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**ADHERENCE TO AND COMPLIANCE
WITH
ARMS CONTROL, NONPROLIFERATION,
AND
DISARMAMENT AGREEMENTS
AND COMMITMENTS**



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ADHERENCE TO AND COMPLIANCE WITH ARMS CONTROL, NONPROLIFERATION, AND DISARMAMENT AGREEMENTS AND COMMITMENTS

INTRODUCTION

PURPOSE

This Report is transmitted pursuant to Section 403 of the Arms Control and Disarmament Act, as amended (22 U.S.C. 2593a), which requires a report by the President on *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments*.

SCOPE OF THE REPORT

This Report assesses U.S. compliance with and adherence to arms control, nonproliferation, and disarmament agreements and related commitments in 2016, including Confidence- and Security-Building Measures (CSBMs), as well as the adherence in 2016 of other nations to arms control, nonproliferation, and disarmament agreements and related commitments, including CSBMs and the Missile Technology Control Regime, to which the United States is a participating State. The issues addressed in this Report primarily reflect activities from January 1, 2016, through December 31, 2016, unless otherwise noted.^a

The Compliance Report includes reporting and analysis at the levels of classification for which reliable supporting information is available. The unclassified version of this report recounts as much information as possible, but certain issues can be discussed only at higher levels of classification. Some compliance concerns are raised and some findings of violations are made, for instance, only in the SECRET- or TOP SECRET/SCI-level versions of this Report.

^a In this Report, previous editions of the Report are cited by their year of release unless otherwise noted. In general, each edition of the Report focuses on activities that took place during the preceding calendar year. For example, the previous edition of the Report was released in 2016 and primarily reflected activities from January 1, 2015 through December 31, 2015. However, there have been some exceptions to that general practice. For example, the edition released in 2011 primarily reflected activities from January 1, 2009 through December 31, 2010, and the edition released in 2010 primarily reflected activities from January 2004 through December 2008.

ADHERENCE AND COMPLIANCE

Arms control, nonproliferation, and disarmament agreements and related commitments continue to be important tools that can protect and advance U.S. interests. Their provisions can limit or reduce threats to U.S. and allies' security, including by limiting participating States' access to or engagement in dangerous or destabilizing capabilities or activities, providing insight and transparency into the actions of participating States, and encouraging stabilizing patterns of behavior and interaction. In such ways, such agreements and commitments can contribute broadly to transparency and stability on a global and regional scale.

The utility of arms control, nonproliferation, and disarmament agreements and commitments as tools of statecraft and for the protection and advancement of security interests diminishes significantly, however, if participating States do not fully implement the obligations and commitments they have undertaken. In fact, failures to comply can present serious national security challenges. A party that complies with a treaty only to have one or more of its counterparties violate the agreement, for instance, can find itself at a potentially grave and destabilizing disadvantage – a danger that would be all the more acute to the degree that such cheating is successfully concealed. Violations that are not appropriately and effectively addressed can perpetuate and compound these dangers. Therefore, within the framework of any given set of agreements and commitments, vigorous verification, scrupulous compliance analysis, and robust compliance enforcement are critical aspects of U.S. national security planning.

In evaluating any country's compliance with its arms control, disarmament, and nonproliferation obligations, the United States considers a variety of factors. These include the nature and precise language of the obligations undertaken in the context of international law, information regarding the country's activities - including that acquired by so-called National Technical Means of verification (i.e., intelligence collection), cooperative verification measures, open source information, and diplomatic means - and any information provided by the country in question. A similar process is used to evaluate a country's adherence to politically binding commitments.

Many concerns relating to compliance involve matters of interpretation; many involve highly classified information derived from sensitive sources and methods. Furthermore, some states often attempt to conceal activity that is inconsistent with their obligations or commitments, and some are able to do so with a thoroughness and sophistication that can make it difficult to "pierce the

veil” of denial and deception and establish the requisite factual basis for a compliance assessment. For these reasons, it may take significant time to assess whether the actions or activities that gave rise to concerns constitute violations or simply represent differences in implementation approaches or some other permissible activity.

