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ACTION OES-09

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 TO SECSTATE WASHDC 5556
 INFO USEU BRUSSELS
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 AMEMBASSY BONN
 DIRFBI WASHDC
 WHITEHOUSE WASHDC
 NRC WASHDC
 DOE WASHDC

S E C R E T SECTION 01 OF 13 MOSCOW 032874

STATE FOR ACDA (GOODBY), PM/NE, EUR/RPM AND
 EUR/ISCA/CAST;
 DOE FOR S-1 (BERLS), NN-1 (LUONGO), NN-42 (ROONEY)
 AND PO-70;
 NRC FOR OIP;
 WHITEHOUSE FOR NSC (STERN) AND OSTP (VON HIPPEL);
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DIR FBI FOR SSA PAUL DEMINIKI;

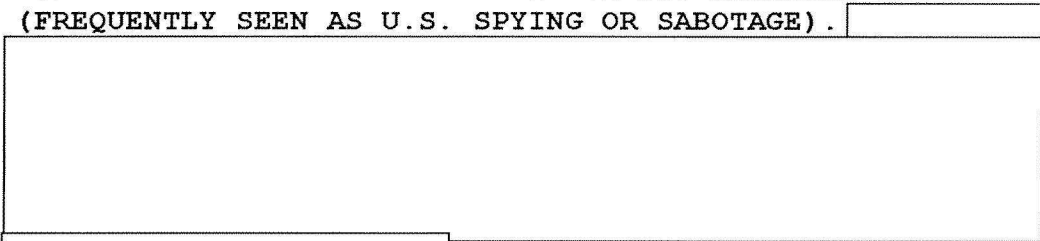
UNITED STATES DEPARTMENT OF STATE
 REVIEW AUTHORITY: FRANK H PEREZ
 CLASSIFICATION: SECRET REASON: 1.4(B), 1.4(D)
 DECLASSIFY AFTER: 15 NOV 2019
 DATE/CASE ID: 12 NOV 2010 200905308

E.O. 12356: DECL: OADR
TAGS: PARM, MNUC, TRGY, ASEC, RS
SUBJECT: OVERVIEW OF NUCLEAR MATERIAL PROTECTION,
CONTROL AND ACCOUNTING IN RUSSIA

1. SECRET - ENTIRE TEXT.

SUMMARY

2. WHILE MANY DIFFERENT SYSTEMS ARE IN PLACE IN RUSSIA TO INSURE THE SECURITY OF NUCLEAR MATERIALS AGAINST THEFT OR DIVERSION, FEW IF ANY OF THESE SYSTEMS WOULD MEET U.S.-STYLE STANDARDS FOR NUCLEAR SECURITY. SOVIET NUCLEAR SECURITY SYSTEMS WERE BASED ON CONCEPTS OF ISLOATION OF NUCLEAR MATERIALS AND SPECIALISTS AND ON PROTECTION AGAINST EXTERNAL THREATS (FREQUENTLY SEEN AS U.S. SPYING OR SABOTAGE).



GOR ACTIONS OVER THE PAST
SEVERAL MONTHS INDICATE THAT THE GOVERNMENT AS A WHOLE INCREASINGLY RECOGNIZES CURRENT PROBLEMS WITH THE SECURITY OF NUCLEAR MATERIALS AND HAS BEGUN

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IMPROVEMENTS, ALTHOUGH FUNDING CONSTRAINTS REPRESENT A MAJOR BARRIER TO RAPID PROGRESS.

3. THIS CABLE PROVIDES A NON-TECHNICAL OVERVIEW OF RUSSIAN SYSTEMS FOR PROTECTING NUCLEAR MATERIALS FROM THEFT OR DIVERSION; ITS PURPOSE IS TO PROVIDE A BACKGROUND AGAINST WHICH MORE SPECIFIC INFORMATION ON RUSSIA'S SYSTEMS FOR THE SECURITY OF NUCLEAR MATERIALS CAN BE COMPARED. IT ALSO PROVIDES HISTORICAL AND OTHER BACKGROUND INFORMATION IN ORDER TO PROVIDE A

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CONTEXT FOR EVALUATING INFORMATION ON THE STRENGTHS AND WEAKNESSES OF RUSSIA'S NUCLEAR MATERIAL PROTECTION, CONTROL AND ACCOUNTING SYSTEMS AS WELL AS ON CURRENT EFFORTS TO IMPROVE THOSE SYSTEMS. END SUMMARY.

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OVERVIEW

4. SEIZURES IN RUSSIA, GERMANY AND ELSEWHERE OF NUCLEAR MATERIALS WHICH MAY HAVE ORIGINATED FROM RUSSIA HAVE FOCUSED CONSIDERABLE ATTENTION ON THE SECURITY OF RUSSIA'S NUCLEAR STOCKPILE AGAINST THEFT OR DIVERSION. THIS CABLE PROVIDES A NON-TECHNICAL OVERVIEW OF THE SYSTEMS CURRENTLY IN PLACE IN RUSSIA TO PROTECT NUCLEAR MATERIALS. IT IS INTENDED TO ASSIST READERS ACTIVE IN EFFORTS TO ASSIST RUSSIA IN IMPROVING THE SECURITY ITS NUCLEAR STOCKPILE BETTER UNDERSTAND DEVELOPMENTS IN RUSSIA BY PROVIDING A BACKDROP AGAINST WHICH REPORTS ON SPECIFIC ASPECTS OF THE OVERALL SYSTEM AND AREAS OF U.S.-RUSSIAN

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COOPERATION CAN BE PUT INTO PERSPECTIVE. WHILE SPECIFIC EXAMPLES OF BOTH STRONG AND WEAK POINTS IN RUSSIA'S SYSTEMS FOR PROTECTING NUCLEAR MATERIALS ARE CITED, THEY ARE CITED FOR ILLUSTRATIVE PURPOSES ONLY; THIS CABLE DOES NOT PROVIDE COMPREHENSIVE INFORMATION ON ALL ASPECTS OF NUCLEAR MATERIAL PROTECTION, CONTROL AND ACCOUNTING (MPC&A) IN RUSSIA.

5. DETAILED INFORMATION ON SPECIFIC ASPECTS OF RUSSIA'S MPC&A SYSTEMS HAVE BEEN INCLUDED IN NUMEROUS REPORTING CABLES FROM THIS EMBASSY AS WELL AS FROM REPORTS PREPARED BY VISITORS TO RUSSIA FROM THE DEPARTMENT OF ENERGY (DOE), U.S. NATIONAL LABORATORIES, THE IAEA AND EURATOM AS WELL AS FROM OTHER SOURCES. WHILE MOST OF THE INFORMATION CONTAINED IN THIS REPORT IS ALREADY AVAILABLE FROM THESE SOURCES, THIS MESSAGE PULLS TOGETHER TO PRESENT AN OVERALL PICTURE. THIS REPORT DOES NOT COVER NUCLEAR WEAPONS SECURITY.

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THE SAFETY OF NUCLER MATERIALS IN RUSSIA

6. WHILE EXISTING SECURITY MEASURES AT FACILITIES

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DIRFBI WASHDC
WHITEHOUSE WASHDC
NRC WASHDC
DOE WASHDC

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S E C R E T SECTION 02 OF 13 MOSCOW 032874

STATE FOR ACDA (GOODBY), PM/NE, EUR/RPM AND
EUR/ISCA/CAST;
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AND PO-70;
NRC FOR OIP;
WHITEHOUSE FOR NSC (STERN) AND OSTP (VON HIPPEL);
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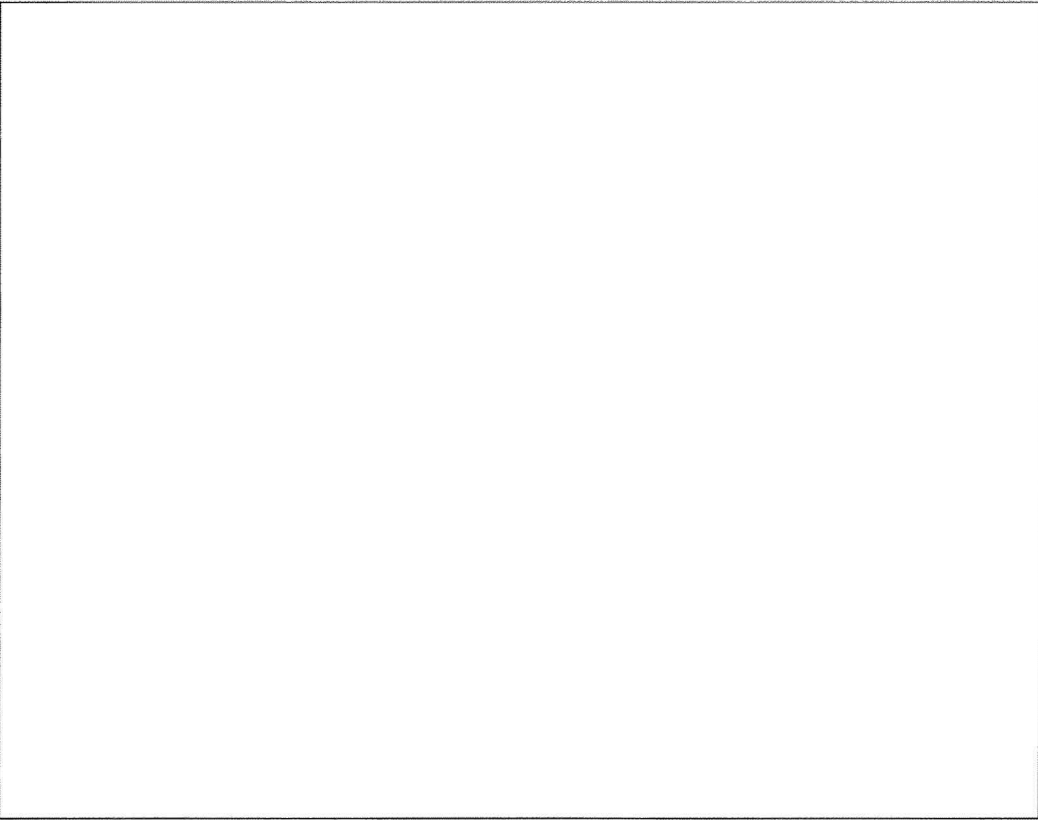
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DIR FBI FOR SSA PAUL DEMINIKI;
USVIENNA FOR USVIE

E.O. 12356: DECL: OADR
TAGS: PARM, MNUC, TRGY, ASEC, RS
SUBJECT: OVERVIEW OF NUCLEAR MATERIAL PROTECTION,
CONTROL AND ACCOUNTING IN RUSSIA

WITH ACCESS TO NUCLEAR MATERIALS UNDERSTANDABLY VARY
GREATLY DEPENDING ON THE NATURE OF THE NUCLEAR
MATERIAL LOCATED IN A GIVEN FACILITY, FEW IF ANY OF
THE SYSTEMS ESTOFF HAS SEEN WOULD MEET U.S. STANDARDS
FOR PROTECTION. THIS DOES NOT MEAN THAT ALL NUCLEAR
SECURITY SYSTEMS ARE UNIFORMLY WEAK. THE OPPOSITE IS
TRUE -- SECURITY ARRANGEMENTS AT A NUMBER OF
FACILITIES ARE QUITE IMPRESSIVE.

