

are quoted as holding. . . . We would welcome any information you could send us that would dispel the notion that your presidential decision-making would be biased by these or other superstitions," says the FAS letter.

FAS director Jeremy Stone reports in the federation's current newsletter that Jeane Dixon told him she considers Reagan a friend and writes to him periodically. Reagan responds from time to time, Dixon says, but she would not expect him to consult her when he was President.

The Reagan-Bush campaign headquarters takes a calm view of the candidate's astrological interests. "Mr. Reagan has a casual interest in astrology, nothing heavy. He simply, like most people, checks the astrology in the paper," says deputy press secretary Joe Holmes.

Holmes denies that Reagan believes in astrology. Why then does he bother to check his horoscope? "He certainly doesn't check it every day," the governor's press secretary explains.

## France, Iraq, and the Bomb

On 12 July a young woman named Marie-Claude Magal, apparently drunk, got into a quarrel with a man driving a car down the Boulevard Saint-Germain in Paris. He slapped her; she fell to the ground and was hit and killed instantly by a passing car.

Miss Magal was the only witness to a murder committed a month earlier. Yahia El Meshad, an Egyptian physicist, was found dead in his Paris hotel room on 14 June, having been killed with a sharp object.

Meshad's purpose in Paris was to check the quality of the enriched uranium being supplied by France to Iraq as part of a 1.45-billion-franc (\$363-million) contract to provide a nuclear research center.

Israel has strenuously opposed the contract, arguing that the transfer of both nuclear know-how and nuclear materials will enable Iraq to build atomic weapons. Israeli objections may not have been limited to words. An Israeli radio report 3 days after the murder stated that El Meshad was one of the few Arab scientists with au-

thority in nuclear energy, and that his death "will delay by at least two years the completion of the atomic weapon planned by Iraq."

An earlier violent setback to the French-Iraqi research program occurred on 6 April 1979. Saboteurs broke into the factory at Seyne-sur-Mer where the two research reactors intended for Iraq were under construction, and damaged both severely with explosive devices.

The Israelis' conviction that the Iraqis intend to derive nuclear weapons from their research reactor may be based on more than theoretical grounds: Israel is widely believed to have developed her own nuclear weapons from the research reactor constructed for her by the French at Dimona.

There are several disquieting features about the French-Iraqi agreement. Despite public assurances that all is well, the French government seems to have had qualms about the pact, at least to the extent of trying to persuade Iraq to accept a form of nuclear fuel unsuitable for bombs in place of enriched uranium. Iraq refused to alter the terms.

Not only is Iraq France's second largest oil supplier, but France hopes to sell Iraq a 700-megawatt commercial nuclear reactor. The agreement to supply Iraq with a nuclear research center was made in the wake of the 1973 oil crisis. The contract calls for two research reactors of which the larger, known as Osiris, is fueled by 93 percent enriched uranium, supplied by France's military enrichment plant at Pierrelatte. France has undertaken to supply four charges of fuel for the reactor, making a total of 70 kilograms of enriched uranium. This is reported to be sufficient to make about four nuclear weapons.

The nuclear research center, located at Tuvait, near Baghdad, will train some 600 nuclear engineers and technicians. Under a contract signed in February 1978 with Italy, Iraq is also obtaining four laboratories, one of which, known as a "hot cell," is reportedly capable of extracting and fabricating small quantities of plutonium from the spent fuel of the reactor.

The French government, finding it cannot apparently alter the terms of the agreement, has reacted with heat to accusations made by the Israelis and others. "The French government

is astonished," declared a statement put out by the Quai d'Orsay on 31 July, "at the fantastical assertions and accusations that have recently been spread about." Iraq, the statement pointed out, has signed the non-proliferation treaty and has placed itself under the controls of the International Atomic Energy Agency. "The modalities of delivery of the uranium correspond to the unique needs of the research reactor supplied, they are scheduled to that end and they are surrounded by all necessary precautions," the statement added. The government's assurances would perhaps carry even more conviction if the terms of the French-Iraqi agreement of 18 November 1975 had ever been made public.

Iraq has reacted to international criticism by insisting all the more that the agreement be executed as planned. At a press conference held in Baghdad on 20 July, Iraqi strongman Saddam Hussein sarcastically observed that several years ago "Zionist circles in Europe derided the Arabs who, they said, were an uncivilized and backward people, good only for riding camels in the desert. See how today these same circles say without batting an eyelid that Iraq is on the point of producing an atomic bomb."

The Carter Administration, which has made nonproliferation a central feature of its foreign policy, is not happy about the deal but can do little to prevent it. Issues such as what will happen to the spent fuel from the reactor, whether Iraq will be able to reprocess it and extract the plutonium, are open questions, since apparently France has not informed the American government of the precise terms of the agreement.

The United States has no obvious means of stopping the deal. Embargoing sales of enriched uranium, as suggested by the *Washington Post* on 8 August, would accomplish little beyond infuriating the French, who have just built a \$6-billion enrichment plant to insulate themselves from this very kind of pressure.

Lest Foggy Bottom should be mulling over any such move, the Quai d'Orsay has helpfully compiled a list of 78 imported research reactors around the world, almost all of them fueled by enriched uranium, and almost all of American manufacture.

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