In this Report, the term “violation” refers to any action or omission by a State Party to an international agreement that is determined by the United States to be inconsistent with obligations owed by that State Party to the United States under the agreement in question and that may give rise to international legal remedies.

As noted above, there can sometimes be legal or factual uncertainty as to whether a violation has occurred. Accordingly, this Report distinguishes between “violations” and instances in which the U.S. Government is considering but has not yet determined whether a violation has occurred, for example because there are unresolved factual or legal questions about compliance. The Report refers to the latter category as “compliance concerns” or “compliance questions.”

In general, this Report uses the terms “violation” and “compliance” only in reference to legal obligations undertaken in international agreements. When discussing politically binding commitments, the Report generally uses the term “adherence” instead of “compliance.” Thus, a State engaged in conduct that is determined to be inconsistent with a politically binding commitment is said to be “not adhering” to that commitment, rather than “violating” the commitment.

When concerns arise regarding the actions of our treaty partners, we seek, whenever possible, to address our concerns through diplomatic engagement. However, in the event that we determine violations to have occurred, we also have a range of options and means to try to convince violators it is in their interest to return to compliance and to prevent violators from benefitting from their violations.

This Report evaluates adherence to and compliance with arms control, nonproliferation, and disarmament agreements and commitments to which the United States is a participating State. The United States and the majority of the other participating States involved in these agreements and commitments are implementing these obligations and commitments and have indicated their intention to continue doing so. As the Report makes clear, however, compliance concerns – and in some instances treaty violations and actions determined to be inconsistent with political commitments – exist involving a relatively small

number of States. Where possible, the United States continues to pursue resolution of those issues with the States in question, as well as to assess the implications of these States' actions and how best the United States should respond to them.

U.S. Organizations and Programs to Evaluate and Ensure Treaty Compliance

Because of our deep-seated legal traditions, our commitment to the rule of law, and our belief in the importance of such agreements to enhance our security and that of our allies and friends, the United States complies with its obligations under all applicable arms control, nonproliferation, and disarmament agreements and commitments. It is longstanding U.S. policy to comply with international legal obligations. To the extent the United States has determined that compliance with an obligation is no longer in the U.S. national security interest, the United States has sought to negotiate modification of the agreement in question or withdraw from the agreement altogether – as indeed occurred with the Anti-Ballistic Missile (ABM) Treaty.

As a reflection of the seriousness with which we view these obligations, the United States has established legal and institutional procedures to ensure U.S. compliance. Individual departments and agencies within the Executive Branch have established policies and procedures to ensure that plans and programs under those departments and agencies' purview remain consistent with U.S. international obligations. For example, U.S. Department of Defense (DoD) compliance review groups oversee and manage DoD compliance with arms control, nonproliferation, and disarmament agreements and related commitments, including CSBMs. Additionally, the U.S. Department of State, in its role as the lead U.S. agency on arms control matters, is responsible for providing policy advice and expertise related to compliance to individual departments and agencies and the interagency community. Further, an interagency review is conducted in appropriate cases, including when other treaty parties formally raise concerns regarding U.S. implementation of its obligations. Finally, Congress performs oversight functions through committee hearings and budget allocations.

OVERVIEW

This Report addresses U.S. compliance with and adherence to arms control, nonproliferation, and disarmament agreements and commitments (Part I), compliance by the Russian Federation (Russia) and other successor States of the Soviet Union with treaties and agreements that the United States bilaterally

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concluded with the Soviet Union or one of its successor States (Part II), compliance by States Party (including successor States Party) with legally binding multilateral treaties and agreements concluded with the United States (Part III), adherence by participating States (including successor States) to politically binding bilateral and multilateral commitments in which the United States participates (Part IV), and States' adherence to certain unilateral commitments (Part V).

