RAS 7108

WINSTON & STRAWN LLP

1400 L STREET, N.W., WASHINGTON DC 20005-3502
202-371-5700

35 W. WACKER DRIVE, CHICAGO IL 60601-9703, 312-558-5600
200 PARK AVENUE, NEW YORK, NY 10166-4193, 212-294-6700
38TH FLOOR, 333 SOUTH GRAND AVE, LOS ANGELES, CA 90071-1543, 213-615-1700
101 CALIFORNIA STREET, SAN FRANCISCO CA 94111-5894, 415-591-1000
43 RUE DU RHONE, 1204 GENEVA, SWITZERLAND, 41-22-317-75-75
21 AVENUE VICTOR HUGO, 75116 PARIS, FRANCE, 33-1-53-64-82-82
CITY POINT, 1 ROPEMAKER STREET, LONDON, ENGLAND EC2Y 9HT, 44-207-153-1025

VIA FEDERAL EXPRESS

November 24, 2003

Ann Marshall Young, Chairman
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Anthony J. Baratta
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Thomas S. Elleman
Administrative Judge
5207 Creedmoor Road # 101
Raleigh, N.C. 27612

Re: In the Matter of Duke Energy Corporation
Catawba Nuclear Station, Units 1 and 2
Docket Nos. 50-413-OLA, 50-414-OLA

Dear Administrative Judges:

My November 21, 2003 letter to the Atomic Safety and Licensing Board responding to the November 20, 2003 Order in this proceeding indicated that one item on the enclosed document list was unavailable but would be provided to the Licensing Board under separate cover. A copy of that item is enclosed. It consists of excerpts from *Post-Soviet Nuclear & Defense Monitor* articles published on January 20, 2003, May 20, 2003, June 9, 2003, August 6, 2003, and October 6, 2003. These excerpted pages are reprinted with permission from the publisher. Copies of this document are also being sent to the service list.

Very truly yours,

Anne W. Cottingham

Anne W. Cottingham
Counsel for Duke Energy Corporation

Enclosure

cc: Service List (w/Enclosure) via U.S. mail

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SECY-02

SERVICE LIST

Ann Marshall Young, Chairman
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
(email: AMY@nrc.gov)

Anthony J. Baratta
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
(email: AJB5@nrc.gov)

Dr. Thomas S. Elleman
Administrative Judge
5207 Creedmoor Road, #101
Raleigh, NC 27612
(e-mail: elleman@eos.ncsu.edu)

Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555
Attn: Rulemakings and Adjudications Staff
(e-mail: HEARINGDOCKET@nrc.gov)

Office of Commission Appellate
Adjudication
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Adjudicatory File
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Susan L. Uttal, Esq.
Antonio Fernandez, Esq.
Kathleen A. Kannler, Esq.
Office of the General Counsel
U.S. Nuclear Regulatory Commission
Washington, DC 20555
(e-mail: slu@nrc.gov)
(e-mail: axf2@nrc.gov)
(e-mail: kak1@nrc.gov)

Mary Olson
Director, Southeast Office
Nuclear Information and Resource Service
P.O. Box 7586
Asheville, NC 28802
(e-mail: nirs.se@mindspring.com)

Diane Curran
Harmon, Curran, Spielberg &
Eisenberg, LLP
1726 M Street, N.W.
Suite 600
Washington, DC 20036
(e-mail: dcurran@harmoncurran.com)

RUSSIA AGREES TO U.S. PROPOSAL TO USE FRENCH MOX FACILITY DESIGN

Joint U.S.-Russian Pu Disposition Program Moves Forward

The U.S.-Russian joint plutonium disposition program proposal offered by the U.S. side (*NW&M Monitor*, Vol. 6 Nos. 19 & 20), centered on building a MOX Fabrication facility based on the Cogema-designed U.S. facility, has been accepted by the Russian Atomic Energy Agency (MINATOM). The proposed program, with some modification as a result of suggestions by MINATOM officials, is based on the following previously reported components:

- Construction of a MOX facility in Russia replicating the design of the U.S. facility, which is to be constructed by the Duke, Cogema, Stone & Webster consortium based on Cogema-developed technology;
- TVEL, the commercial unit of MINATOM involved in the fuel fabrication business, will be the overall manager of the MOX facility construction;
- The burning of Russian-fabricated fuel in foreign reactors will be pursued;
- Only the currently operating Russian VVER 1000 and the BN-600 reactors will be utilized to burn the fabricated MOX; and
- The earlier proposed Russian Pit Disassembly and Conversion Facility will not be built; instead MINATOM will be solely in charge of developing a process for weapons disassembly.

The details of the program have yet to be laid out. A meeting between U.S. and Russian officials to begin the planning was to have occurred in the past week but was postponed.

