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~~SECRET/NOFORN~~

TALKING POINTS ON ALGERIAN NUCLEAR DEVELOPMENTS
FOR DELIVERY TO SENATORS GLENN AND ROTH (SGA),
SENATORS PELL AND HELMS (SFRC), AND
CONGRESSMEN FASCELL AND BROOMFIELD (HFAC)

(ALSO CLEARED FOR USE WITH MAJORITY AND MINORITY
STAFF DIRECTORS OF SGA, SFRC, AND HFAC)

OVERVIEW

-- Over the past several months, concerns have been raised about the nature of Algeria's nuclear program, and more specifically about cooperation between Algeria and China in the construction of a new reactor.

-- We have had several discussions with Algiers and Beijing on their joint cooperation and both parties have made public statements on the scope and intent of that cooperation.

-- Algeria has also stated publicly and reiterated to us privately that it will submit the new reactor to IAEA safeguards. The GOA has told the IAEA that it intends to negotiate a safeguards agreement in time for the IAEA to apply safeguards when the reactor becomes operational, but no later than June 1992.

-- Algeria and China have stated that the reactor under construction is a 15 megawatt heavy water research reactor that will be fueled with low enriched uranium and that it is to be used for basic research and radioisotope production.

-- This is consistent with our understanding of the original design specifications of the reactor.

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a senior GOA official recently stated that the reactor's power level could be increased to a maximum of 20 MW, but that such an increase is not contemplated.

-- External features of reactor-related facilities at the site, specifically the cooling towers, appear to be adequate to support operation of a substantially large reactor, possibly up to 50 MW.

-- We are seeking to acquire details on why a 15 MW reactor would require such apparently large cooling towers.

-- The GOA has told the IAEA Director General it intends to negotiate a safeguards agreement with the IAEA for this reactor in time for the IAEA to apply safeguards when the reactor starts up, but no later than June 1992. We are stongly encouraging the GOA to initiate and complete these negotiations as soon as possible.

-- Assuming that the statements made by Algeria and China about the size and type of reactor are correct, this specific reactor in Algeria under IAEA safeguards would not appear to pose a significant proliferation risk.

-- However, more technical information is needed about the reactor, such as whether the reactor is designed so that it can be substantially increased in power level, before we can come to a final judgment on this matter.

-- Algeria will have to provide the IAEA with detailed technical information about the reactor in conjunction with the negotiation of the safeguards agreement. We will be strongly encouraging the Agency to visit the reactor site to begin to carry out its design verification responsibilities as soon as possible and well before the reactor becomes operational.

-- We have encouraged Algeria to adhere to the NPT and to reach a full-scope safeguards agreement with the IAEA covering all present and any future nuclear facilities.

DETAILS (for use as necessary)

The Reactor

-- The nuclear reactor under construction is located approximately 130 kilometers south of Algiers near Ain Oussera and is being built by China pursuant to a 1983 nuclear cooperation agreement.

-- Actual construction activity at the reactor site did not begin until April 1988, [redacted] Building construction began in 1989. By early 1991, the reactor building, which is similar to a number of early generation reactor buildings, was nearing external completion.

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-- Based on the rate of construction, the reactor could be operational by mid-1992, assuming fuel is available and no problems are encountered in equipment installation and start-up.

-- The Chinese government told us in late May that it would be informing the IAEA that it is supplying Algeria with 11 metric tons of heavy water and approximately 909 kilograms

of 3% enriched uranium dioxide fuel in connection with the supply of the Ain Oussera reactor.

-- From mid-January to mid-March of this year, the reactor site was defended with AAA and early warning radar.

-- Installation of these defensive measures coincided with duration of Operation Desert Storm. The defenses were removed in mid-March.

-- Algeria's only other reactor is a 1 megawatt research reactor on the southwestern outskirts of Algiers provided by Argentina. This reactor uses 20% enriched uranium fuel, became operational in 1989, and is subject to IAEA safeguards.

Original Plans and Current Status

-- China agreed in 1983 to provide Algeria with a reactor similar to the 15 MW heavy water research reactor located at the Institute of Atomic Energy near Beijing. Original plans called for the reactor to be fueled with 3% enriched uranium and to be used for basic training, radioisotope production and general research. B1

-- These plans are consistent with earlier Algerian interest in acquiring reactors for research and/or radioisotope production and in establishing a research center near Ain Oussera.

-- We do not know whether the parties subsequently modified their original agreement. As noted earlier, the cooling towers at the site appear adequate to support a substantially larger reactor, possibly up to 50 MW.

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-- A 15 MW reactor would have applications in research and radioisotope production. Use of enriched uranium fuel (3% material) would reduce or complicate the reactor's potential to produce fissile material.

-- Assuming a power rating of 15 MW and use of 3% enriched uranium fuel, the reactor normally would produce slightly less than 1 kilogram of plutonium per year and would consume substantial quantities of fuel. Assuming a power rating of 50 MW and use of 3% enriched fuel, the reactor could produce approximately 3 kilograms of plutonium per year.

-- However, a low-enriched uranium fueled reactor could be modified to enhance its fissile material production capability.

-- If the reactor used natural uranium fuel, tis plutonium production capability would be significantly greater. With a power rating of 15 MW, approximately 4 kilograms of plutonium could be produced annually, while at 50 WM, the plutonium production would be appoximately 10 to 13 kilograms per year.

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final judgment on the proliferation potential of the Ain Ouserra reactor will depend on confirmation of the reactor's size and further technical information on the degree to which the reactor's core could be reconfigured to enhance plutonium production and whether the reactor is designed to allow future upgrading to significantly higher power levels.

Algerian Intentions

-- We have no clear indication at the present time that Algiers intends to pursue a military nuclear program.

-- However, 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.

-- In response to inquiries by our Embassy in Algiers, senior Algerian government officials have said they have no plans to develop a nuclear weapons capabiltiy capability and maintain that Algeria is pursuing nuclear research for purely peaceful purposes.

Need for Additional Facilities/Capabilities

-- If Algeria chooses to embark on a nuclear weapons development program, we believe it will require significant foreign assistance.

-- While acquiring a reactor--particularly if it is well-suited for fissile material production--would be an important first step, 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.

-- With respect to other facilities at the Ain Oussera reactor site, there is a deep, heavy-walled facility under construction that appears suited for high-level radioactive waste storage.

-- Such a facility would be needed if Algeria chose to develop a reprocessing capability.

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Safeguards

-- The GOA left it unclear with the IAEA Director General when it would begin negotiations with the IAEA and did not address when it would be prepared to have IAEA visit the reactor for the first time in connection with the development of the safeguards agreement.

-- The Chinese government told us in late May that the PRC was encouraging Algeria to move quickly to get safeguards in place.

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