

1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION
3 OFFICE OF THE SECRETARY
4 ***

5 MEETING WITH KOREAN PENINSULA ENERGY DEVELOPMENT
6 ORGANIZATION (KEDO) AND STATE DEPARTMENT
7 ***

8 PUBLIC MEETING
9

10 Commission Conference Room
11 One White Flint
12 Rockville, Maryland
13 Tuesday, June 13, 2000

14 The Commission met in open session, pursuant to
15 notice, at 1:05 p.m., the Honorable RICHARD A. MESERVE,
16 Chairman of the Commission, presiding.

17 COMMISSIONERS PRESENT:

18 RICHARD A. MESERVE, Chairman of the Commission
19 GRETA J. DICUS, Member of the Commission
20 NILS J. DIAZ, Member of the Commission
21 EDWARD McGAFFIGAN, JR., Member of the Commission
22 JEFFREY S. MERRIFIELD, Member of the Commission
23
24
25

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1 STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:
2 BRUCE TURNER, State Department
3 JEROME BOSKEN, State Department
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P R O C E E D I N G S

[1:05 p.m.]

CHAIRMAN MESERVE: Good afternoon. On behalf of my colleagues here at the Nuclear Regulatory Commission, I would like to welcome the representatives of the Department of State and the Korean Peninsula Energy Development Organization to the Nuclear Regulatory Commission.

The context for this meeting, as people at the table well know, is that there is an agreed framework that was executed by the United States and the People's Republic of Korea that among the terms of that agreement, it included some undertakings that there would be the development of 2,000 megawatt electric reactors in North Korea in exchange for some activities that the North Koreans would undertake.

We have received a letter from Ambassador Cartwin requesting that the Nuclear Regulatory Commission provide some assistance and cooperation relating to KEDO's safety efforts and particularly relating to efforts to develop and maintain a strong and competent regulatory entity in North Korea that would be responsible for these plants once they are up and running.

Our briefing today is to discuss what is going on with regard to this activity and, in particular, with regard to the request that has been made of the NRC.

We are joined this morning or this afternoon from ANN RILEY & ASSOCIATES, LTD.

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1 the State Department by Bruce Turner, who is coordinator for
2 the agreed framework division, Office of Korean Affairs,
3 Bureau of East Asian and Pacific Affairs, and by Jerome
4 Bosken, who is a Senior Technical Advisor in that same
5 group.

6 We have several representatives of the Korean
7 Peninsula Energy Development Organization, or KEDO, as I'm
8 sure we'll probably all be referring to it, and the
9 representatives include Desaix Anderson, and I apologize if
10 I mispronounce some names; Tae Sik Lee, who is the Deputy
11 Executive Director; Masaaki Ono; Yoichi Togo, and Jack
12 Mulligan. Welcome.

13 Why don't we proceed, and we will hear first from
14 the State Department.

15 MR. TURNER: Thank you, Mr. Chairman. While we're
16 at introductions, I would also liken to introduce two
17 additional people who came with us today from the State
18 Department, both from the non-proliferation bureau, Kathryn
19 Schultz and Warren Stern, who are sitting right behind me.

20 CHAIRMAN MESERVE: Let me interrupt for one thing.
21 As you've noted, I would observe there are only four of the
22 five Commissioners that are here. Commissioner Dicus did
23 ask me to state that something had come up that caused her
24 to have to miss the meeting. She asked me to apologize for
25 her failure to be able to be with us this afternoon.

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1 She has indicated to me that we will receive a --
2 all of us have the opportunity to get a transcript of this
3 meeting and she will be reviewing the transcript. Excuse
4 me.

5 MR. TURNER: Thank you, again, Mr. Chairman. It
6 is a pleasure to be here today to discuss with you and the
7 other Commissioners the KEDO project to construct two light
8 water reactor power plants in North Korea, as called for
9 under the 1994 agreed framework between the United States
10 and the DPRK.

11 For the most part, I will leave it to KEDO's
12 Executive Director, Mr. Desaix Anderson, to explain in
13 detail the status of the work and the steps that KEDO is
14 taking to assure the safety of this endeavor.

15 For my part, I would like to say a few words about
16 the political issues that underlie the project and the
17 importance we in the United States Government attach to
18 nuclear safety.

19 I appreciate the opportunity to do so.

20 However, just as a brief caveat at the beginning,
21 since this is a public session, I would ask your
22 understanding for the fact that we might not be able to
23 discuss fully some sensitive issues and matters currently
24 under negotiation with North Korea. We would be pleased to
25 accommodate your questions on these issues at a later time,

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1 if you see such a need.

2 Today is a momentous day. Many eyes are turned
3 toward North Korea, where there are already some surprising
4 developments. Earlier today, South Korean President Kim dae
5 Jong met in Pyongyang with the President of North Korea, Kim
6 Jo Nil. This is an historic summit meeting, the first time
7 that two presidents have met since the division of the
8 country 55 years ago.

9 This can, of course, be only a first step toward a
10 process of dialogue. The South Korean goal is to end
11 confrontation on the peninsula and to begin the process of
12 reconciliation and cooperation and lay the groundwork for
13 eventual unification.

14 The United States strongly supports this effort and has
15 great confidence in President Kim Il Jung.

16 It is important also to see the summit in the
17 context of other events. It is not an isolated incident,
18 but part of an apparent North Korean trend toward improving
19 relations with its neighbors and others in the international
20 community.

21 We note in that regard that the Government of
22 Japan has also entered into discussions with the DPRK on
23 establishing bilateral relations. No one could also fail to
24 note that North Korean President Kim Jo Nil's recent visit
25 to China, his first foreign travel in many years.

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1 Earlier this year, North Korea established diplomatic
2 relations with Italy, reestablished relations with
3 Australia, and requested membership in the Austrian regional
4 forum. And Russia recently announced that President Putin
5 will visit Pyongyang in July.

6 So as you can see, there is great activity on many
7 fronts.

8 The United States, for its part, has held numerous
9 rounds of talks with the DPRK in recent months, addressing a
10 range of issues, from the easing of economic sanctions on
11 North Korea to North Korea's missile activities.

12 We used the latest round of discussions last month
13 in Rome to launch a new negotiation on implementation of the
14 agreed framework. The U.S. plan is to use these new
15 negotiations to address the full range of our nuclear
16 related concerns.

17 Also in Rome, we held a preparatory session and
18 made further progress on arrangements for the next formal
19 round of U.S.-DPRK missile talks, which we expect will take
20 place soon. North Korea reiterated that its moratorium on
21 flight testing of missiles would remain in effect while
22 these discussions continue.

23 As many of you know, the Republic of Korea, Japan,
24 and the United States coordinate very closely on policy
25 toward North Korea. This process began with the recently

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1 concluded review of U.S.-DPRK policy conducted by former
2 Secretary of Defense William Perry, which Congress had
3 requested.

4 We are currently implementing the review's
5 principal recommendation for a step-by-step reciprocal
6 approach aimed at eliminating North Korea's nuclear and
7 long-range missile threats and at improving our bilateral
8 relations.

9 The Perry process also reaffirmed the centrality
10 of the agreed framework as a foundation of our North Korea
11 policy.

12 In 1992, inconsistencies in information on DPRK
13 nuclear material production and new processing activities,
14 including DPRK resistance to IAEA inspections to resolve
15 these inconsistencies led to international concern about the
16 direction of the North Korean nuclear program.

17 Following the March 1993 DPRK announcement that it
18 would withdraw from the nuclear non-proliferation treaty,
19 the United States entered into bilateral negotiations with
20 North Korea that resulted in the signing of the agreed
21 framework in October 1994.

22 Under the framework, the DPRK agreed to freeze and
23 eventually dismantle its graphite moderated reactors and
24 related facilities. These included an operational five
25 megawatt reactor that had been refueled and a 50 megawatt

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1 and a 200 megawatt reactor that were under construction.

2 The five megawatt reactor is thought to have been
3 able to produce about seven kilograms of weapons grade
4 plutonium annually. The larger reactors under construction
5 would have been expected to yield another 200 kilograms of
6 weapons grade plutonium annually, enough plutonium for tens
7 of weapons per year.

8 The agreed framework also called for the canning
9 of all spent fuel from the five megawatt reactor and its
10 eventual removal from the DPRK. I am pleased to inform you
11 that the canning, under IAEA's seal, of all accessible spent
12 fuel rods was completed in April of this year.

13 The IAEA has confirmed since then to us that the
14 remaining fuel rod fragments that are currently inaccessible
15 do not represent a proliferation concern.

16 The U.S. spent fuel team will return to the DPRK
17 in October to continue cleanup and to begin looking at long-
18 term maintenance.

19 The freeze is holding. The agreed framework
20 stopped an ongoing nuclear program and will eventually
21 result in dismantling fissile material production facilities
22 and removal of spent nuclear fuel from the country, not
23 merely placing them under safeguards.

24 Until this point is reached, the IAEA will
25 continue to monitor the freeze and the spent fuel, and I'm

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1 happy to say, is receiving the full cooperation of the North
2 Koreans.

3 The LWR project also is making progress. Granted,
4 that progress has not always been rapid or smooth, but it is
5 also important never to forget that this is a unique and
6 uniquely complex project. The funding for the reactor
7 construction is being provided by loans from the export
8 banks of South Korea and Japan. The turnkey contract
9 between KEDO and the South Korean utility KEPCO became
10 effective in February of this year.

11 Full-scale work, including contracts for long lead
12 time components and training for DPRK personnel has now
13 begun. We anticipate that the construction permit will be
14 issued by the DPRK in late summer 2001, which will mark the
15 beginning of excavation of the nuclear bloc.