One ticklish issue that needs to be resolved is how Cogema will be compensated for the use of their MOX-fabrication technology for the Russian facility. Another issue of import is the burning of Russian fabricated MOX fuel in European reactors in lieu of fuel currently supplied by the French and British. However, another concern, the desire of some members of the G-8 to have Russia contribute hard cash to support the program based on the value of the Russian uranium enriched fuel that would be sold on the world market as it is replaced by Russian fabricated MOX in the VVER 1000s and BN 600, has been resolved—the value being determined to be inconsequential (*see related story*).

U.S. NRC Ready to Work With Russian Regulator

One of the distinct advantages of the U.S.-Russian program, as has been pointed out previously (*NW&M Monitor*, Vol. 6 Nos. 19 & 20), is that using the design of the U.S. MOX facility in Russia will significantly reduce the time required to bring the Russian facility on line, both by facilitating the engineering/design phase and by speeding up obtainment of the necessary permits from the Russian nuclear regulatory agency, GOZATOMNDAZOR (GAN). GAN has had a close working relationship with the U.S. Nuclear Regulatory Commission for years. There is also the added benefit that identifying the Russian facility as being based on a licensed U.S. facility will inspire a higher degree of public confidence and support. From what the *NW&M Monitor* has learned, Commission officials are quite enthusiastic about working with GAN and sharing information on the licensing application for the U.S. facility.

Russian MOX in Foreign Reactors Troublesome

Though a French government official, in an exclusive interview with *NW&M Monitor* (Vol. 6 Nos. 19 & 20), said that the French support the decision to allow use of the Cogema technology for the Russian reactor, the same official expressed opposition to the possibility that Russian MOX could be burned in foreign reactors on the grounds that the disarmament program should not be used to help Russia enter into the commercial MOX market. But it is well known that other countries, including Canada, are supportive of such action. French officials did not return calls for comment on the final deal.

Int'l Support, Program Governance Progresses

With the principal technical and engineering components of the overall U.S.-Russian program now in place, the focus now turns to financial support and overall involvement of the G-8 and potential other donor countries in the implementation of the program. On the funding side, according to government officials, the U.S. appropriations for FY03 and FY04 will meet program needs, and the prospect of support from the other G-8 countries has grown much brighter.

With regard to the role of the donors in the implementation of the program, the direction appears to be the creation of a less formal means than an international authority or commission. The path currently being pursued, according to what the *NW&M Monitor* has learned, though it has not

G-8 Pu WORKING GROUP STEPS FORWARD ON MANAGEMENT FRAMEWORK

The Multilateral Plutonium Disposition Group (MPDG), made up of representatives of the G-8 countries, managed to make some headway toward finalization of the management framework and financing for the Russian plutonium disposition program at its May 6 meeting in Paris, a U.S. official reported to *NW&M Monitor*, though no formal agreement on either issue has been reached. While talks concerning the management structure appeared to be progressing well, a substantive step forward has been made to deal with the outstanding issue of financing for the program, the official reported. "For the first time, there was a paper [on program financing] down that essentially puts down the dynamic...that additional pledges and a Russian contribution could be related," the official said. "We didn't get beyond putting that out...but the conversation previous to this has been that the [G-8] contributions will be for construction, while the Russians are responsible for operation, and the Russians have said either there's funding for everything or they may not want to participate.... Getting off those absolutes takes a discussion, and the [financing] paper opens the door for that," he explained. "Informally, there appears to be some flexibility on the Russians' part and on the partners' part on the project as a whole, looking at it as a 20-year project. At this meeting we just began to get the dynamic out in the open so we can discuss it." (*More on U.S. Negotiations With the G-8 in an Upcoming Interview with U.S. Ambassador Michael Guhin. Guhin did not comment for this story.*)

Financing Proposal Outlines A Russian Contribution

With the G-8 nearing the goal of securing the $1 billion necessary in contributions to finance the capital phase of the Russian Pu program—officials report the total now to amount to $800 million, and talks are ongoing to secure the remaining portion—the issue of financing the operations phase is beginning to be discussed more openly. While the U.S. official was optimistic about the impact the financing paper put forth at the meeting would have, other G-8 officials were more cautious, calling the paper itself "more 'food for thought' than something concrete," in the words of one G-8 official. "Nobody went through this in detail, we all took it away to look at," he said. "This is a long-term project, and this issue doesn't need to be solved right now. But the paper was presented, and the perception that other countries may have been a little less firm than they have been is fair.... Still, I wouldn't say that it set out an obvious linkage [between G-8 contributions to the operations phase and an increased Russian contribution for the project]. Some of its points, though—certainly the issue of should there be a Russian contribution and what should it be—were discussed at some length."

Several officials stressed that there was a political commitment to securing the estimated $1 billion necessary for the operating phase of the program, but they added that it remained to be seen the extent to which the various sources available for that funding would be utilized. "There are revenue sources that could be applied to operating phase—certainly there are revenue streams [generated by the MOX fuel itself], there's also funding sources from the G-7 and also contributions from Russia...they all need to be there in some way, shape or form, but what that form, how it takes place is yet to be decided," another U.S. official said. "This is long-term, and the situation is uncertain. Uranium markets are not something that can be predicted that far down the road, and it complicates things a little bit. This issue is a little harder to get our arms around [than securing contributions for the capital phase]."

