

# **Developments in the Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran and Agency Verification of Iran's Suspension of Enrichment-related and Reprocessing Activities**

**Update Brief by the Deputy Director General for Safeguards**

**31 January 2006**

The purpose of this brief is to provide an update on the developments that have taken place since November 2005 in connection with the implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran (Iran) and on the Agency's verification of Iran's voluntary suspension of enrichment related and reprocessing activities. The brief provides factual information concerning those developments; it does not include any assessments thereof.

Iran has continued to facilitate access under its Safeguards Agreement as requested by the Agency, and to act as if the Additional Protocol is in force, including by providing in a timely manner the requisite declarations and access to locations.

## **1. Enrichment Programme**

As detailed in the Director General's report of 18 November 2005, during meetings that took place in October and November 2005, the Agency requested Iran to provide additional information on certain aspects of its enrichment programme. Responses to some of these requests were provided during discussions held in Tehran from 25 to 29 January 2006 between Iranian officials and an Agency team, headed by the Deputy Director General for Safeguards. This information is currently being assessed.

### **1.A. Contamination**

As part of its assessment of the correctness and completeness of Iran's declarations concerning its enrichment activities, the Agency is continuing to investigate the source(s) of low enriched uranium (LEU) particles, and some high enriched uranium (HEU) particles, which were found at locations where Iran has declared that centrifuge components had been manufactured, used and/or stored.

### **1.B. The 1987 offer**

As previously reported to the Board, Iran showed the Agency in January 2005 a copy of a hand-written one-page document reflecting an offer said to have been made to Iran in 1987 by a foreign intermediary concerning the possible supply of a disassembled centrifuge (including drawings, descriptions and specifications for the production of centrifuges); drawings, specifications and calculations for a "complete plant"; and materials for 2000 centrifuge machines. The document also made reference to: auxiliary vacuum and electric drive equipment; a liquid nitrogen plant; a water treatment and purification plant; a complete set of workshop equipment for mechanical, electrical and electronic support; and uranium re-conversion and casting capabilities.

On 25 January 2006, Iran reiterated that the one-page document was the only remaining documentary evidence relevant to the scope and content of the 1987 offer, attributing this to the secret nature of the programme and the management style of the Atomic Energy Organization of Iran (AEOI) at that time. Iran stated that no other written evidence exists, such as meeting minutes, administrative documents, reports, personal notebooks or the like, to substantiate its statements concerning that offer.

### **1.C. Genesis of the mid-1990s offer**

According to Iran, there were no contacts with the network between 1987 and mid-1993. Statements made by Iran and by key members of the network about the events leading to the mid-1990s offer are

still at variance with each other. In this context, Iran has been asked to provide further clarification of the timing and purpose of certain trips taken by AEOI staff members in the mid-1990s.

### ***P-1 centrifuge component deliveries in the mid-1990s***

Iran has been unable to supply any documentation or other information about the meetings that led to the acquisition of 500 sets of P-1 centrifuge components in the mid-1990s. The Agency is still awaiting clarification of the dates and contents of these shipments.

### ***P-2 centrifuge programme***

Iran still maintains that, as a result of the discussions held with the intermediaries in the mid-1990s, the intermediaries only supplied drawings for P-2 centrifuge components (which contained no supporting specifications), and that no P-2 components were delivered along with the drawings or thereafter. Iran continues to assert that no work was carried out on P-2 centrifuges during the period 1995 to 2002, and that at no time during this period did it ever discuss with the intermediaries the P-2 centrifuge design, or the possible supply of P-2 centrifuge components. In light of information available to the Agency indicating the possible deliveries of such components, which information was shared with Iran, Iran was asked in November 2005 to check again whether any deliveries had been made after 1995.

In connection with the R&D work on a modified P-2 design said by Iran to have been carried out by a contracting company between 2002 and July 2003, Iran has confirmed that the contractor had made enquiries about, and purchased, magnets suitable for the P-2 centrifuge design. The Agency is still awaiting clarification of all of Iran's efforts to acquire such magnets.

## **2. Uranium Metal**

Iran has shown the Agency more than 60 documents said to have been the drawings, specifications and supporting documentation handed over by the intermediaries, many of which are dated from the early- to mid-1980's. Among these was a 15-page document describing the procedures for the reduction of UF<sub>6</sub> to metal in small quantities, and the casting of enriched and depleted uranium metal into hemispheres, related to the fabrication of nuclear weapon components. It did not, however, include dimensions or other specifications for machined pieces for such components. According to Iran, this document had been provided on the initiative of the network, and not at the request of the AEOI. Iran has declined the Agency's request to provide the Agency with a copy of the document, but did permit the Agency during its visit in January 2006 to examine the document again and to place it under Agency seal.

## **3. Transparency Visits and Discussions**

On 1 November 2005, the Agency was given access to a military site at Parchin, with a view to providing assurances regarding the absence of undeclared nuclear material and activities at that site, where several environmental samples were taken. Final assessment is still pending the results of the analysis of those samples.