16 As the project is implemented, KEDO and the United
17 States are committed to ensuring that the plant is built and
18 operated at the highest international safety standards. The
19 plant will be based on a South Korean reference plant,
20 which, in turn, was based on United States technology. The
21 South Korean Institute for Nuclear Safety, which we refer to
22 as KINS, will have the lead role in safety reviews and in
23 working with the DPRK regulator.

24 The IAEA will conduct a design and safety review
25 of the plant for KEDO and might be further involved in the
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1 project.

2 We also see a role for national regulatory
3 authorities, in particular for the Nuclear Regulatory
4 Commission, that is complimentary to this effort. We
5 believe it is especially important to expose North Korean
6 regulatory personnel to the structure and standards of
7 internationally acceptable nuclear regulation and to
8 encourage the required safety culture.

9 Because U.S. technology and equipment will be
10 used, but, even more importantly, because the NRC plays a
11 global leadership role in nuclear safety and regulatory
12 matters, we believe that the NRC can meet a critical need in
13 helping KEDO to train DPRK personnel and in providing
14 experts to the KINS and IAEA reviews and other activities.

15 The NRC, in our view, also has a role with respect
16 to the provision of information and computer safety codes
17 needed to license and assure the safe operation of the two
18 light water reactors.

19 The plant will incorporate advanced design
20 features and its safe operation will be of vital interest to
21 all. We believe that information on its performance will be
22 very valuable to the NRC and U.S. industry.

23 Mr. Chairman, thank you for this opportunity.
24 With your indulgence, I would like now to turn the floor
25 over to Mr. Anderson and KEDO, who I understand will speak

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1 more about the type of cooperation that KEDO is seeking.
2 Once details of such cooperation are developed,
3 the State Department would be pleased to work together with
4 the NRC on the necessary arrangements for funding this sort
5 of effort.

6 Thank you again for this opportunity to speak to
7 you. I will be ready to answer questions that you might
8 have either following Mr. Anderson's presentation or
9 immediately, if that's your desire.

10 CHAIRMAN MESERVE: Why don't we proceed with Mr.
11 Anderson's presentation.

12 MR. ANDERSON: Thank you very much, Mr. Chairman,
13 and good afternoon, Commissioners. I'm Desaix Anderson, the
14 Executive Director of KEDO, been there almost three years.

15 It's a unique organization that combines
16 engineers, scientists, diplomats, lawyers, other
17 professionals, in, again, a unique project, which is not
18 only designed to strengthen the international non-
19 proliferation, goals and regime in Northeast Asia, but also
20 to improve the lasting prospects for peace.

21 This afternoon I would like to touch on how KEDO
22 is organized, the current status of the project, and the
23 unique system that we've developed to advance the nuclear
24 safety of the project. I won't repeat what Mr. Turner has
25 said about the background, but it was clear in the '80s that

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1 the North Koreans were trying to develop nuclear weapons and
2 in 1993 and 1994, they blocked the IAEA inspections,
3 threatened to withdraw from the NPT and IAEA.

4 President Jimmy Carter visited North Korea and he
5 and North Korean President Kim Il Sung agreed to what in
6 effect became the negotiation for the agreed framework,
7 signed later in October of that year, which froze the DPRK's
8 nuclear program.

9 Six months later, Japan, the Republic of Korea and
10 the United States expressed their common desire to cooperate
11 in taking the steps necessary to implement the agreed
12 framework and signed a charter establishing KEDO.

13 Three years later, the European Atomic Energy
14 Community supported KEDO through substantial and sustained
15 cooperation and became the fourth member of the board.
16 Today, there are 13 country members in KEDO.

17 KEDO is charged with financing and constructing in
18 the DPRK the two light water reactors, a technology of U.S.
19 origin, and to provide the DPRK with an alternate source of
20 energy in the form of 500 metric tons of heavy fuel oil
21 annually, until the first reactor is completed.

22 Needless to say, the political environment in
23 which we operate over the past five years has been
24 tumultuous. It's difficult to discuss KEDO without first
25 establishing all contexts in which we work. As Executive

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1 Director of KEDO for the past three years and the former
2 State Department official with the responsibility over East
3 Asia and the Pacific, there is no question but that the
4 present moment is the most auspicious in the past 50 years.
5 The source of my recent optimism is based on three
6 actualities; first, Secretary Perry, on behalf of the
7 President, has conveyed clearly to the leadership in
8 Pyongyang in May of 1999 that there was an opportunity to
9 choose between meaningful and peaceful engagement and
10 support for the rehabilitation of North Korea's economy in
11 the context of elimination of the nuclear missile and
12 military threats, on the one hand, or isolation and possible
13 confrontation, with all the economic and military
14 implications that this posed to North Korea, and that was
15 the message of the Perry report, the gist of it.
16 Second, I'm tentatively convinced that North Korea
17 has come to realize that survival is determined on the
18 gradual -- would be determined on the basis of gradual
19 change through economic cooperation with neighboring
20 countries and Mr. Turner has mentioned a number of recent
21 activities, diplomatic activities on the part of North
22 Korea. There are others, as well. They are trying to join
23 the Austrian regional forum. They've talked to a number of
24 other countries, Britain, France, Kuwait, others among the
25 European Union.

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1 They have strengthened their overtures to Russia.
2 Kim Jong Il has just visited China and, of course, the U.S.-
3 DPRK talks. But the third most important feature is the
4 stunning event which we all saw on television this morning
5 of President Kim dae Jong and General Secretary Kim Jung Il
6 walking, smiling and chatting, as President Kim visited
7 Pyongyang.

8 Now, KEDO is not involved directly in any of these
9 discussions, but I like to think that our organization has
10 helped create the overall positive atmosphere surrounding
11 relations between the DPRK and the outside world. In turn,
12 improved relations on the Korean peninsula and beyond
13 creates a better working environment with the DPRK and will
14 certainly aid in achieving our objectives, and we have
15 already noticed change.

16 With this backdrop, I would like to provide a
17 brief description of KEDO's organization. We have
18 approximately 40 people in New York, with a consul office at
19 the future power site in DPRK, which is comprised of
20 nationals from Japan, Republic of Korea, the U.S. and the
21 European Atomic Energy community.

22 An American has traditionally served as the
23 organization's executive director. I am ably assisted by
24 two Deputy Executive Directors, Mr. Ono and Mr. Lee, who
25 flank me, who oversee seven divisions in KEDO. The two

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1 pertinent divisions for this conversation are the nuclear
2 safety and quality assurance division, which is headed by
3 Mr. Yoichi Togo, and the project operations division, headed
4 by Jack Mulligan, who are with us here today.

5 To obtain the technical support and supervising
6 overall implementation of the light water reactor project
7 and in providing regulatory compliance, expertise, KEDO
8 hired the U.S. architecture engineering firm Duke
9 Engineering and Services as our technical support
10 consultant.

11 The executive board members, with whom we work
12 very closely, are the European Union, Japan, South Korea and
13 the United States.

14 In December of 1995, KEDO concluded the supply
15 agreement with the DPRK. This serves as the governing
16 document between KEDO and the DPRK for the light water
17 reactor project. The most pertinent to today's meeting, the
18 supply agreement stipulates the division of responsibility
19 between KEDO and the DPRK, including nuclear safety related
20 areas of the light water reactor project.

21 In particular, it was agreed that KEDO would
22 provide the DPRK with two pressurized light water reactor
23 units, with two coolant loops and a generating capacity of
24 approximately 1,000 megawatts of electricity, each from a
25 turnkey basis.

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1 The reactor model selected by KEDO will be the
2 advanced version of U.S. origin, design and technology
3 currently in production on the Korean standard nuclear power
4 plant.

5 Most important to our discussions is the supply
6 agreement stipulation that designates KEDO as the party
7 responsible for assuring the design, manufacture,
8 construction, testing and commissioning of the light water
9 reactor plants are in compliance with nuclear safety and
10 regulatory codes and standards, those ordered by the U.S.
11 NRC and IAEA.

12 The DPRK regulatory authority, on the other hand,
13 has responsibility for issuing the construction,
14 commissioning and operating permits to KEDO and KEDO should
15 provide the DPRK with all the results of its review for
16 examination of the DPRK before the issuance of the permits.

17 After completion of the light water reactor
18 plants, KEDO and the DPRK will conduct safety reviews to
19 ensure the safe operation and maintenance of the light water
20 reactor plants. But the DPRK owner/operator will be
21 responsible for the safe operation and maintenance of the
22 light water reactor plants, for appropriate physical
23 protection, for environmental protection, safe storage and
24 disposal of radioactive waste, including fuel spent once
25 KEDO turns the plant over to them.

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1 Where we have come since the conclusion of the
2 supply agreement in 1995, we have codified the requirements
3 and responsibilities stipulated in the supply agreement in a
4 number of areas and we have completed six protocols to
5 accomplish this.

6 These include KEDO's status in the DPRK,
7 transportation, communications, takeover of the site, DPRK
8 provision of labor and services, penalties for non-payment
9 of financial obligations by the DPRK and KEDO, and we have
10 recently concluded the negotiations on the protocol covering
11 training for DPRK management, operators and maintenance
12 personnel.

13 We will next shortly begin to try to conclude the
14 negotiation of a protocol on quality assurance and
15 warranties of the LWR plant.

16 Implementation of the agreed framework has been
17 extremely challenging, an intense process. Everything we do
18 must be laid out explicitly in these detailed protocols to
19 ensure proper procedures are followed and commitments met.

20 In parallel to our discussions with the DPRK,
21 we're working diligently on activities to fulfill our
22 obligation to build the two light water reactors. In March
23 1996, four months after concluding the supply agreement with
24 the DPRK, KEDO officially designated the Korea Electric
25 Power Corporation, KEPCO, as the prime contractor for the

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1 light water reactor project.

2 KEPCO is a partially privatized ROK government-
3 owned utility that is the sole supplier and distributor of
4 electricity in the ROK. Presently KEPCO operates 15 nuclear
5 power plants, 11 pressurized water reactors, and four
6 pressurized heavy water reactors.

