

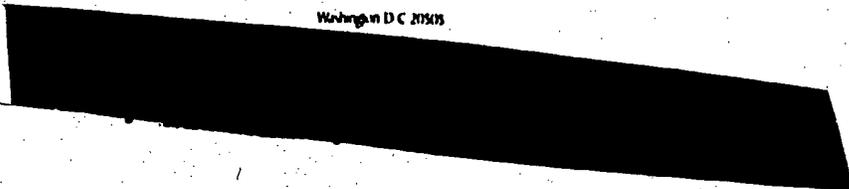
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Central Intelligence Agency



Washington D.C. 20505

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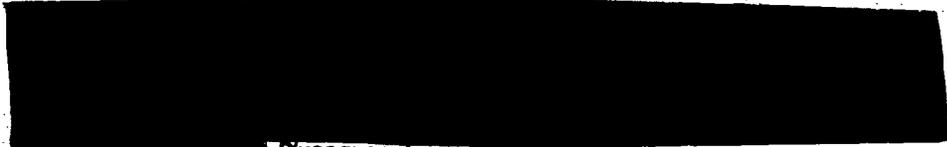


DIRECTORATE OF INTELLIGENCE

03 May 1988

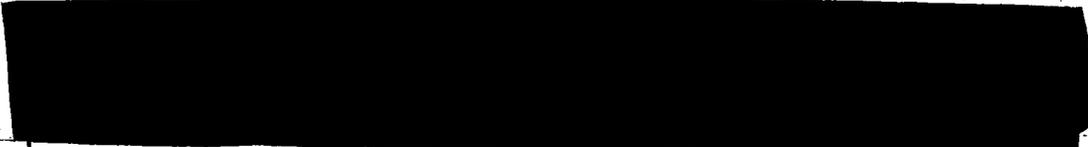
North Korea's Expanding Nuclear Efforts 

Summary

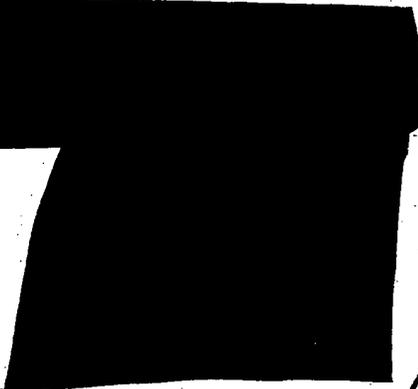


Pyongyang's accession to the Nuclear

Nonproliferation Treaty (NPT) in December 1985 obligates it to bring all of its nuclear facilities under full-scope International Atomic Energy Agency safeguards, but it has yet to enter into the required safeguards agreement or acknowledge new nuclear-related facilities. These failures have raised South Korean concerns about the North's nuclear intentions, with Seoul publicly stating that Pyongyang could have nuclear weapons in a few years. North Korea suffers from chronic energy shortages, and the Soviets have agreed to help build a nuclear power plant, suggesting at least part



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of P'yongyang's nuclear program is aimed at developing a new energy source. We have no evidence that North Korea is pursuing a nuclear weapon option, but we cannot rule out that possibility. [REDACTED]

#### P'yongyang's Nuclear Efforts...

The Yongbyon Nuclear Research Center, the focal point of the North's nuclear efforts, was established with Soviet assistance in the 1960s (see figures 1 and 2). Until the early 1980s, the center consisted of an operations area with a 4-megawatt (MW) research reactor, supplied by the Soviets under IAEA safeguards, and a large support area. Since the North began an expansion program in 1980, it has constructed more support buildings and a 10- to 30-MW graphite-moderated, gas-cooled reactor fueled with natural uranium. The new reactor has been in regular operation since October 1987. [REDACTED]

[REDACTED]

In our view, at least part of North Korea's nuclear program is aimed at developing a new energy source. [REDACTED]

[REDACTED] P'yongyang has initiated a major hydroelectric power project at Kumgangsan in southwestern North Korea and is constructing thermal power plants throughout the country. The Soviets have agreed to help build a nuclear power plant, and the North may well hope this will be the beginning of a series of nuclear projects that will help its energy-short economy. [REDACTED]

Nonetheless, the new 10- to 30-MW reactor raises some questions. The reactor could be used for power generation, [REDACTED] and its limited estimated electric output would do little to ease P'yongyang's energy shortages. [REDACTED]

<sup>1</sup> We believe P'yongyang probably has also developed portions of the front end of the nuclear fuel cycle--uranium mining, milling, and fuel fabrication--to provide fuel for its nuclear activities. [REDACTED]

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**...And Nonproliferation Performance**

The issue of the purpose for the 10- to 30-MW reactor--along with the North's unwillingness to acknowledge its existence--highlights P'yongyang's failure to follow up on its accession to the Nuclear Nonproliferation Treaty (NPT) in December 1985. In accordance with the NPT, the North should have entered into a safeguards agreement--including declaration and on-site inspection of its nuclear facilities--with the International Atomic Energy Agency (IAEA) within 18 months. On 2 June 1987--days before its target date--the North Koreans rejected the proposed IAEA safeguards agreement, claiming it infringed on their national sovereignty because it was more restrictive than the model NPT Safeguards Agreement. [REDACTED]

[REDACTED] In our view, implementation of a full-scope safeguards agreement is, at best, many months away. [REDACTED]

**The Soviet Connection**

We believe Moscow played a large role in encouraging P'yongyang to sign the NPT in December 1985. The Soviets have been involved in North Korea's nuclear program since at least 1956. In addition to providing technical assistance, Moscow has supplied a 4-MW research reactor and assisted in the construction of the Yongbyon Nuclear Research Center. [REDACTED]

North Korea deposited its instrument of accession with the Soviets and the Soviet press announced P'yongyang's decision to join the NPT. The North Korean press, on the other hand, was silent. Moscow, apparently in response to P'yongyang's accession to the NPT, agreed to build at least one power plant that could be composed of as many as four 440-MW reactors. Neither side has announced the project's location, but the Soviet press [REDACTED] indicate the plant will be built before 1993. [REDACTED]

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**Outlook**

[REDACTED] Nonetheless, the possibility that P'yongyang is developing a reprocessing capability and its footdragging on implementing NPT provisions, suggest close scrutiny of the North's nuclear effort is in order. The South Koreans are clearly pursuing that course. [REDACTED] South Korean [REDACTED] believes P'yongyang is developing a nuclear weapon capability--a concern that Seoul has raised publicly-

[REDACTED]

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