PERMANENT MISSION
OF THE ARAB REPUBLIC OF EGYPT

CHAIR OF THE VIENNA CHAPTER
OF THE
NON ALIGNED MOVEMENT

January 21st, 2011
NAM/128/2011

Note Verbale

The Permanent Mission of the Arab Republic of Egypt in Vienna in its capacity as Chair of the Vienna Chapter of the Non-Aligned Movement (NAM) presents its compliments to all NAM Member and Observer States, and pursuant to its note NAM/128/2011 dated 10 January 2011 regarding the invitation by the Islamic Republic of Iran to visit Iran's nuclear sites, has the honor to circulate the Mission Report of the Chairmanship regarding that visit.

The Permanent Mission of the Arab Republic of Egypt in Vienna avails itself of this opportunity to renew to the Permanent Missions of NAM Member and Observer States the assurances of its highest consideration.

To: All Permanent Missions of NAM Member and Observer States.

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MISSION REPORT

RE: VISIT OF THE CHAIRMAN OF THE VIENNA CHAPTER OF THE NON-ALIGNED MOVEMENT TO THE ISLAMIC REPUBLIC OF IRAN (15 – 16 JANUARY 2011).

I. INTRODUCTION

1. The Chairman of the Vienna Chapter of the Non-Aligned Movement received an invitation from H.E. Ambassador Ali Asghar Soltanieh, Permanent Representative of the Islamic Republic of Iran to the IAEA, on behalf of his Government, to "accompany other Ambassadors, representing other groups, in paying a visit to Iran's nuclear sites. Bearing in mind possible working obligations in Vienna, it was suggested to use the weekend of 15 & 16 January 2011, as they are working days in Iran. Meeting with high ranking officials during the visit is envisaged".
2. The NAM Chairman briefed NAM Members on that invitation in a NAM Plenary meeting, during which the following was also clarified:
   a. That the goals of this visit, similar to previous visits paid to Iran by NAM Chairmen in November 2004 and February 2007 respectively, were:
      i. To receive updated information from the authorities of Iran about its nuclear program.
      ii. To visit some nuclear facilities in Iran.
   b. That there shall be no statements made by the NAM Chairman on this matter in Iran.
3. H.E. Ambassador Soltanieh extended an open invitation during that meeting to other NAM members wishing to participate in that visit.
4. The NAM Plenary welcomed the visit and requested a factual report on it. Accordingly, the present report is presented to NAM Member and Observer States.

II. VISIT OUTLINE

5. The visit mainly involved visiting Iran's Heavy Water Research Reactor (IR-40), Heavy Water Production Plant in Arak and its Uranium Enrichment Plant in Natanz, as well as meeting H.E. Dr. Ali Akbar Salehi, Acting Minister of Foreign Affairs of I.R. of Iran and Vice President of I.R. of Iran & head of the Atomic Energy Organization of Iran (AEOI), and H.E. Dr. Saeed Jalili, Secretary of the National Security Council. A detailed program is attached.
6. Participants in the visit included Permanent Representatives of the Troika Members of the Vienna Chapter of NAM to the IAEA (Egypt, Cuba), the Chairperson of the Group of 77 and China (Algeria), as well as the Representative of the League of Arab States, who all participated in these capacities. Other Resident Representatives of NAM Members to the IAEA participated in the visit in their national capacities. They included the Resident Representatives to the IAEA of the following Member States: The Sultanate of Oman, The Syrian Arab Republic, and The Bolivarian Republic of Venezuela.
7. H.E. Ambassador Soltanieh accompanied the delegation throughout the visit.