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8. FINALLY, THE FINANCIAL CRISIS AFFLICTING RUSSIA'S NUCLEAR INDUSTRY ALSO ADDS TO THE RISK OF DIVERSION. MANY NUCLEAR WORKERS ARE LEAVING THEIR JOBS AND THOSE THAT REMAIN RECEIVE LOW PAY WHICH OFTEN ARRIVES MONTHS LATE. RUMORS OF LAYOFFS AND CLOSURES CIRCULATE FREQUENTLY, INCLUDING RUMORS THAT THE GOVERNMENT MAY CLOSE ENTIRELY SOME OF ITS "SECRET" NUCLEAR CITIES WHICH ARE HOME TO ALMOST 1,000,000 PEOPLE.

9. WHILE WESTERN OBSERVERS TEND TO SEE MANY "OBVIOUS" WEAKNESS IN RUSSIA'S SYSTEMS FOR SECURING THE SAFETY OF NUCLEAR MATERIALS, THE RUSSIAN (AND FORMER SOVIET) AUTHORITIES WHO DESIGNED AND IMPLEMENTED CURRENT SYSTEMS ARE QUICK TO DEFEND THEIR WORK AND TO TAKE OFFENSE AT PERCEIVED SLIGHTS. THESE RUSSIAN EXPERTS CITE THE FACT THAT THEIR SECURITY SYSTEMS WORKED ESSENTIALLY FLAWLESSLY FOR OVER 40 YEARS. WHILE A
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PART OF THE RISK FACING RUSSIA'S NUCLEAR STOCKPILE CAN
BE TRACED TO THE DETERIORATION OF SECURITY MEASURES
SINCE THE BREAK-UP OF THE SOVIET UNION, THE MOST
IMPORTANT FACTORS WHICH HAVE LED TO INCREASED RISK ARE
CHANGES IN THE NATURE OF THE THREAT AND IN THE NATURE
OF RUSSIAN SOCIETY. SECURITY SYSTEMS IN PLACE TODAY
WERE DESIGNED DURING THE SOVIET PERIOD, WHEN THE
NATION WAS CHARACTERIZED BY A POWERFUL CENTRALIZED
STATE WITH A PERVASIVE SECURITY NETWORK. THE MEASURES
NEEDED TO INSURE NUCLEAR SECURITY IN SUCH AN
ENVIRONMENT WERE VERY DIFFERENT THAN THOSE THAT HAVE
ALWAYS BEEN NEEDED IN WESTERN COUNTRIES OR WHICH ARE
NEEDED IN RUSSIA TODAY.

10. FINALLY, MANY WITHIN THE GOR ARE WELL AWARE OF
THE WEAKNESS IN SECURITY SYSTEMS DESCRIBED IN THIS
REPORT. THE GOR'S CHIEF NUCLEAR SAFETY WATCHDOG,
GOSATOMNADZOR, FOR EXAMPLE, HAS BOTH STUDIED THE
PROBLEM AND RECEIVED REPEATED INSTRUCTIONS TO INCREASE
SECURITY AND TO MANDATE IMPROVED ACCOUNTING SYSTEMS.
OTHER GROUPS, INCLUDING THE NUCLEAR SOCIETY OF RUSSIA
AND THE SOCIETY FOR NONPROLIFERATION, HAVE COMMENTED
PUBLICLY ON THE NEED FOR TIGHTER CONTROLS.
UNFORTUNATELY, GOSATOMNADZOR OFFICIALS IN CHARGE OF

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TO SECSTATE WASHDC 5558
INFO USEU BRUSSELS
USMISSION USVIENNA
AMEMBASSY BONN
DIRFBI WASHDC
WHITEHOUSE WASHDC
NRC WASHDC
DOE WASHDC

S E C R E T SECTION 03 OF 13 MOSCOW 032874

STATE FOR ACDA (GOODBY), PM/NE, EUR/RPM AND
EUR/ISCA/CAST;
DOE FOR S-1 (BERLS), NN-1 (LUONGO), NN-42 (ROONEY)
AND PO-70;
NRC FOR OIP;
WHITEHOUSE FOR NSC (STERN) AND OSTP (VON HIPPEL);
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DIR FBI FOR SSA PAUL DEMINIKI;
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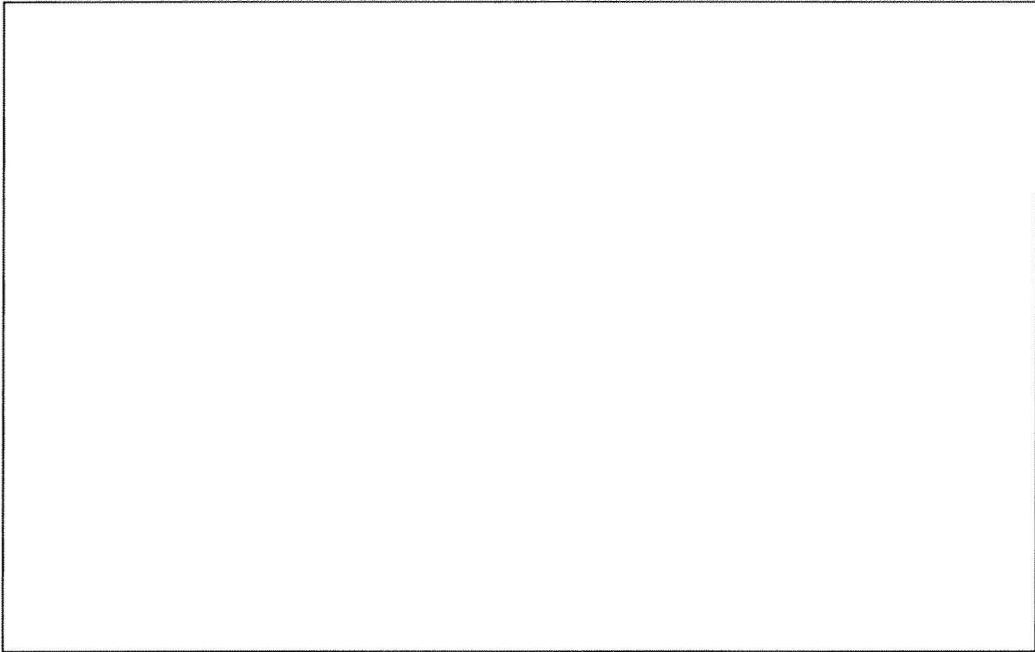
E.O. 12356: DECL: OADR
TAGS: PARM, MNUC, TRGY, ASEC, RS
SUBJECT: OVERVIEW OF NUCLEAR MATERIAL PROTECTION,
CONTROL AND ACCOUNTING IN RUSSIA

THE SECURITY OF NUCLEAR MATERIALS REPORT THAT THE

PRIMARY PROBLEM IS ONE OF MONEY. UPGRADING PHYSICAL SECURITY AND ESTABLISHING ACCOUNTING SYSTEMS VIRTUALLY FROM SCRATCH WILL BE VERY EXPENSIVE. AMERICAN MPC&A EXPERTS WHO HAVE VISITED VARIOUS NUCLEAR FACILITIES IN RUSSIA GENERALLY AGREE THAT THE TOTAL AMOUNT OF MONEY NEEDED COULD BE MEASURED IN THE BILLIONS OF DOLLARS WITH AN ANNUAL OPERATING BUDGET OF UP TO USD ONE BILLION.

THE PEAK OF PHYSICAL PROTECTION: THE CLOSED CITIES

11. RUSSIA'S TEN CLOSED "SECRET" NUCLEAR CITIES POSSESS THE MOST SENSITIVE NUCLEAR MATERIALS/TECHNOLOGIES IN RUSSIA AND ARE THE BEST PROTECTED OF THE FACILITIES COVERED IN THIS REPORT.



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12. THE FIRST ELEMENT OF THE "SECURITY SYSTEM" AT THE CLOSED CITIES IS PHYSICAL SPACE -- ALL OF THE NUCLEAR CITIES ARE PHYSICALLY REMOTE FROM POPULATION CENTERS. WHILE THEY ARE LOCATED IN THE SAME GENERAL AREA WITH THE OPEN CITIES AFTER WHICH THEY ARE NAMED, THE CLOSED CITIES ARE LOCATED BETWEEN 40 AND 150 KILOMETERS AWAY FROM THEIR NEIGHBORS. IN ADDITION, MOST CLOSED CITIES ARE LOCATED IN VERY REMOTE REGIONS, MANY OF WHICH WERE CLOSED TO FOREIGN TRAVEL UNTIL RECENTLY.

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15. THIS OUTER PERIMETER FENCE SURROUNDS THE ENTIRE CLOSED CITY. THESE CITIES RANGE IN POPULATION FROM A LOW OF ABOUT 45,000 TO A HIGH OF OVER 100,000. FROM THE TIME THESE CITIES WERE FOUNDED UP UNTIL LESS THAN A DECADE AGO, NOT ONLY DID THE FENCES KEEP PEOPLE OUT OF THE CLOSED CITIES, THEY KEPT THE RESIDENTS IN. VERY FEW RESIDENTS OF CLOSED CITIES WERE ALLOWED TO TRAVEL WITHIN RUSSIA; EVEN FEWER WERE ALLOWED FOREIGN TRAVEL RIGHTS. WHEN ONE MEMBER OF A FAMILY WAS ALLOWED TO TRAVEL, OTHERS WERE FORCED TO STAY BEHIND. A NUMBER OF YOUNGER (UNDER 40) CLOSED CITY RESIDENTS WITH WHOM ESTOFF HAS SPOKEN REPORT THAT THEY WERE BORN IN THEIR CLOSED CITY AND NEVER LEFT FOR ANY REASON UNTIL THE LAST FEW YEARS. WHILE SOME OUTSTANDING STUDENTS WERE ALLOWED TO TRAVEL TO MOSCOW OR ELSEWHERE FOR HIGHER EDUCATION, MANY OTHERS COMPLETED THEIR

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S E C R E T SECTION 04 OF 13 MOSCOW 032874

STATE FOR ACDA (GOODBY), PM/NE, EUR/RPM AND
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DIR FBI FOR SSA PAUL DEMINIKI;
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TAGS: PARM, MNUC, TRGY, ASEC, RS
SUBJECT: OVERVIEW OF NUCLEAR MATERIAL PROTECTION,
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EDUCATIONS INSIDE THE CLOSED CITY.

16. THE GEOGRAPHIC SIZE OF THE CLOSED CITIES HELPED SUPPORT THEIR ISOLATION. LARGE LAND AREAS -- SOMETIMES MEASURING HUNDREDS OF SQUARE MILES -- ARE ENCLOSED BY THE TIGHTLY GUARDED PERIMETER FENCES DESCRIBED ABOVE. FARMS, FOOD PROCESSING AND LIGHT INDUSTRIES, STORES, SCHOOLS, HOSPITALS AND CULTURAL FACILITIES ARE ALL LOCATED WITHIN THE FENCE, THUS MINIMIZING THE NEED FOR CONTACT WITH THE OUTSIDE WORLD. DELIVERIES OF SUPPLIES ARE PROCESSED BY A "SPECIAL SERVICES" RUN ORGANIZATION. IN THE PAST, MOST TRUCKS WERE EITHER UNLOADED AT SPECIAL WAREHOUSES ON THE BORDERS OF THE CLOSED CITY OR ELSE DRIVERS WERE REQUIRED TO RELINQUISH CONTROL OF THEIR VEHICLES AT THE BORDER OF THE CLOSED CITY TO OTHER DRIVERS WHO WORKED ONLY WITHIN THE CITY. TODAY, SUPPLY TRUCKS APPEARS TO TRAVEL WITH RELATIVE FREEDOM IN AND OUT OF THE GATES.

