ISIS REPORT

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# TIMELINE 1967-1993: ARGENTINE LOW-ENRICHED URANIUM AT TEHRAN RESEARCH REACTOR<sup>1</sup>

By Christina Walrond

# 1967

United States supplies Iran with the 5MW-th research reactor using 93 percent enriched uranium fuel.

#### 1967-1979

The United States supplies the Tehran Research Reactor with 93 percent enriched uranium fuel<sup>2</sup>

#### 1979

After the Islamic Revolution, the United States stops authorizing the export of highly enriched fuel by the United Nuclear Corporation. (Iran currently stores several kilograms of irradiated U.S-origin HEU fuel.)

#### 1987

Argentina concludes a deal to convert the reactor core to use nearly 20 percent enriched uranium instead of 93 percent enriched fuel. Nucleonics Week reports that Argentina will enforce strict guidelines for nuclear trade with Iran on a case-by-case basis, but it may export medium-enriched uranium for Iran's research reactor in addition to some uranium enrichment technology. 4

#### May 1987

*Nuclear Engineering International* reports that Argentina might supply Iran with 20 percent enriched uranium for Iran's research reactor if current negotiations succeed. Iran and Argentina signed nuclear cooperation agreements in December 1985.<sup>5</sup>

<sup>&</sup>lt;sup>1</sup> Much of this information was sourced from the Nuclear Threat Initiative's Iran profile.

<sup>&</sup>lt;sup>2</sup> Foreign Suppliers to Iran's nuclear development, MIIS http://cns.miis.edu/wmdme/flow/iran/reactor.htm.

<sup>&</sup>lt;sup>3</sup> "The China-Iran Nuclear Cloud," Middle East Defense News, 22 July 1991; in Lexis-Nexis, <a href="http://www.lexis-nexis.com/">http://www.lexis-nexis.com/</a>>.

<sup>&</sup>lt;sup>4</sup> Richard Kessler, "Argentina To Enforce Curb On Nuclear Trade With Iran," *Nucleonics Week*, 19 March 1987, p. 12.

<sup>&</sup>lt;sup>5</sup> "Argentina Steps Out With The Argos Phwr," Nuclear Engineering International, May 1987, p. 2.

#### May 5, 1987

After 18 months of negotiations, Argentina's Investigaciones Aplicadas (INVAP) and the Atomic Energy Organization of Iran sign a \$5.5 million contract for INVAP to supply Iran with a new core for its US-supplied research reactor at the Tehran Nuclear Research Center (TNRC). The May 5 agreement, acknowledged by the Argentine Foreign Ministry on May 18, reportedly sets up broader cooperation between Iran and Argentina. In addition to the reactor core, Argentina may supply uranium enrichment technology; however, Iran maintains that this technology would be used to produce only low-enriched uranium. Argentina will train Iranian experts at its Jose Balseiro Nuclear Institute as an element of its fuel cycle technology transfer to Iran. CNEA [Commission Nuclear Energy Argentina] will provide the 115.8 kg of uranium from its Pilcanyeu enrichment plant. 6

# February 24, 1988

*Somos* of Buenos Aires reports that at the request of the International Atomic Energy Agency, Argentina reconverted the core of the Tehran Research Reactor and provided the fuel for its operation.<sup>7</sup>

### September 1988

The International Atomic Energy Agency (IAEA) approves the sale by Argentina of 115.8 kg of nearly 20 percent enriched uranium to Iran. Argentina plans to supply the fuel by mid-1990.<sup>8</sup>

# Mid-September 1988

The IAEA postpones a recommendation by the Secretariat to the governing board to approve Iran's request for the Agency's assistance in the transfer of 115.8 kg of nearly 20 percent enriched uranium, and it agrees to place the issue on the agenda for the next meeting on September 26, 1988. Because the supply of HEU by the United States had been interrupted, the reactor is to be converted from highly enriched to low-enriched uranium with IAEA assistance.<sup>9</sup>

# September 26, 1988

The International Atomic Energy Agency approves Iran's request for assistance in receiving 115.8 kg of 20 percent enriched uranium from Argentina. The fuel is to be supplied by Argentina's Investigaciones Aplicadas (INVAP).<sup>10</sup>

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<sup>&</sup>lt;sup>6</sup> Richard Kessler, *Nucleonics Week*, 14 May 1987, pp. 6-7; *Nuclear News*, July 1987, pp. 4-5; *Nuclear Engineering International*, July 1987, pp. 4-5; Richard Kessler and Mark Hibbs, *Nucleonics Week*, 12 November 1987, pp. 6-7.

<sup>&</sup>lt;sup>7</sup> "Sabato On Argentina-Brazil Nuclear Cooperation Agreements," *Nuclear Developments*, 24 February 1988, pp. 20-21.

<sup>&</sup>lt;sup>8</sup> Gamini Seneviratne, *Nuclear Fuel*, 3 October 1988, p. 13; Richard Kessler, *Nuclear Fuel*, 14 November 1988, pp. 3-4; Richard Kessler, *Nuclear Fuel*, 24 July 1989, pp. 12-13.

<sup>&</sup>lt;sup>9</sup> Gamini Seneviratne, "IAEA Board Postpones Decision On Argentina-Iran Fuel Transfer" *Nucleonics Week*, 22 September 1988, p. 3.

<sup>&</sup>lt;sup>10</sup> Gamini Seneviratne, "IAEA Approves Argentine Fuel For Teheran Research Reactor," *Nuclear Fuel*, 3 October 1988, p. 13.

### November 14, 1988

Nuclear Fuel reports that Argentina has contracts to supply 115.8 kg of nearly 20 percent enriched uranium to Iran, which must by filled by mid-1990.<sup>11</sup>

# **April** 1989

Argentina replaces the core of Iran's research reactor at TNRC. 12

#### June 1, 1989

Nuclear Engineering International reports that the IAEA delayed a shipment of lowenriched uranium from Argentina to Iran. <sup>13</sup>

# February 1993

The International Atomic Energy Agency confirms that Argentina will export a shipment of nearly 20 percent enriched uranium to Iran in 1993. 14

# February 18 1993

The IAEA confirms that a shipment of nearly 20 percent enriched uranium from Argentina will arrive in Iran within the year. 15

<sup>&</sup>lt;sup>11</sup> Richard Kessler, "Argentina's Cnea Turns To Soviets For Small Supply Of Enriched Uranium," *Nuclear* Fuel, 14 November 1988, pp. 3-4.

<sup>&</sup>lt;sup>12</sup> Clarin (Buenos Aires), 4 April 1989, p. 12; in *Nuclear Developments*, 23 May 1989, pp. 10-11. <sup>13</sup> "Argentina: Power Cuts," *Nuclear Engineering International*, June 1989, p. 21.

<sup>&</sup>lt;sup>14</sup> Claude van England, "Iran Defends Its Pursuit Of Nuclear Technology," *The Christian Science Monitor*, 18 February 1993, p. 7; The Arms Control Reporter, March 1993.

<sup>&</sup>lt;sup>15</sup> Claude van England, "Iran Defends Its Pursuit of Nuclear Technology," *The Christian Science Monitor*, 18 February 1993, p.7; in Lexis-Nexis, <a href="http://www.lexis-nexis.com">http://www.lexis-nexis.com</a>.