III. VISIT TO IRAN'S HEAVY WATER RESEARCH REACTOR & HEAVY WATER PRODUCTION PLANT IN ARAK

8. The rationale behind Iran's choice of research reactors was outlined by Iran as follows:
   a. Three research reactors currently exist in Iran:
      i. The Tehran Research Reactor (TRR): This is a pool type, light water 5 MW reactor, supplied by AMF Atomics, and in operation since 1967. Its neutron flux is 3×10^{13} n/cm^2-s and its initial fuel type is a plate type of 93% HEU. As of 1993, its present fuel type became a plate type of 20% LEU.
      ii. The Miniature Neutron Source Reactor (MNSR): This is a light water 30 kW reactor, supplied by China, and in operation since 1993 at the Esfahan nuclear fuel research and production center affiliated with the AEOI. Its neutron flux is 3×10^{12} n/cm^2-s and its initial fuel type is of 90.2% HEU. Since its operation, its present fuel type became a plate type of 20% LEU.
      iii. The Heavy Water Zero Power Reactor (HWZPR): This is a heavy water 100 W reactor, supplied by China, and in operation since 1995 at the Esfahan nuclear fuel research and production center affiliated with the AEOI. Its neutron flux is 1×10^{8} n/cm^2-s and its initial fuel type is a rod type of natural uranium. This fuel type remained the same.
   b. All three research reactors are mainly used for neutron activation analysis, neutron physics parameter calculations and investigations, validation of neutronics parameters and eventually for training purposes in the nuclear engineering and physics fields. In addition, the TRR is also used to produce certain required radioisotopes in Iran.
   c. Since the TRR is almost 44 years old, most of its systems and equipment are obsolete. Efforts have been made to renew and replace most of the equipment and systems, but international cooperation in this regard has not been successful. Concurrently, there has been an increase in demand for certain medical and industrial isotopes, such as FDG-18 required for PET/CT scans. Such scans are commonly used in the detection, staging, and follow up of various cancers. Hence, the need to replace the TRR with another research reactor has become more urgent.
   d. In this context, Iran decided to construct a 40 MW heavy water research reactor (IR-40). The parameters governing the decision on the type and size of that reactor were as follows:
      i. Compared to the path of nuclear fuel enrichment, the use of domestically produced natural uranium oxide (UO_2) along with the required heavy water was the logical and practical path for the Iranian nuclear industry, due to the following reasons:
         - International limitations and constraints prevented the acquisition of enriched fuel by Iran, and
         - The technological basis for nuclear fuel enrichment was not established at the time, and was not foreseen then to be attainable in the near future.

ii. This project integrates well with other AEOI projects that have been declared to the IAEA, namely the Heavy Water Production Plant and the Uranium Conversion Facility (UCF).

iii. In order to have a sufficient neutron influx, a reactor with power on the order of 30 – 40 MW was said to be required.

iv. In 1996, proposals received from foreign countries for the construction of research reactors were as follows:

- China : 5 MW Heavy Water Reactor at $150 million and Iranian Rials Costs; to be constructed in 5 years.
- Russia: 40 MW Heavy Water Reactor at $360 million and Iranian Rials Costs; to be constructed in 6 years.
- Russia: 40 MW Light Water Reactor at $350 million and Iranian Rials Costs; to be constructed in 6 years.

v. No agreement was made regarding these proposals. Therefore, Iran decided to construct the 40 MW Heavy Water Research Reactor on its own.

vi. Given that huge investments have been made in various AEOI projects that are mostly in the initial stages of commissioning or operation, it was viewed that succeeding in the design and construction of the proposed research reactor would definitely provide some sort of self sufficiency for Iran in this field, especially in the absence of international cooperation with Iran in the nuclear industry field. The IAEA has not been very helpful in terms of nuclear technology transfers except in very limited areas such as in the nuclear waste and radiological fields.

vii. Accordingly, the location, design and construction activities of the IR-40 project have been declared to the IAEA on 12 July 2003. Currently, this project is supervised by the IAEA whereby an inspection visit is conducted every 3 months and relevant reports are submitted to the Agency.

9. The Arak Heavy Water Production Complex was presented by Iran as follows:

a. The basic design for the Complex was concluded in 1993, whereas its detailed Engineering design was concluded in 1997. Site preparation activities covering an area of 300 hectares were conducted in 1998, whereas construction commenced in 2001, covering an area of 20 hectares. In 2006, the Complex was commissioned and actual operation began.

b. All construction activities were carried out by Iranian companies.

c. The initial heavy water production plant design capacity was 8 tons per year. That capacity was doubled during construction to 16 tons per year. The plant is mainly composed of the following:

i. Four process units: One hydrogen sulfide production unit, two dual temperature exchange GS units, and one water distillation unit.

ii. Nine utility units: A demineralized water unit, a flare unit, a waste water treatment unit, a steam generation unit, a power substation & MCC unit, an instrument air production unit, a fuel distribution unit, a nitrogen production unit, and a cooling unit.

d. Heavy water applications include serving as a moderator in reactors using natural or low enriched uranium, as well as other applications relating to deuterated solvents, heavy drugs and biological effects.

10. A guided tour of the IR-40 Reactor and the Heavy Water Production Plant then ensued.

IV. VISIT TO IRAN'S FUEL ENRICHMENT PLANT IN NATANZ

11. The Fuel Enrichment Plant was presented by Iran as follows:

    a. The Fuel Enrichment Plant (FEP) is located 40 km south east of Kashan. Construction commenced in 2000, whereas production began in 2006. It is used to produce UF6 with less than 5% enrichment and a capacity of 150000 SWU/year.

    b. The Pilot Fuel Enrichment Plant (PFEP) is used for R&D activities and to produce UF6 with less than 20% enrichment for the Tehran Research Reactor.

    c. The enrichment plant and all its equipment were designed and manufactured by Iranian engineers in domestic companies.