17. AT PRESENT, WHILE RESIDENTS MUST STILL FILE PAPERWORK REQUESTING PASSES TO LEAVE, PERMISSION TO TRAVEL WITHIN RUSSIA IS REPORTEDLY GRANTED ROUTINELY.

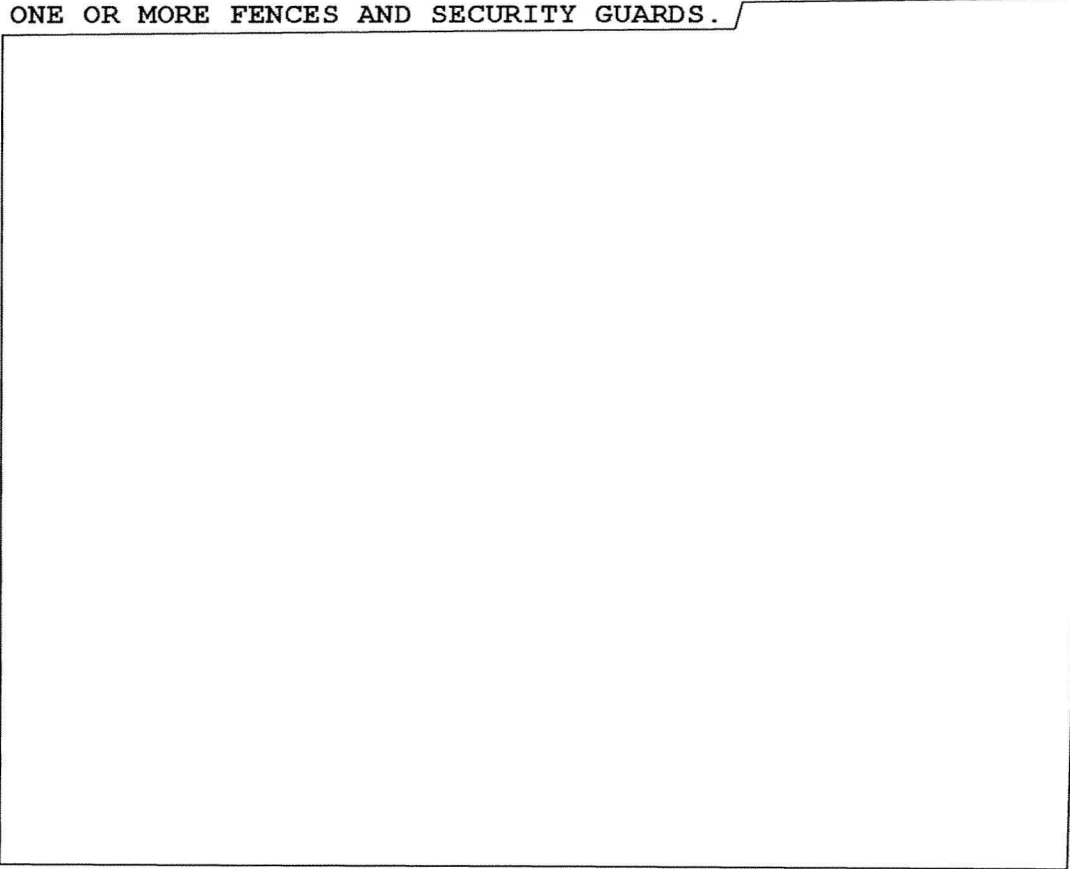
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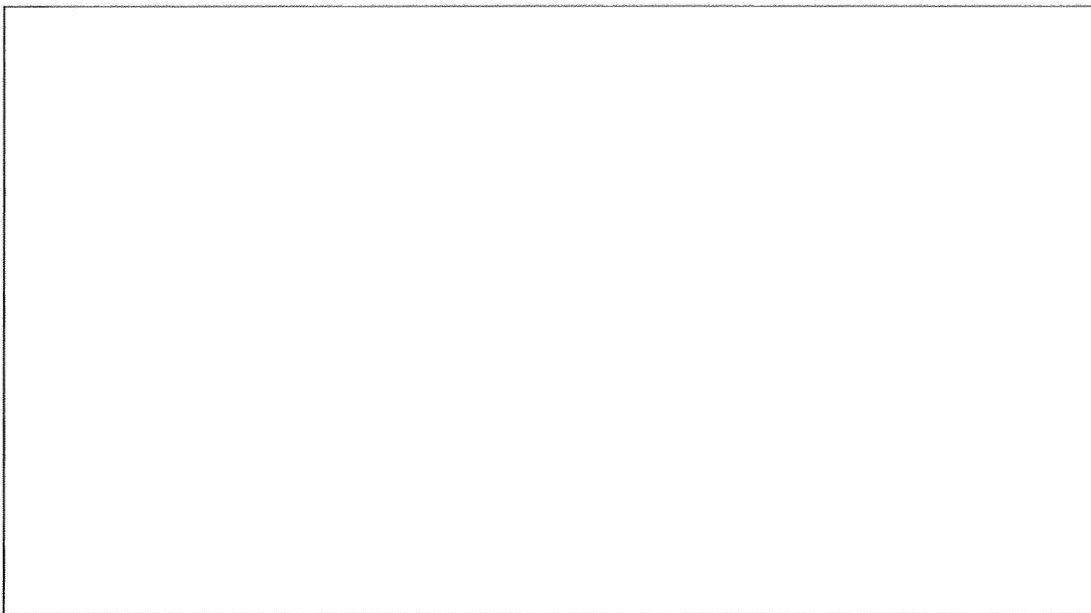
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FOREIGN TRAVEL IS STILL MORE TIGHTLY CONTROLLED, WITH
FOREIGN PASSPORTS ONLY ISSUED AFTER LONG SECURITY
CHECKS. THOUSANDS OF PEOPLE FROM WITHIN THE CLOSED
CITIES ARE REPORTEDLY EITHER WAITING FOR PERMISSION TO
TRAVEL ABROAD OR ARE APPEALING DENIALS.

18. ACCESS TO CLOSED CITIES BY OUTSIDERS IS STILL
TIGHTLY CONTROLLED. ALL VISITS BY FOREIGNERS REQUIRE
30 DAYS ADVANCE NOTICE. VISITS BY RUSSIAN NATIONALS
REQUIRE AT LEAST 10 DAYS NOTICE AND ARE NOT APPROVED
WITHOUT A SPONSOR INSIDE THE CLOSED CITY AND A VALID
REASON FOR TRAVEL.

19. WITHIN THE CLOSED CITIES, RESIDENTIAL AREAS ARE
PHYSICALLY SEPARATED FROM PRODUCTION/RESEARCH AREAS.
DESIGN BUREAUS AND OTHER BUILDINGS IN WHICH ONLY
"PAPER WORK" IS PERFORMED TEND TO BE LOCATED
RELATIVELY CLOSE TO THE MAIN POPULATION CENTERS;
LABORATORIES AND PRODUCTION FACILITIES ARE LOCATED
FARTHER AWAY. EACH INDIVIDUAL BUILDING OR FACILITY IS
PROTECTED BY ITS OWN SECURITY, GENERALLY CONSISTING OF
ONE OR MORE FENCES AND SECURITY GUARDS. /



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TO SECSTATE WASHDC 5560
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S E C R E T SECTION 05 OF 13 MOSCOW 032874

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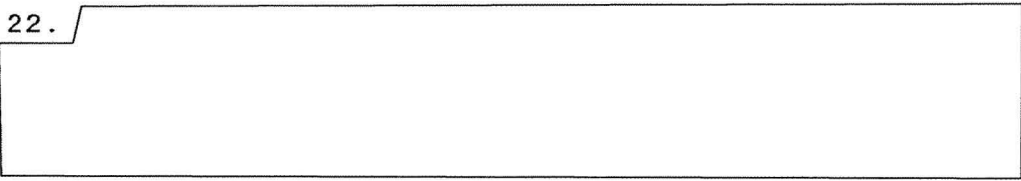
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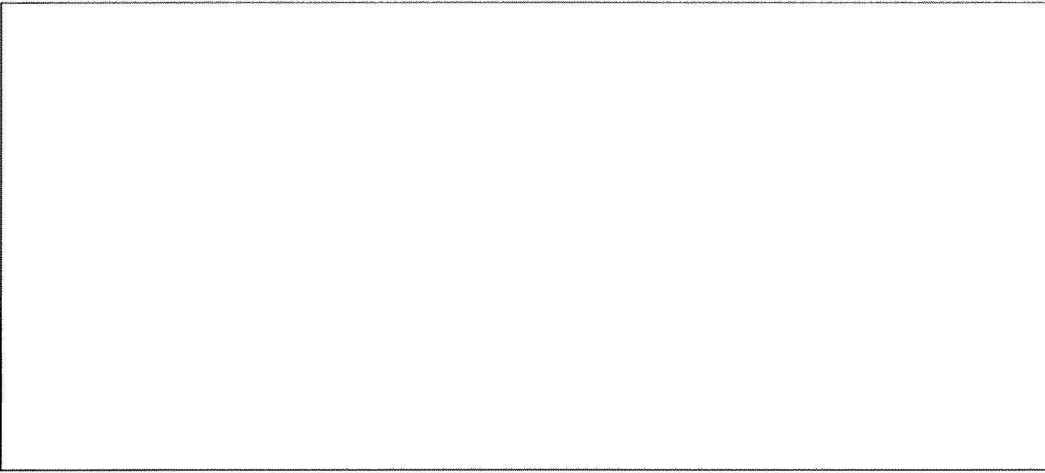
E.O. 12356: DECL: OADR
TAGS: PARM, MNUC, TRGY, ASEC, RS
SUBJECT: OVERVIEW OF NUCLEAR MATERIAL PROTECTION,
CONTROL AND ACCOUNTING IN RUSSIA