7 The reference plant of the LWR project are Ochen
8 Units 3 and 4, operating in the ROK, which are based on the
9 Korean standard nuclear power plant model. In August of
10 '97, we signed the preliminary works contract with KEPCO to
11 initiate site activities for grading infrastructure
12 development prior to implementation of the turnkey contract.

13 Breaking ground the same month, we have undertaken
14 considerable site preparation at a cost of \$94 million.

15 Site grading work is leveling the mountain where
16 the two reactors will be constructed and back-filling
17 surrounding areas where the construction facility will be
18 located. Seventy percent of the total volume of 4.4 million
19 cubic meters needed to be removed has been removed, to get
20 the final -- reach the final grade level of ten meters above
21 sea level.

22 We have installed an independent supply of
23 reliable electricity, a potable water plant, for the needs
24 of construction personnel and to meet the construction
25 requirements.

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1 Construction of facilities for warehousing
2 materials, offices, heavy equipment repair, electrical
3 generators, water supply and treatment and concrete batching
4 have also been erected.

5 At the construction site in Kumo, which is on the
6 eastern coast of the DPRK, we have also built a small
7 village from nothing, housing medical facilities, roads,
8 water and electricity services, three houses of religious
9 worship. The village also has a restaurant where South and
10 North Korean workers serve the same food from the same
11 kitchen.

12 December 15, '99, KEDO concluded the \$4.6 billion
13 turnkey contract with KEPCO for supply of the two light
14 water reactor plants. Soon after that, KEDO finalized loan
15 agreements with the Japan Bank for international
16 corporation, JBIC, and the Korean Export/Import Bank to
17 finance the project, and South Korea will provide 70 percent
18 of the financing and Japan will provide \$116.5 billion yen.

19 The DPRK will repay KEDO for each light water
20 reactor plant, free of interest, over a 20-year term after
21 completion of each light water reactor plant.
22 Work has begun on the preparation of the preliminary safety
23 analysis report and environmental report this past February
24 and the PSAR will be prepared, based on the format and the
25 contents of Regulatory Guide 1.7, Revision 3, and the

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1 environmental report on Regulatory Guide 4.2. It is
2 anticipated that KEDO will provide the PSAR and the
3 environmental report to the DPRK regulatory authority
4 sometime early next year for their review.

5 Within the DPRK, the nuclear energy matters are
6 the responsibility of the General Department of Atomic
7 Energy. The DPRK also relies on an ad hoc committee of the
8 Atomic Energy Commission for advice on nuclear energy
9 issues.

10 Regulatory responsibilities are carried out by the
11 State Nuclear Safety Regulatory Commission, or the SNSRC.
12 The chairman, vice chairman, three department directors
13 oversee management of SNSRC, which is comprised of three
14 divisions, departments of nuclear safety inspection,
15 radiation control, and standards establishment.

16 The department of nuclear safety inspection is
17 responsible for licensing the nuclear facilities, while the
18 department of standards establishment develops regulations,
19 bylaws and technical standards on nuclear safety.

20 The hierarchy of laws, regulations and standards
21 are as follows. Acts, including the Atomic Energy Act, are
22 adopted by the standing committee of the Supreme People's
23 Assembly. Regulations are adopted by the cabinet, guides and
24 technical standards by the State Nuclear Safety Regulatory
25 Commission.

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1 Our understanding is that the SNSRC reports to the
2 cabinet and is not part of the General Department of Atomic
3 Energy, which we believe will operate the plant.

4 And while the SNSRC has informed us about their
5 structure, our knowledge about the capabilities and
6 experience of North Korean regulatory bodies remains
7 limited. We know for certain, however, that the SNSRC has
8 no practical experience in the design, construction,
9 operation or regulation of pressurized light water reactors
10 of the type KEDO is supplying.

11 At the same time, they are making every effort to strengthen
12 their regulatory infrastructure, and this has been made
13 abundantly clear in the most recent meetings that we have
14 had with them, the nuclear safety experts meeting.

15 For these reasons, KEDO is taking a conservative
16 approach toward nuclear safety to assure well designed, well
17 constructed and safe plants, that meet all the necessary
18 internationally accepted standards.

19 KEDO itself cannot regulate or license the plant.
20 Ultimately, it is the DPRK which is the regulatory body and
21 issues the construction, commissioning and operating
22 permits.

23 To address the concerns raised over the
24 credibility and independence of the DPRK nuclear regulatory
25 body, expressed internally from KEDO member countries and

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1 internationally, KEDO established a unique system to monitor
2 the safety of the light water reactor project and we called
3 the system the nuclear safety confirmation system.

4 Before I explain the details of the system, let me
5 first outline KEDO's nuclear safety policy, which serves as
6 the foundation from which all the light water reactor
7 related activities are built.

8 In short, the fundamental precepts of our nuclear
9 safety policy state that KEDO will conduct all light water
10 reactor project activities in such a manner that nuclear
11 safety is accorded the highest priority. We will adopt
12 fundamental nuclear safety principles and licensing
13 practices and utilize internationally formulated guidelines
14 and recognize the importance of openness and transparency in
15 the conduct of nuclear safety endeavors and that the prime
16 responsibility for the safety of a nuclear installation
17 rests with the holder of the operating license.

18 In recognition of the challenges posed by this
19 policy, KEDO established the Nuclear Safety and Quality
20 Assurance Division to oversee nuclear safety aspects of the
21 project and they act independently of the entity's
22 responsibility within KEDO for the design, construction and
23 commissioning of the light water reactor plants.

24 The safety division has established a nuclear
25 safety confirmation system to ensure these goals are met.

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1 Under the nuclear safety confirmation system, KEDO sets its
2 nuclear safety policies and practice, undertakes safety
3 reviews and manages associated issues, and oversees all
4 safety-related activities.

5 The end result of these activities is the ability
6 to confirm that the light water reactor plants achieve an
7 internationally acceptable standard of nuclear safety.

8 In the interest of openness and transparency, the
9 safety confirmation system relies on technical support from
10 many outside experts and organizations. At present, KEDO
11 has established a three-pronged approach with the nuclear
12 safety confirmation system.

13 Because of uncertainty in North Korea's nuclear
14 regulator, KEDO has decided to undertake its own safety
15 review of the light water reactor plants. To carry out this
16 significant undertaking, KEDO concluded a cooperation
17 agreement with the Korea Institute for Nuclear Safety, or
18 KINS, of the ROK. KEDO considers itself fortunate to have
19 the expertise of KINS, which is responsible for conducting
20 safety reviews of the ROK plants for the Ministry of Science
21 and Technology and, therefore, is intimately knowledgeable
22 of the Korean standard nuclear power plant.

23 KINS has already started its preliminary review of
24 the light water reactor plant documentation, including the
25 site survey report and the plant description. Discussions

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1 are being finalized concerning the final scope of KINS'
2 review, which is expected to start formally early next year,
3 when the PSAR and ER are issued, and should be completed in
4 mid 2001.

5 We are also making plans to supplement KINS'
6 reviewers with experts from KEDO member countries who would
7 participate with KINS in its review of the licensing
8 documents.

9 KINS will document its safety review and safety
10 evaluation reports, just as is the practice here in the U.S.
11 KEDO will provide the SNSRC with the safety evaluation
12 reports for their information.

13 Another important entity in the nuclear safety
14 confirmation system serves as a final check on all of our
15 nuclear safety related activities. This is the nuclear
16 safety advisory group, the NSAG, which is composed of very
17 distinguished senior level nuclear experts from member
18 countries of KEDO.

19 The NSAG advises me on all nuclear safety related
20 matters. NSAG was established to provide the executive
21 director of KEDO with an independent assessment of the
22 adequacy and implementation of KEDO's safety confirmation
23 policies and practice.

24 The NSAG is currently comprised of experts from
25 nine countries, including the United States. With nearly
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1 300 years of combined experience in diverse nuclear related
2 fields, including the current and past chair of the IAEA's
3 international nuclear safety advisory group, we have and
4 will continue to rely on this group to provide guidance and
5 advice on all nuclear safety aspects of the light water
6 reactor project.

7 The primary tasks of the NSAG are to perform
8 oversight of the safety reviews carried out by KINS and to
9 make recommendations to the KEDO executive director on
10 nuclear safety.

11 In addition, the NSAG also has taken a strong
12 interest in the capabilities of both the DPRK operator and
13 regulator, an interest that we warmly welcome. In fact, the
14 group invited the State Nuclear Safety Regulatory Commission
15 of the DPRK to its most recent meeting held last week in
16 KEDO's headquarters in New York, to cultivate the safety
17 culture of the DPRK and to have transparency in the safety
18 review process and the nuclear safety confirmation system.

19 NSAG hopes to get a firsthand sense of level of
20 competence and readiness of the DPRK regulatory authority to
21 perform its regulatory role with the light water reactor.
22 Unfortunately, DPRK was unable to attend because of the
23 timing, but we intend to press for DPRK participation in the
24 future meetings and the DPRK appeared to be quite eager to
25 do so.

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1 To support the further objective of ensuring the
2 safety of the light water reactor project in a transparent
3 and internationally recognized way, KEDO has requested the
4 design safety review services of the International Atomic
5 Energy Agency. We met with the IAEA earlier this year to
6 discuss their support and we expect they will provide these
7 services and visits KINS' office in mid-2001 to conduct
8 their two-week safety review.

9 Considering the breadth of knowledge and expertise
10 at the IAEA, KEDO is also interested in seeking support to
11 help strengthen the DPRK regulatory body. Because the DPRK
12 is not a member of the IAEA at this point, the agency is
13 unable to provide direct support currently to North Korea.

14 The IAEA did, however, express interest in the
15 idea and said they could make available other technical
16 services to KEDO, if requested.

