with changes

that affect Russia and other post-Soviet republics.

5. 12 U.S.C.A. 635(b)(2). The other countries currently classified as Marxist-Leninist are Cambodia, Afghanistan, Laos, China, Cuba, Yugoslavia, Vietnam and Tibet.

6. 12 U.S.C.A. 635(b)(3).

7. 12 U.S.C.A. 635(b)(4).

8. 22 U.S.C.A. 2199 (i) and 2151n.

9. International Financial Institutions Act, 22 U.S.C.A. 262d.

10. Department of State determination of January 20, 1988.

11. Section 43 of the Bretton Woods Agreement Act, as amended, 22 U.S.C.A. 286aa.

12. 50 U.S.C.A. App. 5; 31 CFR 500.201 et seq.

13. Section 710 of the pending authorization bill for the Department of State, proposed by

Senator Robb.

14. 22 U.S.C.A. 3201 et seq..

15. Atomic Energy Act of 1954, as amended, 123; 42 U.S.C.A. 2073, 2074, 2077, 2094, 2112, 2121, 2133, 2134, 2164.
16. Atomic Energy Act of 1954, as amended, 126(a)(2).
17. Atomic Energy Act of 1954, as amended, 127(1), emphasis added.
18. Atomic Energy Act of 1954, as amended, 127(2), emphasis added.
19. Atomic Energy Act of 1954, as amended, 127(5), emphasis added.
20. Atomic Energy Act of 1954, 126(b)(2).
21. In *Immigration and Naturalization Service v. Chadha*, 1983, 462 U.S. 919, 103 S.Ct. 2764, 77 L.Ed.2d 317, the Supreme Court declared unconstitutional provisions of former 8 U.S.C. 1254(c)(2) which authorized a House of Congress, by resolution, to invalidate an action of the Executive Branch. Whether the provisions of section 126 of the Atomic Energy Act providing for Congressional invalidation of a Presidential waiver would be found unconstitutional under that analysis is beyond the scope of this paper.
22. Atomic Energy Act of 1954, as amended, 128.
23. For a discussion of South Korea's nuclear export potential and its export procedures see: Peter Hayes, "South Korea," in W.C. Potter, ed., *International Nuclear Trade and Nonproliferation*, Lexington Books, Lexington, Massachusetts, 1990.
24. Atomic Energy Act, 123(5).
25. Atomic Energy Act of 1954, as amended, 131(a).

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Nautilus Institute
608 San Miguel Ave., Berkeley, CA 94707-1535 | Phone: (510) 423-0372 | Email:
nautilus@nautilus.org