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B1, 1.4(D)

The Algerian Nuclear Program

Program Description and Assessment

Algeria's nuclear program is fairly rudimentary. Its central facilities are two research reactors. The first of these, supplied by Argentina and operational since 1989, is a one megawatt research reactor located on the southwestern outskirts of Algiers. It is subject to IAEA safeguards.

The second reactor -- the focus of current concern -- is located near Ain Oussera, approximately 130 kilometers south of Algiers, and appears to be in the late stages of construction. It is being built with Chinese assistance under a 1983 agreement for cooperation between China and Algeria. Site preparation for the reactor had begun by April 1988, with building construction beginning in 1989.

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By early 1991 the reactor building, which is similar to a number of early generation reactor buildings, was nearing external completion. Based on the rate of construction, the reactor could be operational by mid-1992, assuming that fuel is available and no major problems are encountered in equipment installation and start-up. Current Algerian plans call for the reactor to be fueled by June 1992. There is also a deep, heavy-walled building under construction at the reactor site that appears suited to provide options for high-level waste storage for a future reprocessing capability. Initial USG concerns about the size and purpose of this reactor were prompted by the cooling towers at the site which appear adequate to support the operation of a relatively large reactor, possibly up to 50 megawatts. The site was defended by AAA and early warning radar from mid-January to mid-March 1991 .i.e. during Operation Desert Storm.

Algeria and China had not publicly acknowledged their cooperation on this reactor project prior to the appearance of U.S. press reports in April 1991 alleging that China was assisting Algeria in the construction of a nuclear reactor which could be employed in a future Algerian nuclear weapons effort. Subsequent to the press reports and U.S. demarches to both governments on this reactor project, both countries publicly and privately stated that this is a 15 megawatt heavy water moderated research reactor, to be fueled with low enriched uranium and used for strictly peaceful purposes in the basic research and radioisotope production areas.

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The GOA and PRC statements made to date, both publicly and privately, are consistent with our understanding of the terms of the original contract for reactor supply signed in 1983. That Algeria would wish to acquire a research reactor in the 15 megawatt range is consistent with earlier expressions of Algerian interest--communicated to a number of nuclear suppliers including the U.S.--in acquiring reactors for research and/or radioisotope production and in establishing a nuclear research center south of Algiers. BI

In late May, the GOA told the IAEA Director General it intended to place the reactor under IAEA safeguards in time for the IAEA to apply safeguards when the reactor starts up, but no later than June 1992. The Director General advised the June IAEA Board of Governors meeting of Algeria's statement of intention to place the reactor under IAEA safeguards.

An IAEA safeguarded reactor in Algeria--if it is of the power level and type claimed by the Algerian and Chinese governments--would not pose a significant proliferation risk. However, a final judgement must await confirmation of key technical factors such as the reactor's power level and fuel type; the potential to upgrade the power level of the reactor and/or to reconfigure the core to enhance plutonium production. In particular, we need to understand why the cooling towers at the site appear capable of supporting a 50 megawatt reactor; a reactor that size--depending on the type of fuel used--could produce a significant amount of plutonium in spent fuel (i.e., enough for at least one nuclear explosive device per year).

Since Algeria will be required to provide the IAEA with detailed technical information about the reactor in conjunction with the negotiation of the safeguards arrangements for the reactor, an early IAEA design verification visit to the reactor--well before the reactor becomes operational--in connection with its expected safeguards agreement would appear to offer the best chance of obtaining the needed information.

The IAEA has provided the GOA with a copy of a model safeguards agreement as the basis for discussion on the safeguards agreement for reactor currently under construction in Algeria. According to the IAEA, as of mid-August, there has been no response from the GOA. When the GOA first informed the IAEA of its intention to place the reactor under IAEA safeguards, it left it unclear as to when it would begin negotiations with the IAEA and did not address when it would be prepared to have IAEA safeguards personnel visit the reactor for the first time in connection with the development of the safeguards arrangements for the reactor. Algeria's record on

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timely completion of safeguards arrangements negotiations with the IAEA on its only other nuclear facility is not a good one. In the case of its Argentine-supplied reactor, negotiations on the safeguards agreement were not completed prior to reactor start-up and the IAEA wasn't given access to the reactor before it became operational.

Algerian Nuclear Intentions/Current Political Atmosphere in Algeria

Press reporting in Algiers earlier this spring makes it clear that at least some major political Parties in Algeria favor the development of a nuclear weapons capability.

However, we do not have sufficient information from which to conclude that the GOA has decided to pursue a military nuclear program. Senior Algerian officials have stated to our Embassy that the GOA has no plans to develop a nuclear weapons capability and that Algeria is pursuing nuclear research for purely peaceful purposes. In recent months, the GOA has undertaken a significant effort to publicize Algerian plans for peaceful nuclear research and potential energy development, including, for example, airing a television special on the new reactor and its role in the Algerian program.

While acquiring a reactor--particularly if it is well-suited for fissile material production--would be an important first step toward a nuclear weapons capability, additional facilities and capabilities would be needed. For example, Algeria would need to acquire the ability to recover fissile material from spent reactor fuel, to produce nuclear and non-nuclear components, and to develop or otherwise acquire a credible nuclear device design.

All this would probably require significant foreign assistance.

There are major, current political uncertainties in Algeria. A caretaker government was installed in June after planning for national elections broke down. Until such elections are held (hopefully by late 1991): the government will not be able/willing to take significant decisions. If our actions in support of an early conclusion of a safeguards agreement were to become public and perceived as a case of the West trying to apply heavy pressure on Algeria, it could become a highly charged election issue.

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Present Course of Action

We have encouraged Algeria: (1) to begin consultations with the IAEA as soon as possible to ensure that safeguards are applied to the Ain Oussera reactor promptly; (2) to take additional steps to ensure that its entire nuclear program is peaceful in nature and fully subject to international safeguards; and (3) to adhere to the NPT as a tangible demonstration of its commitment to the peaceful uses of nuclear energy and a willingness to submit all its nuclear facilities to international safeguards. We have asked France, the UK, Germany, Italy, Spain, Portugal, Canada and Japan to make comparable approaches to Algeria. The PRC told us in late May that it was encouraging Algeria to move quickly to get safeguards in place, and that it would inform the IAEA of its supply of 11 metric tons of heavy water and approximately 909 kilograms of 3% uranium dioxide fuel to Algeria for use in the reactor.

The PCC believes that we should continue to keep the pressure on the GOA to conclude the safeguards agreement as soon as possible and to work with the IAEA to learn as much as possible about the technical characteristics and potential of the reactor before it becomes operational. We propose to monitor the situation closely. If we conclude that the Algerian reactor poses a significant proliferation risk, further options will be explored in the PCC for advancing our non-proliferation objectives with respect to Algeria.

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