17 According to the supply agreement, the DPRK will
18 come to full compliance with its IAEA safeguards agreement
19 before delivery of the key nuclear components. IAEA
20 involvement will be far easier at that time, including in
21 the area of nuclear safety.

22 KEDO faces other significant challenges, however,
23 that affect nuclear safety. In particular, then safe
24 operation, maintenance and regulation of the plants after
25 plant takeover. Aside from any requirement in the supply

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1 agreement, KEDO understands and recognizes its obligations
2 to support the development of a strong independent DPRK
3 regulatory body. Therefore, KEDO is working and will
4 continue to work with both the DPRK regulator and operator
5 to ensure that these organizations are prepared to assume
6 the responsibility to operate safely and regulate the light
7 water reactor plant.

8 Based on the cooperation agreement between KEDO
9 and KINS, KINS has also been instrumental in formulating an
10 orientation or training program for the DPRK nuclear
11 regulatory staff, which provides information on
12 establishments and management of a regulatory organization,
13 and in-depth training on the light water reactor plant,
14 safety reviews and inspections.

15 We have just recently presented this program to
16 the DPRK for their consideration and we're waiting on their
17 feedback. It is also worth noting that the DPRK has
18 expressed a strong desire to visit regulatory bodies of
19 other countries, including the United States, for training
20 and to undertake other cooperative activities.

21 We are working to arrange appropriate visits to
22 the KEDO member regulatory bodies.

23 Our working plan, which encompasses the
24 orientation and the visits of DPRK personnel, is the one I
25 just mentioned. KEDO has suggested to the DPRK that we work

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1 together to develop a mutually agreed working plan and the
2 DPRK fully agreed.

3 The purpose of the working plan is to define a
4 collaboration scheme between KEDO and the DRPK regulatory
5 body. The working plan outlines activities in which KEDO
6 and the DRPK need to be involved and how the two
7 organizations work together to accomplish these activities.
8 The working plan also includes interaction between the DPRK
9 and the nuclear safety confirmation system.

10 KEDO has implemented a unique, but a comprehensive
11 approach to ensure the safety of the light water reactor
12 plants, in addition to supporting the establishment of a
13 strong independent nuclear regulatory authority in the DPRK.
14 However, as I have noted, this is an extremely challenging
15 undertaking and one which requires varied knowledge and
16 experiences.

17 For this reason, KEDO is continually seeking ways
18 in which we will be able to demonstrate to the international
19 nuclear community that we have succeeded. Often this
20 involves enlisting the support of individuals or
21 organizations from member countries.

22 It is our sincere hope that such a relationship
23 can be established between KEDO and the U.S. NRC.

24 Lastly, I would like to suggest the cooperation
25 that we have in mind with the U.S. NRC, if, of course, you

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1 are willing. First, the DPRK suggests a strong desire to
2 visit the regulatory bodies of other countries. KEDO also
3 understands it is worthwhile for them to visit nuclear
4 developed countries from the viewpoints that we have to
5 cultivate the safety culture in the DPRK and accept them as
6 a reliable member country to operate the nuclear power
7 plants in the future.

8 The U.S. NRC has experience in regulation itself
9 and transfers its experience and knowledge to Japan and the
10 Republic of Korea, which are, of course, core members of the
11 light water reactor project. It would be a significant
12 contribution to the light water reactor project if the U.S.
13 NRC hosted the personnel visits or the DPRK regulatory body
14 to transfer regulatory information and to help build the
15 safety culture.

16 Second, during the audit calculations of the
17 nuclear safety body by the regulatory body, several computer
18 codes are used in every country. Most of these codes
19 originate in the NRC. KINS also uses them, which they have
20 obtained through bilateral cooperation. KEDO will make the
21 necessary arrangements, but only the U.S. NRC, as the owner
22 of the codes, can provide them to the DPRK and we hope for
23 the cooperation of NRC on this issue.

24 Third, during KINS' review and the nuclear safety
25 confirmation system, KEDO wants to invite experts from
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1 member countries to observe that review, to increase the
2 transparency and prove that it can hold to a set of codes
3 and standards equivalent to those of the IAEA and the U.S.
4 and apply it to the reference plant as stipulated in the
5 supply agreement.

6 Participation of experts from the U.S. NRC can
7 increase the quality and credibility of the review.

8 Thank you very much for your attention. I'd be
9 happy to answer any questions.

10 CHAIRMAN MESERVE: Thank you very much. I'd like
11 to thank you both for very helpful presentations and
12 description of the project.

13 Let me start off with a few questions. You have
14 indicated, Mr. Anderson, that there are three areas in which
15 you would think it would be particularly helpful for the NRC
16 to lend assistance.

17 First was that we host visits of DPRK individuals
18 who are from their safety agency, the SNSRC. Could you give
19 us a little more information about what you envision? Are
20 these that we would host a delegation for a brief meeting or
21 is this the notion that there might be some extended
22 involvement with us? What exactly do you envision within
23 the visits element?

24 MR. ANDERSON: I think it would be extremely
25 desirable if you were able to invite a few people, key

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1 people to come for a fairly long period of time, say nine
2 months, six to nine months, so they could really begin to
3 absorb the culture, safety culture. So that's what I think
4 would be ideal, something along those lines.

5 CHAIRMAN MESERVE: And you say a few people.

6 MR. ANDERSON: A few people.

7 CHAIRMAN MESERVE: Do you know whether the -- I
8 suppose it may be premature to know whether, in fact, there
9 are indications from the DPRK that they would be willing to
10 allow people to be with us for that extended period.

11 MR. ANDERSON: I think so, and it's probably
12 premature to say that, but our experience has been that they
13 very much -- they are very interested in the press for
14 nuclear regulatory training outside the DPRK and they regard
15 this as a very serious matter. They've spoken favorably and
16 very informally when we talked with them about the NRC, and
17 they certainly are committed to training outside the DPRK.

18 So my guess is it may take a little while to work
19 out agreements, but, yes, that they would be willing to
20 participate.

21 CHAIRMAN MESERVE: And the second area that you
22 indicated was that access to computer codes, information of
23 that kind. Do you have an indication from DPRK of what
24 codes in particular they're interested in?

25 MR. ANDERSON: We, of course, have given them this

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1 book and various other regulatory matters, but they are
2 quite interested in that, and let me ask, Jack, have they
3 been specific about what they want?

4 MR. MULLIGAN: I believe they have provided a list
5 based on their review of the PSAR and other documents. They
6 have generated a list of the codes that they would like to
7 get.

8 CHAIRMAN MESERVE: Is there any reason we couldn't
9 give the list to the NRC?

10 MR. TOGO: They have indicated some lists of
11 computer courses and many of them originate in the NRC, and
12 future codes are important, where they are necessary to make
13 audit calculation.

14 CHAIRMAN MESERVE: Do you have any indication of
15 the computer capabilities that SNSRC has available to it?

16 MR. TOGO: They have some capability, but we don't
17 know what they have. Once it is determined to provide the
18 computer codes to SNSRC, we will consult them in detail how
19 to provide them.

20 CHAIRMAN MESERVE: Some of them are designed to
21 run on certain platforms that they need to have available to
22 them.

23 MR. ANDERSON: If I may, Mr. Chairman. In this
24 whole area, the DPRK personnel have been particularly
25 forthcoming. We have the easiest, most cordial discussions

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1 in the whole nuclear safety area and concerning regulatory,
2 as well as other aspects.

3 CHAIRMAN MESERVE: And the third area which you
4 indicated you'd like to have our involvement was
5 participation in some role in observing the review. That
6 could be pretty open-ended, from our perspective, in that,
7 as I'm sure you are aware, that evaluation of a nuclear
8 power plant, full evaluation of it is a very extensive
9 activity that involves a substantial portion of our staff.
10 Do you have any sense of the degree of involvement
11 that you are requesting?

12 MR. ANDERSON: I think at this point we're not
13 talking about the full process. We'd like you to be a
14 supplementary part of what we will be doing generally. KINS
15 will be conducting the final review and I think it's at that
16 stage that it would be very useful to have participation of
17 organizations such as NRC.

18 So we're not talking about a continuous
19 involvement, but the crucial end final exam.

20 CHAIRMAN MESERVE: I have a question for you, Mr.
21 Turner. In order for the NRC to be engaged, that there are
22 a series of legal hurdles that we have to basically
23 overcome. We have our own export regulations that would
24 affect our capacity to interact with the North Koreans. I'm
25 sure we do not have, I know we do not have an agreement of

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1 cooperation under Section 123 of the Atomic Energy Act with
2 them.

3 Finding our way to deal with those seem to be an
4 essential ingredients for having a capacity to consider
5 this. Could you give me any sense as to where the U.S.
6 Government is headed in resolving these issues?

7 MR. TURNER: Well, I think it's fair to say that
8 we have not resolved them at this point in time. We are
9 struggling to focus on some of these issues, in particular,
10 the nuclear cooperation agreement. We're looking at when we
11 might start such negotiations, but that's about all I can
12 say right now.

13 On the licensing side, our understanding is that
14 at the present, that the Department of Energy, which I think
15 has the authority in this area, has granted initial
16 authorization for export of control technology needed for
17 licensing and safe operation, but which would not enable
18 design or manufacture of reactor components or fuel.

19 CHAIRMAN MESERVE: You also have a role in that,
20 too. I'm just curious as to whether that whole process has
21 been started, and you say the Department of Energy has
22 started that process.

23 MR. TURNER: Yes.

24 CHAIRMAN MESERVE: I know that my colleagues have
25 many questions about this, so let me turn first to

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1 Commissioner Merrifield.

2 COMMISSIONER MERRIFIELD: Thank you, Mr. Chairman.
3 Mr. Anderson, do we have any sense or can you characterize
4 the current capabilities of SNSRC in terms of, for example,
5 number of personnel that they have, the technical
6 capabilities that they have?