Export Remains Potential Revenue Source

One revenue stream mentioned by several G-8 officials is the exportation of Russian MOX for burning in foreign reactors. "Exporting does come up in financing concept papers, as one of the potential revenue streams, but there's a lot beneath that has to be worked out," the U.S. official said. "But I would not say there's stark opposition to the idea. When you put it in terms of exporting as a way to...dispose of an additional two tons annually, then I believe that we will find some consensus [in favor of export], even among those countries who feel they have the most to lose, or at least are the most worried about it. If you put it in terms of those two tons and you seek a compromise within that framework, I feel we're going to get there...but I don't want to be too sanguine."

EBRD Most Likely Option As Fund Manager

"Part of the discussion [at the May 6 meeting], a very important part this time, was to see how we can begin to structure now to do the construction project and then have some sort of template to move into the operations phase," the U.S. official reported. "The framework proposed relatively recently (*NW&M Monitor*, Vol. 7 Nos. 10&11), we're getting very good feedback on it, though the G-8 still wants to see it in a more detailed form," particularly regarding the role of the fund manager, he said. The program's fund manager has not been finalized, but G-8 officials have made it clear that it will have to be an international body so as to satisfy the concern of donor

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RUSSIAN PU DISPOSITION PROGRAM COSTS ESTIMATED AT $2+ BILLION

Analysis Takes In to Account
Using U.S. MOX Facility Design

The Russian plutonium disposition program encompassing 34 metric tons of weapons grade material, as is now accepted by both U.S. and Russian governments and preliminarily endorsed by the other G-8 countries, will cost upwards of $2 billion to put in place according to a soon-to-be-released report, *Scenarios and Costs in the Disposition of Weapon-Grade Plutonium Withdrawn from Russia's Nuclear Military Programs*, by the Joint U.S.-Russian Working Group on Cost Analysis and Economics in Plutonium Disposition. The cost analysis takes into account:

- Replicating the U.S. mixed oxide fuel fabrication facility in Russia;
- Not obtaining any equipment from the defunct German Hanau processing facility;
- Locating the Russian MOX facility in Seversk, not Mayak as initially proposed; and
- Reduced credit for the amount of uranium fuel displaced since it is no longer assumed that MOX fuel would be irradiated to the same level as uranium fuel, "with the consequence that a greater quantity of MOX fuel would be irradiated than the quantity of uranium fuel that it displaces."

What is of particular note is that the cost of the four scenarios analyzed—all of which are based on feasible options—vary by no more than a total of $500 million for a program that is to span 22-25 years. Economics, therefore, is not much of a driving factor. Further, none offer any great schedule advantage over another.

The four scenarios examined are:

- Disposition in Russian VVER-1000s only, using seven of the reactors for irradiation of MOX fuel produced at a single production facility (*$2.131B*);
- Disposition in VVER-1000s and in the BN-600 fast reactor, in which four VVER-1000s would be employed in tandem with the BN-600, which would operate with a full MOX core, to disposition MOX fuel manufactured in a single fabrication facility (*$2.460B*);
- Disposition in VVER-1000 reactors and in a vibropak fueled BN-600, which would be essentially the same as the second scenario, with the important difference that a second MOX fabrication facility would be constructed and commissioned to manufacture the vibropak fuel for the BN-600 (*$2.676B*); and
- Disposition in VVER-1000s and in a hybrid core BN-600, supplemented by partial export, in which two fuel fabrication facilities are necessary, one primary facility that would produce pellet MOX for the four VVER-1000s and for export and another small-scale facility that would produce vibropak fuel for the BN-600 (*$2.218B*).

VVER-1000-Only Option Is Simplest, Cheapest

Irradiating the MOX fuel only in the seven VVER-1000 reactors—"by far the least complicated of the options" —was also found to be the least expensive, with an estimated cost of $2.13 billion. All of the MOX fuel would be loaded by 2025, with fuel meeting the 'spent fuel standard' for disposition by 2027. According to the report, the "chief advantage" of the option is that the fuel used by the VVER-1000s is technologically similar to the fuel used by the pressurized water reactors the U.S. will employ. The one concern with this approach being voiced by MINATOM is that it requires utilizing a large portion of Russia's VVER-1000s, and further that there is no MOX operating experience with these reactors.

Using BN-600 Increases Program Complexity

The two options that employ the BN-600 were found to be somewhat more feasible on an economic basis than expected, particularly the vibropak-fueled option, but the inclusion of a second type of reactor was found to technically complicate the effort if only one fuel fabrication plant was to be constructed. Using the same fabrication facility for both the VVER-1000s and the BN-600 was found to cost $2.82 billion and result in a $360 million reduction for displaced uranium fuel, for a total cost of $2.46 billion. Building a second fabrication facility devoted to producing vibropak-fuel for the BN-600 is estimated to cost slightly more, at $3.04 billion, which, coupled with the same $360 million reduction for displaced uranium profits, would result in a total program cost of $2.68 billion— the highest of all options, but, again, still feasible. Under each scenario disposition is expected to be completed by 2024, one-year faster than under the VVER-1000-only scenario, "but these completion dates are in large part an artifact of the 15-year service extension of the BN-600 until 2025," the analysis points out.