Since 2004, the Agency has been awaiting additional information and clarifications related to efforts made by the Physics Research Centre (PHRC), which had been established at Lavisan-Shian,<sup>1</sup> to acquire dual use materials and equipment that could be used in uranium enrichment and conversion

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<sup>1</sup> According to Iran, the PHRC was established at Lavisan-Shian in 1989, inter alia, to "support and provide scientific advice and services to the Ministry of Defence" (see GOV/2004/60, para. 43).

activities. The Agency has also requested interviews with the individuals involved in the acquisition of those items.

On 26 January 2006, Iran presented to the Agency documentation the Agency had previously requested on efforts by Iran, which it has stated were unsuccessful, to acquire a number of specific dual use items (electric drive equipment, power supply equipment and laser equipment, including a dye laser). Iran stated that, although the documentation suggested the involvement of the PHRC, the equipment had actually been intended for a laboratory at a technical university where the Head of the PHRC worked as a professor. However, Iran declined to make him available to the Agency for an interview. The DDG-SG reiterated the Agency's request to interview the professor, explaining that it was essential for a better understanding of the envisioned and actual use of the equipment, which included balancing machines, mass spectrometers, magnets and fluorine handling equipment (equipment that appears to be relevant to uranium enrichment).

On that same day, the Agency also presented to Iran a list of high vacuum equipment purchased by the PHRC, and asked to see, and to take environmental samples from, the equipment in situ. The following day, some of the high vacuum equipment on the Agency's list was presented at a technical university, and environmental samples were taken from it.

On 26 January 2006, Iran provided additional clarification about its efforts in 2000 to procure some other dual use material (high strength aluminium, special steel, titanium and special oils), as had been discussed in January 2005. High strength aluminium was presented to the Agency, and environmental samples were taken therefrom. Iran stated that the material had been acquired for aircraft manufacturing, but had not been used because of its specifications. Iran agreed to provide additional information on inquiries concerning the purchase of special steels, titanium and special oils. Iran also presented information on Iran's acquisition of corrosion resistant steel, valves, and filters, which were made available to the Agency on 31 January 2006 for environmental sampling.

On 5 December 2005, the Agency reiterated its request for a meeting to discuss information that had been made available to the Agency about alleged undeclared studies, known as the Green Salt Project, concerning the conversion of uranium dioxide into UF<sub>4</sub> ("green salt"), as well as tests related to high explosives and the design of a missile re-entry vehicle, all of which could have a military nuclear dimension and which appear to have administrative interconnections. On 16 December 2005, Iran replied that the "issues related to baseless allegations." Iran agreed on 23 January 2006 to a meeting with the DDG-SG for the clarification of the Green Salt Project, but declined to address the other topics during that meeting. In the course of the meeting, which took place on 27 January 2006, the Agency presented for Iran's review a copy of a process flow diagram related to bench scale conversion and communications related to the project. Iran reiterated that all national nuclear projects are conducted by the AEOI, that the allegations were baseless and that it would provide further clarifications later.

#### **4. Suspension**

The Agency has continued to verify and monitor all elements of Iran's voluntary suspension of enrichment related and reprocessing activities.

In a letter dated 3 January 2006, Iran informed the Agency that it had decided to resume, as from 9 January 2006, "those R&D on the peaceful nuclear energy programme which ha[d] been suspended as part of its expanded voluntary and non-legally binding suspension" (GOV/INF/2006/1). On 7 January 2006, the Agency received a letter from Iran requesting that the Agency remove seals applied at Natanz, Farayand Technique and Pars Trash for the monitoring of suspension of enrichment

related activities (see GOV/INF/2006/2). The seals were removed by Iran on 10 and 11 January 2006 in the presence of Agency inspectors.

Since the removal of the seals, Iran has started what it refers to as “small scale R&D”. As of 30 January 2006, Agency inspectors had not seen any new installation or assembly of centrifuges, or the feeding of UF<sub>6</sub> material for enrichment. However, substantial renovation of the gas handling system is underway at the Pilot Fuel Enrichment Plant (PFEP) at Natanz, and quality control of components and some rotor testing is being conducted at Farayand Technique and Natanz. Due to the fact that all centrifuge-related raw materials and components are without IAEA seals, the Agency’s supervision of the R&D activities being carried out by Iran cannot be effective except at PFEP, where containment and surveillance measures are being applied for the enrichment process. The two cylinders at Natanz containing UF<sub>6</sub>, from which seals had been removed on 10 January 2006, were again placed under Agency containment and surveillance on 29 January 2006.

The uranium conversion campaign which commenced at the Uranium Conversion Facility (UCF) in Esfahan on 16 November 2005 is continuing and is expected to end in March 2006. All UF<sub>6</sub> produced at UCF thus far has remained under Agency containment and surveillance.

Using satellite imagery, the Agency has continued to monitor the ongoing civil engineering construction of the Iran Nuclear Research Reactor (IR-40) at Arak.