7 The reason I ask this is because for training and
8 some things where we may be helpful, for us to be helpful,
9 it's useful to know what impact our involvement would have
10 on the program and knowing what they have, I think, would be
11 useful to start us off.

12 MR. ANDERSON: Let me ask my colleagues to help me
13 on this, but we have very limited knowledge. We've gotten
14 only bare bones. But each time we're talking with them, we
15 are getting more. We have serious doubts that they have
16 been able -- I mean, we know that they don't have any
17 experience in this particular regulating of light water
18 reactors, so they need to learn a great deal, but also have
19 the impression that their education level is inverse in
20 level and that they come from a research institute, so
21 they've got a background which is not as pertinent and
22 that's another reason for this training.

23 But let me ask my colleagues to comment.

24 MR. TOGO: We have limited knowledge about the
25 DRPK, but we have the regular meetings between the DPRK
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1 regulatory bodies, the nuclear safety meeting. So we've
2 already had five meetings and after that, it's good
3 experience for the nuclear safety regulations.

4 And also we have the experimental meeting about
5 the regulatory system of the ROK to DPRK. At the meeting,
6 there was the --

7 COMMISSIONER MERRIFIELD: Excuse me. Mr.
8 Chairman, we have somebody in this audience who has a cell
9 phone.

10 CHAIRMAN MESERVE: I would request that whoever
11 has a cell phone, please turn it off.

12 COMMISSIONER MERRIFIELD: I'm sorry to interrupt.

13 MR. TOGO: During that meeting, the SNSRC made
14 very good detailed questions to the KINS. So that was very
15 educating. It was really a credit to the regulatory system,
16 day by day or year by year.

17 COMMISSIONER MERRIFIELD: I guess if you could clarify for
18 me what you foresee as the interaction between KINS, the NRC
19 and IAEA in terms of trying to bring the SNSRC up to the
20 level of regulatory ability that we would expect for an
21 independent regulator of the nuclear program and at what
22 point would they be able to step in and actually oversee the
23 regulation of the building of these facilities?

24 MR. ANDERSON: Let me answer it and, again, ask
25 Mr. Togo to add to what I say. KINS, of course, is drawing
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1 up the training program, the work plan, and that' been
2 approved by our board, so we'll be pursuing that. They will
3 be very much involved in it.

4 But in addition to that, we hope that not just the
5 NRC, but also the European and the Japanese have shown
6 interest, so we'd like for them to get the broadest
7 experience and training, from the visits that I mentioned,
8 from as many of them as possible, so that the experience can
9 be building all the time.

10 But the actual program would be this work plan
11 that KINS has come up with, so that would be the core
12 curriculum. And they are going -- they will -- the final
13 two years before we actually turn over the plant, they will
14 be involved in the work, they will be integrated into the
15 workforce.

16 COMMISSIONER MERRIFIELD: So you wouldn't expect
17 them to be integrated until two years before.

18 MR. ANDERSON: That's into the work itself, but,
19 yes, the PSAR which we are developing now would be given to
20 them, the preliminary review by KINS will be undertaken
21 three months before the PSAR is completed and that's to be
22 completed by next February, and then there's a six month
23 period in which we are studying it, but, at the same time,
24 KINS will make a final review of that and then we will and
25 NSAG will look at it.

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1 And at that period, too, they will be able to --
2 they will be studying the PSAR. So there's nine months
3 they've got to be learning and absorbing what's in that and
4 commenting on it.

5 So really the process is going to start before,
6 within a few months in terms of engaging them directly in
7 some of the safety related activity.

8 Then in addition to that, we would hope that they
9 will participate also in the quality assurance program that
10 we have, so that will give them exposure to other aspects of
11 these problems.

12 So the involvement is going to start -- it's
13 already started through the dialogue, but it will accelerate
14 and they will be heavily engaged and then finally integrated
15 in the process itself.

16 MR. TOGO: The only thing is the DRPK regulatory
17 board has to issue the construction permit and the operating
18 permit. So concerning the time, we are making efforts to
19 rev up their knowledge. So we make the first scope
20 orientation based on the ROK practice and then the ROK makes
21 education to the newcomers in this area.

22 In addition to that, it depends on the details
23 that DPRK gives. If they are given the chance to visit the
24 other countries, in addition to the ROK, they will be very
25 pleased at the level of competence, to be experienced in the

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1 nuclear regulatory fields.

2 Thank you very much.

3 COMMISSIONER MERRIFIELD: That argues for earlier
4 rather than later, if possible.

5 @@ COMMISSIONER MERRIFIELD: Let me ask a question.
6 I had the pleasure, I should say, of traveling to the
7 Republic of Korea this past spring and had an opportunity to
8 witness what I think is a very vibrant nuclear program and
9 we have an excellent counterpart in KINS.

10 That having been said, we, as an agency,
11 frequently, in the international arena, talk to the
12 importance of what we believe of having an independent,
13 credible regulator in the country hosting the nuclear power
14 plant being able to regulate that power plant.

15 Given the fact that the agreement, in Article 9,
16 Section 3, basically says that the DPRK shall be responsible
17 --

18 CHAIRMAN MESERVE: Could I ask whoever has the
19 cell phone to please turn it off? Excuse me.

20 COMMISSIONER MERRIFIELD: Thank you, Mr. Chairman.
21 The DPRK shall bring no claims against KEDO, its contractors
22 and subcontractors and respective personnel arising out of
23 any nuclear damage or loss. Given that in the agreement, it
24 would seem to me that there is a very important role for
25 having the SNSRC brought up to the highest capability as

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1 quickly as possible so that from the point at which that
2 plant begins construction, that they have the ability to
3 oversee that.

4 Certainly that's something that has been a concern
5 to me.

6 I want to turn to a separate issue.

7 MR. ANDERSON: Excuse me. I'd just say I
8 absolutely agree with you, there's no question about that.

9 COMMISSIONER MERRIFIELD: I want to turn to a
10 separate issue, the annex two. Annex two, number three
11 requires DPRK to provide a stable supply of electricity for
12 commissioning of the two LWR plants.

13 Given the nature of the current electrical
14 generating capacity in the DPRK, which is not very high, and
15 the lack of a state-of-the-art grid, in the most positive
16 sense, how is it that the DPRK will be able to meet those
17 requirements for providing the necessary off-site power at
18 those plants in the event of an emergency?

19 MR. ANDERSON: Well, you are right to look at that
20 and they have that responsibility, they're aware of it.
21 They have raised it with me several times and asking us to
22 do it. As you know, we've said we will support their
23 efforts, but we are not going to build a grid.

24 In the supply agreement, they are committed to
25 doing so and to providing two sources of exit and input and

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1 they also have to have a safety-related diesel generator at
2 the plant for emergencies and then there will be another
3 generator there which it's not safety-related, but it would
4 be another alternative.

5 So they've got to do this and they're aware that
6 they have to and we can't turn the plant over to them until
7 that is done. So it's a big challenge and I think, as I
8 have told them, it makes no sense unless they integrate
9 themselves into the regional and global and international
10 community and get the support of the outside world, that
11 they're not going to be able to refurbish their grid or
12 their infrastructure generally.

13 So that's very much a -- this project doesn't make
14 sense except in that context. But they are well aware of it
15 and I think they're looking at the commercial loans to help
16 upgrade it or they've talked about the ADB and I know there
17 is some interest in the World Bank.

18 But it's their responsibility and we won't proceed
19 until they have satisfied it.

20 COMMISSIONER MERRIFIELD: Okay. One question for
21 Mr. Turner. The House of Representatives, on May 15 of this
22 year, passed H.R. 4251 to enhance the Congressional
23 oversight of nuclear transfers to North Korea.

24 Although this has only passed the House and it has
25 not passed the Senate, it is quoted by one of its sponsors,
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1 MR. Gilman, it would require Congressional review and
2 approval of any nuclear cooperation with North Korea.

3 I've not asked our own staff to review the impact
4 it would have on possible cooperation between the NRC and
5 through KEDO, the SNSRC, but do you have any sense of, if
6 that were to be adopted by the Senate and were to make its
7 way into law, how that would impact the kind of
8 interrelationships which we're talking about today?

9 MR. TURNER: No. I couldn't say that I know today
10 how that would affect those relationships. I think at this
11 point, we would -- the Administration does not view this
12 kind of legislation as something that we are in favor of.

13 COMMISSIONER MERRIFIELD: Okay.

14 MR. TURNER: It has a negative impact.

15 COMMISSIONER MERRIFIELD: I understand that. If
16 you could -- I would appreciate it, given the fact that it
17 was an overwhelming majority in the House, if you can get
18 back to us in terms of the State Department's understanding
19 of how that might affect some of the proposals that have
20 been put forth today and the involvement of the NRC. I'd
21 appreciate that.

22 Understanding that you don't like the legislation,
23 we'd still like to know what impacts it would have. Mr.
24 Chairman.

25 MR. ANDERSON: Mr. Chairman, could I tag on to

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1 that question, one you asked earlier. We have the
2 agreement, within the supply agreement, that they will not
3 use -- they will use this material for peaceful purposes,
4 non-explosive and so forth. So that is our base starting
5 point.

6 But in addition to that, in terms of any
7 technology and it would probably mainly be from the United
8 States and ROK, that we will fulfill or require to be
9 fulfilled any legal requirements before we would facilitate
10 the delivery of any of that equipment.

11 So this is pertinent to that, as well.

12 COMMISSIONER MERRIFIELD: Commissioner McGaffigan.

13 COMMISSIONER McGAFFIGAN: Let me follow up on the
14 grid question that Commissioner Merrifield asked.

15 How does the agreement read? I mean, you could
16 get these two reactors built, theoretically, and there is no
17 grid to receive the power or to provide off-site power and,
18 therefore, the benefits of the agreement don't come into
19 effect, because the plants aren't operating. Is that right?
20 It benefits the agreement from the non-proliferation
21 perspective.

