AGREEMENT BETWEEN
THE GOVERNMENT OF THE UNITED STATES OF AMERICA
AND THE GOVERNMENT OF THE RUSSIAN FEDERATION
CONCERNING THE DISPOSITION OF
HIGHLY ENRICHED URANIUM EXTRACTED FROM NUCLEAR WEAPONS

The Government of the United States of America and the Government of the Russian Federation, hereinafter referred to as the Parties,

Desiring to arrange the safe and prompt disposition for peaceful purposes of highly enriched uranium extracted from nuclear weapons resulting from the reduction of nuclear weapons in accordance with existing agreements in the area of arms control and disarmament,

Reaffirming their commitment to ensure that the development and use of nuclear energy for peaceful purposes are carried out under arrangements that will further the objectives of the Treaty on the Non-Proliferation of Nuclear Weapons,

Affirming their commitment to ensure that the nuclear material transferred for peaceful purposes pursuant to this Agreement will comply with all applicable non-proliferation, physical protection, nuclear material accounting and control, and environmental requirements,

Have agreed as follows:

ARTICLE I

PURPOSE

The Parties shall cooperate in order to achieve the following objectives:

(1) The conversion as soon as practicable of highly enriched uranium (HEU) extracted from nuclear weapons resulting from the reduction of nuclear weapons pursuant to arms control agreements and other commitments of the Parties which is currently estimated at approximately 500 metric tons in the Russian Federation, having an average assay of 90 percent or greater of the uranium isotope 235 into low enriched uranium (LEU) for use as fuel in commercial nuclear reactors. For purposes of this Agreement, LEU shall mean uranium enriched to less than 20 percent in the isotope 235; and

(2) The technology developed in the Russian Federation for conversion of HEU resulting from the reduction of nuclear weapons in the Russian Federation may be used for conversion of United States HEU in the United States of America; and

(3) The establishment of appropriate measures to fulfill the non-proliferation, physical protection, nuclear material accounting and control, and environmental requirements of the Parties with respect to HEU and LEU subject to this Agreement.

ARTICLE II

IMPLEMENTATION CONTRACTS AND AGREEMENTS

1. The Parties, through their Executive Agents, shall within six months from entry into force of this Agreement seek to enter into an initial implementing contract to accomplish the objectives set forth in Article I of this Agreement. The Parties may conclude additional implementing contracts or agreements pursuant to this Agreement, as required. For any purchase, the Executive Agents shall negotiate terms (including price), which shall be subject to approval by the Parties.

2. It is the intent of the Parties that the initial implementing contract shall provide for, inter alia:

(i) The purchase by the United States Executive Agent of LEU converted from HEU at facilities in the Russian Federation and sale of such LEU for commercial purposes. The United States will provide information to the Russian Federation on all commercial disposition of such LEU;

(ii) Initial delivery of LEU converted from HEU extracted from nuclear weapons resulting from the reduction of nuclear weapons pursuant to arms control agreements and other commitments of the Parties by October 1993, if possible;

(iii) Conversion of no less than 10 metric tons having an average assay of 90 percent or greater of the uranium isotope 235 in each of the first five years, and, in each year thereafter, conversion of no less than 30 metric tons of HEU having an average assay of 90 percent or greater of the uranium isotope 235; however, specific amounts will be stipulated in the first and subsequent implementing contracts or agreements;

(iv) The participation of the United States private sector and of Russian enterprises;

(v) The allocation among the United States of America, private sector firms of the United States of America, the Russian Federation, and Russian enterprises of any proceeds or costs arising out of activities undertaken pursuant to any implementing contracts;

(vi) The use by the Russian side of a portion of the proceeds from the sale of LEU converted from HEU for the conversion of defense enterprises, enhancing the safety of nuclear power plants, environmental clean-up of polluted areas and the construction and operation of facilities in the Russian Federation for the conversion of HEU to LEU;

(vii) By agreement of the Parties an equivalent amount of HEU can substitute for the corresponding amount of LEU planned for purchase by the United States Executive Agent.

ARTICLE III

EXECUTIVE AGENTS

Each Party shall designate an Executive Agent to implement this Agreement. For the United States side, the Executive Agent shall be the Department of Energy. For the Russian side, the Executive Agent shall be the Ministry of the Russian Federation of Atomic Energy. After consultation with the other Party, either Party has the right to change its Executive Agent upon 30 days written notice to the other Party. If a governmental corporation is established under United States law to manage the uranium enrichment enterprise of the Department of Energy, it is the intention of the United States Government to designate that corporation as the Executive Agent for the United States side.

ARTICLE IV

PRIORITY OF AGREEMENT

In case of any inconsistency between this Agreement and any implementing contracts or agreements, the provisions of this Agreement shall prevail.

ARTICLE V

ADDITIONAL MEASURES

1. The Executive Agent of the Russian Federation shall ensure that the quality of LEU derived from HEU subject to this Agreement is such that it is convertible to LEU usable in commercial reactors. Specifications shall be agreed upon in the process of negotiating the initial and subsequent implementing contracts.

2. The conversion of HEU subject to this Agreement shall commence as soon as possible after the entry into force of the initial implementing contract.

3. The Parties shall, to the extent practicable, seek to arrange for more rapid conversion of HEU to LEU than that provided for in Article II (2) (iii).

4. The United States of America shall use LEU acquired pursuant to this Agreement and its implementing contracts and agreements, when subject to United States jurisdiction and control, for peaceful purposes only.

5. LEU acquired by the United States of America pursuant to this Agreement, and implementing contracts and agreements related to it, shall be subject to safeguards in accordance with the November 18, 1977, Agreement Between the United States of America and the International Atomic Energy Agency (IAEA) for the Application of Safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons.

6. The Parties shall maintain physical protection of HEU and LEU subject to this Agreement. Such protection shall, at a minimum, provide protection comparable to the recommendation set forth in IAEA document INFCIRC/225/REV.2 concerning the physical protection of nuclear material.

7. If the Parties enter into an agreement for cooperation concerning the peaceful uses of nuclear energy, nuclear material acquired by the United States of America pursuant to this Agreement and its implementing contracts and agreements, when subject to United States jurisdiction or control, shall be subject to the terms and conditions of that Agreement for cooperation.

8. The activities of the United States Government under this Agreement, or any implementing contract or agreement, shall be subject to the availability of United States Government funds.

9. In the event the United States Government does not have funds available for implementation of this Agreement, the Executive Agent of the Russian Federation reserves the option to obtain funding for implementation of this Agreement from any private United States company.

10. Prior to the conclusion of any implementing contract, the Parties shall establish transparency measures to ensure that the objectives of this Agreement are met, including provisions for nuclear material accounting and control and access, from the time that HEU is made available for conversion until it is converted into LEU. Specific transparency measures shall be established in the same time frame as the negotiation of the initial implementing contract, and shall be executed by a separate agreement.

11. Prior to the conclusion of any implementing contract, the Parties shall agree on appropriate governing provisions for entry and exit, liability, and status of personnel, exemptions for taxes and other duties, and applicable law.

12. The Executive Agent of the United States of America shall use the LEU converted from HEU in such a manner so as to minimize disruptions in the market and maximize the overall economic benefit for both Parties. This Agreement shall have no effect on contracts between Russian enterprises and United States companies for the delivery of uranium products which are currently in force and consistent with United States and Russian law.

13. This Agreement places no limitations on the right of the Russian Federation to dispose of LEU derived from HEU extracted from nuclear weapons resulting from the reduction of nuclear weapons pursuant to arms control agreements and other commitments of the Parties beyond the specific commitments set forth herein.

ARTICLE VI

ENTRY INTO FORCE, DURATION AND AMENDMENTS

1. This Agreement shall enter into force upon signature and shall remain in force until the full amount of HEU provided for in paragraph 1 of Article I is converted into LEU, delivered, and supplied to commercial customers.

2. Each Party may propose amendments to this Agreement. Agreed amendments shall enter into force upon signature and shall remain in force so long as this Agreement remains in force.

3. Each Party shall have the right to terminate this Agreement upon 12 months written notification to the other Party.

Done at Washington this 18th day of February, 1993, in duplicate in the English and Russian languages, both texts being equally authentic.

FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA:

FOR THE GOVERNMENT OF THE RUSSIAN FEDERATION:

MEMORANDUM OF UNDERSTANDING BETWEEN THE GOVERNMENT OF THE UNITED STATES OF AMERICA AND THE GOVERNMENT OF THE RUSSIAN FEDERATION RELATING TO TRANSPARENCY AND ADDITIONAL ARRANGEMENTS CONCERNING THE AGREEMENT BETWEEN THE GOVERNMENT OF THE UNITED STATES OF AMERICA AND THE GOVERNMENT OF THE RUSSIAN FEDERATION CONCERNING THE DISPOSITION OF HIGHLY ENRICHED URANIUM EXTRACTED FROM NUCLEAR WEAPONS

The Government of the United States of America and the Government of the Russian Federation, hereinafter referred to as the Parties,

In accordance with paragraphs 10 and 11 of Article 5 of the Agreement Between the Government of the United States of America and the Government of the Russian Federation Concerning the Disposition of Highly Enriched Uranium Extracted from Nuclear Weapons of February 18, 1993, hereinafter referred to as the Agreement, and,

In furtherance of the initial implementing contract thereunder between the Department of Energy of the United States of America and Techsnabexport, a joint-stock company, as agent of the Ministry of Atomic Energy of the Russian Federation, hereinafter referred to as the implementing contract,

Have agreed as follows:

ARTICLE I
PURPOSE AND SCOPE

1. In accordance with, and in order to ensure the objectives of, the Agreement and the implementing contract:

(a) The Russian side shall ensure that the highly enriched uranium (HEU) extracted from nuclear weapons pursuant to the Agreement is oxidized, fluorinated and subsequently blended with natural uranium or low enriched uranium (LEU) blended-stock to yield LEU end product enriched to less than 5 percent U-235.

(b) The U.S. side shall ensure that LEU received by the United States of America pursuant to the Agreement shall be fabricated into fuel for commercial nuclear reactors.

(c) The Parties shall use their existing systems of material control and accounting (MC&A) and shall incorporate further MC&A measures relevant to transparency as they are developed.

2. In order to ensure that the objectives of the Agreement are fulfilled, the Parties shall implement transparency and access measures to guarantee, inter alia: that the HEU subject to the Agreement is extracted from nuclear weapons and that this same HEU enters the oxidation facility and is oxidized therein; that the declared quantity of HEU is blended down to LEU; and, that the LEU delivered to the United States of America pursuant to the Agreement is fabricated into fuel for commercial nuclear reactors.

3. The transparency and access arrangements shall be implemented in such a manner as to:

(a) avoid, to the maximum extent possible, hampering the economic and technological development of the Parties for international cooperation in the field of peaceful nuclear activities, including international exchange of nuclear material;

(b) avoid undue interference in the Parties' nuclear activities and, in particular, the operation of facilities;

(c) be consistent with accepted management practices required for the economic and safe conduct of nuclear activities; and

(d) take full account of technological developments relevant to transparency and access measures.

4. All references to uranium, HEU and LEU in this Memorandum of Understanding (MOU), are understood to mean uranium, HEU and LEU subject to the Agreement.

ARTICLE II
GENERAL TRANSPARENCY ACTIVITIES

1. Each Party shall have the right to send monitors to the facilities of the other Party where activities pursuant to the Agreement and implementing contract are being conducted and each Party shall be obligated to accept and facilitate such visits. Procedures regarding notification of the dispatch of monitors and related arrangements shall be agreed upon by the Parties in accordance with Article VI of this MOU.

2. The Parties shall:

(a) provide a description of the processes to be employed pursuant to the Agreement. The scope of such a description shall be determined by the providing Party, and shall be sufficient to provide the other Party a full understanding of such processes;

(b) provide updates identifying any changes in the processes pursuant to the Agreement if and when such changes take place;

(c) provide access to relevant equipment being used pursuant to the Agreement as agreed upon by the Parties in accordance with Article VI of this MOU;

(d) assist monitors of the Parties in witnessing collection of uranium samples for technical analyses. Sample analysis shall be performed in accordance with procedures to be agreed by the Parties. If analysis is performed in the host country with the host country's equipment, monitors shall have the right to observe the process and test the calibration of the host's equipment with calibration samples;

(e) ensure that all containers that hold uranium are marked with unique identifiers and tamper-indicating seals, which shall be recorded in MC&A documentation, and have the right to examine such unique identifiers or tamper-indicating seals applied subject to this MOU. The type of seals or tags and related application procedures shall be agreed upon by the Parties in accordance with Article VI of this MOU;

(f) comply with all proper and applicable safety and security practices and precautions of the relevant Party at all times;

(g) have the right to suggest additional safety precautions if necessary during any technical procedure being executed, including procedures to obtain a material sample in accordance with this MOU;

(h) provide written reports to each other, on a periodic basis as mutually agreed, with the Russian side specifying the mass and chemical and isotopic composition of material at all stages of converting and blending HEU to LEU, and the U.S. side specifying LEU received at, used at, and shipped to fuel fabrication facilities from, Portsmouth; LEU received at U.S. fuel fabrication facilities; LEU delivered to commercial nuclear power stations as fuel assemblies; and LEU received at nuclear power plants as fuel assemblies;

III.2.

(i) have the right to observe the preparation of MC&A data corresponding to: for the U.S side, all stages of conversion and blending of HEU to LEU; and, for the Russian side, the utilization of LEU received from the Russian Federation that is fabricated into fuel for commercial nuclear reactors. Each side shall have the right to review associated records;

(j) have the right, consistent with paragraph 3 of Article I of this MOU, to request collection and obtain analysis of uranium samples, for the U.S. side, at the process steps involved in conversion and blending of HEU to LEU, and, for the Russian side, at the process steps involved in processing LEU before delivery to and at commercial nuclear fuel fabricators. Each Party shall be obligated to comply with such requests;

(k) have the right to confirm data reported pursuant to subparagraph (h) of this paragraph by analytical methods as agreed by the Parties in accordance with Article VI of this MOU; and

(1) have access to shipping documentation relating to HEU and LEU.

ARTICLE III
TRANSPARENCY ACTIVITIES OF THE UNITED STATES OF AMERICA IN THE RUSSIAN FEDERATION

1. U.S. monitors shall have the right to observe HEU feed material extracted from nuclear weapons being fed into the oxidation and fluorination process and observe the LEU being transferred from the technological cylinder to the 30B cylinder.

2. The Russian side shall identify and implement transparency measures to confirm that natural uranium or LEU blendstock is mixed with HEU resulting in LEU end product. If the Parties cannot agree that these measures are sufficient, the U.S. side shall have the right to observe uranium being fed into and withdrawn from the blending process, including observation of the Russian procedures to measure the mass and chemical and isotopic composition of the HEU feed and blendstock. In the event that the Russian side expands its blending capacity to greater than 10 metric tons per year pursuant to the implementing contract, or installs a new separate facility for blending, the U.S. side shall have the right to observe the processes relating to the conversion and blending of HEU to LEU, as well as the procedures to measure and analyze HEU feed, blendstock and LEU end product.

II 2.(h)

ARTICLE IV
TRANSPARENCY ACTIVITIES OF THE RUSSIAN FEDERATION IN THE UNITED STATES OF AMERICA

1. Russian monitors shall have the right to review the relevant documentation concerning the arrival, movement, and departure of 30B cylinders containing LEU of the Russian side on U.S. territory.

2. Russian monitors shall have the right to observe the process at Portsmouth involving the utilization of LEU and its shipment to commercial nuclear fuel fabricators, as well as to observe LEU of the Russian side being fed into and withdrawn from U.S. fuel fabrication facilities. Russian monitors shall have the right to review documentation regarding the number of fuel assemblies containing LEU of the Russian side received at commercial nuclear power plants.

ARTICLE V
ADDITIONAL PROVISIONS

1. Information gained by either Party as a result of implementing this MOU shall be treated confidentially and shall not be disclosed to any third party or utilized by either Party for its own commercial advantage, without the prior approval of the other Party.

2. The Parties shall make all administrative arrangements necessary to carry out their obligations in order to implement the Agreement, the implementing contract and this MOU.

3. Each Party shall facilitate the entry and exit of personnel of the other Party into and out of its territory, and the importation into, and exportation from, its territory of materials and equipment for the purpose of carrying out activities in accordance with the Agreement, the implementing contract and this MOU.

4. Each Party shall treat with due respect the personnel of the other Party present on its territory in connection with activities in accordance with the Agreement, the implementing contract and this MOU, and shall take all appropriate steps to prevent any attack on the person, freedom and dignity of such personnel.

5. The import and export of equipment to be used for purposes of carrying out activities in accordance with this MOU shall be subject to agreement by the Parties in accordance with the relevant laws and regulations of each Party.

6. The Parties shall consult on claims and proceedings that may arise out of activities carried out in accordance with the Agreement, the implementing contract and this MOU.

7. The Parties designate Executive Agents to implement this MOU as follows: for the United States of America, the Executive Agent shall be the Department of Energy; for the Russian Federation, the Executive Agent shall be the Ministry of Atomic Energy of the Russian Federation. After consultation with the other Party, either Party has the right to change its Executive Agent upon 30 days written notice to the other Party.

8. The U.S. side shall not change the enrichment level of LEU of the Russian side delivered to Portsmouth so long as the U.S. side is able to meet its customers' needs with such LEU. If, however, the U.S. side is not able to meet its customers' needs with such LEU, the U.S. side may, upon 30 days written notification, alter the level of enrichment, within the range of 2.8 to 4.95 percent U-235, of LEU of the Russian side.

9. In the event that LEU delivered by the Russian side is exported from the United States of America, the U.S. side shall provide to the Russian Federation assurances that such LEU is subject to peaceful-use-only commitments and to all applicable IAEA regulations.

ARTICLE VI
FURTHER ARRANGEMENTS

To ensure effective implementation of this MOU, the Parties shall seek to agree upon further arrangements prior to first delivery of the LEU to the United States of America. Thereafter, the Parties may agree upon additional implementing measures as necessary.

ARTICLE VII
RESOLUTION OF AMBIGUITIES

Monitors of each Party shall have the right to request clarifications if ambiguities arise during monitoring activity. The Monitored Party shall provide the monitor, during the inspection, with such clarifications as may be necessary to remove the ambiguity. If an ambiguity is not resolved to the satisfaction of the monitors, or if the monitors determine that the cooperation of the monitored Party was inadequate, or if the monitored Party determines that the monitors abused their rights, the Parties shall promptly hold consultations where they shall seek to agree on measures to resolve the ambiguity.

ARTICLE VIII
AMENDMENT AND ENTRY INTO FORCE

This MOU may be amended by the written agreement of the Parties. This MOU shall enter into force upon signature and shall remain in force as long as the Agreement remains in force.

DONE at Washington this first day of September 1993, in duplicate, in the English and Russian languages, both texts being equally authentic.

FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA:

Philip C. Smith

FOR THE GOVERNMENT OF THE RUSSIAN FEDERATION:

Signed version

PROTOCOL ON HEU TRANSPARENCY ARRANGEMENTS IN FURTHERANCE OF THE MEMORANDUM OF UNDERSTANDING OF SEPTEMBER 1, 1993

The Department of Energy of the United States of America and the Ministry of Atomic Energy of the Russian Federation, hereinafter referred to as the Parties or the Executive Agents,

In accordance with Article VI of the Memorandum of Understanding Between the Government of the United States of America and the Government of the Russian Federation Relating to Transparency and Additional Arrangements Concerning the Agreement Between the Government of the United States of America and the Government of the Russian Federation Concerning the Disposition of Highly Enriched Uranium Extracted from Nuclear Weapons, dated September 1, 1993, hereinafter referred to as the Memorandum of Understanding (MOU),

Have agreed as follows:

Article I
Purpose

1. For purposes of ensuring that the highly enriched uranium (HEU) subject to the Agreement is extracted from nuclear weapons and that this same HEU enters the oxidation facility and is oxidized therein; that the declared quantity of HEU is blended down to low enriched uranium (LEU); and that the LEU delivered to the United States of America is fabricated into fuel for commercial nuclear reactors, the Parties shall have the right to implement transparency and access arrangements at the following facilities:

(a) Ural Electrochemical Integrated Enterprise (UEIE), Sverdlovsk-44, Russia; the Tomsk chemical processing and conversion facility (Tomsk) at which HEU metal extracted from nuclear weapons is oxidized prior to shipment to UEIE; and any other facility at which operations subject to the MOU and this Protocol are performed.

(b) Portsmouth Gaseous Diffusion Plant (Portsmouth), Piketon, Ohio; Nuclear fuel fabrication facilities in the United States to include Westinghouse in Columbia, South Carolina; General Electric in Wilmington, North Carolina; Babcock and Wilcox in Lynchburg, Virginia; Combustion Engineering in Hematite, Missouri; Siemens in Richland, Washington; and any other facility at which operations subject to the MOU and this protocol are performed.

2. All references to uranium, HEU and LEU in this Protocol, are understood to mean uranium, HEU and LEU subject to the MOU.

Article II
Implementation

To provide a means to promote the objectives and the implementation of the MOU and to continually improve transparency measures, the Executive Agents hereby establish a Transparency Review Committee (TRC) which shall convene no later than 21 days following the request of either Party, unless otherwise agreed. Within the framework of the TRC, the Parties may:

1. consider questions concerning the implementation and effectiveness of transparency measures;

2. discuss and agree upon changes or additional measures or procedures to promote the purposes of the MOU and this Protocol; and

3. resolve, by mutual agreement, any other relevant issues regarding the implementation of the MOU.

Article III
Transparency Measures

The provisions of this Article are without prejudice to any rights under existing or future transparency agreements.

1. The United States side shall have the right to perform the following monitoring activities at Tomsk:

(a) Visual monitoring, by means of physical presence, of HEU metal at the point where such metal is fed into the oxidation process,

(b) Visual monitoring, by means of physical presence, of the HEU oxide as it is withdrawn from the oxidation process, and

(c) Visual monitoring, by means of physical presence, of the HEU oxide at the storage and shipping areas where it is prepared for shipment to UKIE.

2. With respect to the monitoring activities set forth in paragraph 1 of this Article, the Parties shall agree upon

applicable procedures within the TRC, consistent with the MOU. An Agreement on such procedures shall be concluded during the first session of the TRC, unless otherwise agreed.

3. The United States side shall have the right to perform monitoring activities at the following locations at UEIE:

(a) the location at which HEU is received;

(b) oxidation feed and withdrawal locations for uranium subject to the MOU;

(c) fluoridation feed and withdrawal locations for uranium subject to the MOU; and

(d) all areas where LEU is being transferred from a technological cylinder to a 30B cylinder.

4. With respect to the locations listed in paragraph 3 of this Article, the Parties shall further agree upon applicable procedures within the TRC, consistent with the MOU. An Agreement on such procedures shall be concluded during the first session of the TRC, unless otherwise agreed.

5. In the event that the Russian side proposes or uses other sites for the processing of HEU, then the Parties shall agree within the TRC upon transparency measures for such sites, consistent with the MOU.

6. The Russian side shall have the right to perform monitoring activities at:

(a) the relevant receiving, storage, feed and withdrawal areas, the 30B cylinder filling area, and other processing areas at Portsmouth; and

(b) the receipt and storage area for sealed UF6 cylinders, the receipt area for sealed containers of uranium powder or pellets, and the shipping area containing serialized fuel assemblies packaged for shipment and sealed, or powder or pellets in sealed shipping containers, at U.S. fuel fabrication facilities.

7. With respect to the locations listed in paragraph 6 of this Article, the Parties shall further agree upon applicable procedures, within the TRC, consistent with the MOU.

8. The monitoring of the content of U-235 in the material being processed is among the major parameters of monitoring for both Parties.

9. Each Party shall endeavor to make additional familiarization visits, at the earliest possible time, to the facilities specified in Article I, in order to enable the Parties to understand fully each other's facilities, processes, and monitoring environment. The teams for the familiarization visits shall have no more than 10 individuals. During these familiarization visits, the Parties shall have the right to observe the other Party's activities at all locations specified in paragraphs 3 and 6 of this Article.

10. Contract representatives shall have the right to perform the activities agreed upon pursuant to the MOU and paragraphs 3, 5, and 6 of this Article, in addition to any activities performed pursuant to the implementing contract. The Russian Federation shall have the right to have contract representatives continuously present within the U.S. Portsmouth, Ohio facility and the United States shall have the right to have contract representatives continuously present within the UEIE facility.

11. Each Party shall have the right to conduct monitoring visits in accordance with the MOU.

(a) The monitoring Party shall notify the monitored Party of its intent to conduct monitoring visits at least 30 days prior to such a visit.

(b) The monitored Party shall facilitate monitoring visits and grant entry into the monitored facility upon the arrival of the monitoring team.

(c) Each monitoring team shall consist of: for UEIE, no more than 10 individuals; for Tomsk, no more than 7 individuals.

12. The Parties shall seek to establish mutually acceptable MC&A systems for UEIE and for Portsmouth at the earliest possible time, within the TRC, or through other channels.

13. If any LEU subject to the MOU is reexported to a third country, the United States side will require that such re-export be subject to International Atomic Energy Agency safeguards and to peaceful use assurances in the recipient country. Questions arising from transparency of reexports should be discussed in the TRC.

Article IV
Procedures

1. The Parties shall, within the TRC, develop not later than six months after entry into force of this Protocol, unless otherwise agreed, specific additional detailed measures and procedures for implementing the rights and obligations contained in the MOU and this Protocol, including, as appropriate, additional measures regarding permanent contract representatives, monitoring visits, analytical measurements, sampling, declarations and reports. These detailed measures and procedures shall be incorporated as annexes to this Protocol.

2. The monitored Party shall provide personal protective equipment.

3. Permanent contract representatives and visiting monitors shall have the right throughout the entire period of monitoring to be in communication with their embassy and their home country.

4. Each Party shall be responsible for the costs of its monitoring, including monitoring visits, and contract representation activities in the territory of the monitored Party.

Article V
Entry into Force and Amendment

1. This Protocol shall enter into force upon signature and remain in force as long as the MOU remains in force. This Protocol may be amended by the written agreement of the Parties.

2. If changes or additions are proposed in the TRC and the Parties are unable to reach agreement on such changes or additions within one year from the date of the opening of the TRC wherein such changes or additions were proposed, then each Party may so report to its government and then each government may decide, upon consultation with the other government, not to issue delivery orders, under the implementing contract. Deliveries or delivery orders may be resumed, in accordance with the implementing contract, upon resolution of issues raised by such proposals.

3. Upon entry into force of this Protocol, deliveries of the LEU, in accordance with the implementing contract, to the United States of America may commence.

DONE at Washington, D.C., in two copies, this 18th day of March, 1994, in the English and Russian languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF ATOMIC ENERGY OF THE RUSSIAN FEDERATION:

ANNEX 1 TO THE PROTOCOL

TRANSPARENCY REVIEW COMMITTEE

1. Composition of the TRC

1.1. The Transparency Review Committee (TRC) shall consist of delegations representing each Executive Agent. Each Executive Agent shall designate a Head of Delegation, Deputy Head of Delegation, and such members, advisors, experts, and other representatives as each Executive Agent deems necessary.

1.2. The Heads of Delegation, and in their absence, the Deputy Heads of Delegation, shall act as co-chairs of the committee;

1.3. The TRC may constitute working groups, consisting of any of the individuals, referred to in paragraph 1.1. for the preparation of proposals addressing any questions raised in the TRC.

2. Work of the TRC

2.1. The TRC may consider any matter consistent with the provisions of Article 2 of the Protocol.

2.2. Information about the work of the TRC shall not be made public, except as otherwise agreed by the TRC.

2.3. Agreements reached in the TRC shall be recorded in appropriate documents, which shall be done in two copies in English and in Russian, both texts being equally authentic. Such documents shall not be confidential, except as otherwise agreed.

2.4. The TRC shall produce a joint statement at the conclusion of each TRC session that reflects agreements reached during that session.

3. Convening a Session of the TRC

3.1. As specified in Article II of the Protocol, a session of the TRC shall be convened no later than 21 days following the request of either Executive Agent, unless otherwise agreed. Requests shall include the following:

3.1.1. the questions, proposed changes, additional measures, procedures, or any other issues that the Executive Agent intends to include on the agenda;

3.1.2. the name of the head of its delegation;

3.1.3. the proposed date and location of the TRC session; and

3.1.4. any proposals for resolving the concerns described under 3.1.1.

3.2. The other Executive Agent may also submit additional questions, proposed changes, measures, procedures, or any other issues for consideration by the TRC at any time prior to the session.

3.3. No later than seven days after receiving a request for a session as provided for in paragraph 3.1., the other Executive Agent shall submit a response to that request.

3.3.1. The response shall include:

3.3.1.1. the name of the head of its delegation for this session; and

3.3.1.2. acceptance of the proposed location and date for the convening of the session or a proposal for an alternate location and date, which date shall be no later than ten days after the date proposed, unless otherwise agreed.

3.3.2. The response may also include proposals for resolving any issue raised.

3.4. Either Executive Agent may accept a proposed resolution of the other Executive Agent, and based on this acceptance, request that the proposed TRC session not be convened.

3.5. The Executive Agents may agree at any time not to convene the TRC session.

3.6. Sessions of the TRC shall be convened in Geneva, Switzerland, or at another location as agreed upon by the Executive Agents.

3.7. A Head of Delegation or his designee may, at any time, initiate communication with the Head of Delegation of the other Executive Agent or his designee regarding any matter that falls under the jurisdiction of the TRC .

3.8. Either Executive Agent may request additional information related to any issue raised, but such request shall not affect a decision to convene a session of the TRC.

3.9. A session of the TRC will continue for no more than 2 weeks, unless otherwise agreed.

3.10. The TRC session shall convene at least one time in each calendar year, unless otherwise agreed.

4. Agenda of a TRC Session

4.1. The agenda for a session of the TRC shall consist of those questions, proposed changes, additional measures, procedures, or any other issues that the Executive Agents have included in the communications provided under paragraphs 3.1., 3.2., and 3.3. of this Annex.

4.2. Each delegation may raise in the TRC any questions, proposed changes, additional measures, procedures, or any other issues that were not included in the agenda through communications provided under paragraphs 3.1., 3.2., and 3.3. of this Annex; however, consideration of such concerns during the current session shall be subject to mutual agreement.

5. Costs

5.1. Each Executive Agent shall bear the cost of its participation in the TRC by its delegation.

6. Communications

6.1. All communications related to the work of the TRC conducted when the TRC is not in session shall be addressed to each Executive Agentís Head of Delegation.

6.2. Each Executive Agent shall acknowledge the receipt of communications within three business days.

7. Additional Procedures

7.1. The Executive Agents may agree upon additional procedures governing the operation of the TRC.

DONE at Washington, D.C., in two copies, this 28th day of July, 1995, in the English and Russian languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF ATOMIC ENERGY OF THE RUSSIAN FEDERATION

ANNEX 2 TO THE PROTOCOL

NOTIFICATION OF VISITS AND RELATED ARRANGEMENTS

1. Exchange of lists of monitors :

1.1. Each Executive Agent shall provide the other Executive Agent with an annual list, consisting of no more than 100 monitoring personnel, who shall carry out monitoring activities in accordance with the MOU and the Protocol. The initial list shall be provided no later than 60 calendar days after this Annex comes into force and shall be effective for one year, unless otherwise agreed. Subsequent annual lists may be submitted up to 120 calendar days prior to the expiration date of the list currently in effect.

1.2. Each Executive Agent may, by written notification, add or substitute monitoring personnel at any time within the numerical limitations of paragraph 1.1.

1.3. Each listing of monitoring personnel shall contain: the first name, middle name or patronymic, and last name; day, month, and year of birth; city, state or oblast, and country of birth; passport number; passport expiration date; gender; and citizenship.

2. Permanent Monitors

No less than 30 working days prior to entry, the Executive Agent of the monitoring Party shall provide, through official channels, to the Executive Agent of the monitored Party, notification of those permanent monitors designated from the list in paragraph 1.1., who shall undertake monitoring activities in accordance with the MOU and the Protocol.

3. Special Monitors

No less than 30 working days prior to entry, the Executive Agent of the monitoring Party shall provide, through official channels, to the Executive Agent of the monitored Party, notification of those special monitors designated from the list in paragraph 1.1., who shall undertake monitoring activities in accordance with the MOU and the Protocol.

4. Notifications

4.1. The Executive Agent of the monitoring Party shall provide to the Executive Agent of the monitored Party a notification of intent to conduct monitoring visits at least 30 working days prior to such visits.

4.2. Notification shall include the planned date and estimated time of arrival, the point of entry, the destination facility, the names of the monitors, and the name of the monitoring team leader.

4.3. Notification shall include a list of all equipment to accompany the monitoring team.

5. Entry Documentation

5.1. No later than 30 working days prior to entry, the Executive Agent of the monitoring Party shall provide to the embassy of the monitored Party the passports and visa applications of the personnel included in the notification.

5.2. No more than 15 working days following receipt of the passports and visa applications, the embassy of the monitored Party shall return those passports to the Executive Agent of the monitoring Party with multiple entry visas and all necessary documents that shall allow entry to and exit from the Russian Federation through St. Petersburg, Moscow, Novosibirsk, and Yekaterinburg or entry to and exit from the United States of America through Washington, D.C., New York, Cincinnati, and Atlanta.

6. Removal

6.1. If a Party determines that a monitor is unacceptable who has been included on the initial or annual list of monitoring personnel or on a list of proposed changes submitted under paragraph 1.2. of this Annex, the Executive Agent of the objecting Party shall notify the Executive Agent of the other Party of the objection within 30 calendar days of the submission of the list. Such monitors shall be deemed to have been removed from the list of monitoring personnel unless otherwise agreed.

6.2. If the monitored Party determines that a monitor on its territory has violated the provisions of its national legislation, the MOU, the Protocol, or paragraph 8 of this Annex, the Executive Agent of the monitored Party shall notify the Executive Agent of the monitoring Party. The monitor who is the subject of the determination shall be removed from the list of monitoring personnel, and depart from the monitored country, as soon as possible unless otherwise agreed.

7. Articles for Personal Use & Monitoring Equipment

7.1. Both Executive Agents shall allow monitors to bring into the territory of the monitored Party:

7.1.1. articles for their personal use, with the exception of articles the import or export of which is prohibited by law or controlled by quarantine regulations; and

7.1.2. equipment, supplies, or standards intended for use in the conduct of monitoring activities.

7.2. The Executive Agent of the monitored Party shall, for the purpose of eliminating delay, assist the passage through customs of baggage, supplies, equipment, or standards for use by the monitors .

7.3. The shipping of equipment, supplies, or standards containing radioactive materials within the territory of the monitored Party shall be conducted by the monitored facility in accordance with International Atomic Energy Agency recommendations and national legislation.

8. Conduct

8.1. Monitors shall not engage in any professional or commercial activity for personal profit in the territory of the monitored Party.

8.2. Monitors shall be obligated to respect the laws and regulations of the monitored Party and are also obligated not to interfere in the internal affairs of the monitored Party.

9. Escorts

The Executive Agent and management of the monitored facility shall have the right to designate its own personnel to escort monitors .

10. Assistance

The Executive Agent and management of the monitored facility shall assist monitors, if requested, in obtaining travel tickets, making hotel reservations, and arranging for meals, medical and dental care.

11. Upon arrival at a monitored facility monitors shall be briefed on safety procedures, safety regulations, and the work routine at the facility.

12. Monitors shall have the right to receive qualified emergency medical and dental assistance from the Executive Agent of the monitored Party or the management of the monitored facility. Such treatment is to be paid for by the Executive Agent of the monitoring Party, at the time the service is provided.

13. Monitors shall be escorted within any monitored facility or within the limits of the cities of Seversk or Novouralsk if required by the Executive Agent of the monitored Party or the management of a monitored facility, except that no escort shall be required within the monitors' designated office spaces or the monitors' residences. Escorts shall be available during monitored work shifts and periods of transit between monitor residences and monitored facilities. Escorts shall not be required to be available for other periods of time unless monitors' residences are within the city limits of Seversk and Novouralsk, in which case escorts shall be available 24 hours a day.

14. Monitors shall have the rights to maintain voice, facsimile, and data communication with their embassy and home country at all times by means of the telephone systems of the monitored Party. In addition, monitors shall also have the right to maintain other forms of communication at the cost of the monitoring Party, provided that the monitors obtain the necessary communications permits in accordance with the national communications regulations of the monitored Party.

15. Monitors, while on the territory of the monitored Party, shall have the right to the services of an interpreter. Such services shall be provided by the management of the monitored facility within any facility subject to monitoring activities under the MOU and the Protocol and paid by the Executive Agent of the monitoring Party.

DONE at Vienna, Austria in two copies, this 5th day of April, 1996, in the English and Russian languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF ATOMIC ENERGY OF THE RUSSIAN FEDERATION

ANNEX 3 TO THE PROTOCOL

PROCEDURES OF U.S. MONITORING AT THE URAL ELECTROCHEMICAL INTEGRATED ENTERPRISE (UEIE), NOVOURALSK, RUSSIA

1. Facilitation of the Monitoring Activities

The Ministry of Atomic Energy of the Russian Federation (MINATOM) and the Ural Electrochemical Integrated Enterprise (UEIE) shall facilitate monitoring visits and shall designate responsible persons to provide assistance to the U.S. monitors.

2. At UEIE, U.S. monitors shall have access to the following monitoring areas specified by the Protocol:

2.1. At the area where HEU oxide is received and at all areas where HEU oxide is stored:

2.1.1. serial numbers, tags and seals on all containers;

2.1.2. sample containers;

2.1.3. scales and mass logging computers;

2.2. At the area where HEU oxide is fed into the fluorination process:

2.2.1. all containers conveyed to the fluorination process;

2.2.2. serial numbers, tags, and seals on all containers conveyed to the fluorination process;

2.2.3. the input to the fluorination equipment;

2.2.4. tags and seals removed from the HEU oxide containers once the containers are unsealed and opened;

2.3. At the area where HEU hexafluoride containers are withdrawn from the fluorination process and at the area where HEU hexafluoride containers are stored:

2.3.1. the output from the fluorination equipment;

2.3.2. all HEU hexafluoride containers when they are being withdrawn from the fluorination facility;

2.3.3. serial numbers, tags and seals on all containers;

2.3.4. sampling equipment and sample containers;

2.3.5. scales and mass logging computers;

2.4. At the area where LEU hexafluoride is transferred from process cylinders into 30B†containers:

2.4.1. all process cylinders and 30B containers;

2.4.2. serial numbers, tags and seals on all containers;

2.4.3. scales and mass logging computers; and

2.4.4. sampling equipment and sample containers.