Cost Comparison: Five Scenarios

($1000s)

Program Element	March 2001 Base Case (1)	VVER-1000s Only	VVER-1000s/Pellet-Fueled BN-600	VVER-1000s/Vibropak-Fueled BN-600	Supplemented Partial Export (2)
Plutonium Conversion (3)	310,400	290,100	297,600	275,000	*265,800*
MOX Fuel Fabrication	1,125,100	1,414,100	1,706,100	1,923,200	*1,402,100*
Reactor Modifications and Upgrades	303,400	279,100	340,500	339,200	*280,900*
Storage	190,100	258,300	287,900	285,400	*272,700*
Transportation	120,300	89,900	113,500	113,700	*104,700*
Licensing	59,700	74,700	74,700	100,000	*74,700*
SUBTOTAL	2,109,000	2,406,200	2,820,300	3,036,500	*2,400,900*
Uranium Fuel Deduction	(345,000)	(275,000)	(360,000)	(360,000)	*(183,000)*
TOTAL	1,764,000	2,131,200	2,460,300	2,676,500	*2,217,900*

(1) Base case costs are in year-2001 U.S. dollars. All other costs are in year-2003 dollars.

(2) Costs for partial export are only costs incurred in Russia (denoted by italics), and do not include costs and credits external to Russia.

Timelines: 2001 Base Case and Current Scenarios

Program Year	2001 "Base Case"	VVER-1000s Only	VVER-1000s w/Pellet-Fueled BN-600	Parallel Paths: VVER-1000s/Vibropak-Fueled BN-600	Supplemented Partial Export
1					
2	0.030	0.030	0.030	0.030	0.030
3	0.072	0.030	0.091	0.091	0.091
4	0.096	0.030	0.139	0.139	0.139
5	0.211	0.075	0.209	0.163	0.163
6	0.165	0.030	0.297	0.342	0.342
7	0.301	0.030	0.297	0.297	0.297
8	0.301	0.030	0.297	0.387	0.297
9	0.470	0.934	1.292	1.216	0.568
10	1.214	1.974	2.241	1.880	1.410
11	2.331	1.974	3.191	2.603	2.298
12	2.331	2.893	3.191	3.206	3.770
13	2.331	2.517	2.543	3.206	3.770
14	2.331	2.487	3.161	3.206	3.770
15	2.511	3.315	3.161	3.176	3.740
16	2.511	2.848	2.513	3.176	3.740
17	2.481	2.848	3.161	3.176	3.740
18	3.021	3.496	3.161	3.176	3.740
19	3.021	2.848	2.513	3.176	3.740
20	3.021	2.848	3.161	2.950	1.850
21	1.804	3.496	2.136	1.217	0.267
22	1.804	2.848	1.217	1.217	0.267
23	1.804	0.422			
24	1.804				
25	1.804				
26	0.230				
TOTAL	38.00	38.00	38.00	38.00	38.00

Cost Estimates for the Disposition of Weapon-Grade Plutonium Withdrawn From Russia's Nuclear Military Programs, Joint U.S.-Russian Working Group on Cost Analysis and Economics in Plutonium Disposition, March 2001.

Export Offers Little Schedule Advantage

Another notable conclusion of the report is that exporting Russian fabricated MOX to burn in foreign reactors—which has generated heated opposition from France (*NW&M Monitor*, Vol. 6 Nos. 19&20)—offers little advantage in quickening the disposition timetable over the current proposed program. The cost of the partial export program is estimated to be $2.4 billion, less $183 million for the displaced uranium, for a total cost of $2.22 billion. This estimate, however, only takes into account those costs incurred within Russia, and does not include any costs or credits outside the country. The working group highlights those potential factors as "critical" but says that they "cannot at this time be estimated." An Annex to the report postulates that while there are additional costs that would be incurred through MOX export, "there remains the potential for significant cost offsets and income ... that could in principle reduce substantially the overall costs of the Russian program." This is, of course, assuming that the revenues derived from such export sales would be contributed by Russia to support the disposition program. While noting that "the economics of an export option ... are and will remain unavoidably case-specific" and are therefore impossible to determine without specific cases to analyze, the group predicts that export "would still nonetheless produce likely revenues that would reduce the estimated net cost of the partial export scenario."