22 MR. ANDERSON: Hopefully that's not right.

23 COMMISSIONER McGAFFIGAN: I just want to
24 understand.

25 MR. ANDERSON: In the supply agreement, we're
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1 going to have a number of milestones -- I'm sorry, not the
2 supply agreement -- the performance, delivery schedule and
3 performance agreement, and we're going to build in a number
4 of milestones and that will include aspects of getting the
5 grid up to par.

6 But they are keenly aware of the need for this and
7 they are -- I think that it's, in part, related to why they
8 are expanding their circle of people with whom they're
9 dealing around the world, that they know they've got to do
10 it.

11 So theoretically, the answer is yes, but I think
12 as a practical matter, that they will put something in place
13 by the time that we're ready for it.

14 And we've got 5,000 megawatts right now and we're
15 going to add an additional two, but the 5,000 is seriously
16 deteriorated. The floods hurt the hydroelectric power and
17 the thermal is running much slower than it should. So
18 there's a lot of room for improvement of the performance of
19 what they've got already.

20 COMMISSIONER McGAFFIGAN: You're up in the far
21 northeast corner of the country, way away from --

22 MR. ANDERSON: No. We are in a remote spot, but
23 it's actually further south. It's up near the second
24 largest -- it's not so far.

25 COMMISSIONER McGAFFIGAN: But it's a fair ways,

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1 isn't it, from --

2 MR. ANDERSON: Well, what they're thinking of is a
3 trunk line to Pyongyang, is what they want.

4 COMMISSIONER McGAFFIGAN: Okay.

5 MR. ANDERSON: Plus one to Pychong, which is a
6 regional delivery point substation and I think that's
7 probably related to Homhyong, which is the second largest
8 city, close by. So the distance is not enormous, basically
9 across the --

10 COMMISSIONER McGAFFIGAN: You also talked about
11 the -- what is this construction permit authorization that
12 they're going to have to do next year? In this country, if
13 we were going to authorize a construction permit or actually
14 in the future, we're going to do the combined construction
15 and operating license, that's a pretty big deal and we'd
16 have large numbers of staff pouring over documents.

17 I assume KINS is, as a quasi-regulator, going to
18 deal with some of the documents, but how do they issue a
19 construction permit next year? If I'm the North Korean
20 regulator and you've described the North Korean regulator as
21 not having much experience in this area, how do they pull
22 that off?

23 MR. ANDERSON: That's why we've got to help try to
24 bring them up to speed, but as I mentioned, the three months
25 prior to the PSAR, which will be this February is our date

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1 on that when that should be ready, three months prior to
2 that, KINS will be reviewing the pre-PSAR examination and
3 the DPRK will be brought into the process at that point.

4 So they would have access to all the information
5 that KINS is looking at at that point and then for six
6 months after that, they will have the PSAR itself and they,
7 of course, will be doing their own examination, while KINS
8 is doing its review and while we're doing the review.

9 So they will have to be brought into that process
10 and eventually we have to bring them up to speed in nine
11 months so that they can ultimately provide the construction
12 permit, and I think that's possible.

13 One thing we've found is that international
14 standards go a long way with them and it may sound ironic,
15 but when we finally convinced them of a point in the
16 negotiation, if we can show them some written material, like
17 in this book, it's very helpful.

18 So there is a predilection to accepting the
19 national standards on their part and as I said, they've got
20 the educational background in nuclear issues. It's just
21 that they don't have the -- it's all system that they don't
22 know, and so there's a lot of educating that needs to be
23 done, but we --

24 COMMISSIONER McGAFFIGAN: Why was this education -
25 - if this is predictable and indeed this project is running
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1 behind schedule compared to where you hoped to be, I think,
2 in '95 or that sort of timeframe, why was this effort to
3 educate the North Korean regulator not recognized sooner as
4 a key milestone?

5 MR. ANDERSON: Well, it has been recognized, but
6 we are finding it is just painfully slow to move forward on
7 these issues and we spent a great deal of time the last two
8 years concluding the turnkey contract and negotiating the
9 financing and we've been working on this protocols and now
10 we have had the draft on the training protocol and we've got
11 this work plan on the regulatory.

12 So it's just taken time to develop --

13 COMMISSIONER MCGAFFIGAN: Work plan on the
14 regulator, how many people do you envision -- as I
15 understand, the KINS, from your viewgraph, has the main job
16 in educating North Korean regulator, providing information
17 to them and as I understand, from reading, there is some
18 dispute as to whether that training is going to be done in
19 North Korea or South Korea.

20 But how many, in terms of numbers of people, do
21 you envision?

22 MR. ANDERSON: On the regulatory side?

23 COMMISSIONER MCGAFFIGAN: Yes.

24 MR. ANDERSON: How many people are we talking
25 about?

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1 MR. TOGO: The number of the people is, first, we
2 understand that the North Korean regulatory body is not very
3 experienced in the regulation. So we have the nuclear
4 safety confirmation system, including KINS and IAEA, who do
5 some of the regulatory process. It means that KINS may
6 review and give the results to the DPRK.

7 In addition to that, we are inviting the DPRK
8 regulatory bodies to KINS during the review process. We are
9 now considering that we invite 40 persons, but it depends.

10 COMMISSIONER MCGAFFIGAN: So 20 to 40.

11 MR. TOGO: Twenty to 40 persons, but it depends on
12 their concentration between the DPRK.

13 COMMISSIONER MCGAFFIGAN: I'll ask a question that
14 you guys may find -- I've got to ask it, because it's in
15 Nucleonics Week, to some degree, but there's, according to
16 the press, there has been some reluctance, for fear that
17 people will be not safe in South Korea, in terms of sending
18 North Korean regulators to the south.

19 As I understand it, again, from press reports,
20 there is some thought that this education might be done in
21 North Korea rather than South Korea to deal with these North
22 Korean sensitivities about either defection or kidnapping,
23 depending the perspective.

24 But what -- where would the training -- it sounded
25 like a moment ago you're planning that this training would

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1 take place at KINS, which is the most rational thing, but
2 you're also saying earlier that this is a painfully slow
3 process and I'm just trying to understand whether you have
4 backup plans for educating these folks in the north.

5 MR. ANDERSON: On the question of safety, there
6 have been a number of North Koreans who have been in the
7 south and they have not had any problem. The government is
8 taking good care of them and I'm sure that that would be the
9 case.

10 So I think this is a matter that can be dealt
11 with. Some of the training will be at the site, but it will
12 be elsewhere as well, and as I say, we hope that part of it
13 can be here. But I'm confident we'll be able to conduct the
14 training where it needs to be done.

15 COMMISSIONER MCGAFFIGAN: I'm just perplexed as to
16 -- if I'm a North Korean regulator and the best of this
17 happens, and 24 to 40 people go there, am I still in a
18 position to grant a construction permit sometime next year
19 and be at the standard of European or North American
20 regulators?

21 MR. MULLIGAN: Could I just interject something
22 here? This is not something that has been thought of at the
23 last moment. First, you must remember this is a standard
24 plant. The DPRK has had a full PSAR for Ochen 3 and 4 for
25 about two years. They have apparently been studying it at

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1 great length and have asked lots of questions about it, and
2 it's clear that they're studying it.

3 We also have given them just about every NRC
4 regulation that's ever come down the pike and also given
5 them, I believe, a full set of the regulations from the ROK.
6 So they have been busily studying for quite a long time. Of
7 course, you can't get everything you need just by sitting
8 and reviewing the books, and this other program is meant to
9 supplement that.

10 COMMISSIONER McGAFFIGAN: Just one final question.
11 The section, in order for us, the United States, to export
12 any material that -- hardware, not the stuff that comes
13 under DOE, an export license is going to be required and in
14 order for an export license, there needs to be an agreement
15 for cooperation.

16 In order for there to be an agreement for
17 cooperation, there are certain requirements and law that
18 would seem to be difficult to meet in this case. How do we
19 carry out our obligations under the agreement? I think two
20 years ago, we had a premature application for an export
21 license from I think then Combustion Engineering, which the
22 State Department advised them to withdraw, and they did and
23 we also had a petition for the hearing from former
24 Commissioner Gulinski and Mr. Sikulski of the non-
25 proliferation center during that brief period.

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1 This is going to be an adjudicated -- it looks
2 like it may well be an adjudicated export license. So how
3 do the I's get dotted and the T's crossed so that this is an
4 export that would pass muster under our current law?

5 MR. TURNER: I think the answer to actually many
6 of the questions you've been asking, perhaps most of the
7 questions that you have just asked is that this is all going
8 to be a complicated process. You have a number of strands
9 of different things that are moving on tracks which are both
10 separate and interrelated.

11 Certainly it is our intention to comply with
12 United States law. We don't always have all the -- we don't
13 necessarily have the answers to all the questions as to how
14 all of these things and the final analysis are going to come
15 together and that's really the nature of the project, which
16 is you're talking about beginning work on a project where
17 certain things, frankly, are not in place at this time.

18 And it's true that that is not the kind of
19 situation that you would normally find in the United States.
20 At the same time, there are certain firewalls built into the
21 agreement framework and into the way we proceed, which,
22 unless you satisfy certain kinds of conditions at certain
23 times, it will not be possible to proceed beyond that point.

24 So I think the general answer to this is we will
25 certainly try to do what we need to do in due course. The

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1 earlier you can start the various processes, that you can
2 set them entrained to achieve the desired results by a
3 particular time, the better.

4 Of course, much of this will also depend, in fact,
5 most of it will also depend on the actions of the North
6 Koreans and what kind of steps they are prepared to take,
7 both in a technical sense in terms of establishing the kinds
8 of structures you are talking about, but also in a political
9 sense.