3. In accordance with the Joint Statement adopted at the Second Session of the Transparency Review Committee (TRC), U.S. monitors shall have access to the following additional points of monitoring:

3.1. At the blending facility where the HEU hexafluoride feed and LEU hexafluoride blend stock are combined and mixed:

3.1.1. points where flow-rate measuring orifice plates on the HEU hexafluoride feed and LEU blend stock pipelines are mounted;

3.1.2. seals on the flow-rate measuring orifice plates on the HEU hexafluoride and LEU blend stock pipelines;

3.1.3. seals removed from the flow-rate measuring equipment mounted on the HEU hexafluoride and LEU blend stock pipelines;

3.1.4. pressure indicating devices on HEU hexafluoride and LEU blend stock pipelines in front of and following the flow-rate measuring orifice plates;

3.1.5. sampling equipment for drawing samples from the HEU hexafluoride feed, LEU hexafluoride blend stock and LEU product pipelines;

3.1.6. seals and tags on the HEU hexafluoride feed, LEU hexafluoride blend stock, and LEU product sample containers.

4. After installation of the U.S. NDA and flow measurement equipment, U.S. monitors shall have access to the following:

4.1. U.S. nondestructive assay (NDA) instruments, as specified in Annex 12, on each of the HEU hexafluoride, LEU hexafluoride blend stock, and LEU product pipelines to continuously monitor the U-235 enrichment of the uranium in the three pipelines;

4.2. U.S. flow measurement instruments, as specified in Annex†12, on each of the HEU hexafluoride, LEU hexafluoride blend stock, and LEU product pipelines to continuously monitor the flow of uranium in the three pipelines.

5. Equipment and Container Handling at UEIE.

5.1. All handling of containers, process cylinders, and sample containers or of process equipment and devices, related to monitoring activities at UEIE shall be performed by UEIE personnel, unless otherwise stated.

6. At the monitoring areas the monitors shall have the right to carry out monitoring activities as follows:

6.1. At the area where HEU oxide is received and stored:

6.1.1. visually inspect containers with seals and tags;

6.1.2. verify the integrity of seals and tags on the containers;

6.1.3. observe the container weighing procedure;

6.1.4. observe the measurements using the portable U.S. sodium iodide detector NDA instruments, or equivalent Russian instruments, as selected by U.S. monitors, to measure the U-235 enrichment of the HEU oxide in containers, selected by the monitors, where those containers are stored;

6.2. At the area where HEU oxide is fed into the fluorination process:

6.2.1. visually inspect containers with seals and tags;

6.2.2. verify the integrity of seals and tags on the containers;

6.2.3. observe the process of HEU oxide feeding into the fluorination facility;

6.3. At the area where HEU hexafluoride containers are withdrawn from the fluorination process and at the area where HEU hexafluoride containers are stored:

6.3.1. observe the process of HEU hexafluoride containers being withdrawn from the fluorination facility;

6.3.2. observe the process of application of tags and seals to containers filled with HEU hexafluoride;

6.3.3. observe the process of HEU hexafluoride containers weighing before and after filling with UF_6;

6.3.4. visually inspect HEU hexafluoride containers;

6.3.5. observe the measurement using the portable U.S. sodium iodide detector NDA instruments or equivalent Russian instruments, as selected by U.S. monitors, to measure the U-235 enrichment of the HEU hexafluoride in containers selected by the monitors, where those containers are stored;

6.3.6. observe the process of sampling of the containers filled with HEU hexafluoride;

6.3.7. visually inspect sample containers and observe the process of their weighing before and after sampling;

6.3.8. observe the process of sealing filled sample containers;

6.4. At the area where LEU hexafluoride is transferred from process cylinders into the 30B containers:

6.4.1. visually inspect the process cylinders and 30B containers;

6.4.2. observe the transfer operations of LEU hexafluoride from process cylinders into the 30B containers and monitor the process parameters;

6.4.3. observe the process of LEU hexafluoride sampling;

6.4.4. visually inspect sample containers and observe the process of their weighing before and after sampling;

6.4.5. observe the process of filled sample containers sealing;

6.4.6. observe the process of 30B containers being withdrawn from the transferring station;

6.4.7. observe the process of sealing 30B containers;

6.4.8. observe the process of weighing 30B containers before and after their filling;

6.5. At the facility for blending HEU with LEU blend stock:

6.5.1. observe the process of flow-rate measuring orifices diameter measurement and the process of their mounting into the HEU hexafluoride and LEU blend stock pipelines;

6.5.2. observe the sealing of the points where the flow-rate measuring orifice plates are mounted into the HEU hexafluoride and LEU blend stock pipelines;

6.5.3. verify the integrity of tags and seals on the flow-rate measuring orifice plates mounted into the HEU hexafluoride and LEU blend stock pipelines;

6.5.4. observe the instrument readings that indicate pressure on HEU and LEU hexafluoride blend stock pipelines in front of and behind the orifice plates;

6.5.5. observe UEIE personnel's activities with regard to enrichment and flow measurement instruments in obtaining data from recording devices associated with these instruments, performing diagnostic check-out procedures, and maintaining, calibrating, and, as necessary, repairing or replacing these instruments;

6.5.6. request and observe the process of HEU hexafluoride, LEU blend stock, and LEU product sampling;

6.5.6.1. Until the beginning of the installation of NDA enrichment and flow equipment at the blend point, U.S. monitors shall have the right to request such samples be withdrawn four times per calendar year;

6.5.6.2. The taking of the four sample sets shall occur on the day of the request. Notification of the request to take sample sets shall be submitted no later than 8†AM.

6.5.7. observe the process of weighing sample containers before and after sampling and the process of their sealing;

6.6. In the Analytical Laboratory:

6.6.1. visually inspect tags and seals on sample containers filled with HEU hexafluoride, LEU blend stock, and LEU product;

6.6.2. observe the process of weighing of sample containers filled with HEU hexafluoride, LEU blend stock, and LEU product; and

6.6.3. observe and take part in the process of blind sample analysis in accordance with the Procedure for Blind Sample Analysis, as given in Attachment 2 to this Annex;

7. At UEIE, U.S. monitors are provided for familiarization with data on Nuclear Material Control and Accountability (NMC&A) related to monitoring activities.

7.1. The data on NMC&A provided to the U.S. monitors for familiarization shall include the forms listed below for all uranium subject to the Agreement. Blank examples of these forms are found in Attachment 1 to this Annex. All technical and analytical data fields in each form shall, when provided, be complete to the extent possible for the current stage of processing.

7.1.1. K-1 - Way-Bill Certificate for HEU U_3O_8 and samples received from SChE and waste shipped to SChE;

7.1.2. K-14-1 - Analytical Data for HEU U_3O_8 of uranium and U_{235};

7.1.3. K-14-2 - Analytical Data for waste of uranium and U_{235};

7.1.4. K-14-3 - Analytical Data for HEU hexafluoride of uranium and U_{235};

7.1.5. K-15-1 - Analytical Data for HEU hexafluoride of U_{235} at the blending point;

7.1.6. K-15-2 - Analytical Data for LEU hexafluoride blend stock of U_{235} at the blending point;

7.1.7. K-15-3 - Analytical Data for LEU hexafluoride product of U_{235} at the blending point;

7.1.8. Document 1.2. - Quality and Weighing Data Certificate for LEU hexafluoride product in 30B containers;

7.1.9. Document 1.3. - Analytical Data for LEU hexafluoride product in 30B containers;

7.1.10. K-11 - Material Report of reprocessing HEU into LEU for one-month period;

7.1.11. K-12 - Material Report of reprocessing HEU into LEU for one-year period.

7.2. Documents shall be fully completed in accordance with the agreed format as given in Attachment 1 to this Annex.

7.3. The information provided to monitoring personnel shall be treated confidentially, restricted to official agencies and to persons designated by the Executive Agents, and shall not, without the permission of the monitored Party, be provided to third parties or released to the public or utilized by the receiving Party for its own commercial advantage.

8. At UEIE, U.S. monitors shall have the right:

8.1. to record and retain data obtained from the monitoring activities;

8.2. to familiarize themselves with accountability records in accordance with paragraph†7 of this Annex;

8.3. to obtain photocopies of completed Documents 1.2 and 1.3, described in sub-paragraphs 7.1.8 and 7.1.9 of this Annex; these photocopies shall be provided to U.S. monitors outside of the UEIE facility for removal to the U.S. All copies of the documents provided to the U.S. side shall have the diagonal mark "U.S. Document."

8.4. to familiarize themselves with the description of technological processes performed at UEIE on uranium subject to the Agreement; to request additional information to clarify technical process descriptions given in Annex 9;

8.5. to check the serial number of each HEU U_3O_8 container received from SChE as well as the placement, integrity, and serial numbers of tags and seals on each container;

8.6. to observe the measurements using the portable U.S. sodium iodide detector NDA instruments or equivalent Russian instruments, as selected by U.S. monitors, to measure the U-235 enrichment of the HEU oxide in each HEU U_3O_8 container received from SChE, as selected by monitors;

8.7. to observe the application of U.S. tags and/or seals:

8.7.1. on flow-rate measuring orifice plates in HEU and LEU blend stock pipelines in the blending facility;

8.7.2. on containers with samples withdrawn from HEU, LEU blend stock, and LEU product pipelines in the blending facility;

8.7.3. on 30B containers and sample containers with LEU hexafluoride product;

8.7.4. any U.S. tag and seal affixed at the U.S. monitors request shall not compromise other seals affixed by UEIE personnel.

8.8. to observe measurements using portable U.S. sodium iodide detector NDA instruments or equivalent Russian instruments, as selected by U.S. monitors, to measure the U-235 enrichment of the HEU hexafluoride in each HEU hexafluoride container, selected by the monitors;

8.9. to monitor the calibration of scales, offer U.S. standards, observe the measurements of these standards, and obtain the results of the measurements;

8.10. From the time of completion of installation and adjustment of the enrichment and flow measurement systems, monitors shall have the right of access to the blend point once every two weeks during the first four months and, subsequently, once every two months;

8.11. to request and observe UEIE personnel's activities with regard to enrichment and flow measurement instruments in obtaining data from the recording devices and the computer system associated with these instruments; maintaining, calibrating, and performing diagnostic procedures; and, as necessary, repairing or replacing these instruments;

8.12. to take part in the process of "blind" sample analysis in accordance with Attachment 2 to this Annex;

8.13. to use other equipment and supplies, as listed in Annex 12;

8.14. to have working rooms in UEIE buildings where they:

8.14.1. examine accountability records listed in paragraph 7;

8.14.2. process and store the documentation obtained; and

8.14.3. carry out other work related to monitoring activities;

8.15. to observe application of U.S. supplied tags and seals to installed U.S. NDA and flow measurement instruments and to the security containers in which U.S. NDA equipment and spare parts are stored.

9. Upon U.S. monitors arrival, UEIE shall provide them with copies of Accountability Records, for familiarization in accordance with paragraph 7, on all quantities of uranium received from SChE, processed by UEIE and/or shipped from UEIE for the period since last monitoring visit.

10. Permanent Monitors and Special Monitors

10.1. The permanent monitoring staff shall consist of up to four (4) persons. At any time, there can be no more than three (3) permanent monitors within the UEIE plant.

10.2. The monitoring activities shall be carried out on working days during day-time shifts, when the HEU reprocessing takes place, with the following exceptions:

10.2.1. Monitoring activities during evening or night shifts as well as on days off may be carried out only upon special request which is given to escorts on a working day not later than two (2) hours before the end of the day-time shift.

The number of such requests shall not exceed two (2) per month and shall not exceed twelve per year.

10.2.2. The procedures specified in paragraphs 6.5.1, 6.5.2, and 6.5.3 shall be performed whenever flow rate orifice plates are replaced.

10.2.3. In the event of operational necessity at UEIE, the orifice plates may be replaced in the absence of the U.S. monitors with immediate notification of the replacement given to the U.S. side.

10.3. For two (2) days during the replacement period of the U.S. permanent monitors, up to four (4) persons shall be allowed to be present in the working rooms within the UEIE plant.

10.4. The total number of monitors present within the UEIE plant may consist of no more than ten (10) persons.

10.5. The number of days during which special monitoring activities occur shall not exceed five (5) working days for each special monitoring visit to UEIE. The number of special monitoring visits shall not exceed six (6) visits per calendar year.

10.6. During their monitoring activities the group of special and permanent monitors shall have the right to divide into not more than three (3) subgroups.

10.7. Translators for permanent and special monitors shall be selected from the approved list of monitors specified in Annex†2, and counted against the limitations indicated in paragraphs 10.1 and 10.4 of this Annex, except in the case where translators are provided by the management of the monitored facility as described in Annex 2, paragraph 15.

10.8. All monitors are obligated to observe safety regulations and management procedures in effect at UEIE.

11. The UEIE Administration provides U.S. monitors with personal protective equipment and individual dosimeters to be used at UEIE. In addition, each U.S. monitor shall have the right to use at the monitoring points two thermoluminescent integrating dosimeters supplied by the U.S. side. Dosimeters furnished by the UEIE and U.S. shall be worn by each monitor while working at UEIE and given to the UEIE responsible person at the end of the working day. Upon completion of each monitor's visit, the UEIE responsible person shall select one of the two U.S.-supplied dosimeters which had been used by each monitor. The selected dosimeter shall be tagged and sealed by both sides and retained at UEIE as a confirmation device if questions arise concerning monitor exposure levels. Within 90 days following the monitor's departure from UEIE, each side shall have the right to contact the other side for a joint reading of the confirmation dosimeter. The second dosimeter supplied by the U.S. side shall be retained by each monitor when departing from the UEIE. The U.S. side shall provide to the UEIE Administration, necessary information on the reading and calibration methods of the dosimeters supplied by the U.S. side.

12. Upon request of U.S. monitors the UEIE Administration shall provide data on radioactive environment in the working areas of the monitors.

13. UEIE will take appropriate measures to facilitate the optimum operation of the U.S. NDA and U.S. flow measurement instruments.

14. Equipment installation.

14.1. Installation and adjustment of U.S. enrichment and flow instrumentation shall begin not earlier than March 1997, in accordance with an agreed schedule. Installation shall not require a shutdown of the blending process for more than seven calendar days. The monitoring party will assist in the timely first installation, March 1997, certification and licensing of U.S. supplied equipment, as specified in Annex 12. Installation and adjustment shall be done by the trained Russian personnel under the observation of U.S. technical experts. During equipment installation, daily access shall be provided to U.S. technical experts by the monitored facility beginning in March. The monitoring party shall pay for all expenses associated with licensing, training, installation and adjustment of NDA equipment.

14.2. The number of U.S. technical experts and monitors present at the blend point at any given time during installation and adjustment should not exceed four people.

14.3. Following installation of the monitoring party's NDA equipment at the blend point, unless the Russian blending process changes, the monitoring process will not change before March 1, 2001. The executive agent of the monitored party shall assist in licensing, installation and operation of this equipment, and will do so to meet the March 1997 installation start-up.

14.4. Aspects regarding the photocopying of the data printouts, including its contents, will be resolved during installation.

DONE in Moscow, Russia, in two copies, this 20th day of December, 1996, in the English and Russian Languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF THE RUSSIAN FEDERATION FOR ATOMIC ENERGY:

FORMS FOR ACCOUNTABILITY RECORDS

TABLE OF CONTENTS:

1. K-1 - Way-Bill Certificate for HEU U_3O_8 and samples received from SChE and waste shipped to SChE;

2. K-14-1 - Analytical Data for HEU U_3O_8 of uranium and U_{235};

3. K-14-2 - Analytical Data for waste of uranium and U_{235};

4. K-14-3 - Analytical Data for HEU hexafluoride of uranium and U_{235};

5. K-15-1 - Analytical Data for HEU hexafluoride of U_{235} at the blending point;

6. K-15-2 - Analytical Data for LEU hexafluoride blend stock of U_{235} at the blending point;

7. K-15-3 - Analytical Data for LEU hexafluoride product of U_{235} at the blending point;

8. Document 1.2. - Quality and Weighing Data Certificate for LEU hexafluoride product in 30B containers;

9. Document 1.3. - Analytical Data for LEU hexafluoride product in 30B containers;

10. K-11 - Material Report of reprocessing HEU into LEU for one-month period;

11. K-12 - Material Report of reprocessing HEU into LEU for one-year period.

THE PROCEDURE FOR BLIND SAMPLE ANALYSIS

1. The following method for a "blind" sample analysis procedure is to be used in analyzing samples taken at the blending point by mass spectrometry in the Analytical Centre (AC) of UEIE.

2. Procedure for observing/sealing:

2.1 UEIE personnel in the presence of U.S. monitors shall weigh the empty À4437 sample containers (drawing À4437) intended for taking samples at the blending point and shall take 3 uranium hexafluoride samples into them: HEU, LEU blendstock and LEU product – one sample of each type.

2.2 The U.S. monitors shall observe the sampling procedure.

2.3 U.S. monitors shall observe the UEIE personnel weighing and placing seals, provided by the U.S. side, on the filled sample containers after the sample taking.

2.4 UEIE personnel shall place the three selected samples in three storage & transport containers (TC) (drawing À5062, Fig. 3) for conveying the samples to the Analytical Centre (AC).

2.5 U.S. monitors shall observe the placing of seals, provided by the U.S. side, on the storage & transport containers.

2.6 UEIE personnel shall convey the sealed storage & transport containers to the Material Control and Accounting (MC&A) Service for registration and conveyance to the Analytical Centre.

3. Observing the conduct of analysis:

3.1 Analysis of these samples shall be performed as soon as possible and in accordance with normal plant scheduling, but no later than three days after the samples are withdrawn from the blend point.

3.2 At the Analytical Centre the U.S. monitors shall verify the integrity of the seals on the storage & transport containers containing the UF_6 samples taken at the blending point.

3.3 Preparation of the samples and RMs for measurements:

3.3.1 Both sides shall verify the integrity of seals on all ″ ″ 1¿-- Œ• packing sets containing RM.

3.3.2 UEIE personnel in the presence of U.S. monitors shall open any two of the packing sets with the 90% enriched uranium RM and both sides shall verify the integrity of the seals on those sample containers.

3.3.3 Both sides shall record the identification numbers marked on the RM sample containers. U.S. monitors shall observe UEIE personnel removing the seals and weighing the sample containers.

3.3.4 UEIE personnel in the presence of U.S. monitors shall cover the identification numbers marked on the sample containers with an opaque material.

3.3.5 UEIE personnel in the presence of U.S. monitors shall open the storage & transport container with the UF_6 HEU sample taken at the blending point.