GAPS IN THE SECURITY NET

22. /



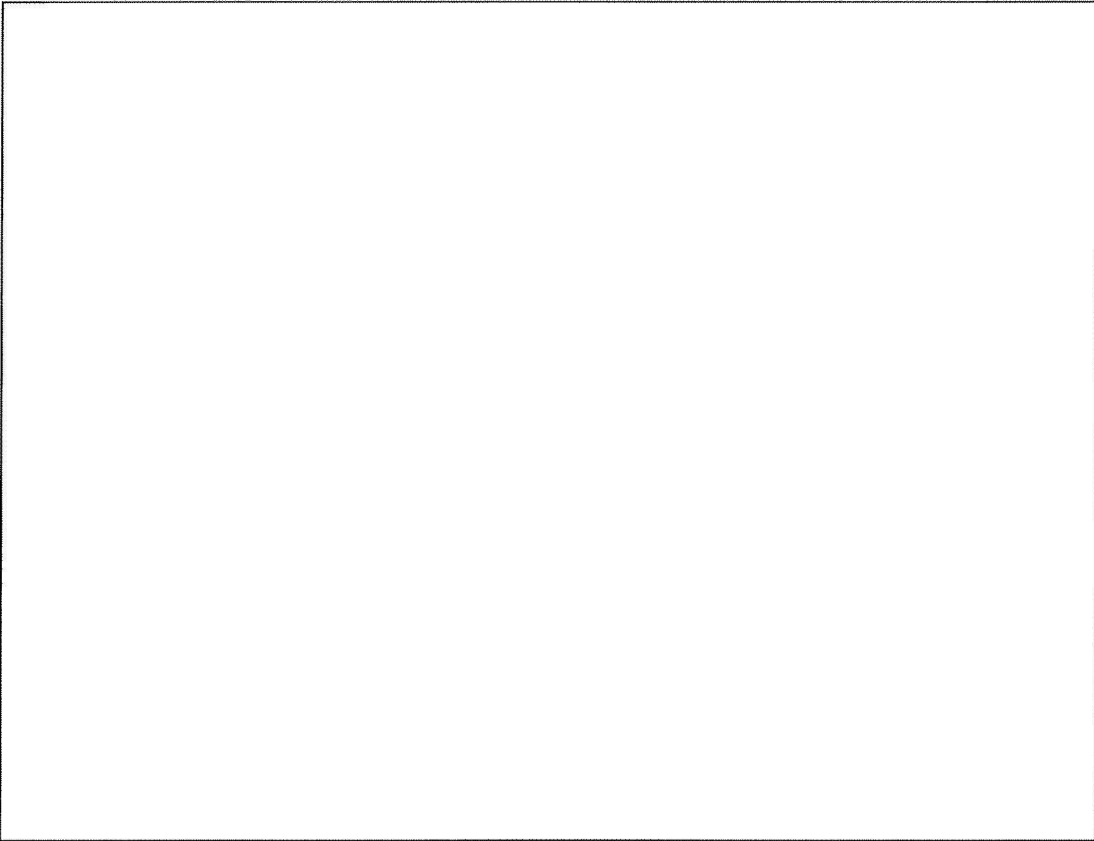
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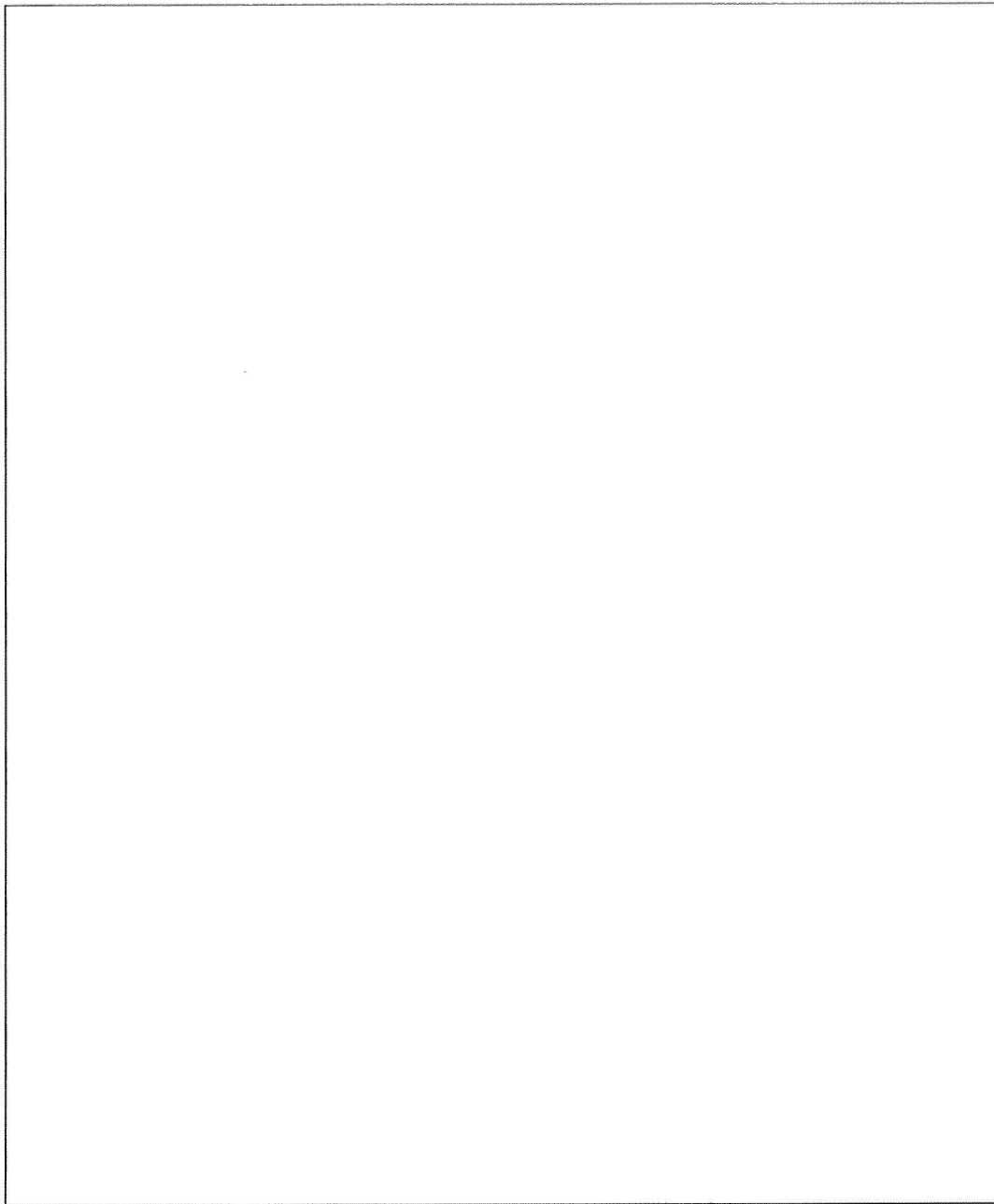
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S E C R E T SECTION 06 OF 13 MOSCOW 032874

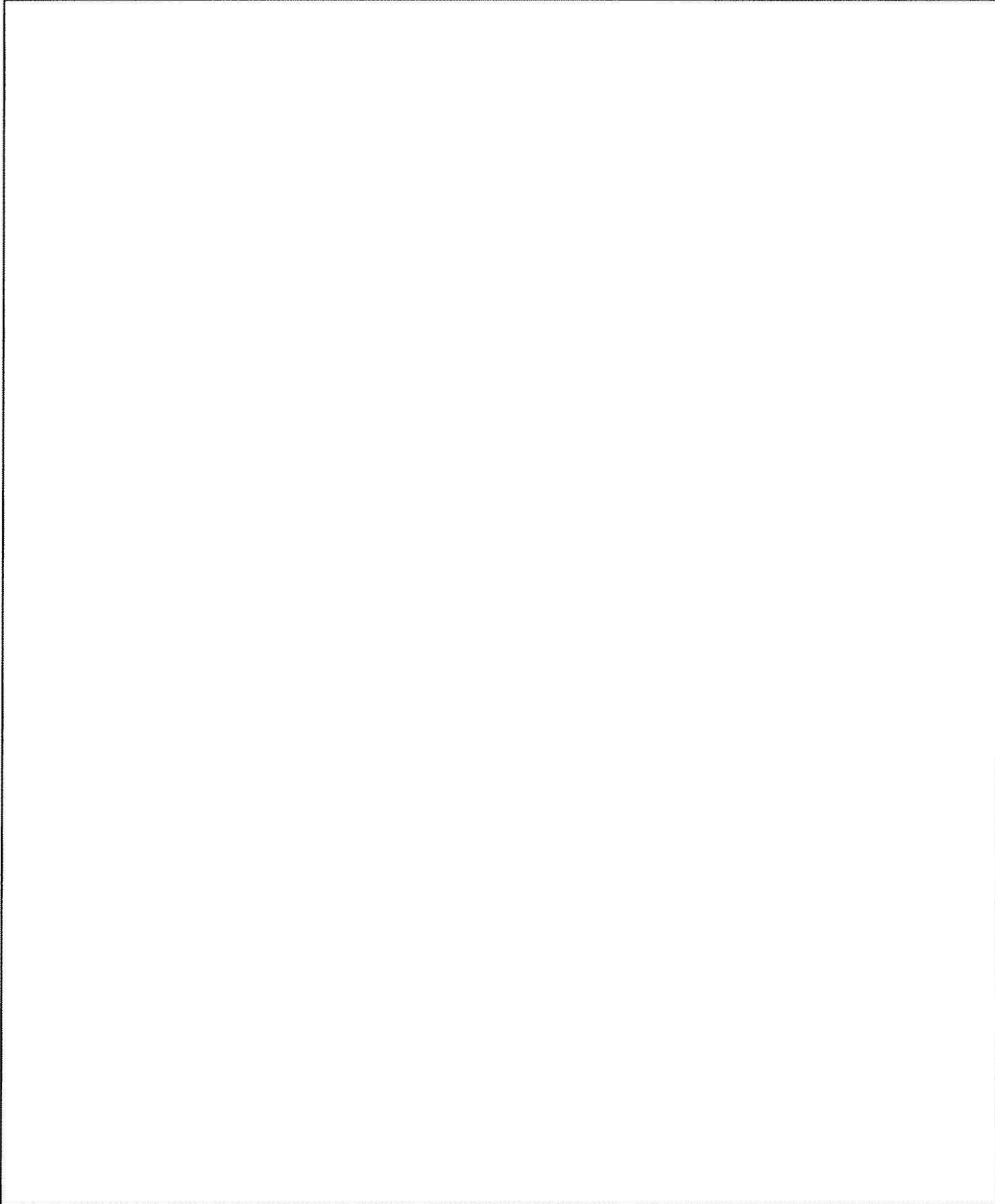
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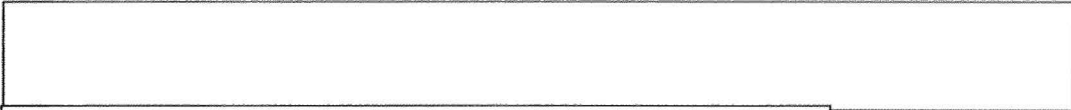


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NUCLEAR MATERIAL PROTECTION AT OTHER SITES

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THE
FACTORS WHICH DETERMINE THE LEVEL OF SECURITY AT A
GIVEN FACILITY ARE:

- DOES THE FACILITY HAVE ACCESS TO PLUTONIUM?

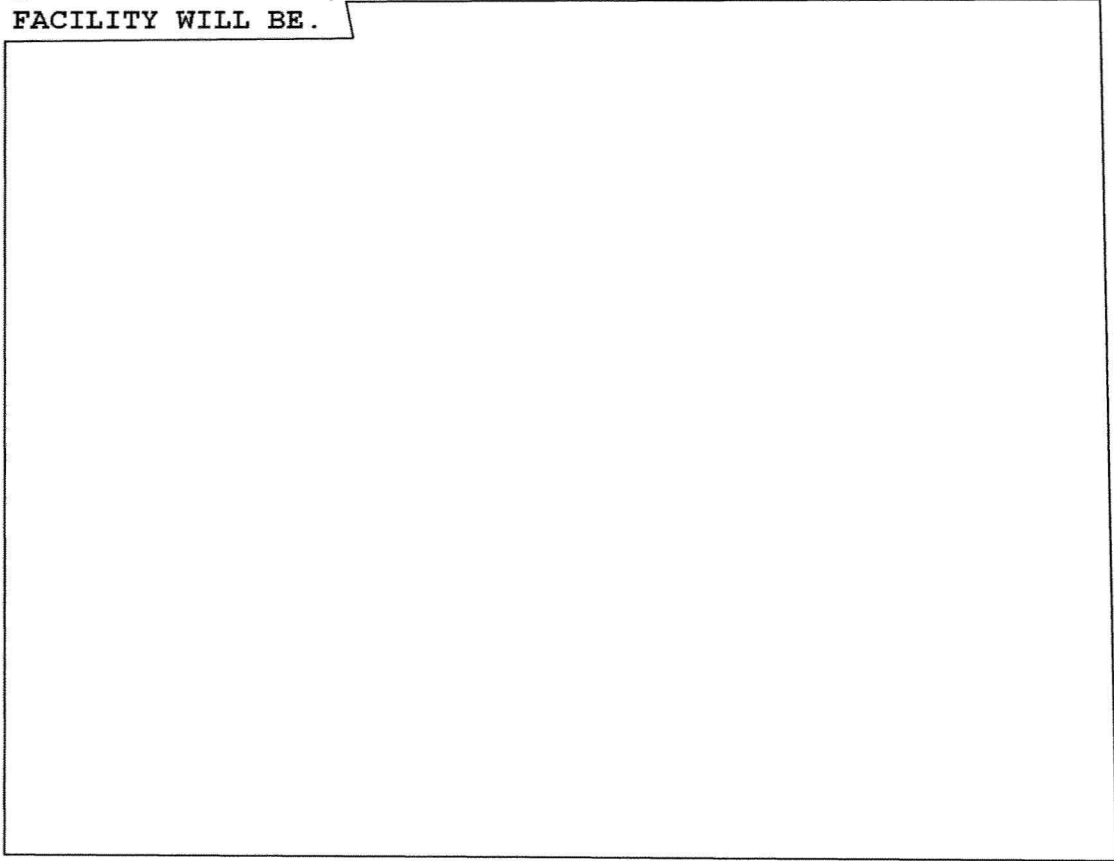
- IS THE FACILITY CONSIDERED TO BE "MILITARY" OR
"CIVILIAN" IN NATURE? WITHIN THE "MILITARY" CATEGORY,
IS IT A "WEAPONS" (AS OPPOSED TO "FUEL") FACILITY?