10 Again, there are some pretty amazing things
11 happening today right now between North and South Korea,
12 certainly if you were to make a judgment at this particular
13 -- or make a snapshot at this particular time, you would, I
14 think, come to the conclusion that chances are, as of today,
15 better rather than worse that it will be possible to do some
16 of these things.

17 But in the final analysis, at least certainly from
18 the standpoint of United States policy and the reason for
19 the agreed framework, at the very heart of this is the
20 requirement that the North Koreans come into compliance with
21 their NPT commitments.

22 If they don't do that, the project is never going
23 to be completed, in any case. So this is, as I say, a very
24 complicated project, but we work very hard and we take each
25 step as we can and with the aim of bringing it all together

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1 at the appropriate time.

2 CHAIRMAN MESERVE: Commissioner Diaz.

3 COMMISSIONER DIAZ: Thank you, Mr. Chairman. Let
4 me prefix a couple of comments and my questions by quoting
5 the Chairman of the NRC, because everything I am going to
6 say or ask is certainly based on that.

7 The Commission needs to be able to have the
8 capacity to consider this issue. That's really what we
9 don't have and we don't even have the capacity at this
10 moment, from many viewpoints, to consider participation in
11 this issue.

12 And I want to quote what you have been saying,
13 this is a favorite pastime of mine, like the issues, both
14 short and long-term, an extremely challenging undertaking,
15 painfully slow, premature, preliminary. There's a lot of
16 conditions in there which, in regulatory space, our space,
17 makes it very difficult to achieve the conditions that will
18 lead to having the capacity to consider how we participate
19 in this issue.

20 I think understating this is the fact that the NRC
21 is an independent domestic agency, with limited
22 international involvement. That is our exporting and our
23 representation outside.

24 And third, I'd like you to be painfully aware that
25 one of the things that the staff has gone to this Commission

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1 with was what they call a skepticism and a questioning
2 attitude, which this Commissioner intends to use very
3 carefully, because I don't see where all of these things
4 belong.

5 Having said that, I think you realize there are
6 many issues that need to be resolved, not in preliminary
7 fashion, before this Commission will have the capacity to
8 consider what is it that we can do.

9 Having that as setting the stage, let me turn to
10 Mr. Turner and ask a question. You say there is a
11 fundamental framework agreement. One was the dismantling of
12 the graphite reactors from not having the capability to
13 produce plutonium, and the other was the canning of all the
14 spent fuel which you said has been progressing quite
15 adequate, only some non-accessible material which might not
16 be really a problem.

17 Where is the issue in time regarding this project?
18 Where is the issue of dismantling the capability to produce
19 plutonium? Is the five megawatt reactor fully operational
20 and capable of producing plutonium now, five years from now,
21 30 years from now? Where is this? I mean, what does the
22 agreement call for?

23 MR. TURNER: We are not at the stage of
24 dismantling the reactor. That does not come until much
25 later. But the important thing is that it's frozen at this

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1 time.

2 COMMISSIONER DIAZ: It's frozen, meaning it is not
3 producing plutonium at this time.

4 MR. TURNER: It's not being used at this time.

5 COMMISSIONER DIAZ: Not being used at this time.
6 But does the agreement call for the reactor to be dismantled
7 or not capable of producing plutonium or producing plutonium
8 only with really strict safeguards five years from now, at
9 the end of the project, when?

10 MR. TURNER: Well, first of all let me say that
11 the reactor is not to be dismantled until the LWRs are
12 completed. So you have this sort of -- throughout the
13 agreed framework, you have this step by step reciprocal
14 approach to each and every problem. So that one side has to
15 do certain things before the other side is called on to do
16 other things.

17 COMMISSIONER DIAZ: The capability to produce
18 plutonium will be there until the reactors are turned over
19 to the DPRK. That is what the agreement reads.

20 MR. TURNER: Yes. The theoretical capability.
21 Now, my guess is that with each -- I don't know how long you
22 can successfully mothball a reactor.

23 COMMISSIONER DIAZ: A long time. A small reactor,
24 a long time. All right. Thank you. Let's go to the next
25 issue. You say the statement helping KEDO to train DPRK

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1 personnel. Is it your intention, from the standpoint of the
2 United States Government, that all training activities be
3 conducted through the participation, coordination of KEDO or
4 do you anticipate some United States Government-DPRK --

5 MR. TURNER: On a bilateral basis?

6 COMMISSIONER DIAZ: Yes.

7 MR. TURNER: I think at this point, I would say
8 that we are working through KEDO at this point, which is why
9 --

10 COMMISSIONER DIAZ: You are not intending to do
11 any bilateral separate.

12 MR. TURNER: Not to my knowledge, at this stage.

13 COMMISSIONER DIAZ: Just a comment, because I
14 think it plays to my first question regarding the
15 capabilities to ensure that the proliferation activities.
16 Of course, you all know there is no such thing as a
17 proliferation resistant reactor. There are only things that
18 international organizations and processes can use to monitor
19 compliance with non-proliferation commitments.

20 So the establishment of commitments to prevent
21 proliferation from light water reactors are an important
22 part of whatever is going to take place, because there is no
23 such thing as a non-proliferated reactor or a proliferation
24 resistant reactor. It does not exist.

25 It might be along time before it exists. Thank

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1 you, Mr. Turner.

2 Now, let me ask Mr. Anderson a quick question. Of
3 course, DPRK is a developing country, with many
4 infrastructure problems. Some have been already alluded to.
5 The issue of the power grid is a physical thing. I think
6 there are many physical issues of developing the resources
7 to be able to do many of these things, including having the
8 capability to train people on site, to observe.

9 But I'm concerned about the capability of the
10 infrastructure to be able to conduct all of the activities
11 that need to be carried at the same time, with assurance
12 that they are being done properly, that they do fit within
13 the international safety and safeguards agreements.

14 There are major requirements that come into a
15 country that are not only the power grid, although that is
16 extremely important.

17 There is the infrastructure, the human
18 infrastructure, the organizations and so forth, and history
19 has many, many bad examples all the way through of having
20 not succeeded in developing properly the infrastructure of
21 the country while it tries to become a nuclear power
22 country.

23 This issue is being addressed, as you have a
24 timetable that shows the progression of the infrastructure
25 that needs to be developed, because I think, to tell you the

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1 honest truth, if we get five or ten people from DPRK in the
2 United States NRC right now, something that I think you have
3 mentioned as being desirable, I think they will have
4 cultural shock. They might not be prepared to see a full
5 democracy with a lot of safeguards and a lot of balance and
6 checks being used for the protection of public health and
7 safety interacting with the high technology.
8 I think that before anybody comes here, they should be
9 prepared to know what they are going to see and I'm not even
10 hinting that they -- that I will agree at the present time
11 to such a thing, but I am saying if it happens, I think that
12 pre-preparation to avoid the cultural shock that will
13 definitely ensue, the capability to make decision-making,
14 and many places -- without having to check.

15 On the other hand, when important decisions are
16 made, how structured it is to make those decisions go up and
17 happen. It is a completely different thing. I am sorry to
18 say this, but I see this as a major flaw and a painfully
19 slow process that will take quite a bit of time and I would
20 like to see whether you have any comments on the
21 infrastructure development.

22 MR. ANDERSON: Mr. Commissioner, you certainly
23 highlighted the challenge that this, there is not any doubt
24 about it. We're doing something extraordinary. But it's
25 not quite as bleak as I think that you're portraying. The

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1 north, in fact, was ahead of the south. It was a more
2 industrialized part of the country at the end of the
3 Japanese period and it remained more industrialized well
4 into the '70s, probably mid '70s, and then because of the
5 policies, they started downhill and when they really started
6 downhill was when the Soviet Union cut off support in '89
7 and '90.

8 But they had an infrastructure which has
9 deteriorated, but they had an infrastructure which was
10 pretty impressive, and they also have had lots of
11 educational experiences in the Soviet Union and Hungary,
12 Czechoslovakia, all of the Eastern bloc.

13 So it's not as though they would be leaving North
14 Korea for the first time, because most of these people are
15 scientists and they've probably got advanced training, or
16 many of them have.

17 So it would certainly -- if you've only been to
18 the Prague -- I won't say Prague -- East Germany earlier,
19 then you might find Washington, the cultural shock, and I'm
20 sure that they will, to a certain extent --

21 COMMISSIONER DIAZ: No, not Washington. The NRC,
22 sir.

23 MR. ANDERSON: The NRC, cultural shock. Still
24 they have got people that have been trained in the
25 equivalents in the Soviet Union and Eastern Europe, and so I

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1 think that they can manage at least intellectually the
2 climate that they would have to deal with, but the culture
3 may be a bit more difficult.

4 But we're building on -- they may -- they are
5 certainly a very under-developed place and the place looks
6 awfully bleak when you travel around, except in Pyongyang.

7 COMMISSIONER DIAZ: I'm talking about the
8 intellectual capability to assimilate a system that is
9 extremely well balanced, that has many, many, many checks on
10 it, that has the capability to make serious decisions
11 without going out of line, making decisions that go
12 sometimes not so quickly over the line, but it is this
13 capability of taking a regulatory issue, for example, and
14 being able to work it down with an organization that is -- I
15 want to call it fluent and that is able to do that, which we
16 have seen in many other developing countries, as completely
17 closing down projects for periods of time or for people not
18 having the ability to do it.

19 And I think we need to realize that as DPRK is
20 opening, they still have a long history of being a very
21 closed society, and that is the type of cultural shock that
22 I am talking about, coming to another country and all of a
23 sudden being faced with a completely different way of doing
24 things.

25 MR. ANDERSON: You are quite right. By the same
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1 token, our experience has been that they can deal with us on
2 a very businesslike basis, it's almost never that we get
3 into any political discussions, and they have proven in
4 many, many hours of negotiation that they are intelligent
5 and well educated and able to deal with the kind of issues
6 we're introducing.