3.3.6 Both sides shall verify the integrity of the seals and record the identification number marked on the sample container. U.S. monitors shall observe UEIE personnel removing the seals and weighing the sample container.

3.3.7 UEIE personnel in the presence of U.S. monitors shall cover the identification number marked on the sample container as in paragraph 4.3.4 with an opaque material, and replace the container in an empty slot in the storage & transport container. The sample containers filled with 90%-enriched RM shall be placed into the same storage and transport container.

3.3.8 The procedures in 4.3.1 - 4.3.7 shall be repeated for the LEU blendstock and LEU product UF_6 samples.

3.4 U.S. monitors shall shuffle the sample containers in the storage & transport container.

3.5 U.S. monitors shall remove the three sample containers from the storage & transport container (two filled with RM and one filled with the sample taken at the blending point) and hand them over to the responsible person in the Analytical Centre to measure the U-235 content.

3.6 The analysis of the enriched U-235 shall be conducted according to the method in ASTM designation C 761-91 or an equivalent method.

3.7 The precision of the U-235 measurement must not be worse than ±0.5% of the measured value.

3.8 U.S. monitors shall observe the UEIE personnel connecting the sample containers to be measured on the mass spectrometer, making measurements of U-235 content and removing the sample containers from the mass spectrometer.

3.9 After concluding the measurement of U-235 content the Analytical Centre shall present a copy of the computer printout with the results of the analysis to the U.S. monitors for familiarization.

3.10 After concluding the measurements of each set of three analyses (one sample and two RM) UEIE personnel in the presence of U.S. monitors shall remove the opaque covering material from the sample containers, and both Sides shall verify the identification numbers marked on the sample containers.

3.11 UEIE personnel shall place the sample container with the measured sample into the storage & transport container in which that sample reached the Analytical Centre.

3.12 The procedures in points 4.4 - 4.11 shall be repeated for the sample containers filled with LEU blendstock and LEU product.

3.13 After concluding the "blind" measurement of each UF_6 sample taken at the blending point (HEU, LEU blendstock, and LEU product), UEIE personnel in the presence of U.S. monitors shall weigh each measured RM container, seal it with seals provided by the U.S. side, and place it in the ″ ‟ 1¿-- Œ• packing set for storage. The weight of the UF_6 in each RM container shall not be less than 0.5 g.

3.14 After placing the RM containers in the packing sets, UEIE personnel in the presence of U.S. monitors shall seal the packing sets with seals provided by the U.S. side and hand them over to the NMC&A Service to be stored until the next cycle of measurements is to be conducted.

ANNEX 4 TO THE PROTOCOL

PROCEDURES OF THE RUSSIAN MONITORING ACTIVITIES AT THE PORTSMOUTH GASEOUS DIFFUSION PLANT AT PIKETON, OHIO (PORTS)

1. Description

1.1. This Annex covers the receipt, inventory, and tracking of Russian LEU delivered to PORTS, as well as associated monitoring activities in two situations. The first situation involves the delivery of Russian LEU cylinders that are shipped directly from PORTS to a U.S. fuel fabricator. The second situation involves delivery of cylinders of Russian LEU to PORTS and transferral of their contents to other cylinders and mixing the Russian LEU in these cylinders.

1.2. The U.S. side informed the Russian side that at this time, it has no plans to feed into the Portsmouth enrichment cascade any of the LEU delivered to this facility that contains LEU of Russian origin except for the following:

1.2.1. Material used during the process of sampling to flush lines prior to and after collection of sample material

1.2.2. Residual materials from sampling procedures that are not consumed in obtaining sample results

(For the exceptions 1.2.1 and 1.2.2, the cumulative amount is limited to 1 percent of the UF_6 contained in each cylinder and will be reported on Form VB-5 in column 7)

1.2.3. Weight adjustment at a customer's request

(This exception is limited to 5 percent of the UF_6 contained in each cylinder and will be reported on Form VB-5 in column 8)

1.2.4. Cold feeding of a cylinder due to safety concerns

(The UF_6 involved in this exception will be reported on Form VB-5 in column 7, and will be explained in a footnote to that column)

1.2.5. Cold burping of a cylinder that has a damaged valve that cannot be repaired

(The UF_6 involved in this exception will be reported on Form VB-5 in column 7, and will be explained in a footnote to that column)

1.3. Russian flow and enrichment instruments can be installed at the feed points in the event that Russian "WR" enriched uranium is fed into the enrichment cascade.

The Russian instruments shall be non-intrusive and shall be installed on the outside of the feed pipelines.

2. Facilitation of the Monitoring Activities

The U.S. Department of Energy (DOE) and PORTS shall facilitate monitoring visits and shall designate a responsible official to provide assistance to the Russian monitors.
Equipment and Container Handling at PORTS

All handling of containers, process cylinders, and sample containers or of process equipment and devices related to monitoring activities at PORTS shall be performed by PORTS personnel.

4. At PORTS Russian monitors are provided with data on Nuclear Material Control and Accountability (NMC&A) related to monitoring activities.

The data on NMC&A provided to the Russian monitors for famarilization include the forms listed below for all uranium subject to the Agreement. Blank examples of these forms are found in Attachment 1 to this Annex. All technical and analytical data fields in each form shall, when provided, be complete to the extent possible for the current stage of processing.

4.1. For cylinders with Russian material, material to be mixed with Russian material, and material resulting from such mixing:

4.1.1. DOE/NRC Form 741 (U.S. Department of Energy/Nuclear Regulatory Commission form 741, Nuclear Material Transaction Report), with "WR" entered in positions 7 and 8 of the "J" column to denote the uranium that is of Russian origin.

4.1.2. Production Scheduling Receipt, Form VB-1

4.1.3. Print Weight Forming Card, Form A-599B (4-91) Rev.

4.1.4. Print Weight Forming Card, Form A-599B (4-91) Rev., for a 30B cylinder after a sample is taken.

4.2. For sampling and analysis at PORTS:

4.2.1. Nuclear Material Sample Transfer, Form A-257 (8-87) Rev.

4.2.2. Sample Transfer Report, Form VB-2

4.3. For cylinders with Russian material shipped from PORTS:

4.3.1. Production Scheduling System (PSS) Field Work Sheet for Off Site Shipments, Nuclear Material Inspection Sheet - Outbound, Form VB-3

4.3.2. Print Weight Forming Card, Form A-599B (4-91) Rev.

4.3.3. DOE/NRC Form 741 (U.S. Department of Energy/Nuclear Regulatory Commission form 741, Nuclear Material Transaction Report), with "WR" entered in positions 7 and 8 of the "J" column to denote the uranium that is of Russian origin.

4.3.4. Russian Material Mixing Report, Form VB-4

Whenever mixing of Russian material occurs at PORTS, Form VB-4 will be prepared by PORTS personnel for each cylinder that results from the mixing process and contains Russian material. The completed form VB-4 will be attached to the DOE/NRC Form 741 accompanying the cylinder to the fuel fabricator. The information for Form VB-4 is to be obtained from column C (cylinder identification number), column O (mass of uranium added), and column Q (weight % U235) on the DOE/NRC Form 741.

4.4. Material Balance Report on Processing of Russian Material, Form VB-5

This form is to be filled out by PORTS personnel for each month and annually.

Documents shall be fully completed in accordance with the agreed format as given in Attachment 1 to this Annex.

4.5. The information provided to monitoring personnel shall be treated confidentially, restricted to official agencies and to persons designated by the Executive Agents, and shall not, without the permission of the monitored Party, be provided to third parties or released to the public or utilized by the receiving Party for its own commercial advantage.

5. Russian monitors shall have access to the following equipment and documents at PORTS:

5.1. the X-344 facility and X-745B cylinder storage yard where LEU hexafluoride is received and stored.

5.1.1. to LEU hexafluoride containers for inspection and spot checking for uranium of the stated enrichment with U.S. or Russian portable NDA equipment at the discretion of the monitors;

5.1.2. to individual 30B containers at the request of the monitors for the measurement of U-235 content, including NDA instruments;

5.1.3. serial numbers, tags and seals on each 30B cylinder, or if the tags and seals have been removed to take a UF6 sample from a 30B cylinder, the tags and seals that have been removed shall be available for inspection;

5.1.4. the accountability forms described in paragraphs 4.1 and 4.2 of this Annex for each 30B cylinder;

5.1.5. scales and scale printers; and

5.1.6. filled 2S sample containers prior to delivery to the laboratory for sub-sampling and analysis.

5.2. the X-342 and X-343 facilities where LEU hexafluoride from a 30B cylinder is sampled and/or fed to the enrichment cascade:

5.2.1. to LEU hexafluoride containers for inspection and spot checking for uranium of the stated enrichment with U.S. or Russian portable NDA equipment at the discretion of the monitors;

5.2.2. serial numbers, tags and seals on each 30B cylinder, or if the tags and seals have been removed to take a UF6 sample from a 30B cylinder, the tags and seals that have been removed shall be available for inspection;

5.2.3. the accountability forms described in paragraph 4.2 of this Annex for each 30B cylinder;

5.2.4. scales and scale printers; and

5.2.5. 2S sample containers that have not been sent to the laboratory for analysis and sub-sampling.

5.3. the X-344 facility and the X-745B cylinder storage yard where the 30B cylinders sent from Russia are made ready for shipment to fuel fabricators:

5.3.1. to LEU hexafluoride containers for inspection and spot checking for uranium of the stated enrichment with U.S. or Russian portable NDA equipment at the discretion of the monitors;

5.3.2. to individual 30B containers at the request of the monitors for the measurement of U-235 content, including NDA instruments;

5.3.3. serial numbers, tags and seals on all 30B cylinders;

5.3.4. the accountability forms described in paragraph 4.3 of this Annex for each 30B cylinder;

5.3.5. scales and scale printers.

5.4. the X-344 facility where the fuel fabricators' 30B cylinders are filled with material resulting from mixing with the Russian material and prepared for shipment:

5.4.1. LEU hexafluoride containers for visual inspection;

5.4.2. serial numbers, tags and seals on each 30B cylinder delivered for mixing with Russian material and the 30B cylinders after mixing;

5.4.3. the accountability forms described in paragraphs 4.1 and 4.3 of this Annex for each 30B cylinder delivered for mixing with Russian material and the 30B cylinders after mixing;

5.4.4. scales and scale printers;

5.4.5. 2S sample containers that have not been sent to the laboratory for analysis and sub-sampling.

5.5. the X-343S cylinder storage yard where 30B cylinders sent from Russia are stored:

5.5.1. to LEU hexafluoride containers for inspection and spot checking for uranium of the stated enrichment with U.S. or Russian portable NDA equipment at the discretion of the monitors;

5.5.2. to individual 30B containers at the request of the monitors for the measurement of U-235 content, including NDA instruments;

5.5.3. serial numbers, tags and seals on all 30B cylinders;

5.5.4. the accountability forms described in paragraph 4.3 of the annex for each 30B cylinder.

5.6. In the Analytical Laboratory:

5.6.1. visually inspect tags and seals on sample containers filled with LEU hexafluoride;

5.6.2. observe the process of weighing of sample containers filled with LEU hexafluoride;

5.6.3. Observe the process of subsampling and analyzing the sample containers filled with LEU hexafluoride for U-235 enrichment.

6. Permanent Monitors and Special Monitors

6.1. The permanent monitoring staff shall consist of up to four persons. At any time, there can be no more than three permanent monitors within the PORTS plant.

6.2. The monitoring activities shall be carried out on working days during day-time shifts, when the LEU reprocessing takes place, with the following exceptions:

6.2.1. Monitoring activities during evening or night shifts as well as on days off may be carried out only upon special request which is given through escorts to the PORTS Administration on a working day not later than two hours before the end of the day-time shift. The number of such requests shall not exceed two per month and shall not exceed twelve per year.

6.3. For two days during the replacement period of the Russian permanent monitors, up to four persons shall be allowed to be present in the working rooms within the PORTS plant.

6.4. A group of special monitors may consist of no more than seven persons, so the total number of monitors present within the PORTS plant may increase up to ten persons.

6.5. The number of days during which special monitoring activities occur shall not exceed five working days for each special monitoring visit to PORTS. The number of special monitoring visits shall not exceed six visits per calendar year.

6.6. During their monitoring activities the group of special and permanent monitors shall have the right to divide into not more than three subgroups.

6.7. Translators for permanent and special monitors shall be selected from the approved list of monitors specified in Annex 2, paragraph 1, and counted against the limitations indicated in paragraphs 6.1 and 6.4 of this Annex, except in the case where translators are provided by the management of the monitored side as described in Annex 2, paragraph 15.

6.8. All monitors are obligated to observe safety regulations and management procedures in effect at PORTS.

7. The PORTS Administration provides Russian monitors with personal protective equipment and individual dosimeters to be used at PORTS. In addition, each Russian monitor shall have the right to use at the monitoring points two thermoluminescent integrating dosimeters supplied by the Russian side. Dosimeters furnished by PORTS and the Russian side shall be worn by each monitor while working at PORTS and given to the PORTS responsible person at the end of the working day. Upon completion of each monitor's visit, the PORTS responsible person shall select one of the two Russian-supplied dosimeters which had been used by each monitor. The selected dosimeter shall be tagged and sealed by both sides and retained at PORTS as a confirmation device if questions arise concerning monitor exposure levels. Within 90 days following the monitor's departure from PORTS, each side shall have the right to contact the other side for a joint reading of the confirmation dosimeter. The second dosimeter supplied by the Russian side shall be retained by each monitor when departing from PORTS. The Russian side shall provide to PORTS Administration, necessary information on the reading and calibration methods of the dosimeters supplied by the Russian side.

8. The special monitors and permanent monitors shall have the following rights regarding LEU hexafluoride subject to the Agreement:

8.1. to examine accountability forms, shipping documents, and measurement control forms;

8.2. to check the serial number of each 30B cylinder and the placement, integrity, and serial number of tags and seals on each 30B cylinder;

8.3. to have their own tags or seals affixed to 30B cylinders to which access is given under the MOU and Protocol, in their presence. Any tag or seal affixed for the monitors shall not compromise the seals affixed by the PORTS personnel;

8.4. to observe the checking of the calibration of PORTS scales through the use of check weights, using either the monitor's standards or PORTS standards, or both. The monitors may also elect to check PORTS standards through the use of their own scale.

8.5. to use an office adjacent to the PORTS production facilities within the limited security area where they:

8.5.1. examine copies of accountability forms listed in paragraph 4;

8.5.2. process and store the documentation obtained;

8.5.3. carry out other work related to monitoring activities.

8.6. For cylinders that have been cold fed due to safety concerns or cold burped due to damaged valves that cannot be repaired:

8.6.1. To be able to inspect any damaged cylinder either prior to or after cold feeding. The location of the damaged cylinder will remain a Transparency Monitoring Point until a Russian monitor has inspected the cylinder.

8.6.2. To be able to inspect any damaged cylinder either prior to or after cold burping. For damaged cylinder valves, the Russian monitor will be provided the opportunity to inspect the damaged cylinder valve at their monitoring office.

9. Upon the arrival of the Russian monitors, PORTS shall provide them with copies of accountability forms and shipping documents, in accordance with paragraph 4, covering all uranium hexafluoride received, stored, mixed, and shipped since the last monitoring visit.

10. For the LEU hexafluoride samples, the following sampling procedures shall apply:

10.1. PORTS shall take and analyze sub-samples, as requested by the monitors from 30B cylinders containing Russian material that has been sent to a fuel fabricator, unless the verification of seal integrity provides assurance that samples need not be taken and from material transferred into 30B cylinders containing uranium subject to the agreement sent to a fuel fabricator;

10.2. PORTS shall provide to the monitors for famarilization Sampling Forms that relate the sample container's number to the container number of the source LEU hexafluoride cylinder;

10.3. PORTS shall afford the monitors an opportunity to witness the sampling and sub-sampling of all uranium subject to the Agreement;

10.4. sub-samples shall consist of at least 7 grams, and not more than 12 grams, of LEU hexafluoride in a P10 Tube. PORTS shall provide assurance that the sub-samples are representative.

11. Upon the request of Russian monitors, the PORTS Administration shall provide data on the radioactive environment in the working areas of the monitors.

DONE at Moscow, Russia, in two copies, this 19th day of December, 1996, in the English and Russian languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF THE RUSSIAN FEDERATION FOR ATOMIC ENERGY:

ACCOUNTABILITY FORMS

TABLE OF CONTENTS:

1. DOE/NRC Form 741 -- Department of Energy / Nuclear Regulatory Commission Form 741, Nuclear Material Transaction Form

2. Form VB-1 -- Production Scheduling Receipt Form

3. Form A-599B(4-91) Rev. -- Print Weight Forming Card

4. Form A-257(8-87) Rev. -- Nuclear Material Sample Transfer

5. Form VB-2 -- Sample Transfer Report

6. Form VB-3 -- Production Scheduling System (PSS) Field Work Sheet For Off Site Shipments, Nuclear Material Inspection Sheet - Outbound

7. Form VB-4 -- Russian Material Mixing Report

8. Form VB-5 -- Material Balance Report on Processing of Russian Material

ANNEX 5 TO THE PROTOCOL

PROCEDURES OF U.S. MONITORING AT THE SIBERIAN CHEMICAL ENTERPRISE (SChE) IN SEVERSK, RUSSIA

1. Facilitation of the Monitoring Activities

The Ministry of the Russian Federation for Atomic Energy (MINATOM) and the Siberian Chemical Enterprise (SChE) shall facilitate monitoring visits and shall designate responsible persons to provide assistance for the U.S. monitors.

2. At SChE, U.S. monitors shall have access to the following monitoring points at the monitoring areas:

2.1. At Warehouse 9, where the HEU weapons components subject to the Agreement, in sealed containers, from dismantled Russian nuclear weapons, are received and stored at SChE upon their initial arrival from Russian nuclear weapons dismantlement facilities:

2.1.1. the sealed containers that hold HEU weapons components;

2.1.2. the SCC-1 Forms.

2.2. At the area where the HEU weapons components subject to the agreement are stored prior to machining and where HEU metal shavings are stored:

2.2.1. the containers that hold HEU weapons components and metal shavings;

2.2.2. the SCC-2 Forms accompanying the containers.

2.3. At the area where HEU metal chips are fed into the oxidation process:

2.3.1. all containers fed into the oxidation process;

2.3.2. serial numbers, tags and seals on all containers fed into the oxidation process.

2.4. At the area where HEU U_3O_8 is withdrawn from the oxidation process:

2.4.1. all containers with HEU U_3O_8 withdrawn from the oxidation process;

2.4.2. serial numbers, tags and seals on all containers with HEU U_3O_8 withdrawn from the oxidation process.

2.5. At the areas where HEU U_3O_8 is fed into the process and withdrawn from the Uranium Purification Process:

2.5.1. the containers with HEU U_3O_8 fed into and withdrawn from the purification process;

2.5.2. serial numbers, tags and seals on all containers with HEU U_3O_8 fed into and withdrawn from the purification process.

2.6. At the area where the HEU U_3O_8 is stored and prepared for shipment to any Russian fluorination facility subject to the Agreement:

2.6.1. serial numbers, tags and seals on all HEU U_3O_8 containers;

2.6.2. scales and mass-logging computers.