More Analyses To Come

The group stresses in the report that the estimates produced therein are "necessarily preliminary" and "much still needs to be known" about the program, including technical details. The group says it plans to complete in the future cost and schedule assessments of at a minimum three other scenarios:

- The possibility of adding gas-turbine, modular helium reactors at a future time to the program, which could down the road accelerate the overall timeframes of the program;
- A single disposition option, "to be developed in light of the current analysis", an analysis that will focus "more closely and in detail" on a specific scenario; and
- A reappraisal of the possible costs of reduced electricity generation by Russian nuclear power plants in the disposition program, "in order to see how (and with what possible cost implications) Rosenergoatom's plans for more advanced fuel designs and advanced fuel loading cycles for Russian VVER-100 reactors might be impacted" by disposition. The study was requested by Rosenergoatom and is planned "for the immediate near term," according to the report.■

CANADA COMMITS $108 MILLION TO G-8 NONPROLIFERATION INITIATIVE

$47 Million To Support Russian Pu Disposition

Canadian Prime Minister Jean Chretien informed Russian President Vladimir Putin during his visit to St. Petersburg just prior to the G-8 Summit that Canada will provide $47 million (US) to support the Russian plutonium disposition program, out of a total of $108 million (US) the country will contribute to aid nonproliferation and nuclear disarmament efforts in Russia. The contribution, which was included in the country's budget this year (though Canada is not required to spend the money in FY 03), is the first part of the $727 million (US) that Canada has pledged to put toward the effort over 10 years. Canadian officials in Ottawa further explained to *NW&M Monitor* that the amount donated to plutonium disposition, which comes out of a larger, unspecified portion of their total 10-year donation that Canada has earmarked for fissile material disposition, was currently the extent of the country's planned contribution to the program, but that more money could feasibly be allotted depending on future assessments. The remaining funds of the fissile materials disposition portion of the contribution are slated to go to projects such as improving physical protection of spent fuel storage facilities, a Canadian official explained, but Canada could reassess its priorities and move more of the fissile material funds to the Russian plutonium disposition program if it decided to, though that is not the consensus view at this time.

The remaining $61 M (US) contribution of the coming year is to be allocated in the following manner:

- $23.3 million for a European Bank for Reconstruction and Development program to manage spent nuclear fuel from Russian submarines;
- $2.9 million to the International Atomic Energy Agency to strengthen nuclear and radiological security in the former Soviet Union;
- $13.1 million to fund International Science and Technology Center projects to employ former weapons scientists; and
- $21.8 million to support the construction of the chemical weapons destruction facility at Shchuch'ye.■

OPPONENTS TO U.S.-RUSSIAN Pu PROGRAM FAIL TO STIR HOUSE PANEL

The renewed campaign against the U.S.-Russian Plutonium Disposition program, kicked off a few weeks ago by former Nuclear Regulatory commissioner Victor Gilinsky; Henry Sokolski, executive director of the Nonproliferation

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U.S.-RUSSIA '98 Pu DISPOSITION PACT PROVIDING LIABILITY COVERAGE EXPIRES

No Real Progress on Resolving Stalemate

The 1998 U.S-Russian agreement on technical cooperation for the plutonium disposition program, which included a liability protection provision but did not cover "intentional" incidents, expired July 24, leaving in place the 2000 pact. The later agreement intentionally does not include any liability protection language, only a commitment by both sides to work on developing such provisions. A U.S. request from the State Department submitted to the Russian side prior to July 24 to extend the 1998 pact for three months was rejected by Russia on the basis that it did not provide sufficient time to reach a compromise between U.S. and Russian positions on liability protection (*see related story*). The net result is that there is no longer any liability protection for the U.S. and U.S. contractor work on the plutonium disposition program. The focus now is on fulfilling the commitment made in the 2001 Pu disposition pact to develop a liability protection agreement. Though it is unclear whether the lack of such an agreement has any immediate effect on the program, there could be consequences if an agreement is not signed by this fall when construction work is scheduled to start in Russia on the mixed oxide fabrication facility. The stalemate over liability protection is also expected to endanger activities covered under the Nuclear Cities Initiative, which expires next month (*see related story*).

Dems Criticize Administration

The lapse of the 1998 agreement and the lack of progress on developing an acceptable liability protection pact prompted House Democrats—lead by Congresswoman Ellen Tauscher (Calif.) and including Ike Skelton (Mo.), John Spratt (S.C.), Adam Schiff (Calif.), Chet Edwards (Texas) and Brad Sherman (Calif.)—to write President Bush, arguing "this impasse has placed prospects of future U.S.-Russian nonproliferation cooperation at great risk.... I cannot understand why the administration would let key aspects of the program to get rid of so much weapons-grade plutonium lapse. Keeping fissile material out of the hands of terrorists seems a critical step in the war on terrorism."

State Pushing for Liability Changes

With the lack of progress on the liability protection provision, DOE officials and Secretary Spencer Abraham are taking pains to assure their counterparts in Russia that the Administration remains strongly supportive of both the plutonium disposition program and NCI. In a July 22 press statement, Abraham reports that he sent a letter to Russian Atomic Agency Minister Alexandre Rumyantsev informing the Minister that though the Department will not be able to renew the NCI agreement, "we are eager to continue our cooperation in this area." The statement adds that Abraham told the MINATOM Minister that projects already underway could be allowed to continue.