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**PART I: U.S. COMPLIANCE WITH ARMS CONTROL,
NONPROLIFERATION, AND DISARMAMENT AGREEMENTS AND
COMMITMENTS**

**U.S. INSTITUTIONAL AND PROCEDURAL ORGANIZATION FOR
ENSURING COMPLIANCE**

There are processes and controls within the U.S. executive branch, including at the DoD, the Department of Energy (DOE), the Department of Homeland Security (DHS), the Department of Commerce, and the Nuclear Regulatory Commission, that operate to ensure that plans and programs under those departments' and agencies' purview remain consistent with U.S. international obligations. Additionally, the Department of State, in its role as the lead U.S. agency on arms control matters, is responsible for providing policy advice and expertise related to compliance to individual departments and agencies and the interagency community. These processes and controls operate in parallel, and in addition to the congressional oversight process.

In 1972, the DoD established the first such department-level process. Under this compliance process, established at the conclusion of the Strategic Arms Limitation Talks (SALT) that led to arms control-related agreements on strategic offensive arms, key offices in DoD are responsible for overseeing DoD compliance with all U.S. arms control, nonproliferation, and disarmament agreements and commitments, including CSBMs. DoD components ensure their implementing program offices adhere to DoD compliance directives and seek guidance from the offices charged with oversight responsibility. Similar processes have been established by other departments and agencies to ensure that their programs and activities comply with U.S. international obligations and commitments. For example, DHS similarly established a compliance review process, which assesses DHS-sponsored research for compliance with all relevant arms controls agreements. Interagency reviews also are conducted in appropriate cases, such as when other States formally raise concerns regarding U.S. implementation of its arms control, nonproliferation, and disarmament obligations and commitments.

U.S. COMPLIANCE

In 2016, the United States continued to be in compliance with all of its obligations under arms control, nonproliferation, and disarmament agreements and continues to make every effort to comply scrupulously with them. When

other countries have formally raised a compliance concern regarding U.S. implementation activities, the United States has carefully reviewed the matter to confirm its actions were in compliance with its obligations.

Biological and Toxin Weapons Convention (BWC)

The BWC entered into force on March 26, 1975. All U.S. activities during the reporting period were consistent with the obligations set forth in the BWC. The United States continues to work toward enhancing transparency of biological defense work and effective national implementation of BWC obligations using the BWC confidence-building measures and a range of voluntary measures and initiatives. Since the U.S. disclosed it had inadvertently shipped samples of incompletely inactivated *Bacillus anthracis*, the Department of Defense has revised its biological security policies and harmonized such policies with Select Agent Regulations. New policy is being developed that requires a standing panel of experts to review all biosafety procedures and protocols governing the removal of Biological Select Agents and Toxins (BSAT) from a containment laboratory. The newly established BSAT Biosafety Program Office ensures the safety and standardization of procedures used in DoD BSAT laboratories and identifies industry-wide best practices to enhance biosafety across the full spectrum of DoD BSAT operations. The samples' incomplete inactivation (thoroughly disclosed by the U.S. Government and extensively documented in the press) was an unintentional biosafety lapse, but not a violation of U.S. treaty obligations. In 2016, the United States engaged Russia bilaterally through an exchange of questions and responses relevant to each other's obligations under the BWC.

Chemical Weapons Convention (CWC)

The CWC entered into force on April 29, 1997. The United States continues to work toward meeting its CWC obligations with respect to the destruction of chemical weapons (CW) and associated CW facilities. The CWC Conference of the States Parties (CSP) decision regarding the "Final Extended Deadlines of 29 April, 2012" requires the United States to report at each regular session of the Organization for the Prohibition of Chemical Weapons (OPCW) Executive Council (EC) on the progress achieved towards complete destruction of remaining stockpiles. The United States provides a report and briefing to the EC quarterly and to the CSP annually on U.S. progress achieved towards complete destruction.

The original deadline of 2012 could not be met when changes in U.S. law required research and development into alternate feasible destruction methods other than transport and incineration.