2.7. At the place where HEU U_3O_8 is received and stored at the fluorination facility:

2.7.1. serial numbers, tags and seals on all containers.

2.8. At the area at the fluorination facility where HEU U_3O_8 is fed into the fluorination process:

2.8.1. all containers conveyed to the fluorination process;

2.8.2. serial numbers, tags, and seals on all containers conveyed to the fluorination process;

2.8.3. tags and seals removed from the HEU U_3O_8 containers once the containers are unsealed and opened.

2.9. At the area in the fluorination facility where HEU hexafluoride containers are withdrawn from the fluorination process and at the area in the fluorination facility where HEU hexafluoride containers are stored and prepared for shipment to any Russian blending facility subject to the Agreement:

2.9.1. all HEU hexafluoride containers when they are being withdrawn from the fluorination facility;

2.9.2. serial numbers, tags and seals on all containers;

2.9.3. scales and mass logging computers.

2.10. At the area in the blending facility where HEU hexafluoride is received and at all areas in the blending facility where HEU hexafluoride is stored:

2.10.1. serial numbers, tags and seals on all containers;

2.10.2. scales and mass logging computers.

2.11. At the facility where the HEU hexafluoride feed and LEU hexafluoride blend stock are blended:

2.11.1. points where flow-rate measuring orifice plates on the HEU hexafluoride feed and LEU blend stock pipelines are mounted;

2.11.2. seals on the flow-rate measuring orifice plates on the HEU hexafluoride and LEU blend stock pipelines;

2.11.3. seals removed from the flow-rate measuring equipment mounted on the HEU hexafluoride and LEU blend stock pipelines;

2.11.4. pressure indicating devices on HEU hexafluoride and LEU blend stock pipelines in front of and behind the flow-rate measuring orifice plates.

2.12. At the area in the blending facility where LEU hexafluoride product is transferred from process cylinders into 30B containers:

2.12.1. all process cylinders and 30B containers;

2.12.2. serial numbers, tags and seals on all containers;

2.12.3. scales and mass logging computers;

2.12.4. sampling equipment and sample containers from 30B containers.

3. All handling of containers, process cylinders, and sample containers, and of process equipment and devices related to monitoring activities at SChE shall be performed by SChE personnel.

4. At the monitoring areas, the monitors shall have the right to carry out monitoring activities as follows:

4.1. At Warehouse 9, where HEU weapons components subject to the Agreement, in sealed containers, from dismantled Russian nuclear weapons are received and stored at SChE upon their arrival from Russian nuclear weapons dismantlement facilities:

4.1.1. review SCC-1 Forms;

4.1.2. receive a list of the numbers of containers subject to the Agreement containing HEU weapons components that are at the plant on the date of the visit;

4.1.3. inventory the numbers on the containers;

4.1.4. check the integrity of affixed seals;

4.1.5. observe the process of affixing U.S. seals on all containers.

4.2. At the area where the HEU weapons components subject to the Agreement are stored prior to machining and where the HEU metal shavings are stored:

4.2.1. review the SCC-2 Forms;

4.2.2. inventory the numbers on the containers;

4.2.3. check the integrity of affixed tags and seals;

4.2.4. randomly select containers from the list in section 4.1.2 for NDA measurements;

4.2.5. observe radiation measurements being performed to confirm the enrichment of HEU in sealed containers, using either U.S. sodium iodide equipment, as specified in Annex 12, or Russian equipment, selected by U.S. monitors;

4.2.6. observe radiation measurements being performed to confirm the absence of HEU in sealed containers, using either U.S. sodium iodide equipment, as specified in Annex 12, or Russian equipment, selected by U.S. monitors.

4.3. At the area where the HEU metal chips are fed into the oxidation process:

4.3.1. review the form SCC-2;

4.3.2. inventory the numbers on the containers;

4.3.3. check the integrity of affixed tags and seals;

4.3.4. prior to oxidation, observe radiation measurements being performed to confirm the enrichment of HEU in sealed containers, using either U.S. sodium iodide equipment, as specified in Annex 12, or Russian equipment, selected by U.S. monitors;

4.3.5. observe the process of loading HEU chips into the oxidation facility;

4.3.6. observe the process of oxidation of the HEU chips.

4.4. At the area where the HEU U_3O_8 is withdrawn from the oxidation process:

4.4.1. observe the process of removal of HEU U_3O_8 containers from the oxidation facility;

4.4.2. observe radiation measurements being performed to confirm the enrichment of HEU in sealed containers, using either U.S. sodium iodide equipment, as specified in Annex 12, or Russian equipment, selected by U.S. monitors.

4.5. At the areas where the HEU U_3O_8 is fed into and withdrawn from the Uranium Oxide Purification Process:

4.5.1. observe the process of feeding into and removal of HEU U_3O_8 from the purification process;

4.5.2. observe the process of sealing of filled containers;

4.5.3. observe radiation measurements being performed to confirm the enrichment of HEU in sealed containers, using either U.S. sodium iodide equipment, as specified in Annex 12, or Russian equipment, selected by U.S. monitors.

4.6. At the area where HEU U_3O_8 is stored and prepared for shipment to any Russian fluorination facility subject to the Agreement:

4.6.1. obtain information from the K-1 Forms;

4.6.2. inventory the numbers on the containers;

4.6.3. check the integrity of affixed tags and seals;

4.6.4. observe the process of sealing and tagging of filled containers during preparation for shipment to any Russian fluorination facility subject to the Agreement;

4.6.5. observe the process of weighing and preparation of containers for shipment to any Russian fluorination facility subject to the Agreement;

4.6.6. observe radiation measurements being performed to confirm the enrichment of HEU in sealed containers, using either U.S. sodium iodide equipment, as specified in Annex 12, or Russian equipment, selected by U.S. monitors.

4.7. At the area in the fluorination facility where HEU U_3O_8 is received and stored:

4.7.1. inventory the numbers on the containers;

4.7.2. check the integrity of affixed tags and seals;

4.7.3. observe radiation measurements being performed to confirm the enrichment of HEU in sealed containers, using either U.S. sodium iodide

equipment, as specified in Annex 12, or Russian equipment, selected by U.S. monitors;

4.7.4. Obtain information from the relevant K-1 forms.

4.8. At the area in the fluorination facility where HEU U_3O_8 is fed into the fluorination process:

4.8.1. inventory the numbers on the containers;

4.8.2. check the integrity of affixed tags and seals;

4.8.3. observe the process of HEU U_3O_8 feeding into the fluorination facility.

4.9. At the area in the fluorination facility where HEU hexafluoride containers are withdrawn from the fluorination process and at the area in the fluorination facility where HEU hexafluoride containers are stored and prepared for shipment to any Russian blending facility:

4.9.1. observe the process of HEU hexafluoride containers being withdrawn from the fluorination facility;

4.9.2. observe the process of application of tags and seals to containers filled with HEU hexafluoride;

4.9.3. observe the process of HEU hexafluoride containers weighing before and after filling with UF_6;

4.9.4. check for tags and seals on HEU hexafluoride containers;

4.9.5. observe radiation measurements being performed to confirm the enrichment of HEU in sealed containers, using either U.S. sodium iodide equipment, as specified in Annex 12, or Russian equipment, selected by U.S. monitors;

4.9.6. obtain information from the K-1 Forms.

4.10. At the area in the blending facility where HEU hexafluoride is received and stored:

4.10.1. inventory the numbers on the containers;

4.10.2. check the integrity of affixed tags and seals;

4.10.3. observe the weighing of containers;

4.10.4. observe radiation measurements being performed to confirm the enrichment of HEU in sealed containers, using either U.S. sodium iodide equipment, as specified in Annex 12, or Russian equipment, selected by U.S. monitors.

4.11. At the facility for blending HEU with LEU blend stock:

4.11.1. check the integrity of affixed tags and seals on the flow-rate measuring orifice plates mounted into the HEU hexafluoride and LEU blend stock pipelines;

4.11.2. observe when it occurs, the sealing of the points where the flow-rate measuring orifice plates are mounted into the HEU hexafluoride and LEU blend stock pipelines;

4.11.3. observe when it occurs, the process of flow-rate measuring orifices diameter measurement and the process of their mounting into the HEU hexafluoride and LEU blend stock pipelines;

4.11.4. observe the instrument readings that indicate pressure on HEU and LEU hexafluoride blend stock pipelines in front of and behind the orifice plates.

4.12. At the area in the blending facility where LEU hexafluoride product is transferred from process cylinders into the 30B containers:

4.12.1. visually inspect the process cylinders and 30B containers;

4.12.2. observe the transfer operations of LEU hexafluoride from process cylinders into the 30B containers;

4.12.3. observe the process of LEU hexafluoride sampling of 30B containers;

4.12.4. visually inspect sample containers and observe the process of their weighing before and after sampling;

4.12.5. observe the process of filled sample containers sealing;

4.12.6. observe the process of 30B containers being withdrawn from the transferring station;

4.12.7. observe the process of sealing 30B containers;

4.12.8. observe the process of weighing 30B containers before and after filling.

5. U.S. monitors at SChE shall be provided for review with data specified below related to monitoring activities:

5.1. The data provided to the U.S. monitors shall be in the form of the forms listed below for all uranium subject to the Agreement. Blank examples of these records are found in Attachment 1 to this Annex. All technical and analytical data fields in each record shall, when provided, be complete to the extent possible for the current stage of processing:

5.1.1. Форма Ф.25б/4СУ "Chart for operational-technical accounting of transfer of U_3O_8 into HEU";

5.1.2. Форма Ф.25б/5СУ "Chart for operational-technical accounting of purified HEU U_3O_8";

5.1.3. Форма Ф.25б/6СУ "Chart for operational-technical accounting of HEU U_3O_8 turned over to the warehouse;"

5.1.4. K-1 - Way-bill-certificate for shipment of HEU U_3O_8 to any Russian fluorination facility;

5.1.5. Form SCC-1: containing information related to the Agreement and extracted directly from the passports and shipping documentation that accompany the HEU weapons components in sealed containers. The Russian side confirms that HEU weapon components taken from dismantled nuclear weapons and subject to the Agreement are contained in "green" transport containers;

5.1.6. Form SCC-2: accounting of product containers holding product;

5.1.7. K-1 - Way-Bill Certificate for shipment of HEU hexafluoride to any Russian blending facility;

5.1.8. S-15-1 - Analytical Data for HEU hexafluoride of U_{235} at the blending point;

5.1.9. S-15-2 - Analytical Data for LEU hexafluoride blend stock of U_{235} at the blending point;

5.1.10. S-15-3 - Analytical Data for LEU hexafluoride product of U_{235} at the blending point;

5.1.11. Document 1.2. - Quality and Weighing Data Certificate for LEU hexafluoride product in 30B containers;

5.1.12. Document 1.3. - Analytical Data for LEU hexafluoride product in 30B containers;

5.1.13. K-11-02 - Material Report of reprocessing HEU into LEU for one-month period;

5.1.14. K-12-02 - Material Report of reprocessing HEU into LEU for one-year period.

5.2. Documents shall be fully completed, beginning with the initial receipt and processing of HEU subject to the Agreement, in accordance with the agreed format as described in Attachment 1 to this Annex;

5.3. Forms to be photocopied shall not be destroyed until U.S. monitors receive an authenticated photocopy of the documents;

5.4. The information provided to monitoring personnel shall be treated confidentially, restricted to official agencies and to persons designated by the Executive Agents, and shall not be provided to third parties or released to the public or utilized by the receiving Party for its own commercial advantage without prior approval of the other Party.

6. The U.S. monitors at the SChE shall have the right to:

6.1. record and retain records and notes of data obtained from the monitoring activities;

6.2. review, on request, documents related to transparency in accordance with paragraph 5 of this Annex;

6.3. obtain photocopies of completed forms 4CY, 5CY, 6CY, SCC-1, SCC-2 and 1.2 and 1.3, during monitor visits, and keep these forms in the tagged and sealed safe for subsequent removal to the U.S.;

6.4. familiarize themselves with the description of the processes of converting HEU into LEU performed at SChE on uranium subject to the agreement; to request additional information to clarify process descriptions given in Annex 9;

6.5. check the serial numbers for each HEU U_3O_8 and HEU hexafluoride container, as well as the placement, integrity, and serial numbers of the tags and seals on each container;

6.6. observe radiation measurements being performed to confirm the U-235 enrichment of HEU in the following forms: components in sealed containers, metal chips, U_3O_8 and UF_6, using either U.S. sodium iodide equipment, as specified in Annex 12, or Russian equipment, selected by U.S. monitors;

6.7. observe the application of tags and/or seals supplied by the U.S. side on the following:

6.7.1. sealed containers holding HEU weapons components subject to the Agreement from dismantled Russian nuclear weapons where they are

received and stored at Warehouse 9 upon their initial arrival from Russian nuclear weapons dismantlement facilities;

6.7.2. containers with HEU U_3O_8 or HEU UF_6 that have been prepared for shipment to any Russian fluorination or blending facilities subject to the Agreement;

6.7.3. flow-rate measuring orifice plates in HEU and LEU blend stock pipelines in the blending facility;

6.7.4. 30B containers and sample containers with LEU hexafluoride product;

6.7.5. no seals or tags supplied by the U.S. side and applied at the request of U.S. monitors may violate the integrity of Russian seals applied by SChE personnel.

6.8. observe the calibration of the scales, offer the use of U.S. standards, observe the measurement of those standards, and obtain the measurement results;

6.9. use equipment and supplies, as listed in Annex 12;

6.10. have work spaces at SChE where they may:

6.10.1. review documentation referred to in paragraph 6;

6.10.2. process the documents provided and store them;

6.10.3. perform other activities related to monitoring.

6.11. store portable U.S. NDA instruments in secure containers in an area in the monitors workroom accessible to U.S. monitors during the time the monitors are working;

6.12. affix their own tags and/or seals to the security containers specified in paragraph 6.11;

6.13. request that SChE personnel check the software in U.S. NDA equipment.

7. The SChE Administration provides U.S. monitors with personal protective equipment and individual dosimeters to be used at SChE. In addition, each U.S. monitor shall have the right to use at the monitoring points two thermoluminescent integrating dosimeters supplied by the U.S. Dosimeters furnished by the SChE and U.S. shall be worn by each monitor while working at SChE and given to the SChE responsible person at the end of the working day. Upon completion of each monitor's visit, the SChE responsible person shall select one of the two U.S.-supplied dosimeters which had been used by each monitor. The selected dosimeter shall be tagged and sealed by both sides and retained at SChE as a confirmation device if questions arise concerning monitor exposure levels.

Within 90 days following the monitor's departure from SChE, each side shall have the right to contact the other side for a joint reading of the confirmation dosimeter. The second dosimeter supplied by the U.S. shall be retained by each monitor when departing from the SChE. The U.S. side shall provide to the SChE Administration, necessary information on the reading and calibration methods of the dosimeters supplied by the U.S.

8. Upon request of U.S. monitors the SChE administration shall provide data on the radioactive environment in the working area of the monitors.

9. Permanent Monitors and Special Monitors:

   9.1. The U.S. side reserves the right to establish a Permanent Presence Office. The sides understand that the establishment of such a Permanent Presence Office would be in accordance with the provisions of the law of the Russian Federation.

   9.2. The number of days during which special monitoring activities occur shall not exceed five working days for each special monitoring visit to SChE. The number of special monitoring visits shall not exceed six per calendar year;

   9.3. The total number of monitors within the SChE plant may consist of no more than ten persons. The team may be divided into no more than three subgroups;

   9.4. Interpreters for monitors shall be selected from the approved list of monitors specified in paragraph 1, Annex 2, and taken into account in calculating the total number of monitors, except in cases where translators are provided by the monitored side, as described in paragraph 15, Annex 2.

10. All monitors are obligated to observe safety and internal regulations in effect at SChE.

11. Installation of U.S. NDA and Flow Measurement Equipment at SChE:

   11.1. U.S. NDA and flow measurement equipment shall be installed on each HEU, LEU blendstock, and LEU end-product pipe at each blendpoint at SChE for the continuous monitoring of enrichment and flow;

   11.2. Russian obligations and U.S. rights concerning the installation, adjustment, testing, operation, maintenance, and repair of U.S. NDA and flow measurement equipment shall be identical to those obligations and rights incorporated in Annex 3, substituting SChE where UEIP appears in those provisions.

DONE at Moscow, Russia, in two copies, this eleventh day of February 1998, in the English and Russian languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF THE RUSSIAN FEDERATION FOR ATOMIC ENERGY:

ANNEX 6 TO THE PROTOCOL

PROCEDURES OF THE RUSSIAN MONITORING ACTIVITIES AT THE U.S. FUEL FABRICATION FACILITIES

1. Facilitation of the Monitoring Activities

The U.S. Department of Energy (DOE) and the U.S. Fuel Fabrication Facilities shall facilitate monitoring visits and DOE shall designate responsible persons to provide assistance for the Russian monitors. At the U.S. Fuel Fabrication Facilities, uranium subject to the Agreement shall be monitored, as officially reflected in the DOE/NRC Form 741 with "WR" in positions 7 & 8 of the "J" column.

2. At the U.S. Fuel Fabrication Facilities, Russian monitors shall have access to the receipt and storage areas for UF_6 cylinders and for containers of uranium powder or pellets containing Russian uranium, and the shipping and storage areas containing fuel assemblies or powder or pellets containing Russian uranium, in shipping packages. U.S. Fuel Fabrication Facilities include:

2.1. Hematite Nuclear Fuel Manufacturing, ABB/Combustion Engineering, Inc., Hematite, MO;

2.2. Framatome Cogema Fuel, Lynchburg Manufacturing Facility (formerly: B&W Commercial Nuclear Fuel Plant), Lynchburg, VA;

2.3. Nuclear Energy Production, General Electric Company, Wilmington, NC;

2.4. Richland Engineering and Manufacturing Facility, Siemens Power Corporation, Richland, WA;

2.5. Columbia Fuel Fabrication Facility, Westinghouse Electric Corporation, Columbia, SC.

3. Equipment and Container Handling

All handling of containers, sample containers, and process equipment and instruments related to monitoring activities at U.S. Fuel Fabrication Facilities shall be performed by U.S. Fuel Fabrication Facility personnel.

4. At the monitoring areas, the Russian monitors shall have the right to carry out monitoring activities as follows:

4.1. At the U.S. Fuel Fabrication Facilities, the Russian monitors shall have access to the receipt and storage areas for UF_6 containers and the Russian uranium powder

and pellet containers:

4.1.1. to check serial numbers and tags and seals on the containers, as well as to test for uranium of the stated enrichment with U.S. or Russian NDA equipment at the discretion of the monitors;

4.1.2. observe the process of the weighing of cylinders and containers;

4.1.3. observe the taking of samples, and observe the measurement of U235 enrichment, if conducted at the facility.

4.2. At the storage and shipping areas containing fuel assemblies packaged for shipment, or powder or pellets in shipping packages containing Russian uranium:

4.2.1. observe the packing of shipping containers;

4.2.2. observe the process of the preparation of and weighing of containers for shipment, if the facility weighs the containers;

4.2.3. observe the measurement of U235 enrichment, if conducted at the facility.