No mention is made in the press statement that Abraham addressed liability protection under the plutonium disposition program, but National Nuclear Security Administration spokesman Bryan Wilkes emphasized the same holds for the U.S.-Russian plutonium disposition program. He reported that "work already begun under the agreement would be allowed to continue despite the expiration." Wilkes identified the State Department as the key player pushing for the liability language changes. "We just want to proceed with our programs, essentially, and we don't want to get bogged down in these legal issues, but...the State Department is insisting on some legal changes," Wilkes said. "We're just trying to do our nonproliferation work." He was careful to add, however, that liability "is a serious issue...and we support entirely [the State Department's] effort."

Result of Pact Lapse Not Clear

The immediate effects of the 1998 liability protection provisions are unclear. State Department spokeswoman Tara Rigler said after the lapse that "industrial-scale disposition activities will not go forward under the Plutonium Management and Disposition agreement of 2000 until adequate liability protections are agreed to." One U.S. official told *NW&M Monitor* that some activities that had begun under the 1998 agreement have ceased since its expiration, though he would not elaborate and insisted they were minor. But Wilkes insists that work is continuing. "Despite the expiration of the 1998 agreement, critical activities for the plutonium disposition program will continue under the 2000 agreement, which does not expire. Although the 2000 agreement does not address liability and indemnification issues, our ongoing critical activities do not pose a risk in this area at this time," he said. According to Wilkes, no new projects could be started under the plutonium agreement now that it has lapsed, but everything that had already begun and "what was already in the pipeline that's been planned" would be allowed to continue. "This does not have any impact in the short term. For all intents and purposes, nobody is really seeing any kind of a difference in terms of work," he said, reiterating NNSA's "intense" commitment to resolving the disagree-

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Volume 7 Nos. 27 & 28 — Double Edition — October 6, 2003

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— INSIDE HIGHLIGHTS —

CONSTRUCTION OF RUSSIAN & U.S. MOX FABRICATION FACILITIES EXPECTED TO BE DELAYED A YEAR

Procurement of Western Company Partner to Build Russian MOX Fabrication Facility Probably Not Affected

The lack of a liability agreement to cover the Russian plutonium disposition program, coupled with the current U.S. position that no new initiatives will be launched with Russia until Russian technical assistance to support Iran's nuclear program is either stopped or resolved in some acceptable manner, is forcing a delay of the startup of construction activities for the Russian MOX fabrication facility until the spring/summer of FY 2005. And because the U.S. and Russian programs are statutorily required to

(See STOPPAGE on pg. 17)

(STOPPAGE from pg. 1)
proceed along roughly parallel paths, startup of construction activities of the U.S. MOX facility will be similarly delayed. Though DOE officials would not comment on the delay, a close examination of the proposed schedule and prior reported comments offered by NNSA officials on the need to have decision by late summer/early fall in order to start outdoor construction work all lead to only one conclusion—construction startup will be postponed (*NW&M Monitor*, Vol. 7 No. 22).

The length of the delay for the Russian MOX facility is due to the fact that the first phase of construction work can only be carried out in the spring or summer months because of the severe winter weather conditions at the proposed site of the facility, in Seversk. The planned start date had been between May and June 2004, but that could only have occurred once liability protection terms had been agreed to and the facility was licensed by Russian regulatory authority GOSATOMNADZOR. According to Russian officials, licensing is estimated to take from eight months to one year; therefore, the licensing process would have to be initiated either in September or no later than early October of this year to allow for construction startup—basically just pouring concrete—to start in May-July 2004. But with no expectation of resolving the liability protection disagreement and the situation in Iran not coming to a head until at least the end of October (*see related story*), there is almost no chance of licensing being initiated even by December, which in turns means no license until the end of August 2004 at the earliest—just before winter conditions arrive at Seversk, preventing the pouring of concrete.

Will Startup Delay Affect Completion?

It is possible, however, that the year delay in the MOX fabrication facility construction startup will not affect the overall schedule, given the availability of FY04/05 funds to accelerate some activities. The down time also provides both sides with the time to focus on various outstanding process issues, like licensing the Russian MOX facility, the Russian side approving the facility's design, and the procurement of a Western company to partner with Russian company TVEL to construct the facility. In fact, one reason that the procurement of the Western company will likely not be delayed is to have all parties ready to begin the first phase of construction work as soon as the spring thaw allows, in May 2005.■

PRES. PUTIN AGREES WITH BUSH ON IRAN CONCERNS

Stresses that Russian Support of Iran Reactor Will Not Result in Proliferation

Nuclear proliferation was a "top agenda item" during U.S. President George W. Bush's summit with Russian President Vladimir Putin at Camp David, as reported by U.S. government officials, but no new agreements involving Iran or North Korea came out of the sessions. Putin expressed his support for the recent International Atomic Energy Agency resolution on Iran's nuclear program (*see related story*) in a statement issued after the meeting, stressing that "Russia has no desire and no plans to contribute in any way to the creation of weapons of mass destruction, either in Iran or in any other ... region in the world," and vowing Russia would "give a clear but respectful signal to Iran" about expanding its cooperation with the International Atomic Energy Agency. However, with regard to Russia's support for Iran's commercial nuclear program, he made it clear that he believes Russia has adequately dealt with international fears that the spent fuel from the Bushehr reactor that Russia is helping the country build could be used to make weapons by demanding that Iran guarantee the return of the spent fuel t Russia before any fresh fuel is delivered. This agreement, however, has yet to be signed, as Putin reported in a later interview with the press from his residence (*New York Times*, 10/6). During that interview, Putin had this to say:

> We are not only hearing what our U.S. partners are telling us, we are listening to what they have to say, and we are finding that some of their assertions are justified. For example, their professional observation that spent fuel can subsequently be enriched and used as a component of nuclear arms. ... That is why we have put the question before our Iranian colleagues that spent Russian nuclear fuel must be returned to Russia ... We also believe ...: that Iran has no justification not to allow the overview of the IAEA over their nuclear programs ... But this does not imply that without agreeing upon the principles of our cooperation in this sphere we're going to suspend all of our programs.

Strength of Relationship Stressed

As reported by Bush and reaffirmed by Putin in a meetin with the press after the summit, and again during Putin's Oct. 5 interview, "the most important thing that came out of these meetings was a reaffirmation of our desire to

work together to convince Iran to abandon her ambitions, as well as to work with other nations so that there is a common voice on this issue." Beyond the reaffirmation of the two leaders' affinity for one another, the summit appears to have produced some substantive plans as well, as Putin in response to a reporter's question during a joint press conference said that he was returning to Russia with "a checklist of different issues" to confront. Bush reported that as a result of the meeting both leaders would be "tasking different agencies and agencies' heads with action plans that we'll be able to monitor."

The Departments of State and Energy both refused to comment on details of the plans, and the National Security Council had not returned a request for comment on the action plans by the time this issue went to press, though the NSC did confirm that future nonproliferation efforts had been discussed. Putin provided some indication as to future areas of cooperation between the two countries in response to reporters' questions following the summit. "Russia and the United States intend to pursue close cooperation for strengthening international regimes and nonproliferation mechanisms," he said.■

U.S.'s RUSSIAN NONPROLIF EFFORT LIKELY TO BE FUNDED AT $421M

The U.S. National Nuclear Security Administration would receive $421.1 million in funding for nonproliferation programs in Russia under the Senate version of the Energy and Water Appropriations bill, passed Sept. 16 and now in conference with the House, just slightly less than the $425.2 million requested by the Administration and the $421.2 million proposed by the House (*NW&M Monitor*, Vol. 7 No. 21). But the Senate bill requires the use of $46.9 million in prior-year balances, while the House estimates the availability of $60 million in uncosted balances. In line with House report language chastising the Department for its failure to obligate and spend program funds, Senate report language points out that "carry-over rates [of annual funding] of 40 percent are not uncommon" for DOE in Russia, and, though the chamber acknowledges that programs can be difficult to implement in the country, "strongly urges the Department to improve on this level of performance."

While both chambers see a problem with the effort's management, Senate and House views on two nonproliferation programs in Russia contrast starkly. The House bill only provides $5 million, one-sixth of the $30 million requested by the Administration, for the Accelerated Materials Disposition initiative, while the Senate bill would match the Administration's request for the program. Further, the House proposes to take $28 million from the International Materials Protection, Control and Cooperation program budget and transfer it to fund a program to install radiation detection equipment at the top 20 overseas seaports, for which the Administration did not request funding in FY 2004. The House bill also would require NNSA to submit along with its FY 2005 budget request for nonproliferation activities a program analysis "applying a risk-based evaluation of different activities proposed in the budget request," a provision not included in the Senate bill.■

U.S., RUSSIAN OFFICIALS STEP FORWARD TO RESOLVE LIABILITY STALEMATE

Sept. Meeting Beneficial, But No Substantive Progress

U.S. Ambassador Michael Guhin, together with a group of legal experts, met with Russian officials this past week to get down to the nitty-gritty of how to resolve the impasse over U.S. and Russian positions on liability protection for the internationally supported Russian plutonium disposition program. But despite the proactive step, and a positive view of the discussions voiced by U.S. officials, no real movement was made by either side from their entrenched positions. The U.S. continues to demand liability protection akin to that provided by the Cooperative Threat Reduction (CTR) umbrella agreement, while Russia is pushing for what is agreed to under the Multilateral Nuclear Environmental Program (MNEPR) and objects to being held responsible for intentional acts (*NW&M Monitor*, Vol. 7 No. 22). "The two sides keep pounding the table, they keep using the same talking points back and forth, and it's not very productive," one Administration official said.