The United States has completed destruction of its Category 2 and 3 chemical weapons and has completed destruction of nearly 90 percent of its Category 1 chemical weapons stockpile. There are two CW destruction facilities, located in Pueblo, Colorado and Blue Grass, Kentucky, that are scheduled to complete destruction of the remaining stockpile not later than December 31, 2023. Neutralization will be used as the primary destruction technology at both sites. Additionally, explosive destruction technologies will be used to enhance safety, while accelerating destruction schedules at both sites.

The United States remains fully committed to complete destruction of its entire stockpile as soon as practicable, consistent with the Convention's imperatives of public safety, environmental protection, and international transparency and oversight.

The United States continues to update the OPCW on U.S. destruction efforts, consistent with the November 2011 adoption by the OPCW Conference of States Party of transparency measures to provide States Party and the OPCW with additional confidence in the continued commitment of States Party - and their progress toward - complete, verified destruction of their chemical weapons under the CWC. The United States has provided a full and complete declaration of its CW and associated CW facilities. The United States also is compliant with its CWC obligations related to commercial activities. U.S. CWC Regulations (15 CFR 710 et seq.) require commercial facilities exceeding CWC-specified activity thresholds to submit annual declarations, notifications, and other reports, including on past and anticipated activities, and to permit systematic and routine verification through on-site inspections of declared commercial facilities.

Treaty on the Elimination of Intermediate-Range and Shorter-Range Missiles, also known as the Intermediate-Range Nuclear Forces (INF) Treaty

All U.S. activities during the reporting period were consistent with the obligations set forth in the INF Treaty.

Threshold Test Ban Treaty (TTBT), Underground Nuclear Explosions for Peaceful Purposes Treaty (PNET), and Limited Test Ban Treaty (LTBT)

The Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Underground Nuclear Weapon Tests, also known as the Threshold Test Ban Treaty (TTBT), was signed in 1974. It establishes a nuclear “threshold” by prohibiting each Party from undertaking underground nuclear weapon tests having a yield exceeding 150 kilotons at any place under its jurisdiction or control. The Peaceful Nuclear Explosions Treaty governs underground nuclear explosions for peaceful purposes at any place under the jurisdiction or control of the Parties other than the test sites specified under the TTBT.

Under Section IV, paragraph 2 of the June 1990 Protocol to the TTBT, each party is required, by not later than June 1 of each year, to inform the other of the number of underground nuclear weapons tests by specified category that it intends to conduct in the following calendar year. For purposes of the TTBT, an “underground nuclear weapon test” means either a single underground nuclear explosion conducted at a test site, or two or more underground nuclear explosions conducted at a test site within an area delineated by a circle having a diameter of two kilometers, conducted within a total period of time of 0.1 second, and whose combined yield is less than 150 kilotons. The TTBT Protocol defines the term “explosion” as “the release of nuclear energy from an explosive canister.”

The United States has not conducted any nuclear weapon explosive tests or any nuclear explosions for peaceful purposes since 1992. All U.S. activities during the reporting period were consistent with the obligations set forth in the TTBT, PNET, and LTBT.

1925 Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare

All U.S. activities during the reporting period were consistent with the obligations set forth in the 1925 Geneva Protocol.

Treaty on Conventional Armed Forces in Europe (CFE) and the Vienna Document 2011

All U.S. activities during the reporting period were consistent with the obligations set forth in the CFE Treaty and the political commitments set forth in the Vienna Document 2011.

The United States continues to maintain cessation of implementation of certain CFE Treaty obligations (notifications, data exchanges, and inspections) vis-à-vis Russia as a countermeasure in response to Russia's continued violation of its obligations to the United States under the CFE Treaty. This measure was closely coordinated with NATO Allies, who implemented similar steps in their respective national capacities. Russia has not challenged this action. The United States continues to perform its obligations under the CFE Treaty vis-à-vis all other States Party.