4.3. At facilities where samples are taken under paragraph 4.1.3 and analyzed at the fabrication facility in the analytical laboratory:

4.3.1. inspect affixed tags and seals on the sample containers;

4.3.2. observe the process of analysis of samples for U235 content.

5. Russian monitors at U.S. Fuel Fabrication Facilities shall be provided with data on Nuclear Material Control and Accountability (NMC&A) related to monitoring activities.

5.1. The data on NMC&A provided to the Russian monitors shall include the forms listed below for all uranium subject to the Agreement. Blank examples of these records are found in Attachment 1 to this Annex. All technical and analytical data fields in each record shall, when provided, be completed to the extent possible for the current stage of processing:

5.1.1. DOE/NRC Form 741 (U.S. Department of Energy/Nuclear Regulatory Commission Form 741, Nuclear Material Transaction Report), with "WR" entered in positions 7 & 8 of the "J" column to denote the uranium that is of Russian origin;

5.1.2. Form AC-1 (Material Balance Report). This report will cover a 12 month period and will be provided once per calendar year;

5.1.3. Form AC-2 (Inventory Change Report), accounts for receipts, shipments, and losses since the most recent Form AC-1;

5.1.4. Forms AC-3A (WR Material Received) and AC-3B (WR Material Shipped): Data for the purpose of showing that all shipments are for peaceful purposes. These would consist of data from the DOE/NRC Forms 741 for all uranium receipts at the U.S. fuel fabricator and data from the DOE/NRC Forms 741 for all shipments of uranium from the U.S. fuel fabricator to commercial power reactors or to another fuel fabricator.

5.2. The documents provided shall be completed in accordance with the agreed format as described in Attachment 1 to this Annex.

5.3. No document provided in accordance with paragraphs 5.1 and 5.2 of this Annex shall be destroyed until the Fuel Fabrication Facility receives a written statement from the Executive Agent of the monitoring party accepting a photocopy of the document as an accurate replica of the original document;

5.4. The information provided to monitoring personnel shall be treated confidentially, restricted to official agencies and to persons designated by the Executive Agents, and shall not, without permission of the monitored Party, be provided to third parties or released to the public or utilized by the receiving party for its own commercial advantage.

6. The Russian monitors at the U.S. Fuel Fabrication Facilities shall have the right:

6.1. to record and retain data obtained from the monitoring activities;

6.2. [to obtain photocopies of completed U.S. accountability records described in Paragraph 5 of this Annex; these photocopies shall be provided to Russian monitors outside of U.S. Fuel Fabrication Facilities for removal to Russia;]$_{US}$

6.3. [to remove electronic and paper copies of the data prepared during monitoring activities from a Fuel Fabrication Facility site and carry the electronic and paper copies to the monitors' rooms and to Russia. The Fuel Fabrication Facility shall review the data on the electronic and paper copies and shall release these copies to Russian monitors within 24 hours;]$_{US}$

6.4. to obtain for examination on site accounting and monitoring documents in accordance with paragraph 5 of this Annex;

6.5. to familiarize themselves with the description of technological processes performed at the U.S. Fuel Fabrication Facility on uranium subject to the

Agreement; to request additional information to clarify technical process descriptions given in Annex 9;

6.6. to familiarize themselves with the procedures used at each U.S. Fuel Fabricatio Facility for assigning Russian country of origin identification and for determining uranium enrichment and mass of fuel assemblies packaged for shipment or powder or pellets in shipment containers;

6.7. to observe the calibration of the fuel fabricators' scales, using either the fuel fabricators' standards or the Russian Federation's standards, or both, and obtain the measurement results;

6.8. to have a work space at U.S. Fuel Fabrication Facilities, located within the monitored facility, where they may:

6.8.1. examine accounting and monitoring documents referred to in paragraph 5 of this Annex;

6.8.2. process the documents provided and store them during their monitoring visit;

6.8.3. perform other operations related to monitoring activities.

7. Each U.S. Fuel Fabrication Facility will provide Russian monitors with any personal protective equipment and individual dosimeters required to be used at the facility. In addition, each Russian monitor shall have the right to use at the monitoring points two thermoluminescent integrating dosimeters supplied by the Russian Federation. Dosimeters provided by the U.S. Fuel Fabrication Facility and the Russian Federation shall be worn by each monitor while working at the U.S. Fuel Fabrication Facility and given to the U.S. Fuel Fabrication Facility responsible person at the end of each working day. Upon completion of each monitor's visit, the U.S. Fuel Fabrication Facility responsible person shall select one of the two Russian Federation-supplied dosimeters which had been used by each monitor. The selected dosimeter shall be tagged and sealed by both sides and retained as a confirmation device if questions arise concerning monitor exposure levels. Within 90 days following the monitor's departure from the U.S. Fuel Fabrication Facility, each side shall have the right to contact the other side for a joint reading of the confirmation dosimeter. The second dosimeter supplied by the Russian Federation shall be retained by each monitor when departing from the U.S. Fuel Fabrication Facility. The Russian side shall provide to the U.S. Fuel Fabrication Facility Administration, necessary information on the reading and calibration methods of the dosimeters supplied by the Russian Federation.

8. Upon request of the Russian monitors the U.S. Fuel Fabrication Facilities shall provide data on the radioactive environment in the working area of the monitors.

9. [In the event that a special monitoring visit at the U.S. Fuel Fabrication Facilities has not occurred in a three-month period, photocopies of completed U.S. accountability records, described in Paragraph 5 of this Annex, shall be sent to the Ministry of Atomic Energy (MINATOM). These forms shall cover the period since the last monitoring visit or last shipment of photocopies of the U.S. accountability records to MINATOM.]US

10. Special Monitors

10.1. The number of days during which monitoring activities occur shall not exceed five working days for each special monitoring visit to U.S. Fuel Fabrication Facilities. The number of special monitoring visits shall not exceed ten per calendar year, with no more than two visits to any single U.S. Fuel Fabrication Facility per calendar year.

10.2. A group of special monitors may consist of no more than seven persons.

10.3. Translators for special monitors shall be selected from the approved list of monitors specified in paragraph 1 of Annex 2, and counted against the limitation indicated in paragraph 10.2 of this Annex, except in the case where translators are provided by the monitored side as described in paragraph 15 of Annex 2.

11. The monitoring team shall have the right to divide into not more than two subgroups.

12. All monitors are obligated to observe safety regulations and management procedures in effect at U.S. Fuel Fabrication Facilities.

13. The Russian side reserves the right to establish a Permanent Presence Office. The sides understand that the establishment of such a Permanent Presence Office would be in accordance with the provisions of the law of the United States.

DONE in Moscow, Russia, in two copies, this eleventh day of February 1998, in the English and Russian languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF THE RUSSIAN FEDERATION FOR ATOMIC ENERGY:

FORMS FOR ACCOUNTABILITY RECORDS

TABLE OF CONTENTS:

1. DOE/NRC Form 741 (U.S. Department of Energy/Nuclear Regulatory Commission Form 741, Nuclear Material Transaction Report) with "WR" entered in positions 7 & 8 of the "J" column to denote the uranium that is of Russian origin.

2. Form AC-1 (Material Balance Report).

3. Form AC-2 (Inventory Change Report).

4. Forms AC-3A (WR Material Received) and AC-3B (WR Material Shipped): Data for the purpose of showing that all shipments are for peaceful purposes. These would consist of data from the DOE/NRC Forms 741 for all uranium receipts at the U.S. fuel fabricator and data from the DOE/NRC Forms 741 for all shipments of uranium from the U.S. fuel fabricator to commercial power reactors or to another fuel fabricator.

NMMSS REPORT AC-3A

COMPREHENSIVE TRANSACTION SUMMARY

WR MATERIAL RECEIVED

REPORTING IDENTIFICATION SYMBOL:_____

ANNUAL REPORT FROM _____TO_____

SHIPPER	BATCH NAME	TRANSACTION NUMBER	DATE RECEIVED	DATE SHIPPED	ELEMENT WEIGHT (GRAMS)	PERCENT U-235 (ENRICHMENT)	WEIGHT U235 (GRAMS)

NMMSS REPORT AC-3B

COMPREHENSIVE TRANSACTION SUMMARY

WR MATERIAL SHIPPED

REPORTING IDENTIFICATION SYMBOL:_____

ANNUAL REPORT FROM _____TO_____

RECEIVER	BATCH NAME	TRANSACTION NUMBER	DATE RECEIVED	DATE SHIPPED	ELEMENT WEIGHT (GRAMS)	PERCENT U-235 (ENRICHMENT)	WEIGHT U235 (GRAMS)

ANNEX 7 TO THE PROTOCOL
Joint draft text

ANALYTICAL METHODS FOR DETERMINING THE URANIUM CONTENT AND ASSAYS OF ENRICHMENT IN ISOTOPE U-235

1. Both Parties shall use industry-standard analytical procedures for conducting the sub-sampling and analysis, in their own analytical laboratories, of HEU metal, oxide and hexafluoride, and LEU hexafluoride, as listed below:

   1.1. ASTM designation C761-91, Methods for Chemical, Mass Spectrometric, Spectrochemical, Nuclear and Radioactive Analysis of Uranium Hexafluoride, or equivalent methods having the error values meeting the requirements specified in the attached table;

   1.2. ASTM designation C696, Methods for Chemical, Mass Spectrometric, Spectrochemical, Nuclear and Radioactive Analysis of Nuclear-Grade Uranium Dioxide Powders and Pellets, or equivalent methods; and

   1.3. Methods comparable to C696, for uranium metal.

2. The results of all analyses shall be recorded on data forms sufficient to allow confirmation of the uranium content and assay of enrichment in isotope U-235 by the monitoring Party.

3. Both Parties shall prepare a written declaration within 90 days of signing this annex which defines the detailed analytical procedures used for determining the uranium contents and assays of uranium 235.

ANNEX 8 TO THE PROTOCOL
JOINT DRAFT TEXT

2.

TAGS AND SEALS

1. Extent of Use

1.1. All containers holding uranium that is subject to the Agreement shall be marked by the monitored party with unique identifying tags or tamper indicating seals. The following containers and equipment shall be tagged or sealed:

1.1.1. containers of HEU metal chips;

1.1.2. containers of HEU U_3O_8;

1.1.3. cylinders of HEU UF_6;

1.1.4. process cylinders of LEU UF_6 product;

1.1.5. 30B cylinders of LEU UF_6 product;

1.1.6. sample containers of HEU metal chips, U_3O_8, and UF_6;

1.1.7. sample containers of LEU UF_6 blend stock and product ;

1.1.8. shipping containers of serialized LEU fuel rod assemblies, LEU pellets, and LEU oxide; and

1.1.9. the place of installation of the blending-point orifices at UEIE.

1.2. In addition, monitors shall have the right to observe the application, by personnel of the monitored facility, of monitor-provided tags and seals to containers and equipment in accordance with annexes 3, 4, 5, and 6. Monitors shall also have the right to periodically verify the integrity of such tags and seals.

1.3. In addition, monitors may affix their own tags and seals to monitoring equipment, monitoring equipment cases, and entrances to designated monitor office spaces.

2. Types of Tags and Seals

2.1. Each Executive Agent shall specify the type of tag or seal to be used for each type of container:

2.1.1. by provision of a specimen to the other Executive Agent; and

2.1.2. by descriptions, attached to this annex, of each type of tag or seal and its method of attachment.

2.2. The tags and seals specified in paragraph 2.1 shall be used until otherwise agreed.

3. Removal

3.1. The monitored facility shall not remove monitor-provided tags or seals, unless monitoring personnel are present to observe such removal and apply replacement tags or seals. Monitoring personnel will also retain monitor-provided tags and seals after removal.

4. Damaged or Missing Tags or Seals

4.1. If a container tag or seal of the monitoring party is determined to be damaged, broken, or missing from a container, the monitored facility shall immediately notify monitoring personnel. No further processing of that container shall take place until monitoring personnel have observed confirmatory analyses or measurements performed by the monitored facility on the container and its contents, and monitoring personnel have observed the attachment of a replacement tag or seal. All replacement tags and seals shall be noted on the Accountability records.

ANNEX 9 TO THE PROTOCOL

TECHNOLOGICAL PROCESS DESCRIPTIONS → NOT SIGNED ?

Pursuant to the Memorandum of Understanding (MOU) Article II, paragraph 2(a), attached are descriptions of the technological processes to be employed pursuant to the Agreement. These descriptions are to be updated identifying any changes in the processes if and when such changes take place. In the event either side uses other facilities for the processing of uranium subject to the Agreement, then technological process descriptions for such facilities will be provided and attached to this Annex.

DONE in Vienna, Austria, in two copies, this 4th day of April, 1996 in the English and Russian languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF THE RUSSIAN FEDERATION FOR ATOMIC ENERGY:

ANNEX 10 TO THE PROTOCOL

FINANCIAL ARRANGEMENTS FOR TRANSPARENCY ACTIVITIES

1. General

1.1. The following two general rules shall apply to the determination of financial responsibility for the conduct of transparency activities except as stated in paragraph 2 of this Annex:

1.1.1. All costs incurred by United States monitoring personnel in the course of conducting monitoring activities in the Russian Federation shall be borne by the Executive Agent of the United States and paid in Russian rubles;

1.1.2. All costs incurred by Russian Federation monitoring personnel in the course of conducting monitoring activities in the United States shall be borne by the Executive Agent of the Russian Federation and paid in United States dollars.

1.2. In general, all costs incurred by monitoring personnel in the territory of the monitored Party shall be paid at the time such costs are incurred, in cash, through a commercial line of credit, or by use of a credit card acceptable to the provider of the goods or services, unless other arrangements are agreed upon with the provider of the goods or services. However, for services that exceed $1000 in cost, the monitored facility shall invoice the monitoring party or their representative and payment will be made within 10 working days.

1.3. Contract agents may be used by the Executive Agents to arrange, and contract for, goods and services necessary for the conduct of monitoring activities, including the lease of residences.

1.4. Upon request of either side, assistance shall be provided by each Executive Agent to monitoring personnel of the other Executive Agent to assist them in securing those goods and services necessary to conduct authorized monitoring activities, including, but not limited to, adequate work arrangements, housing, meals, transportation, communications, and medical care. However, such assistance shall not alter the general rules of financial responsibility contained in paragraphs 1.1.1. and 1.1.2. above.

1.5. Upon request of either side, issues related to reimbursement for medical services for injuries occurring during the conduct of monitoring activities at the monitored facility may be addressed and mutually resolved by the Executive Agents.

2. Services Provided Without Charge

2.1. The monitored facility shall provide the following services to monitoring personnel without charge:

2.1.1. Office space sufficient for concurrent occupancy by all monitoring personnel. This office space is to include heating, and ventilation or air conditioning, and electrical power sufficient for all authorized equipment;

2.1.2. Health and personnel protective equipment for use by monitoring personnel;

2.1.3. Except as provided in paragraph 3.1 below, the assistance of facility personnel and equipment necessary for the conduct of all authorized monitoring activities, as provided for in Annexes 3, 4, 5 and 6;

2.1.4. The conduct of escort activities and the transportation for authorized persons and equipment when performing monitoring activities on week days during the day shift or at other times agreed upon with the monitored facility within the limited security area.

3. Services Provided For Fees

3.1. The monitored facility shall assist in securing the following services to monitoring personnel for fees:

3.1.1. Providing communications as per section 14 of Annex 2;

3.1.2. The drawing and analysis of samples that are conducted at the request of monitoring personnel, if the drawing and analysis of such samples are in addition to that routinely conducted by the monitored facility;

3.1.3. The analysis of analytical standards conducted at the request of monitoring personnel;

3.1.4. Providing storage sufficient to accommodate authorized monitoring personnel equipment at the request of the monitoring party;

3.1.5. Escorts and transportation services not covered in paragraph 2.1.4. of this Annex;

3.1.6. Subsampling and sample analysis performed at the request of the monitors;

3.1.7. Any weighing performed at the request of the monitors;

3.1.8. Services of translators and interpreters provided at the request of the monitors; and

3.1.9. Any other agreed-upon services, not included in paragraph 2 above.

3.2. Fees for goods and services which will be provided by the monitored facility shall not exceed the actual cost of such goods and services provided, but only after such fees have been agreed upon in advance by the designated representative of the monitoring team. Fees for goods and services charged by a commercial third party are not the responsibility of the monitored facility.

3.3. Executive agents shall regularly provide the monitoring side with current cost information on services provided for fees. The cost information will be assumed to be current if no information on a change has been received from the monitored side.

DONE at Vienna, Austria, in two copies, this 4th day of April, 1996, in the English and Russian languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF THE RUSSIAN FEDERATION FOR ATOMIC ENERGY:

ANNEX 11 TO THE PROTOCOL

RE-EXPORT OF RUSSIAN LOW ENRICHED URANIUM FROM THE UNITED STATES OF AMERICA

1. In the event that LEU delivered by the Russian Federation under the Agreement is exported from the United States of America, the following notifications and reports shall be provided to the Russian Federation:

   1.1. If the LEU is exported from the Portsmouth Gaseous Diffusion Plant, the Department of Energy (DOE) will provide MINATOM with copies of DOE/NRC 741 and VB-4 forms (in the event of blending) containing the pertinent information on such shipments;

   1.2. If the LEU is shipped from a fuel fabricator, DOE will provide MINATOM or its designated representatives with copies of DOE/NRC 741 forms documenting such shipments;

   1.3. Sample copies of DOE/NRC form 741 and VB-4 are attached.

2. DOE shall provide an annual declaration to MINATOM that all LEU obtained and exported by the United States under the Agreement was for peaceful use or subject to International Atomic Energy Agency Safeguards in satisfaction of paragraph 4 and 5 of Article V of the Agreement.

3. DOE shall provide an annual declaration to MINATOM on the total amount of exports of LEU subject to the Agreement.

DONE at Vienna, Austria, in two copies, this 3rd day of April, 1996, in the English and Russian languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF THE RUSSIAN FEDERATION FOR ATOMIC ENERGY:

ANNEX 12 TO THE PROTOCOL

EQUIPMENT

1. Monitors carrying out activities related to transparency, in accordance with the MOU and the Protocol, shall have the right to provide, for use by personnel of the monitored facility, equipment and supplies within the limited security areas of monitored facilities and to use at the monitors' residences.

1.1. Within the limited security areas at UEIE, SChE, PORTS and U.S. fuel fabrication facilities, the monitored Party shall provide the monitors with equipment and supplies for the conduct of monitoring activities, such as computers, computer software, calculators, general office supplies, log books, security containers and other items that may be allowed by mutual agreement.

1.2. Equipment provided by the monitoring Party that shall be allowed to be used in the limited security areas includes:

1.2.1. Thermoluminescent integrating dosimeters;

1.2.2. Reference Materials (RM) as detailed in Annex 13;

1.2.3. Check weights (standards) for use in calibration of mass logging scales;

1.2.4. Tags and seals, as agreed in Annex 8, paragraph 2; and

1.2.5. New types or additional equipment and supplies not listed above, if mutually agreed. The Executive Agent of the monitored Party shall inform the monitoring Party of its decision on the proposed changes or additions to this equipment and supplies list within 30 days from the receipt of the proposal from the monitoring Party.