- DOES THE FACILITY DEVELOP OR POSSESS TECHNOLOGY
WHICH IS CONSIDERED MILITARILY SIGNIFICANT OR THE
POSSIBLE TARGET OF FOREIGN INTELLIGENCE?

- WHICH MINISTRY MAINTAINS EFFECTIVE CONTROL OVER THE
FACILITY?

27. THE FEWER TIMES THE ANSWER TO ONE OF THE ABOVE
QUESTIONS IS "YES," THE LOWER THE SECURITY AT THE
FACILITY WILL BE.

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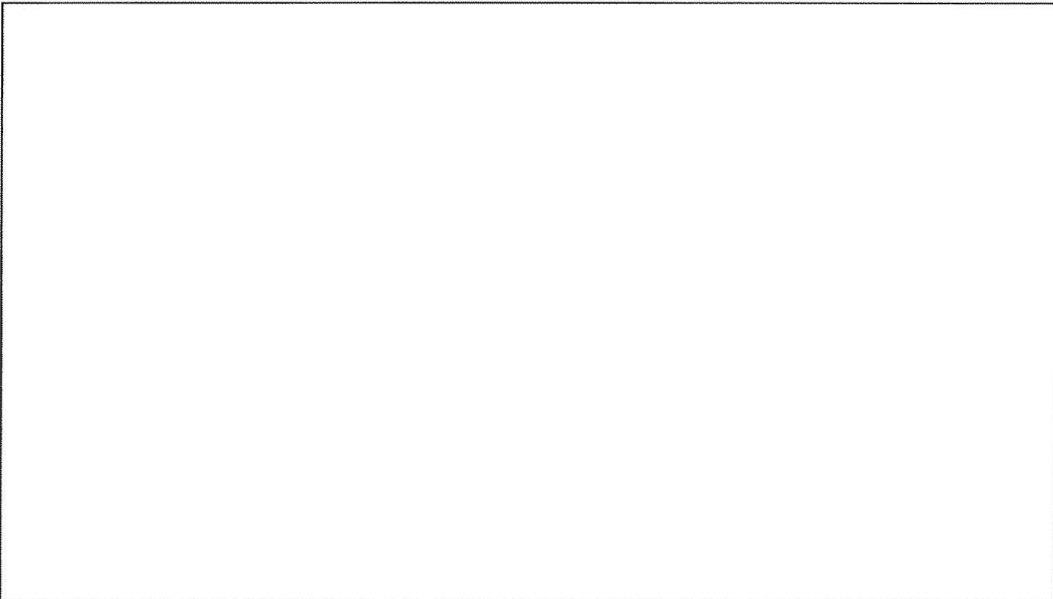
S E C R E T SECTION 07 OF 13 MOSCOW 032874

STATE FOR ACDA (GOODBY), PM/NE, EUR/RPM AND
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DOE FOR S-1 (BERLS), NN-1 (LUONGO), NN-42 (ROONEY)
AND PO-70;
NRC FOR OIP;
WHITEHOUSE FOR NSC (STERN) AND OSTP (VON HIPPEL);
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USVIENNA FOR USVIE

E.O. 12356: DECL: OADR
TAGS: PARM, MNUC, TRGY, ASEC, RS
SUBJECT: OVERVIEW OF NUCLEAR MATERIAL PROTECTION,
CONTROL AND ACCOUNTING IN RUSSIA

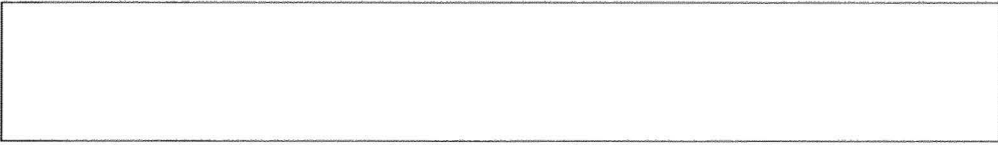


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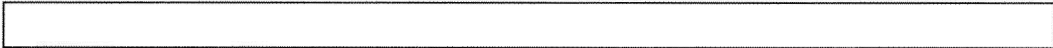
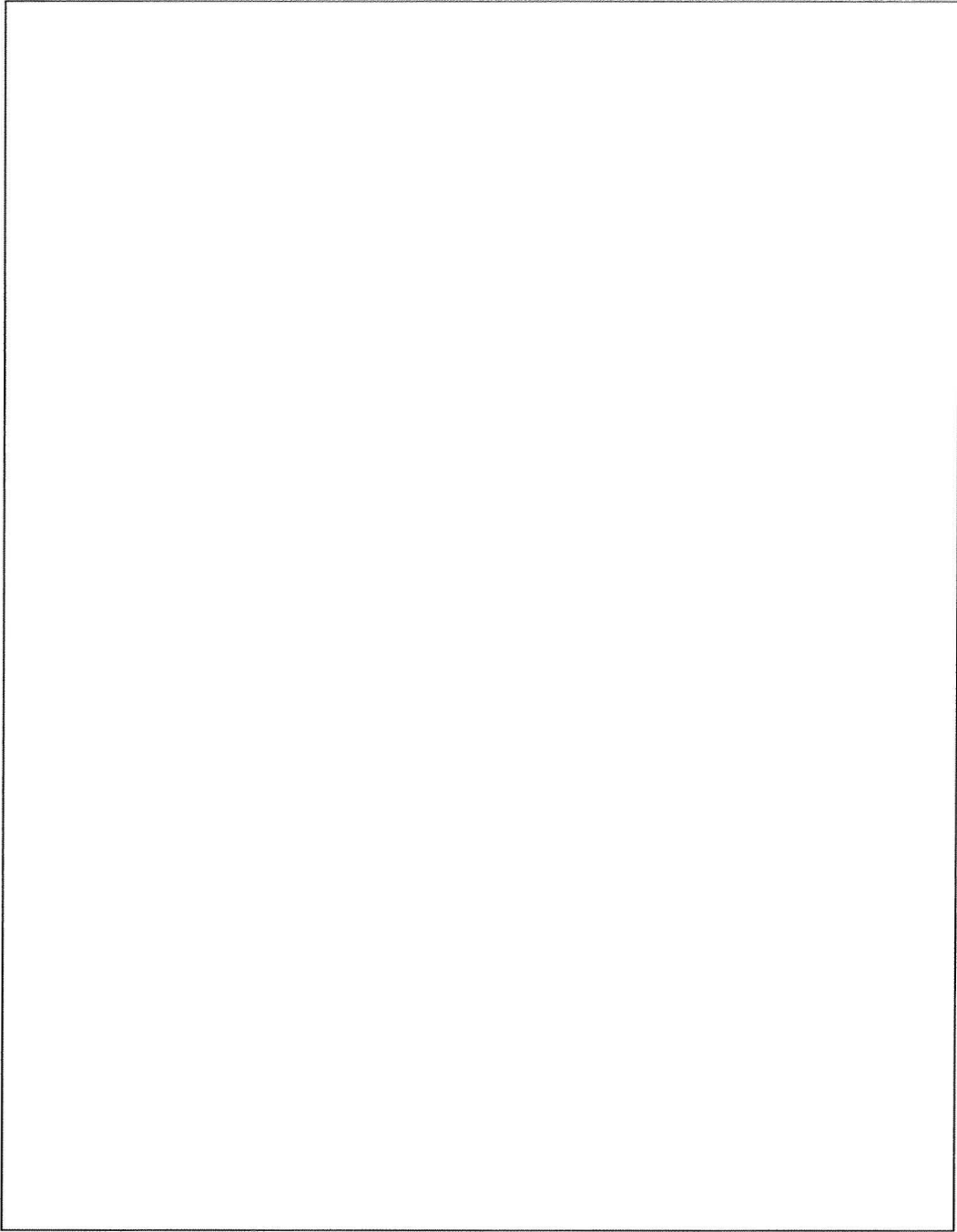
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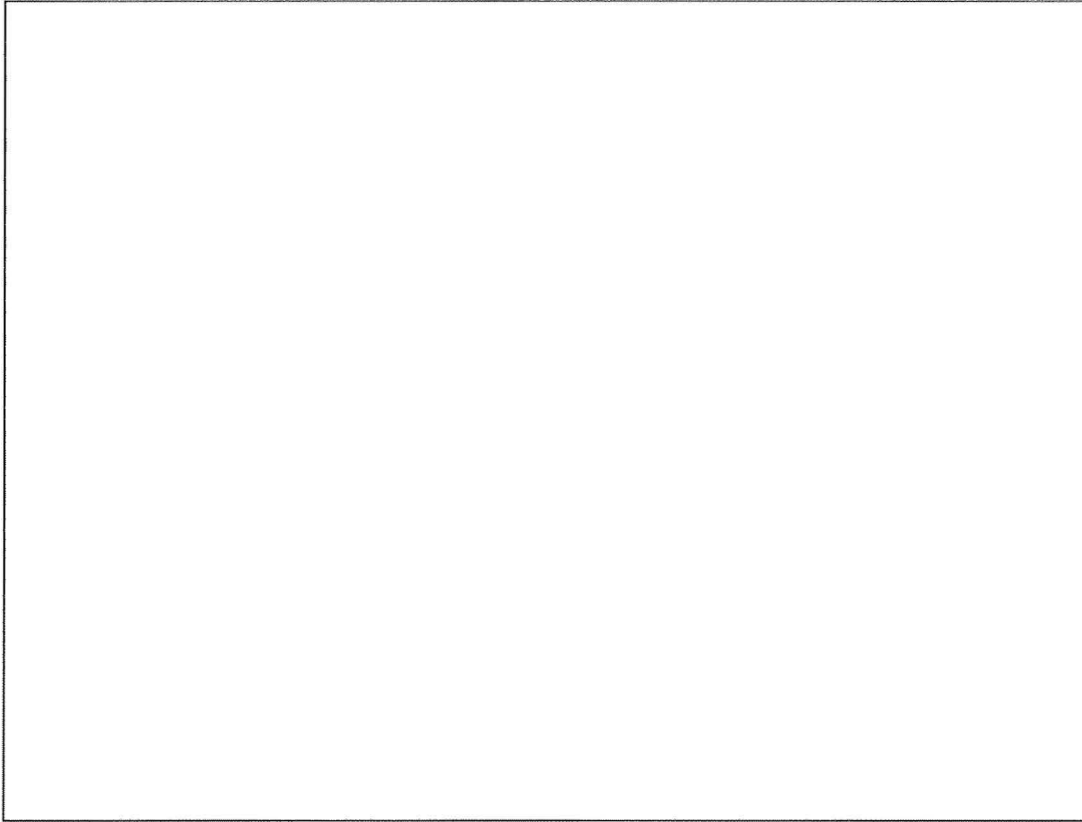
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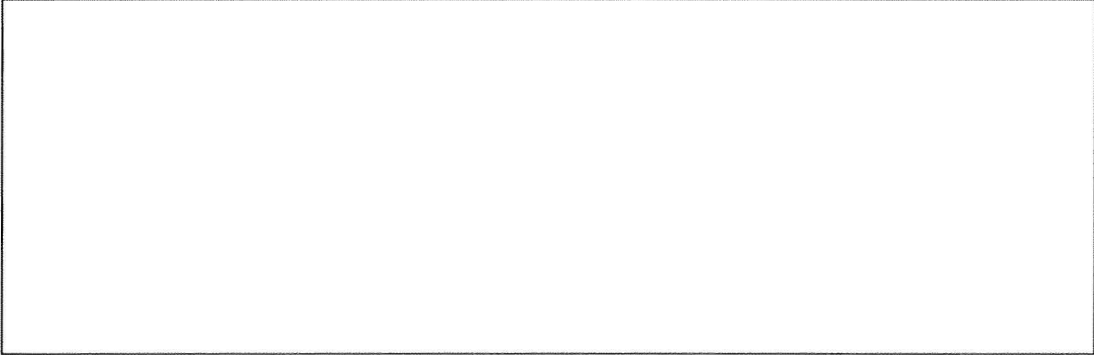
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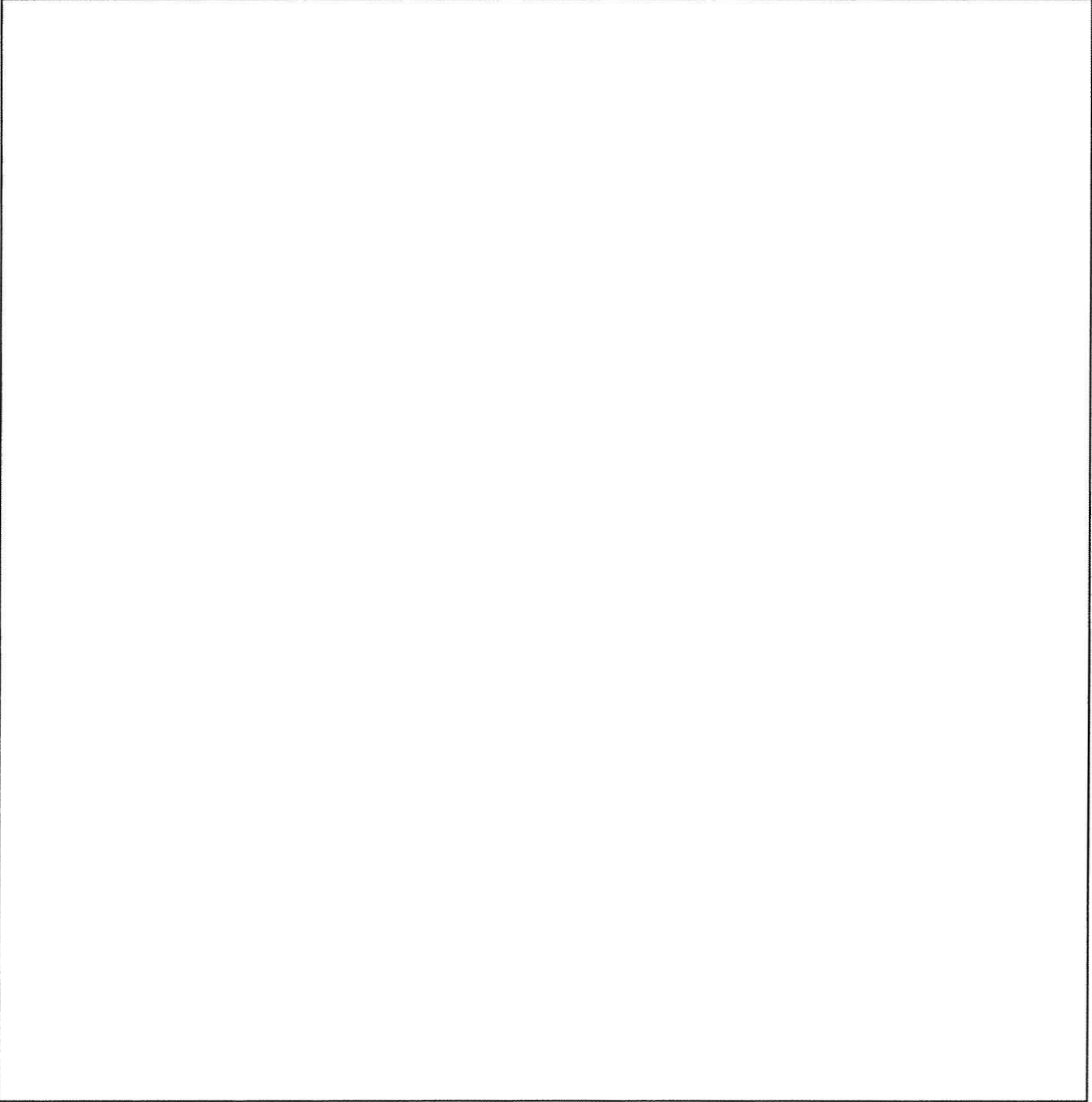
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CONTROL AND ACCOUNTING IN RUSSIA