    d. The IAEA inspectors continuously conduct inspections at FEP & PFEP. During 2010, they conducted 384 person-day Safeguards Inspections. T he following inspections almost amount to their continued physical presence at the site:

        i. Twice per month: Design Information Verification (DIV) & Interim Inventory Verification(IIV).

        ii. Three times per month: Unannounced Inspection (UI).

        iii. Yearly: Physical Inventory Verification (PIV).

    e. IAEA safeguards applied therein, also include the following:

        i. 17 surveillance systems are installed all around the process areas, and all objects leaving the process area are completely verified.

        ii. Seals are applied to all UF6 cylinders and to possible feed/withdrawal points. All UF6 cylinders are verified using either Destructive Analysis (DA) or regular Non-Destructive Analysis (NDA) techniques.

        iii. All nuclear material is weighed by IAEA load cells, and operator's load cells are regularly verified by IAEA standard weights.

        iv. Environmental Samples (ES) are regularly taken from anywhere at the site.

12. A guided tour of the FEP and FFEP then ensued. The visiting Ambassadors were informed that on the same day an unannounced inspection was carried out, with less than two hours advance notice, in the section related to enrichment levels of up to 20%. By coincidence, the visiting Ambassadors saw inspectors performing their functions at the Natanz plant.

V. MEETING WITH H.E. DR. ALI AKBAR SALEHI, ACTING MINISTER OF FOREIGN AFFAIRS OF I.R. OF IRAN, VICE PRESIDENT OF I.R. OF IRAN & HEAD OF AEOI

13. A meeting was held with H.E. Dr. Ali Akbar Salehi, Acting Minister of Foreign Affairs of of I.R. of Iran and Vice President of I.R. of Iran & head of the AEOI. During that meeting, Dr. Salehi expressed his appreciation for the support received by Iran from developing countries, in particular from NAM and G77, and outlined the following:

    a. Iran shall continue its peaceful nuclear activities, as they are based on solid grounds in so far as the rights of Iran in this regard are concerned.

    b. In the context of transparency, Iran undertook several measures towards subjecting its facilities to safeguards and opening them to external visits. Nevertheless, these positive measures were always met by negative reactions.

    c. Iran regards this visit as a positive step towards transparency and confidence building. Therefore, Iran shall continue to issue invitations to such visits, including to experts, even to those who declined them, in the hope that they shall be able to accept the invitation in the future.

    d. Iran shall continue its unwavering commitment to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) as well as the application of normal IAEA safeguards, given that Iran was the first to call in 1974 for the establishment of a Nuclear Weapons Free Zone in the Middle East, and was joined by Egypt then. Hence, Iran is ready to support any effort to establish that zone.

    e. Iran showed flexibility when it accepted the Tehran Trilateral Declaration. In this context, Iran's view regarding the 5 + 1 talks scheduled in Istanbul is that in December 2010, it was agreed during the 5 + 1 meeting held in Geneva that cooperation regarding all international issues and regional issues pertaining to security, economic cooperation, disarmament and non proliferation shall be discussed during the upcoming Istanbul meeting, but the appropriate framework for doing so was not yet agreed upon.

    f. Iran is willing to be patient and is committed to its nuclear program to the furthest extent possible. It is willing to cooperate with Western countries without hindering its nuclear program, although it believes that these countries are interested in monopolizing nuclear power technology.

VI. MEETING WITH H.E. DR. SAEED JALILI, SECRETARY OF THE NATIONAL SECURITY COUNCIL

14. A meeting was also held with H.E. Dr. Saeed Jalili, Secretary of the National Security Council. During that meeting, Dr. Jalili outlined the following:

    a. Iran's membership in the IAEA and the NPT define its rights and obligations in the nuclear field despite the prevailing imbalance between such rights and obligations.

    b. Countries possessing nuclear weapons are the ones hindering nuclear disarmament in the world, and are the ones creating obstacles to the spread of nuclear know how instead of focusing on nuclear disarmament issues.

c. Developing countries should work collectively towards achieving nuclear disarmament, as it is inacceptable to Iran that some powers claim to represent the international community. Other groups, such as NAM and G77, deserve such representation given their large membership.

d. Western countries want to have a monopoly over nuclear technology, and exercise terrorism to liquidate Iran's nuclear scientists. Therefore it is important to define a new category of terrorism called 'nuclear terrorism' that aims to prevent developing countries from acquiring nuclear technology.

e. Iran supports the right of all countries to nuclear power, and is ready to cooperate with all countries in this regard on the basis of Iran's legitimate rights as well.

f. Iran looks forward to enhancing the NPT. Its interaction regarding its nuclear program is within a cooperative framework in the nuclear field that does not question the legitimacy of this program, as Iran shall never surrender its rights in this regard.

g. Iran undertook a lot of confidence building measures that exceed its safeguards obligations. Apparently, the participants in the Geneva talks were not aware of that.