However, another U.S. official said that though the meeting itself yielded no substantive progress, it "initiated a dialogue, and that dialogue gives us some promise to resolve the differences." The goal of the September meeting, he explained, was not to resolve the dispute, but rather "the focus was to figure out what those words [the Russian law complicating the country's agreement to CTR-style liability provisions] say, what they allow, what they do not allow, and what their concerns are with exactly how the words will operate in practice." In his view, the meeting was a success. "Of course there's always a little table pounding, that goes with it. But there was less table pounding and more 'OK, you say that these are the words that you need, tell us how those words operate. Here's a provision, what triggers that. Now what happens?'" the official explained. "It was that kind of dialogue, not aimed at saying 'OK, let's do this and solve the problem,' but rather 'We both say there is a problem ... now let's get down to the operative pieces of it and figure out what our honest concerns are on both sides.'"

He reported that the U.S. officials "walked away with a better understanding of what [the Russians] thought, and they walked away with a better understanding of what we thought." A followup meeting has not been scheduled, though the official said he expected another meeting, through perhaps a less formal one, some time in the coming month. "Another meeting shouldn't necessarily be taken to mean that there's been great progress or there hasn't been," the official said.■

U.S.-RUSSIA NUCLEAR CITIES PACT EXPIRES, BUT 69 PROJECTS EXTENDED

Though the Nuclear Cities Initiative agreement between the U.S. and Russia was allowed to expire Sept. 22 due to lack of agreement between Russia and the United States on liability protection, ongoing projects were approved to continue, as allowed under provisions of the initial pact. The 69 projects approved were not identified by NNSA officials. Paul Longsworth, Deputy Administrator of Defense Nuclear Nonproliferation of the U.S. National Nuclear Security Administration, and Igor Borvkov, First Deputy Minister of MINATOM, signed a protocol during a meeting in Moscow in September invoking article 12 of the 1998 NCI agreement, which allows for such extensions of projects beyond the life of the agreement itself. According to an Administration official, under the agreement on the continuing projects "all of the provisions, governing liability, taxation, access, and so forth, will be carried forward" as they are spelled out in the original agreement for the life of the continued projects.

Department of Energy Secretary Spencer Abraham did reveal that prior to the pact's expiration a new project had been started—a $9 million effort in the city Snezhinsk for the development of a Positron Emission Center, a medical imaging center that will provide capability for cancer diagnostics. This is one of the 69 projects.■

U.S., RUSSIA, IAEA REMOVE UNSECURED HEU FROM ROMANIA

Fourteen kilograms of weapons-grade highly enriched uranium (HEU)—which according to U.S. officials was undersecured and vulnerable to terrorists—was successfully removed from the Institute for Nuclear Research in Pitesti, Romania this past month through a joint effort of the U.S. Department of Energy (DOE), the Russian Atomic Energy Agency (MINATOM), the International Atomic Energy Agency (IAEA) and the Romanian government. Critical to the completion of the transfer was the U.S.'s willingness to shoulder the $4.4 million cost. DOE paid $400,000 for the transfer itself, and an additional $4 million, funneled through the IAEA, for the conversion of a research reactor at the site to use low-enriched uranium instead of HEU. The fuel removal was funded under the U.S.-Russia-IAEA Tripartite Initiative to facilitate the return of both fresh and spent fuel from Russian designed research reactors abroad.

The reactor in Pitesti is a U.S. designed 14-megawatt TRIGA reactor. The conversion is a three-year Technical Cooperation project involving IAEA experts and the U.S. Department of Energy, under the auspices of the Tripartite Initiative. Conversion of the Romanian reactor had already begun, "but the Romanians ran out of money," one U.S. official reported. According to DOE, it will be fully converted over the next two and a half years, with the spent HEU fuel returned to the U.S.

Part of a Broad Effort

The Romania operation is part of a larger U.S. initiative to secure the weapons-usable HEU stored at some 80 research reactors around the world. The transfer was coordinated in a manner similar to the HEU take-back that was conducted in Vinca, Yugoslavia last September (*NW&M Monitor*, Vol. 6 No. 18). Following the Yugoslav operation last summer, State Department officials compiled a list of 24 other overseas reactors that use weapons-grade nuclear fuel and are considered vulnerable. "Romania just happened to work out; we're being opportunistic about this. It's not that Romania was necessarily the next priority, but it was an opportunity that presented itself and so we took it," a U.S. official explained.

But Project Just a 'Drop in the Bucket'

While the Romania operation is being touted as a successful demonstration of international nonproliferation efforts, many are arguing that while the take-back efforts are beneficial, they are still too few and too far between to be of any great help. Indeed, some U.S. officials expressed dissatisfaction with the length of time it took to organize this effort, given that it was more straight-forward then the Vinca affair. "We had a lot more political work to do in Yugoslavia at the time, because we did that fairly soon after the Milosevic regime and had to find friends in high places over there. That was not so necessary in Romania because we already had them. This one was easier than the Vinca one," one official told *NW&M Monitor*. But he insisted that it would be difficult to work any faster. "Getting everybody on board ... working this through the IAEA bureaucracy, working through our own bureaucracy, getting licenses for the shipping casks, getting the Romanians to get all the fuel together and appropriately packaged, all of this stuff takes time. It is very difficult to do anything in a hurry with nuclear material. There are political sensitivities, even though it was much easier in