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MATERIAL CONTROL AND ACCOUNTING

35. WHILE MODERN PRACTICES OF NUCLEAR MATERIAL CONTROL AND ACCOUNTING (MC&A) ARE COMPLEX AND OFTEN DIFFICULT TO EXPLAIN, THEY ARE A KEY ELEMENT IN THE PROTECTION OF NUCLEAR MATERIALS. BY TRACKING NUCLEAR MATERIALS AS THEY MOVE FROM PLACE TO PLACE, OWNER TO OWNER AND EVEN FROM ONE PHYSICAL FORM TO ANOTHER, MC&A PROCEDURES PROVIDE A MEANS OF DISCOURAGING THE THEFT OR DIVERSION OF MATERIALS BY PERSONS WITHIN THE INDUSTRY BY MAKING IT LIKELY THAT ANY SUCH DIVERSION WOULD BE DETECTED DURING AN AUDIT AND COULD BE TRACED TO THROUGH ACCOUNTING RECORDS. UNFORTUNATELY IN RUSSIA, WHERE THE POSSIBILITY THAT WORKERS MAY CHOOSE TO STEAL NUCLEAR MATERIALS IS EXACERBATED BY THE WORST FINANCIAL CRISIS THE NUCLEAR INDUSTRY HAS FACED IN ITS 50-YEAR HISTORY, MC&A PROCEDURES ARE ALMOST NON-EXISTENT.

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36. WHILE MINATOM AUTHORITIES MAINTAIN THAT FULLY

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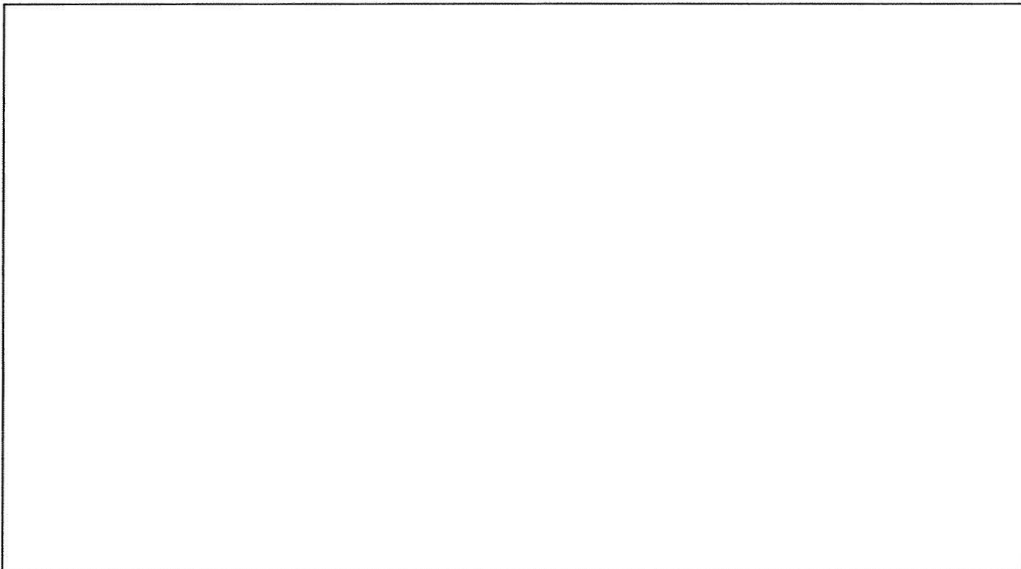
37. WHILE A CAREFUL ANALYSIS OF RECORDS COULD THEORETICALLY LEAD TO A VERY GOOD ESTIMATE OF STOCKS ON HAND, THE PROBLEM IS COMPLICATED BY THE FACT THAT THE RECORDS ARE MAINTAINED ONLY AS STATIC DOCUMENTS.



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TRACING THE MOVEMENT OF MATERIAL BASED ON THESE RECEIPTS IS NOT POSSIBLE. WHILE INVENTORIES ARE SOMETIMES TAKEN AT FACILITIES, THESE INVENTORIES CANNOT BE RECONCILED TO THE STACK OF RECEIVING AND SHIPPING DOCUMENTS.

38. A MEMBER OF A VISITING EURATOM DELEGATION SUMMARIZED THE SITUATION HIS GROUP OBSERVED BY STATING THAT THEY HAD CONCLUDED THAT NO SYSTEM OF NUCLEAR ACCOUNTING EXISTED IN RUSSIA. EACH OF THE SIX ORGANIZATIONS HE SURVEYED CLAIMED TO HAVE A SYSTEM, BUT EACH SYSTEM WAS DIFFERENT AND THERE WAS NO INTEGRATION. THE SYSTEMS ALSO LACKED COMPUTERIZATION OR ANY OTHER METHOD FOR PRODUCING RELIABLE RUNNING TOTALS. HE ALSO NOTED THAT THE LACK OF BASIC LEGISLATION UNDERPINNING THE NUCLEAR INDUSTRY MADE THE PROCESS OF ADDRESSING THE PROBLEM EVEN MORE DIFFICULT.