1.3. The agreed-upon equipment supplied by the monitoring Party may be brought in and removed from the limited security area by the monitored side in accordance with the regulations of the monitored facility.

1.4. In the residences of the monitors that are outside of the limited security areas, the monitors shall have the right to bring in and use, at a minimum, the following:

1.4.1. Office equipment and supplies including, but not limited to, copying and facsimile machines, personal computers, printers and calculators;

1.4.2. All necessary maintenance and support equipment and spare parts necessary for the installation and functioning of equipment of the monitoring Party;

1.4.3. Medical supplies;

1.4.4. Communications equipment to provide voice, data and facsimile capability with the monitor's embassy and home country, including satellite communications equipment; to use the latter the monitors must obtain the necessary communications permits in accordance with the national communications regulations of the monitored Party;

1.4.5. Articles for personal use; and

1.4.6. Other equipment and supplies allowed by mutual agreement between the Executive Agents.

2. Shipments of Monitoring Equipment

2.1. The authorized addresses for equipment shipments are:

2.1.1. PORTS:
United States Department of Energy
Portsmouth Site Office
Monitoring Equipment for Russian Inspectors
3930 U.S. Route 23
Piketon, OH 45661, USA

2.1.2. UEIE:
624130, „. çÓ,ÓÛð‡Î¸ÒÍ, êéëëàü
ìð‡Î¸ÒÍËÈ •ÎÂÍÚðÓ•ËÏË˜ÂÒÍËÈ ÍÓÏ·ËÌ‡Ú
ÛÎ. ÑÁÂðÊËÌÒÍÓ„Ó, 2
OÚ„ðÛÁÍ‡: ÒÚ‡Ì^Ë• ÇÂð•-çÂÈ,ËÌÒÍ ë,Âð‰ÎÓ,ÒÍ‡• Ê.‰.
äÓ‰ ÒÚ‡Ì^Ë•: 771200
äÓ‰ ÔðÂ‰ÔðË•ÚË•: 7023

2.1.3. SChE:
636070, „. ëÂ,ÂðÒÍ, ÍÓÏÒÍ‡• Ó·Î., êéëëàü
ÛÎ. äÛð˜‡ÚÓ,‡ 1
éÚ„ðÛÁÍ‡: ÒÚ‡Ì^Ë• ÍÓÏÒÍ-2 äÂÏÂðÓ,ÒÍÓÈ Ê.‰.

2.1.4. U.S. Fuel Fabrication Facilities:

2.1.4.1. ABB/Combustion Engineering
3300 State Road P
Hematite, MO 63047, USA

2.1.4.2. Framatome Cogema Fuels
Lynchburg Manufacturing Facility
State Road 726/ Mt. Athos Road
Lynchburg, VA 24505, USA

2.1.4.3. General Electric Company

Nuclear Fuel Manufacturing
Attention: Ralph Reda, Manager, Licensing
3901 Castle Hayne Road
Wilmington, NC 28401, USA

2.1.4.4. Siemens Nuclear Power Corporation
Attention: Jim Edgar
2101 Horn Rapids Road
PO Box 130
Richland, WA 99352-0130, USA

2.1.4.5. Westinghouse Commercial Nuclear Fuel Division
5801 Bluff Road
Columbia, SC 29250, USA

2.2. The monitoring Party shall inform the monitored facility of the estimated shipping date, shipping/delivery company, shipment locator number, delivery address and inventory of each shipment seven days prior to shipment. Upon arrival of the shipment, the Executive Agent of the monitored Party shall provide assistance as provided for in Annex 2, paragraph 7.2.

3. Equipment Inspection

The monitored facility shall have the right to inspect any equipment provided by the monitoring Party for use in carrying out monitoring activities inside the limited security areas of the monitored facility. For the purpose of equipment inspection, the following shall apply:

3.1. All equipment defined in Paragraph 1.2 of this Annex is subject to the inspection process; and

3.2. The monitored facility has the right to inspect equipment that is to be taken into the limited security areas for 24 hours prior to the start of the monitoring activities requiring the equipment.

4. Storage of Equipment and Supplies Specified in Paragraph 1.2

4.1. The monitoring side shall have the right to store equipment at a mutually agreed-upon facility for subsequent use.

4.2. Stored equipment shall be placed in containers and the containers shall be sealed by both sides.

4.3. Removal of equipment from storage shall be witnessed by both Parties.

4.4. Equipment removed from storage shall be exempt from further inspection.

4.5. Stored equipment shall not be exposed to environmental or other conditions which could damage the equipment.

5. Replacement of Damaged or Broken Equipment Specified in Paragraph 1.2

5.1. Monitors shall be allowed to replace damaged equipment as needed.

5.2. Such damaged equipment and the replacement equipment shall be subject to inspection as defined in paragraph 3 of this Annex.

DONE at Vienna, Austria, in two copies, this 4th day of April, 1996, in the English and Russian languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY FOR THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF THE RUSSIAN FEDERATION FOR ATOMIC ENERGY:

ANNEX 13 TO THE PROTOCOL

RADIOACTIVE STANDARDS

1. Radioactive Standards:

   1.1. Radioactive standards used at Russian and U.S. facilities in the agreed upon monitoring procedures include:

      1.1.1. standards of uranium hexafluoride with an enrichment range of 1 to 5% U-235 by weight;

      1.1.2. standards of uranium hexafluoride with an enrichment range of 85 to 95% U-235 by weight; and

      1.1.3. standards of uranium oxide with an enrichment range of 85 to 95% U-235 by weight.

2. Both Russian and U.S. standards may be used at the monitored facilities according to agreed upon monitoring procedures.

3. The sides shall develop and agree upon the procedures for the transfer and handling of the standards.

DONE at Vienna, Austria, in two copies, this 4th day of April, 1996, in the English and Russian languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF THE RUSSIAN FEDERATION FOR ATOMIC ENERGY:

ANNEX 14 TO THE PROTOCOL

EXCHANGE OF HEU MATERIAL REPORTS BETWEEN

THE RUSSIAN FEDERATION AND THE UNITED STATES

1. Period Covered by the Reports

   HEU Material Reports prepared by the Executive Agents for the implementation of the Agreement will be issued every calendar year, or as otherwise agreed. Such reports shall cover the activities of the previous calendar year and shall be exchanged not later than 90 days after the end of that calendar year.

2. Format for the Reports

   A blank example of the reports is found in Attachment 1 to the Annex. All data fields in each report, when provided, shall be complete to the extent possible.

DONE at Vienna, Austria, in two copies, this 3rd day of April, 1996, in the English and Russian languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY OF UNITED STATES OF AMERICA:	FOR THE MINISTRY OF THE RUSSIAN FEDERATION FOR ATOMIC ENERGY:

HEU MATERIAL REPORT

USE OF HEU
For Peaceful Purposes
(movement in terms of HEU)

	RECEIVED		SHIPPED	
	Mass (mt)	From	Mass (mt)	To
PLANT				
FUEL FAB PLANTS				

Note for PORTS: To determine the equivalent HEU presented in this table, an HEU enrichment of 90% U235 and a blend stock enrichment of 1.5% U235 is used.

ANNEX 15 TO THE PROTOCOL

PROCEDURES OF U.S. MONITORING AT THE ELECTROCHEMICAL PLANT (ECP), ZELENOGORSK, RUSSIA

1. Facilitation of the Monitoring Activities

The Ministry of Atomic Energy of the Russian Federation (MINATOM) and the Electrochemical Plant (ECP) shall facilitate monitoring visits and shall designate responsible persons to provide assistance to the U.S. monitors.

2. At ECP, U.S. monitors shall have access to the following monitoring areas specified by the Protocol:

2.1. At the area where HEU oxide is received and at all areas where HEU oxide is stored:

2.1.1. serial numbers, tags and seals on all containers;

2.1.2. sample containers;

2.1.3. scales and mass logging computers;

2.2. At the area where HEU oxide is fed into the fluorination process:

2.2.1. all containers conveyed to the fluorination process;

2.2.2. serial numbers, tags, and seals on all containers conveyed to the fluorination process;

2.2.3. the input to the fluorination equipment;

2.2.4. tags and seals removed from the HEU oxide containers once the containers are unsealed and opened;

2.3. At the area where HEU hexafluoride containers are withdrawn from the fluorination process and at the area where HEU hexafluoride containers are stored:

2.3.1. the output from the fluorination equipment;

2.3.2. all HEU hexafluoride containers when they are being withdrawn from the fluorination facility;

2.3.3. serial numbers, tags and seals on all containers;

2.3.4. sampling equipment and sample containers;

2.3.5. scales and mass logging computers.

2.4. At the blending facility where the HEU hexafluoride feed and LEU hexafluoride blend stock are combined and mixed:

2.4.1. points where flow-rate measuring orifice plates on the HEU hexafluoride feed and LEU blend stock pipelines are mounted;

2.4.2. seals on the flow-rate measuring orifice plates on the HEU hexafluoride and LEU blend stock pipelines;

2.4.3. seals removed from the flow-rate measuring equipment mounted on the HEU hexafluoride and LEU blend stock pipelines;

2.4.4. pressure indicating devices on HEU hexafluoride and LEU blend stock pipelines in front of and behind the flow-rate measuring orifice plates;

2.5. At the area where LEU hexafluoride product is transferred from process cylinders into 30B containers:

2.5.1. all process cylinders and 30B containers;

2.5.2. serial numbers, tags and seals on all containers;

2.5.3. scales and mass logging computers;

2.5.4. sampling equipment and sample containers

3. After installation of this equipment, U.S. monitors shall have access to the following:

3.1. U.S. nondestructive assay (NDA) instruments, as specified in Annex†12, on each of the HEU hexafluoride, LEU hexafluoride blend stock, and LEU product pipelines to continuously monitor the U-235 enrichment of the uranium in the three pipelines;

3.2. U.S. flow measurement instruments, as specified in Annex†12, on each of the HEU hexafluoride, LEU hexafluoride blend stock, and LEU product pipelines;

4. Equipment and Container Handling at ECP.

4.1. All handling of containers, process cylinders, and sample containers or of process equipment and devices related to monitoring activities at ECP shall be performed by ECP personnel, unless otherwise stated.

5. At the monitoring areas the monitors shall have the right to carry out monitoring activities as follows:

5.1. At the area where HEU oxide is received and stored:

5.1.1. visually inspect containers with seals and tags;

5.1.2. verify the integrity of seals and tags on the containers;

5.1.3. observe the container weighing procedure;

5.1.4. observe the measurements using the U.S. sodium iodide detector NDA instruments or equivalent Russian instruments, as selected by U.S. monitors, to measure the U-235 enrichment of HEU oxide in containers selected by the monitors, where those containers are stored;

5.2. At the area where HEU oxide is fed into the fluorination process:

5.2.1. visually inspect containers with seals and tags;

5.2.2. verify the integrity of seals and tags on the containers;

5.2.3. observe the process of HEU oxide feeding into the fluorination facility;

5.3. At the area where HEU hexafluoride containers are withdrawn from the fluorination process and at the area where HEU hexafluoride containers are stored:

5.3.1. observe the process of HEU hexafluoride containers being withdrawn from the fluorination facility;

5.3.2. observe the process of application of tags and seals to containers filled with HEU hexafluoride;

5.3.3. observe the process of HEU hexafluoride containers weighing before and after filling with UF_6;

5.3.4. visually inspect HEU hexafluoride containers;

5.3.5. observe the measurement using the portable U.S. sodium iodide detector NDA instruments or equivalent Russian instruments, as selected by U.S. monitors, to measure the U-235 enrichment of the HEU hexafluoride in containers selected by the monitors;

5.3.6. observe the process of sampling of the containers filled with HEU hexafluoride;

5.3.7. visually inspect sample containers and observe the process of their weighing before and after sampling;

5.4. At the facility for blending HEU with LEU blend stock:

5.4.1. observe the process of flow-rate measuring orifices diameter measurement and the process of their mounting into the HEU hexafluoride and LEU blend stock pipelines;

5.4.2. observe the sealing of the points where the flow-rate measuring orifice plates are mounted into the HEU hexafluoride and LEU blend stock pipelines;

5.4.3. verify the integrity of tags and seals on the flow-rate measuring orifice plates mounted into the HEU hexafluoride and LEU blend stock pipelines;

5.4.4. observe the instrument readings that indicate pressure on HEU and LEU hexafluoride blend stock pipelines in front of and behind the orifice plates;

5.4.5. observe ECP personnel's activities with regard to U.S. enrichment and flow measurement instruments in obtaining data from recording devices associated with these instruments, performing diagnostic check-out procedures, and maintaining, calibrating, and, as necessary, in repairing or replacing these instruments;

5.5. At the area where LEU hexafluoride product is transferred from process cylinders into the 30B containers:

5.5.1. visually inspect the process cylinders and 30B containers;

5.5.2. observe the transfer operations of LEU hexafluoride from process cylinders into the 30B†containers and monitor the process parameters;

5.5.3. observe the process of LEU hexafluoride sampling;

5.5.4. visually inspect sample containers and observe the process of their weighing before and after sampling;

5.5.5. observe the process of filled sample containers sealing;

5.5.6. observe the process of 30B†containers being withdrawn from the transferring facility;

5.5.7. observe the process of sealing 30B†containers;

5.5.8. observe the process of weighing 30B†containers before and after their filling.

6. At ECP, U.S. monitors are provided for familiarization with data on Nuclear Material Control and Accountability (NMC&A) related to monitoring activities.

6.1. The data on NMC&A provided to the U.S. monitors for familiarization shall include the forms listed below for all uranium subject to the Agreement. Blank examples of these forms are found in Attachment 1 to this Annex. All technical and analytical data fields in each form shall, when provided, be complete to the extent possible for the current stage of processing.

6.1.1. K-1 - Way-Bill Certificate for HEU U_3O_8 and samples received from SChE and waste shipped to SChE;

6.1.2. K-14-1 - Analytical Data for HEU U_3O_8 of uranium and U_{235};

6.1.3. K-14-2 - Analytical Data for waste of uranium and U_{235};

6.1.4. K-14-3 - Analytical Data for HEU hexafluoride of uranium and U_{235};

6.1.5. K-15-1 - Analytical Data for HEU hexafluoride of U_{235} at the blending point;

6.1.6. K-15-2 - Analytical Data for LEU hexafluoride blend stock of U_{235} at the blending point;

6.1.7. K-15-3 - Analytical Data for LEU hexafluoride product of U_{235} at the blending point;

6.1.8. Document 1.2. - Quality and Weighing Data Certificate for LEU hexafluoride product in 30B containers;

6.1.9. Document 1.3. - Analytical Data for LEU hexafluoride product in 30B containers;

6.1.10. K-11-01 - Material Report of reprocessing HEU into LEU for one-month period;

6.1.11. K-12-01 - Material Report of reprocessing HEU into LEU for one-year period. and

6.2. Documents shall be fully completed in accordance with the agreed format as given in Attachment 1 to this Annex;

6.3. The information provided to monitoring personnel shall be treated confidentially, restricted to official agencies and to persons designated by the Executive Agents, and shall not, without the permission of the monitored Party, be provided to third parties or released to the public or utilized by the receiving Party for its own commercial advantage.

7. At ECP, U.S. monitors shall have the right:

7.1. to record and retain data obtained from the monitoring activities;

7.2. to familiarize themselves with accountability records in accordance with paragraph 6 of this Annex;

7.3. to obtain photocopies of completed Documents 1.2 and 1.3, described in sub-paragraphs†6.1.8 and 6.1.9 of this Annex; these photocopies shall be provided to U.S. monitors outside of the ECP facility for removal to the U.S. All copies of the documents provided to the U.S. side shall have the diagonal mark "U.S. Document."

7.4. to familiarize themselves with the description of technological processes performed at ECP on uranium subject to the Agreement; to request additional information to clarify technical process descriptions given in Annex 9;

7.5. to check the serial number of each HEU U_3O_8 container received from SChE as well as the placement, integrity, and serial numbers of tags and seals on each container;

7.6. to observe the measurement using the portable U.S. sodium iodide detector NDA instruments or equivalent Russian instruments, as selected by U.S. monitors, to measure the U-235 enrichment of the HEU oxide and HEU hexafluoride in containers selected by the monitors, where those containers are stored;

7.7. to observe the application of U.S. tags and/or seals:

7.7.1. on flow-rate measuring orifice plates in HEU and LEU blend stock pipelines in the blending facility;

7.7.2. on 30B containers and sample containers with LEU hexafluoride product;

7.7.3. any U.S. tag and seal affixed at the U.S. monitors request shall not compromise other seals affixed by ECP personnel;

7.8. to monitor the calibration of scales, offer U.S. standards, observe the measurements of these standards, and obtain the results of the measurements;

7.9. From the time of completion of installation and adjustment of the enrichment and flow measurement systems, monitors shall have the right of access to the blend point once every two weeks during the first four months and, subsequently, once every two months.

7.10. to request and observe ECP personnel's activities with regard to enrichment and flow measurement instruments in obtaining data from the recording devices and the computer system associated with these instruments; maintaining, calibrating, and performing diagnostic procedures; and, as necessary, repairing or replacing these instruments;

7.11. to use other equipment and supplies, as listed in Annex†12;

7.12. to have working rooms in ECP buildings where they:

7.12.1. examine accountability records listed in paragraph 6;

7.12.2. process and store the documentation obtained;

7.12.3. carry out other work related to monitoring activities.

7.13. to observe the application of U.S.-supplied tags and seals to installed U.S. NDA and flow measurement instruments and to the security containers in which U.S. NDA equipment and spare parts are stored.

8. Upon U.S. monitors arrival ECP shall provide them for familiarization with copies of Accountability Records in accordance with paragraph 6 on all quantities of uranium received from SChE, processed by ECP and/or shipped from ECP for the period since last monitoring visit.