7 These protocols that we have come up with have all
8 been culturally shocking, like what we wanted in terms of
9 privilege and immunity for ourselves at Kumo to protect us
10 and communications and transportation and we've got a South
11 Korean bank in North Korea.

12 All these things have been startling, I'm sure,
13 but they've taken them in stride and we've been able to move
14 forward with them and I'm confident that we can continue to
15 do so.

16 It certainly is a challenge.

17 COMMISSIONER DIAZ: I just want to assure you that
18 this Commission will be a challenging issue in the months to
19 come regarding how we participate.

20 MR. ANDERSON: Maybe I can get you to go and visit
21 and you can try them out yourself.

22 CHAIRMAN MESERVE: We're very much aware that you
23 have many great challenges in front of you and I think that
24 much of the questioning that you've received reflects our
25 awareness that you have a huge task in trying to pull this

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1 off.

2 One aspect of this that I'd like to pursue is that
3 a lot of the focus of your activity, and appropriately so,
4 has been directed at how we build a competence and
5 capability in the regulator and you've stressed the
6 importance of having a regulator that has an appropriate
7 safety culture and you want to find a way to be able to
8 build that.

9 As Commissioner Diaz has indicated, it is at least
10 as important to have the licensee be educated, as well, and
11 that, in fact, it's far easier for the regulator to do his
12 job if the licensee understands what the obligation is and
13 shares the fundamental underpinnings
14 None of your conversation here is focused on that aspect of
15 the task that's in front of you. I wonder if you could
16 system something about whether there is a counterpart effort
17 you have underway that's directed at the entity that is
18 going to be operating the plant and how you bring those
19 people up to speed, not only in terms of the technical
20 competence, but in terms of having a dedication to the
21 appropriate ideals of assuring safe operation.

22 MR. ANDERSON: Mr. Chairman, I've been remiss in
23 not doing so. Yes, in fact, part of this includes the
24 training program for the operators, managers, and both the
25 senior and more junior levels, and to teach them to be

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1 teachers themselves.

2 And that is what is what is already built into the
3 training protocol which we have included in April and we
4 will be completing that and it includes training starting
5 very early on and that is absolutely as important, maybe
6 even more -- well, I won't say that -- it is equally as
7 important as the regulatory people.

8 So that has been known from the start and is very
9 much included and I'm confident that we've got a good
10 agreement, and I can't publicly go into details on that
11 because it has not yet been approved, but it's certainly a
12 comprehensive agreement and will accomplish the goal not
13 just to get a body of people that can run the thing from the
14 start, but so that they can train people themselves.

15 CHAIRMAN MESERVE: Commissioner Merrifield has
16 asked for the opportunity to ask just a few very short
17 questions.

18 COMMISSIONER MERRIFIELD: Thank you, Mr. Chairman.
19 I had a -- I was wondering if you could share what the
20 current timetable is for construction of a simulator at the
21 facility? We found that that would be very valuable
22 knowledge for the purposes of the operators, but also for
23 the purposes of the regulators to learn how to operate the
24 plants. We operate our own simulator facility. What is your
25 timetable for that?

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1 MR. ANDERSON: I'd have to ask about the
2 timetable, but it's certainly included in what we are
3 planning to do. What is the timetable, Jack?

4 MR. MULLIGAN: Since the simulator needs to be
5 fully consistent with the final configuration of the plant,
6 the timetable for delivery is about two years before fuel
7 delivery. However, the training program calls for extensive
8 simulator training outside of the north, what we're talking
9 about is the simulator that will be delivered to the site, a
10 full-scope simulator.

11 COMMISSIONER MERRIFIELD: I was going to say the
12 earlier that that can get there, the more those licensees
13 and those potential regulators will have access and
14 understanding and perhaps since this is a standard design,
15 there wouldn't be significant differences between the
16 plants.

17 MR. MULLIGAN: As I pointed out, there will be
18 extensive simulator training outside of North Korea prior to
19 that. That will be their simulator to do final training in
20 the north for the two years prior to fuel delivery.

21 COMMISSIONER MERRIFIELD: It's my understanding
22 that we have worked with KEDO already in terms of providing
23 some materials and erg guides and things of that nature.
24 What is the -- if we were to go into the process of also
25 providing the codes, one of the suggestions you've made,

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1 what is the typical timing which would be used to hand those
2 over to the individuals in the DPRK? Do you wait for a
3 given time and meet with them and hand them at that point or
4 is it your intention to try to provide those materials and
5 those codes to them as soon as you receive them?

6 MR. ANDERSON: These earlier codes and standards
7 we've provided to them as soon as we began discussing those
8 kinds of things. The others, as Togo said, we've gotten a
9 list of what they would like, we're talking to KINS about
10 what makes sense, and then we will talk to you. But it
11 would be as soon as it makes some sense for them to have
12 them. Let me ask Togo the timing.

13 MR. TOGO: KEDO has provided to the SNSRC the code
14 and standards before the LWR project and also has provided
15 SNSRC with many regulatory guides and nuclear industry
16 standards, in addition to other codes and standards. So
17 far, we now have provided all the necessary codes and
18 standards until the issue of --

19 MR. ANDERSON: What about the computer codes we
20 have not provided? I think that's what he is asking.

21 MR. TOGO: Computer codes, these are not provided
22 so far.

23 COMMISSIONER MERRIFIELD: If we decided tomorrow,
24 gee, we think you have a good idea, we're going to --
25 through you, we'll give you the codes, you give them to

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1 them, how soon -- if we gave them to you tomorrow, how soon
2 would you get them to DPRK?

3 MR. TOGO: After the decision, that we have to ask
4 the DPRK what kind of objectives they have, so maybe -- I
5 can't anticipate how long it takes, but we'd do it as soon
6 as possible after NRC approves provision of the computer
7 codes.

8 COMMISSIONER MERRIFIELD: Thank you.

9 CHAIRMAN MESERVE: Commissioner McGaffigan.

10 COMMISSIONER McGAFFIGAN: In terms of a request
11 for training outside of South Korea for regulators and
12 operators, how -- you've mentioned some of these folks were
13 trained in Moscow and Eastern Europe. How many of them have
14 English training? We basically are pretty competent in
15 training in English around here. We're not very competent
16 in training in Korean or Russian or Polish or whatever.

17 MR. ANDERSON: That's not that many -- it's
18 another problem. There are certainly some that have, but
19 that is a problem.

20 COMMISSIONER McGAFFIGAN: In all honesty, we do
21 have foreign regulators here, including from Korea and
22 Japan, but they are quite capable of carrying on in English
23 in order to get the benefit of the training here. So I just
24 see that as a potential obstacle.

25 Your viewgraph number seven talks about DPRK

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1 owner/operator being responsible for a bunch of things,
2 including safe storage and disposal of radioactive waste and
3 spent fuel. Obviously, the whole purpose of this project is
4 to make sure that that spent fuel is not reprocessed and
5 will be presumably geologically disposed of or brought back.

6 You say they're responsible, so apparently the
7 agreement doesn't have any take-back provisions for spent
8 fuel to either Japan or the United States. But how is this
9 going to -- how does that aspect of it work in the end? So
10 that we don't end up producing more weapons material,
11 because reactor grade material can be used for weapons.

12 MR. ANDERSON: The several things that you
13 mentioned KINS will be looking at all along. The NSAG will
14 also be looking at them all along and giving us advice about
15 it.

16 COMMISSIONER MCGAFFIGAN: But this will be after
17 the fact. The plant is running now, they are responsible
18 under the agreement for -- the spent fuel is initially going
19 to go to a spent fuel pool and then they're responsible,
20 according to this, for the disposal and safe storage and
21 ultimately disposal of this spent fuel.

22 If we have a 123 agreement, we will have in place
23 all the usual U.S. consent rights to reprocessing, et
24 cetera, that would be there in a formal agreement. So that
25 will be there.

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1 But are there additional safeguards envisioned?

2 MR. ANDERSON: The agreement requires that it be
3 removed from North Korea and it's not specified where it's
4 going and by mutual agreement, that's the way it would be.

5 COMMISSIONER McGAFFIGAN: So the agreement says
6 that the spent fuel, after sitting in the spent fuel pool
7 for a while --

8 MR. ANDERSON: Will be removed.

9 COMMISSIONER McGAFFIGAN: -- will be removed.

10 MR. ANDERSON: Yes. It will be subject to IAEA
11 safeguards, as well.

12 @@ MR. ANDERSON: While it's there.

13 @@ MR. ANDERSON: Yes. But in the meantime, KINS and
14 the NSAG will be keeping an eye on all of these issues as
15 they emerge.

16 COMMISSIONER McGAFFIGAN: And who is the American
17 member of NSAG?

18 MR. ANDERSON: David Hill.

19 COMMISSIONER McGAFFIGAN: David Hill. Okay.

20 MR. ANDERSON: I'd be happy to give you a list.

21 COMMISSIONER McGAFFIGAN: Thank you very much,
22 appreciate it.

23 CHAIRMAN MESERVE: I think we've -- unless
24 Commissioner Diaz has a question.

25 COMMISSIONER DIAZ: No.

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1 CHAIRMAN MESERVE: I think that we have gone over
2 our allotted time. We very much appreciate the presentation
3 that you've given to us. As you see, this is a body where
4 we ask very direct questions and we are fully engaged in
5 this matter and we very much appreciate the efforts that
6 you've made to be here today and to respond to our
7 questions.

8 With that, let me turn to my colleagues and see if
9 they have a closing statement. If not, we stand adjourned.

10 MR. ANDERSON: Thank you very much, Mr. Chairman.
11 [Whereupon, at 2:45 p.m., the meeting was
12 concluded.]
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