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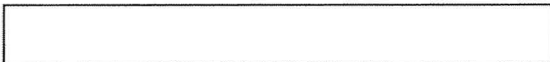
S E C R E T SECTION 10 OF 13 MOSCOW 032874

STATE FOR ACDA (GOODBY), PM/NE, EUR/RPM AND
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 DOE FOR S-1 (BERLS), NN-1 (LUONGO), NN-42 (ROONEY)
 AND PO-70;
 NRC FOR OIP;
 WHITEHOUSE FOR NSC (STERN) AND OSTP (VON HIPPEL);
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40. AT LEAST AT RUSSIA'S CLOSED NUCLEAR CITIES, THERE
 ARE ELEMENTS TO THEIR MC&A SYSTEMS WHICH DO NOT

GENERALLY EXIST IN THE WEST AND WHICH PROVIDE SOME ADDED LEVEL OF ADDED SECURITY. IN THE CLOSED CITIES, INFORMATION CONCERNING STOCKPILES OF NUCLEAR MATERIALS IS TIGHTLY CONTROLLED, AND CONVERSATIONS WITH PRESENT AND FORMER EMPLOYEES OF SOME OF THE CLOSED CITIES HAVE PROVIDED INSIGHTS INTO THE EXTENT TO WHICH SYSTEMS OF CONTROL OVER INFORMATION ARE USED TO SUPPLEMENT SECURITY MEASURES. THE SYSTEMS SURROUNDING THE PLUTONIUM PRODUCTION REACTORS AT TOMSK-7 AND KRASNOYARSK-26 PROVIDE A GOOD EXAMPLE. FUEL IS LOADED AND UNLOADED INTO/FROM THE REACTORS BY A SPECIAL CORPS OF TECHNICIANS. A COMPLETELY SEPARATE GROUP OPERATES THE REACTORS AND A THIRD GROUP PROCESSES THE FUEL AFTER IRRADIATION. THE WORKERS WHO OPERATE THE PLUTONIUM PRODUCTION REACTORS ARE NOT ALLOWED TO KNOW THE EXACT COMPOSITION OF THE FUEL ELEMENTS IN THE REACTORS THEY OPERATE. SIMILARLY, THE WORKERS WHO PROCESS THE SPENT FUEL TO SEPARATE THE PLUTONIUM FROM OTHER ELEMENTS DO NOT KNOW EITHER THE EXACT

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 COMPOSITION OF THE ORIGINAL FUEL OR THE EXACT
 CONDITIONS UNDER WHICH IT WAS PROCESSED IN THE
 REACTOR. DUE TO THESE GAPS IN INFORMATION, NO WORKER
 OR SINGLE GROUP OF WORKERS KNOWS EXACTLY HOW MUCH
 PLUTONIUM, URANIUM, ETC., SHOULD BE AVAILABLE FOR
 EXTRACTION FROM THE SPENT FUEL. WHAT EACH GROUP DOES
 KNOW, HOWEVER, IS THAT THE FSK-RUN SECURITY FORCE HAS
 ALL THE INFORMATION NEEDED TO CALCULATE THE ACTUAL
 QUANTITY OF MATERIALS FINALLY EXTRACTED FROM PROCESSED
 FUEL. SUCH CALCULATIONS CAN BE COMPARED TO THE ACTUAL
 QUANTITIES RECOVERED DURING THE PROCESSING OF THE
 IRRADIATED FUEL. THIS SYSTEM PROVIDES FOR THE CONTROL
 OF MORE THAN JUST NUCLEAR MATERIALS; EACH GROUP
 INVOLVED IN THE CREATION OF PLUTONIUM STOCKPILES KNOWS
 IT MUST FOLLOW DIRECTIONS EXACTLY OR RISK BEING
 CAUGHT.

 THE HISTORY

41. THE HISTORICAL BASIS FOR THE MIS-MATCH BETWEEN

RUSSIAN MPC&A SYSTEMS AND THE CURRENT THREAT CLIMATE IS OF MORE THAN ACADEMIC INTEREST. ANYONE HOPING TO ENGAGE RUSSIAN AUTHORITIES IN COOPERATIVE EFFORTS TO IMPROVE THE SECURITY OF NUCLEAR MATERIALS IN RUSSIA SHOULD REMEMBER THAT RUSSIAN MPC&A SYSTEMS WERE, ON THE WHOLE, VERY CAREFULLY DESIGNED BY HIGHLY QUALIFIED EXPERTS TO RESPOND TO THE THREAT CLIMATE WHICH EXISTED AT THE TIME. RUSSIAN NUCLEAR SECURITY EXPERTS FEEL UNJUSTLY ATTACKED AND TEND TO REACT NEGATIVELY BY CUTTING OFF DISCUSSIONS WHEN OUTSIDE OBSERVERS MAKE

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STATEMENTS TO THE EFFECT THAT RUSSIAN SYSTEMS FOR MPC&A ARE POORLY DESIGNED. GIVEN THE HISTORICAL CONTEXT, A MORE CORRECT (AND LESS CONTROVERSIAL) STATEMENT IS THAT RUSSIAN MPC&A SYSTEMS NEED TO BE UPDATED TO MORE EFFECTIVELY PROTECT AGAINST NEW THREATS WHICH HAVE DEVELOPED ONLY RECENTLY.

42. AT THE TIME RUSSIAN EXPERTS FROM THE FORMER SOVIET UNION DEVELOPED THE SYSTEMS FOR PROTECTING NUCLEAR MATERIALS THAT ARE STILL IN USE TODAY, THEY PROCEEDED BASED UPON SEVERAL ASSUMPTIONS CONCERNING THE THREAT ENVIRONMENT WHICH ARE NO LONGER VALID. KNOWLEDGE OF THESE ASSUMPTIONS CAN HELP UNDERSTAND WHY RUSSIA'S SYSTEMS OPERATE THE WAY THEY DO. KEY ASSUMPTIONS WERE:

-- THE UNITED STATES AND ITS ALLIES REPRESENTED THE SOURCE OF THE PRIMARY THREAT TO WEAPONS NUCLEAR MATERIALS. THIS "AMERICAN THREAT" INCLUDED BOTH AN INTELLIGENCE ASPECT -- ATTEMPTS TO STEAL SOVIET NUCLEAR SECRETS -- AND A PHYSICAL ASPECT -- POSSIBLE ATTEMPTS TO STEAL OR SABOTAGE SOVIET NUCLEAR STOCKPILES/FACILITIES.

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STATE FOR ACDA (GOODBY), PM/NE, EUR/RPM AND
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 NRC FOR OIP;
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-- DUE TO THE NATURE OF SOVIET SOCIETY, THERE WAS NO
DOMESTIC "BLACK MARKET" FOR STOLEN NUCLEAR MATERIALS.
IN ADDITION, THE BORDERS OF THE SOVIET UNION WERE
TIGHTLY CLOSED, GREATLY REDUCING THE CHANCE THAT A
THIRD COUNTRY OR A TERRORIST GROUP WOULD ATTEMPT TO
TARGET SOVIET NUCLEAR MATERIALS.

-- PERSONNEL WITH ACCESS TO SPECIAL NUCLEAR MATERIALS
(NUCLEAR MATERIALS NEEDED FOR THE CREATION OF A
NUCLEAR WARHEAD) WERE TIGHTLY CONTROLLED AND
MONITORED. THEY COULD NOT GENERALLY TRAVEL OUTSIDE
THE CLOSED, SECRET CITIES WHERE THEY WORKED. EVEN
THOSE FEW WHO COULD TRAVEL EITHER WITHIN RUSSIA OR, IN
RARE INSTANCES, ABROAD, KNEW THAT SOVIET SECURITY
SERVICES WORKED ALONG SIDE THEM AT ALL TIMES AND
TRACKED BOTH THEM AND THEIR FAMILIES. THE THREAT OF
CERTAIN AND SEVERE RETRIBUTION VIRTUALLY ELIMINATED
THE POSSIBILITY THAT NUCLEAR WORKERS WOULD BECOME
INVOLVED IN UNAUTHORIZED DIVERSIONS OF NUCLEAR
MATERIALS.

-- PERSONS WITH ACCESS TO THE MOST SENSITIVE MATERIALS
(WEAPONS-GRADE PLUTONIUM, FOR EXAMPLE) WERE KEPT
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RELATIVELY ISOLATED FROM ONE ANOTHER. INFORMATION FLOWS CONCERNING THE PROCESSING AND USE OF THESE MOST SENSITIVE MATERIALS WERE TIGHTLY CONTROLLED IN ORDER TO GUARD AGAINST ANY (PRESUMABLY U.S.-INSPIRED) CONSPIRACY TO DIVERT, STEAL OR DAMAGE NUCLEAR MATERIALS OR THE SECRETS ASSOCIATED WITH THEM.

43. THE FACT THAT THE FSK IS STILL IN CHARGE OF SECURITY AT THE CLOSED CITIES IS AN INDICATION OF THE EXTENT TO WHICH "OLD" THINKING STILL PERMEATES MODERN RUSSIA: THE "COUNTERINTELLIGENCE" SERVICE CONTROLS SECURITY BECAUSE THE THREAT IS PRESUMED TO FROM FOREIGN INTELLIGENCE SERVICES. WHILE FSK OFFICIALS APPEAR QUITE GENUINELY INTERESTED IN IMPROVING SECURITY AT RUSSIAN FACILITIES AGAINST DOMESTIC CRIMINALS, THEIR FUNDAMENTAL FOCUS IS STILL ON FOREIGN GOVERNMENTS, INCLUDING THE USG.

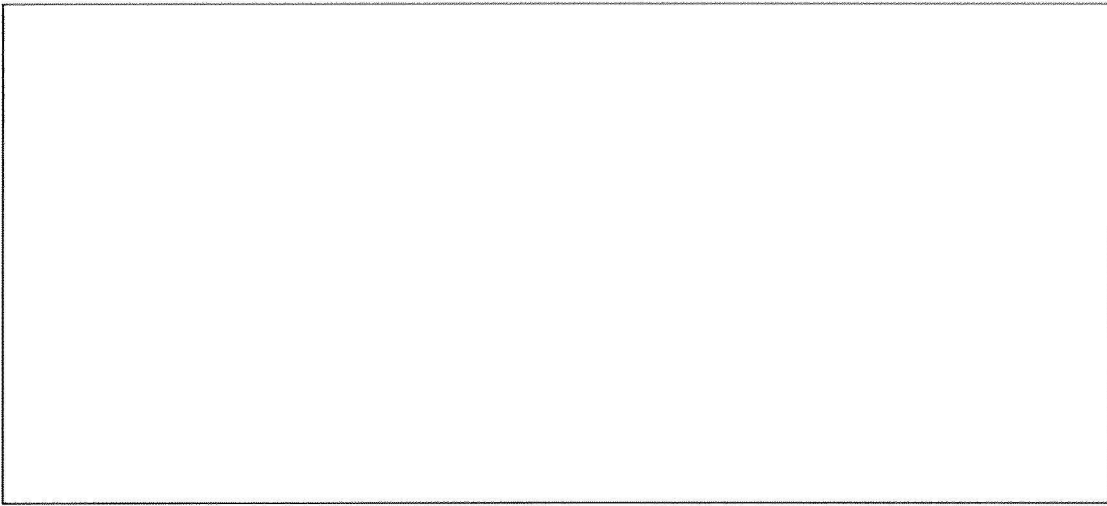
44. THE LEVEL OF CONTROL -- AND THE USE OF STATE TERROR TO EXERT CONTROL -- IN THE FORMER SOVIET UNION CANNOT BE OVER STATED. THIS USE OF TERROR SHAPED THE SECURITY AND THREAT ENVIRONMENT IN WHICH OFFICIALS OF THE FORMER SOVIET UNION DESIGNED SYSTEMS FOR NUCLEAR SECURITY. FROM THE VERY BEGINNING OF THE SOVIET NUCLEAR WEAPONS PROGRAM, SOVIET SECURITY SERVICES REPEATEDLY DEMONSTRATED THAT THEY WERE WILLING TO USE ANY LEVEL OF TERROR TO MAINTAIN CONTROL OVER PEOPLE INVOLVED IN THE NUCLEAR PROGRAM. INSIDE RUSSIA'S CLOSED CITIES, MANY SCIENTISTS ARE ONLY JUST NOW BEGINNING TO MENTION THE NAMES OF COLLEAGUES WHO DISAPPEARED, SOMETIMES TOGETHER WITH THEIR ENTIRE

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FAMILY. THE PRESUMPTION WAS ALWAYS THAT THE PERSON HAD BEEN SOMEHOW INVOLVED IN PROHIBITED ACTIVITIES. MANY STORIES AND EVEN BITS OF BLACK HUMOR DEAL WITH THE HEAVY HAND OF THE KGB AND WITH SECURITY IN THE SYSTEM OF CLOSED NUCLEAR CITIES.