Treaty on Open Skies (OST)

All U.S. activities during the reporting period were consistent with the obligations set forth in the OST.

Nuclear Non-Proliferation Treaty (NPT)

All U.S. activities during the reporting period were consistent with the obligations set forth in the NPT.

Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START Treaty)

All U.S. activities during the reporting period were consistent with the obligations set forth in the New START Treaty.

Agreement between the Government of the United States of America and the Government of the Russian Federation Concerning the Management and Disposition of Plutonium Designated as No Longer Required For Defense Purposes and Related Cooperation ("Plutonium Management Disposition Agreement," or PMDA)

All U.S. activities during the reporting period were consistent with the obligations set forth in the PMDA. The President's FY 2017 budget request to Congress proposed that the mixed oxide facility in which plutonium designated under the PMDA was intended to be disposed be terminated and that the United States proceed with necessary design work to support a method of diluting and disposing of the material. Congress, in the National Defense Authorization Act for 2017, approved continued funding for the mixed oxide facility.

**PART II: COMPLIANCE BY THE RUSSIAN FEDERATION (RUSSIA) OR
OTHER SUCCESSOR STATES OF THE SOVIET UNION WITH
TREATIES AND AGREEMENTS THE UNITED STATES CONCLUDED
BILATERALLY WITH THE SOVIET UNION OR ITS SUCCESSOR
STATES**

INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY

The Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Elimination of Their Intermediate-Range and Shorter-Range Missiles (INF Treaty) was signed by President Reagan and Soviet General Secretary Gorbachev on December 8, 1987, and entered into force on June 1, 1988. Additional information is provided in the higher classification versions of this Report.

FINDING

The United States has determined that in 2016, the Russian Federation (Russia) continued to be in violation of its obligations under the INF Treaty not to possess, produce, or flight-test a ground-launched cruise missile (GLCM) with a range capability of 500 kilometers to 5,500 kilometers, or to possess or produce launchers of such missiles.

CONDUCT GIVING RISE TO COMPLIANCE CONCERNS

The INF Treaty is of unlimited duration and bans the possession, production, and flight-testing of intermediate- and shorter-range missile systems. The Treaty required the complete elimination of all the approximately 800 U.S. and approximately 1,800 former Soviet ground-launched missiles with maximum ranges between 500 and 5,500 kilometers, their launchers, and their associated support equipment and structures. All such items were eliminated by May 28, 1991.

The INF Treaty established a verification regime using national technical means of verification (NTM), notifications, and an on-site inspection regime to detect and deter violations of Treaty obligations. The inspection regime concluded on May 31, 2001 - that is, 13 years after the Treaty's entry into force, in accordance with Article XI of the Treaty. The remainder of the verification regime continues for the duration of the Treaty.

In previous editions of the Compliance Report published in 2014, 2015, and 2016, the United States determined that Russia was in violation of its obligations under the INF Treaty not to possess, produce, or flight-test a GLCM with a range capability of 500 kilometers to 5,500 kilometers, or to possess or produce launchers of such missiles.

ANALYSIS OF COMPLIANCE CONCERNS

The INF Treaty defines an intermediate-range missile as a ground-launched ballistic missile (GLBM) or GLCM having a range capability in excess of 1,000 kilometers but not in excess of 5,500 kilometers. The Treaty defines a shorter-range missile as a GLBM or GLCM having a range capability equal to or in excess of 500 kilometers but not in excess of 1,000 kilometers. A GLCM is defined as a ground-launched cruise missile that is a weapon delivery-vehicle.

Article I provides that the Parties shall not have intermediate-range and shorter-range missiles as defined by the Treaty.

Paragraph 1 of Article IV provides that the Parties shall not possess intermediate-range missiles or launchers of such missiles, or support structures or equipment of the categories listed in the Memorandum of Understanding associated with such missiles and launchers.

Paragraph 1 of Article VI provides that no Party shall produce or flight-test any intermediate-range missiles or produce any stages or launchers of such missiles.