9. Permanent Monitors and Special Monitors

9.1. The U.S. side retains the right to establish a Permanent Presence office;

9.2. The monitoring activities shall be carried out on working days during day-time shifts, when the HEU reprocessing takes place, with the following exceptions:

9.2.1. Monitoring activities during evening or night shifts as well as on days off may be carried out only upon special request which is given to escorts on a working day not later than two (2) hours before the end of the day-time shift.The number of such requests shall not exceed two (2) per month and shall not exceed twelve per year;

9.2.2. The procedures specified in paragraphs†5.4.1, 5.4.2, and 5.4.3 shall be performed whenever flow rate orifice plates are replaced;

9.2.3. In the absence of a Permanent Presence Office notification of an orifice plate replacement shall be given at least 40†days prior to the beginning of the orifice plate replacement;

9.2.4. In the event that this deadline cannot be met as a result of operational necessity at ECP, the orifice plates may be replaced in the absence of the U.S. monitors with immediate notification of the replacement given to the U.S. side;

9.3. For two (2) days during the replacement period of the U.S. permanent monitors, up to four (4) persons shall be allowed to be present in the working rooms within the ECP plant;

9.4. The total number of monitors present within the ECP plant may consist of no more than ten (10) persons;

9.5. The number of days during which special monitoring activities occur shall not exceed five (5) working days for each special monitoring visit to ECP. The number of special monitoring visits shall not exceed six (6) visits per calendar year;

9.6. During their monitoring activities the group of special and permanent monitors shall have the right to divide into not more than three (3) subgroups;

9.7. Translators for permanent and special monitors shall be selected from the approved list of monitors specified in Annex†2, paragraph†1, and counted against the limitations indicated in paragraph†9.4 of this Annex, except in the case where translators are provided by the management of the monitored facility as described in Annex†2, paragraph 15;

9.8. All monitors are obligated to observe safety regulations and management procedures in effect at ECP.

10. The ECP Administration provides U.S. monitors with personal protective equipment and individual dosimeters to be used at ECP. In addition, each U.S. monitor shall have the right to use at the monitoring points two thermoluminescent integrating dosimeters supplied by the U.S. side. Dosimeters furnished by the ECP and U.S. shall be worn by each monitor while working at ECP and given to the ECP responsible person at the end of the working day. Upon completion of each monitor's visit, the ECP responsible person shall select one of the two U.S.-supplied dosimeters which had been used by each monitor. The selected dosimeter shall be tagged and sealed by both sides and retained at ECP as a confirmation device if questions arise concerning monitor exposure levels. Within 90 days following the monitor's departure from ECP, each side shall have the right to contact the other side for a joint reading of the confirmation dosimeter. The second dosimeter supplied by the U.S. side shall be retained by each monitor when departing from the ECP. The U.S. side shall provide to the ECP Administration, necessary information on the reading and calibration methods of the dosimeters supplied by the U.S. side.

11. Upon request of U.S. monitors, the ECP Administration shall provide data on radioactive environment in the working areas of the monitors.

12. ECP will take appropriate measures to facilitate the optimum operation of the U.S. NDA and U.S. flow measurement instruments.

13. Equipment Installation.

13.1. Installation and adjustment of U.S. enrichment and flow instrumentation shall begin not earlier than March 1997, in accordance with an agreed schedule. Installation shall not require a shutdown of the blending process for more than seven calendar days. The monitoring party will assist in the timely first installation, March 1997, certification and licensing of U.S. supplied equipment, as specified in Annex 12. Installation and adjustment shall be done by the trained Russian personnel under the observation of U.S. technical experts. During equipment installation, daily access shall be provided to U.S. technical experts by the monitored facility beginning in March. The monitoring party shall pay for all expenses associated with licensing, training, installation and adjustment of NDA equipment.

13.2. The number of U.S. technical experts and monitors present at the blend point at any given time during installation and adjustment should not exceed four people.

13.3. Following installation of the monitoring party's NDA equipment at the blend point, unless the Russian blending process changes, the monitoring process will not change before March 1, 2001. The executive agent of the monitored party shall assist in licensing, installation and operation of this equipment, and will do so to meet the March 1997 installation start-up.

13.4. Aspects regarding the photocopying of the data print-outs, including its contents, will be resolved during installation.

DONE in, Moscow, Russia, in two copies, this 20th day of December, 1996, in the English and Russian Languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF THE RUSSIAN FEDERATION FOR ATOMIC ENERGY:

FORMS FOR ACCOUNTABILITY RECORDS

TABLE OF CONTENTS:

1. K-1 - Way-Bill Certificate for HEU U_3O_8 and samples received from SChE and waste shipped to SChE;

2. K-14-1 - Analytical Data for HEU U_3O_8 of uranium and U_{235};

3. K-14-2 - Analytical Data for waste of uranium and U_{235};

4. K-14-3 - Analytical Data for HEU hexafluoride of uranium and U_{235};

5. K-15-1 - Analytical Data for HEU hexafluoride of U_{235} at the blending point;

6. K-15-2 - Analytical Data for LEU hexafluoride blend stock of U_{235} at the blending point;

7. K-15-3 - Analytical Data for LEU hexafluoride product of U_{235} at the blending point;

8. Document 1.2. - Quality and Weighing Data Certificate for LEU hexafluoride product in 30B containers;

9. Document 1.3. - Analytical Data for LEU hexafluoride product in 30B containers;

10. K-11-01 - Material Report of reprocessing HEU into LEU for one-month period;

11. K-11-02 - Material Report of reprocessing HEU into LEU for one-year period.

Amendment to Annex 15 to the Protocol, dated December 20, 1996.

The subject Annex is changed as follows. Paragraph 9.1 is changed to read:

9.1 The U.S. side reserves the right to establish a Permanent Presence Office. The sides understand that the establishment of such a Permanent Presence Office would be in accordance with the provisions of the law of the Russian Federation.

ANNEX 16 TO THE PROTOCOL

PROCEDURES OF U.S. MONITORING AT THE MAYAK PRODUCTION ASSOCIATION (Mayak) IN OZERSK, RUSSIA

1. Facilitation of the Monitoring Activities

The Ministry of the Russian Federation for Atomic Energy (MINATOM) and the Mayak Production Association (Mayak) shall facilitate monitoring visits and shall designate responsible persons to provide assistance for the U.S. monitors.

2. At Mayak, U.S. monitors shall have access to the following monitoring points at the monitoring areas:

2.1. At the area where the HEU weapons components from dismantled Russian nuclear weapons, subject to the Agreement, are received and stored in sealed containers prior to machining upon their initial arrival from Russian nuclear weapons dismantlement facilities:

2.1.1. the sealed containers that hold HEU weapons components;

2.1.2. numbers and seals on the containers holding the HEU components.

2.2. At the area where HEU metal chips are stored:

2.2.1. the containers that hold HEU metal chips;

2.2.2. the numbers and seals on containers that hold HEU metal chips.

2.3. At the area where HEU metal chips are fed into the oxidation process:

2.3.1. all containers with HEU metal chips fed into the oxidation process;

2.3.2. serial numbers, tags and seals on the containers referenced in 2.3.1.

2.4. At the area where HEU U_3O_8 is withdrawn from the oxidation process:

2.4.1. all containers with HEU U_3O_8 withdrawn from the oxidation process;

2.4.2. serial numbers, tags and seals on the containers referenced in 2.4.1.

2.5. At the areas where HEU U_3O_8 is fed into and withdrawn from the Uranium Oxide Purification Process:

2.5.1. the containers with HEU U_3O_8 fed into and withdrawn from the purification process;

2.5.2. serial numbers, tags and seals on all containers with HEU U_3O_8 fed into and withdrawn from the purification process.

2.6. At the area where HEU U_3O_8 is prepared for sampling for subsequent analysis:

2.6.1. the containers with HEU U_3O_8 prior to sampling;

2.6.2. serial numbers, tags and seals on containers with HEU U_3O_8 after sampling.

2.7. At the area where the HEU U_3O_8 is stored and prepared for shipment to any Russian fluorination facility subject to the Agreement:

2.7.1. serial numbers, tags and seals on all HEU U_3O_8 containers;

2.7.2. scales and mass-logging computers.

3. All handling of containers and process equipment and instruments related to monitoring activities at Mayak shall be performed by Mayak personnel.

4. At the monitoring areas, the monitors shall have the right to carry out monitoring activities as follows:

4.1. At the area where the HEU weapons components from dismantled Russian nuclear weapons, subject to the Agreement, are received and stored in sealed containers prior to machining upon their initial arrival from Russian nuclear weapons dismantlement facilities:

4.1.1. review POM-1 Forms;

4.1.2. inventory the numbers on the containers;

4.1.3. check the integrity of affixed tags and seals;

4.1.4. randomly select containers from the list in POM-1 for NDA measurements;

4.1.5. observe radiation measurements being performed to confirm the U-235 enrichment of HEU in sealed containers using either U.S. sodium iodide equipment as specified in Annex 12, or Russian equipment, selected by U.S. monitors;

4.1.6. observe radiation measurements being performed to confirm the absence of HEU in sealed containers using either U.S. sodium iodide equipment as specified in Annex 12, or Russian equipment, selected by U.S. monitors.

4.2. At the area where HEU metal chips are stored:

4.2.1. review the filled POM-2 Forms;

4.2.2. inventory the numbers on the containers;

4.2.3. check the integrity of affixed tags and seals;

4.2.4. randomly select containers from the list in POM-2 for NDA measurements;

4.2.5. observe radiation measurements being performed to confirm the U-235 enrichment of HEU in sealed containers using either U.S. sodium iodide equipment as specified in Annex 12, or Russian equipment, selected by U.S. monitors.

4.3. At the area where the HEU metal chips are fed into the oxidation process:

4.3.1. review the form POM-3;

4.3.2. inventory the numbers on the containers;

4.3.3. check the integrity of affixed tags and seals;

4.3.4. observe the process of loading HEU chips into the oxidation facility;

4.3.5. observe the process of oxidation of the HEU chips.

4.4. At the areas where the HEU U_3O_8 is withdrawn from the oxidation process:

4.4.1. observe the process of loading of HEU U_3O_8 into containers and their removal from the oxidation facility;

4.4.2. observe sealing of the filled containers;

4.4.3. review the form POM-3;

4.4.4. observe radiation measurements being performed to confirm the U-235 enrichment of HEU in sealed containers using either U.S. sodium iodide equipment as specified in Annex 12, or Russian equipment, selected by U.S. monitors.

4.5. At the areas where HEU U_3O_8 is fed into and withdrawn from the Uranium Oxide Purification Process:

4.5.1. observe the process of feeding into and removal of HEU U_3O_8 from the purification process;

4.5.2. observe the process of sealing filled containers;

4.5.3. observe radiation measurements being performed to confirm the U-235 enrichment of HEU in sealed containers using either U.S. sodium iodide equipment as specified in Annex 12, or Russian equipment, selected by U.S. monitors;

4.5.4. review the form POM-4.

4.6. At the areas where HEU U_3O_8 is prepared for sampling for subsequent analysis:

4.6.1. observe the input and withdrawal of containers from the sampling area;

4.6.2. observe radiation measurements being performed to confirm the U-235 enrichment of HEU in sealed containers using either U.S. sodium iodide equipment as specified in Annex 12, or Russian equipment, selected by U.S. monitors.

4.7. At the area where HEU U_3O_8 is stored and prepared for shipment to any Russian fluorination facility subject to the Agreement:

4.7.1. obtain information from the K-1 Forms;

4.7.2. inventory the numbers on the containers;

4.7.3. check the integrity of affixed tags and seals;

4.7.4. observe the process of weighing and preparation of containers for shipment to any Russian fluorination facility subject to the Agreement;

4.7.5. observe the process of sealing and tagging filled containers prepared for shipment to any Russian fluorination facility subject to the Agreement;

4.7.6. observe radiation measurements being performed to confirm the U-235 enrichment of HEU in sealed containers using either U.S. sodium iodide equipment as specified in Annex 12, or Russian equipment, selected by U.S. monitors.

5. U.S. monitors at Mayak shall be provided for review with data specified below related to monitoring activities:

5.1. The data provided to the U.S. monitors shall be in the form of the forms listed below for all uranium subject to the Agreement. Blank examples of these records are found in Attachment 1 to this Annex. All technical and analytical data fields in each record shall, when provided, be complete to the extent possible for the current stage of processing:

5.1.1. Form POM-1: Chart for accountability of 90% enriched HEU components where they are received and stored prior to machining; this form contains information related to the Agreement and directly extracted from the passports and shipping documentation that accompany the HEU weapons components in sealed containers. The Russian side confirms that HEU weapon components taken from dismantled nuclear weapons and subject to the Agreement are contained in "green" transport containers;

5.1.2. Form POM-2: Chart for operational-technical accountability of 90% HEU Chips; This form shall include at a minimum: the date and shop

container number if the HEU component is transferred into another container; the date, container number, and the seal number of containers prior to machining; the date and container number after chip production; the date, seal number, and the container number of chips oxidized; and the date of transfer to the next area;

5.1.3. Form POM-3: Chart for operational-technical accountability of 90% HEU U_3O_8. This form shall include at a minimum: loading date and unloading date, container and seal number, as well as aggregate mass per page of HEU U_3O_8 removed from the oxidation glovebox;

5.1.4. Form POM-4: Chart for operational-technical accountability for 90% HEU U_3O_8 prior to and after purification;

5.1.5. K-1 - Way-bill-certificate for shipment of HEU U_3O_8.

5.2. The documents provided in 5.1.1-5.1.4 shall be completed, beginning with the initial receipt and processing of HEU subject to the Agreement, in accordance with the agreed format as described in Attachment 1 to this Annex;

5.3. Forms listed in paragraphs 5.1 shall not be destroyed until U.S. monitors receive an authenticated photocopy of the documents;

5.4. The information provided to monitoring personnel shall be treated confidentially, restricted to official agencies and to persons designated by the Executive Agents, and shall not be provided to third parties or released to the public or utilized by the receiving Party for its own commercial advantage, without prior approval of the other Party.

6. The U.S. monitors at Mayak shall have the right to:

6.1. record and retain records and notes of data obtained from the monitoring activities;

6.2. review, on request, documents related to transparency in accordance with paragraph 5 of this Annex;

6.3 obtain photocopies of completed forms POM-1, POM-2, POM-3 and POM-4, during monitor visits, and keep these forms in the tagged and sealed safe for subsequent removal to the U.S.;

6.4 familiarize themselves with the description of the processes of HEU chip production, oxidation and purification performed at Mayak on uranium subject to the agreement; to request additional information to clarify process descriptions given in Annex 9;

6.5 check the number on any HEU U_3O_8 container, as well as the placement, integrity, and numbers on the tags and seals on any container;

6.6 observe radiation measurements being performed to confirm the U-235 enrichment of HEU in the following forms: components in sealed containers, metal chips, and U_3O_8, as selected by U.S. monitors, using either U.S. sodium iodide equipment as specified in Annex 12, or Russian equipment, selected by U.S. monitors;

6.7 observe the application of tags and/or seals supplied by the U.S. side on the following:

6.7.1 containers with HEU U_3O_8 that have been prepared for shipment to any Russian fluorination facility subject to the Agreement;

6.7.2 no seals or tags supplied by the U.S. side and applied at the request of U.S. monitors may violate the integrity of Russian seals applied by Mayak personnel.

6.8 observe the calibration of the scales, offer the use of U.S. standards, observe the measurement of those standards, and obtain the measurement results;

6.9 to use equipment and supplies, as listed in Annex 12;

6.10 have a work space at Mayak where they may:

6.10.1 review documentation referred to in paragraph 5;

6.10.2 process the documents provided and store them;

6.10.3 perform other activities related to monitoring.

6.11 store portable U.S. NDA instruments in security containers in the monitors' work rooms;

6.12 affix their own tags and/or seals to the security containers specified in paragraph 6.11;

6.13 request that Mayak personnel check the software in U.S. NDA equipment.

7. The Mayak Administration provides U.S. monitors with personal protective equipment and individual dosimeters to be used at Mayak. In addition, each U.S. monitor shall have the right to use at the monitoring points two thermoluminescent integrating dosimeters supplied by the U.S. Dosimeters furnished by Mayak and U.S. shall be worn by each monitor while working at Mayak and given to the Mayak responsible person at the end of the working day. Upon completion of each monitor's visit, the Mayak responsible person shall select one of the two U.S.-supplied dosimeters which had been used by each monitor. The selected dosimeter shall be tagged and sealed by both sides and retained at Mayak as a confirmation device if questions arise concerning monitor exposure levels. Within 90 days following the monitor's departure from Mayak, each side shall have the right to contact the other side for a joint reading of the confirmation dosimeter. The second dosimeter supplied by the U.S. shall be retained by each monitor when departing from Mayak. The U.S.

side shall provide to the Mayak Administration, necessary information on the reading and calibration methods of the dosimeters supplied by the U.S.

8. Upon request of U.S. monitors the Mayak administration shall provide data on the radioactive environment in the working area of the monitors.

9. Special Monitors:

   9.1. The number of days during which special monitoring activities occur shall not exceed five working days for each monitoring visit to Mayak. The number of special monitoring visits shall not exceed six per calendar year;

   9.2. A group of special monitors may consist of no more than five persons;

   9.3. Interpreters for special monitors shall be selected from the approved list of monitors specified in paragraph 1, Annex 2, and taken into account in calculating the total number of monitors, except in cases where interpreters are provided by the monitored side, as described in paragraph 15, Annex 2;

   9.4. The monitoring team shall have the right to divide into not more than two (2) subgroups within the Mayak Site.

10. All movements of the monitors inside the borders of the city of Ozersk, are to be conducted under escort of Mayak personnel.

11. All monitors are obligated to observe safety and internal regulations in effect at Mayak.

12. Mayak will take appropriate measures to facilitate the optimum operations of the U.S. portable NDA instruments.

DONE at Moscow, Russia, in two copies, this eleventh day of February 1998, in the English and Russian languages, each text being equally authentic.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA:

FOR THE MINISTRY OF THE RUSSIAN FEDERATION FOR ATOMIC ENERGY:

FORMS FOR ACCOUNTABILITY RECORDS

TABLE OF CONTENTS:

1. K –1: Way-bill-certificate for shipment of HEU U_3O_8;

2. Form POM-1: Chart for accountability of 90% enriched HEU components where they are received and stored prior to machining;

3. Form POM-2: Chart for operational-technical accountability of 90% HEU Chips.

4. Form POM-3: Chart for operational-technical accountability of 90% HEU U_3O_8.

5. Form POM-4: Chart for operational-technical accountability for 90% HEU U_3O_8 prior to and after purification

POM-1
February 1998

Chart for accountability of 90% HEU components where they are received & stored prior to machining			Accounting No. _____ << >> _____ 199__	
Receipt Date	"T" Containers #	Seal #	Date sent for machining	Notes
1	2	3	4	5
Checked by a member of the accounting group: _____ _____ (Signature)				
NOTE: No corrections without certification in the chart				

POM-2
February 19

Chart for accountability of 90% HEU metal shavings				Accounting No. _____ << >> _____ 199__				
Fed into machining				Production of Shaving			Output of Shavings	
From Delivery document POM-1	Date	Shop Container No.	Seal No.	Date	Container No.	Seal No.	Date	To Receipt Document POM-3
1	2	3	4	5	6	7	8	9
Checked by a member of the accounting group: _____ _____ (Signature)								
NOTE: No corrections without certification in the chart								

Chart for accountability of 90% HEU U_3O_8					Accounting No. ______________ << >> ______________ 199__				
Receipt of chips for burning (oxidation)					Obtaining U_3O_8				
Loading Date	Container No.	Seal No.	From delivery Document POM-2	Glovebox No.	Unloading Date	Glovebox No.	Container No.	Seal No	Mass
1	2	3	4	5	6	7	8	9	10
Total Mass of HEU									

Checked by a member of the accounting group: ______________ ______________ (Signature)

NOTE: No corrections without certification in the chart

POM-

February 1998

Chart for accountability of 90% HEU U_3O_8 prior to and after purification	Accounting No. _____ << >> _____ 199__

Receipt of oxide for purification				Loading	Removal from purification				Date of ship to batching
Arrival Date	Container No.	Seal No.	From delivery Document POM-3	Date	Date	Container No.	Seal No.	Mass	
1	2	3	4	5	6	7	8	9	10

Checked by a member of the accounting group: _____ _____

(Signature)

NOTE: No corrections without certification in the chart