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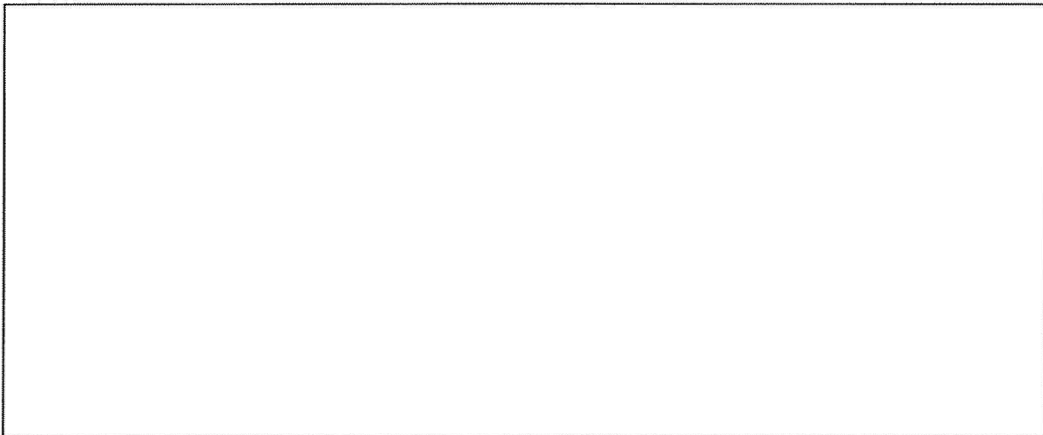
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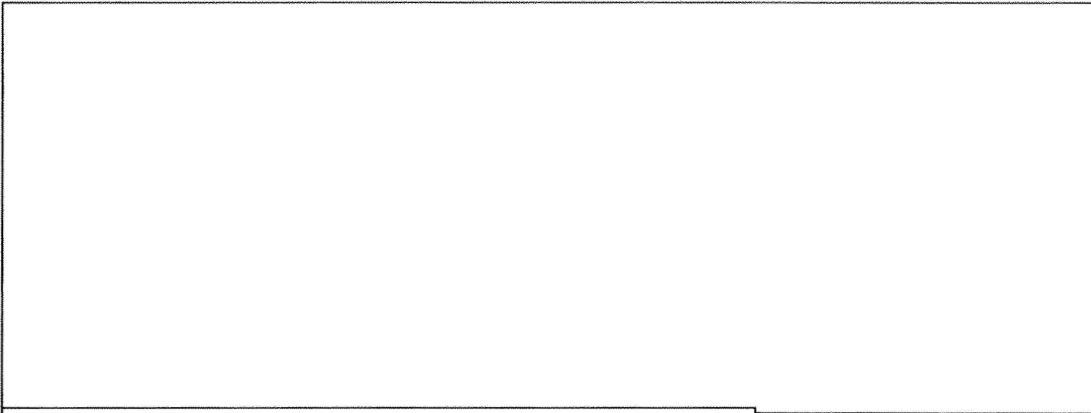
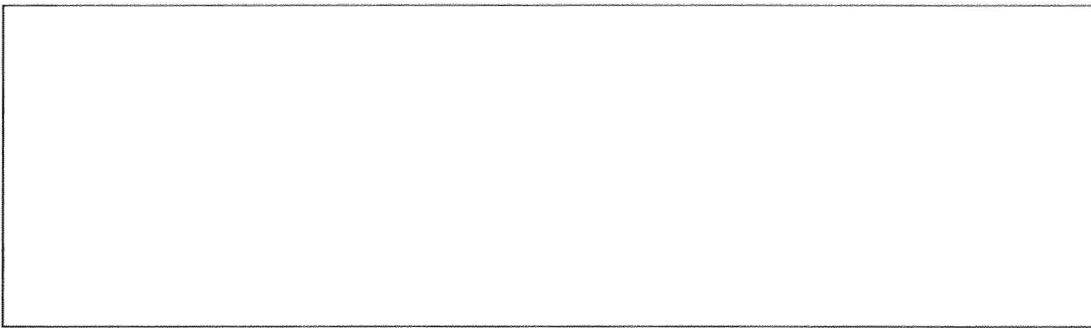
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_____ TERROR WAS A
TOOL THAT WAS USED NOT ONLY TO PROTECT SECRETS AND
MATERIALS, IT WAS EVEN USED AS A MOTIVATION TECHNIQUE.
WITH THE THREAT OF TERROR SO CONSTANT, IT IS
UNDERSTANDABLE WHY SECURITY FORCES DID NOT FEEL THAT
SPECIFIC TECHNICAL MEASURES TO GUARD AGAINST
INDIVIDUAL MALFEASANCE BY NUCLEAR WORKERS WAS NEEDED.

THE FUTURE

48. THE ACTIONS OF THE GOR OVER THE PAST SEVERAL
MONTHS CLEARLY INDICATE THAT THE GOVERNMENT AS A WHOLE
RECOGNIZES THAT NUCLEAR SECURITY IS A PROBLEM AND IS
TAKING STEPS TO ADDRESS THE SITUATION. OFFICIALS FROM
THE NUCLEAR WATCHDOG GOSATOMNADZOR, THE FSK, THE MVD,
THE NATIONAL SECURITY COUNCIL, LOCAL POLICE, NUCLEAR
INSTITUTES AND EVEN INDIVIDUAL NUCLEAR WORKERS HAVE
ALL COMMENTED BOTH IN THE PRESS AND TO U.S. OFFICIALS
ON PRESIDENT YELTSIN'S COMMITMENT TO INSURING THAT
RUSSIA LIVES UP TO ITS RESPONSIBILITIES TO CONTROL
NUCLEAR MATERIALS. WHILE MANY INCREMENTAL
IMPROVEMENTS IN SECURITY CAN BE IMPLEMENTED, A LACK OF
FUNDING WILL IMPEDE PROGRESS FOR THE FORESEEABLE
FUTURE. COMMENTING ON THE DIFFICULT PROCESS OF
CONVINCING A RANGE OF POWERFUL MINISTRIES AND
GOVERNMENT BODIES TO AGREE ON A UNIFIED PLAN FOR
IMPROVING THE SECURITY OF NUCLEAR MATERIALS IN RUSSIA,

THE GOSATOMNADZOR OFFICIAL WHO LED A INTERMINISTERIAL
COMMITTEE FORMED BY PRESIDENT YELTSIN TO EXAMINE THE
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MATTER TOLD ESTOFF THAT, IN THE END, THE ONLY PROBLEM
WHICH COULD NOT BE RESOLVED WAS FUNDING.

49. U.S. EXPERTS ON VARIOUS ASPECTS OF NUCLEAR
SECURITY HAVE VISITED A VARIETY OF RUSSIAN NUCLEAR
FACILITIES OVER THE PAST YEAR. BASED ON ROUGH
"GUESTIMATES" FROM THESE EXPERTS, THE TOTAL AMOUNT OF
FUNDING NEEDED IS HUGE, PROBABLY IN THE BILLIONS OF
DOLLARS. IN COMPARING SYSTEMS OBSERVED IN RUSSIA TO
THOSE IN PLACE IN THE U.S., MORE THAN ONE EXPERT HAS
COMMENTED THAT THE ANNUAL BUDGET FOR OPERATING SYSTEMS
EVER AFTER THEY ARE INSTALLED COULD EXCEED ONE BILLION
DOLLARS.

50. THE INDIVIDUAL PRIORITIES OF ORGANIZATIONS
INVOLVED IN THE PROTECTION OF NUCLEAR MATERIALS
COMPOUNDS THE PROBLEMS CAUSED BY A LACK OF FUNDING.
WITH BUDGETS TIGHT ALL AROUND, DEVOTING SCARCE
RESOURCES TO FIXING OLD PROBLEMS IS NOT ALWAYS THE
HIGHEST PRIORITY. AT MINATOM, IN PARTICULAR, THERE IS
A STRONG TENDENCY TO DEVOTE ALL AVAILABLE RESOURCES TO
KEEPING EXISTING PROGRAMS -- CIVILIAN/COMMERICAL AS
WELL AS WEAPONS -- FUNCTIONING IN THE HOPE (HOWEVER
UNREALISTIC) THAT FUNDING LEVELS WILL SOMEDAY RETURN

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ACTION OES-09

INFO	LOG-00	ACDA-17	ACDE-00	AID-01	AMAD-01	CEQ-00	CIAE-00
	CFE-00	OASY-00	DODE-00	DS-00	EB-01	EUR-01	OIGO-01
	HHS-01	H-01	TEDE-00	INR-00	IO-16	L-01	MCO-01
	ADS-00	NRRC-00	NSAE-00	OIC-02	PA-01	PM-00	PRS-01
	P-01	SNP-00	SP-00	SS-00	T-00	USIE-00	ASDS-01
	EPAE-00	SNIS-00	NISC-01	SSD-01	PMB-00	DSCC-00	G-00
	/059W						

-----88E017 161423Z /38

R 161353Z NOV 94
 FM AMEMBASSY MOSCOW
 TO SECSTATE WASHDC 5568
 INFO USEU BRUSSELS
 USMISSION USVIENNA
 AMEMBASSY BONN
 DIRFBI WASHDC
 WHITEHOUSE WASHDC
 NRC WASHDC
 DOE WASHDC

S E C R E T SECTION 13 OF 13 MOSCOW 032874

STATE FOR ACDA (GOODBY), PM/NE, EUR/RPM AND
 EUR/ISCA/CAST;
 DOE FOR S-1 (BERLS), NN-1 (LUONGO), NN-42 (ROONEY)
 AND PO-70;
 NRC FOR OIP;
 WHITEHOUSE FOR NSC (STERN) AND OSTP (VON HIPPEL);
 SECRET

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DIR FBI FOR SSA PAUL DEMINIKI;
USVIENNA FOR USVIE

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E.O. 12356: DECL: OADR
TAGS: PARM, MNUC, TRGY, ASEC, RS
SUBJECT: OVERVIEW OF NUCLEAR MATERIAL PROTECTION,
CONTROL AND ACCOUNTING IN RUSSIA

TO PREVIOUS LEVELS. IN ORDER TO BUILD SUPPORT FOR ITS
GROWTH PLANS (PLANS WHICH INCLUDE MOVING TO A CLOSED
FUEL CYCLE FOR CIVILIAN NUCLEAR POWER PLANTS AND USING
PLUTONIUM DERIVED FROM WEAPONS AS A CIVIL REACTOR
FUEL), MINATOM'S LEADERSHIP APPEARS TO BELIEVE THAT IT
MUST DENY THAT SECURITY IS A PROBLEM. OTHERWISE, IT
MIGHT BE COMPELLED TO DIVERT SCARCE FUNDS FROM ITS
DEVELOPMENT BUDGETS TO SECURITY. PICKERING

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