Paragraph 1 of Article VII provides that if a cruise missile has been flight-tested or deployed for weapon delivery, all missiles of that type shall be considered to be weapon-delivery vehicles.

Paragraph 2 of Article VII provides that if a GLCM is an intermediate-range missile, all GLCMs of that type shall be considered to be intermediate-range missiles.

Paragraph 4 of Article VII provides that the range capability of a GLCM not listed in Article III of the Treaty shall be considered to be the maximum distance that can be covered by the missile in its standard design mode flying until fuel

exhaustion, determined by projecting its flight path onto the earth's sphere from the point of launch to the point of impact.

Paragraph 7 of Article VII provides that if a launcher has been tested for launching a GLCM, all launchers of that type shall be considered to have been tested for launching GLCMs.

Paragraph 8 of Article VII provides that if a launcher has contained or launched a particular type of GLCM, all launchers of that type shall be considered to be launchers of that type of GLCM.

Paragraph 11 of Article VII provides that a cruise missile that is not a missile to be used in a ground-based mode shall not be considered to be a GLCM if it is test-launched at a test site from a fixed land-based launcher that is used solely for test purposes and that is distinguishable from GLCM launchers.

EFFORTS TO RESOLVE COMPLIANCE CONCERNS

Since 2013, the United States has raised its concerns regarding Russian development of a GLCM with a range capability between 500 and 5,500 kilometers with Russia on repeated occasions and at various levels and departments within the Russian Government in an effort to resolve U.S. concerns. The priority of the United States is for Russia to return to compliance to ensure the continued viability of the INF Treaty, and we continue to engage the Russian Government to resolve our concerns.

In an effort to resolve U.S. concerns, the United States requested to convene a session of the INF Treaty's implementation body, the Special Verification Commission (SVC). Prior to 2016, the SVC had last met in October 2003 following the conclusion of the INF Treaty's inspection regime in 2001. The most recent SVC session, which took place November 15-16, 2016, was attended by Russia, Belarus, Kazakhstan, and Ukraine, and provided the first multilateral technical venue for the United States to raise the issue of Russia's violation of its obligations under the INF Treaty not to possess, produce, or flight-test a GLCM with a range capability of 500 kilometers to 5,500 kilometers, or to possess or produce launchers of such missiles.

The United States has provided detailed information to the Russian Federation over the course of these bilateral and multilateral engagements, more than enough information for the Russian side to identify the missile in question and

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engage substantively on the issue of its obligations under the INF Treaty. This includes the following:

- Information pertaining to the missile and the launcher, including Russia's internal designator for the mobile launcher chassis and the names of the companies involved in developing and producing the missile and launcher;
- Information on the violating GLCM's test history, including coordinates of the tests and Russia's attempts to obfuscate the nature of the program;
- The violating GLCM has a range capability between 500 and 5,500 kilometers;
- The violating GLCM is distinct from the R-500/SSC-7 GLCM or the RS-26 ICBM.

The United States will continue to pursue resolution of U.S. concerns with Russia, and the United States is consulting with allies to review a range of appropriate options should Russia persist in its violation. The United States has made clear to Russia that the United States will protect U.S. security and the security of U.S. allies, and that Russian security will not be enhanced by continuing its violation. Additional information is provided in the higher classification versions of this Report.

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**TREATY ON MEASURES FOR THE FURTHER REDUCTION AND
LIMITATION OF STRATEGIC OFFENSIVE ARMS
(THE NEW START TREATY)**

For a discussion of Russia's implementation of its obligations under the New START Treaty, see the Report on Implementation of the New START Treaty, dated January 2017, submitted pursuant to Section (a)(10) of the Senate Resolution of Advice and Consent to Ratification of the Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (also known as the "Condition (10) Report"), and appended to this Report.

PLUTONIUM MANAGEMENT AND DISPOSITION AGREEMENT

Under the Plutonium Management and Disposition Agreement (PMDA), the United States and Russia each committed to dispose of no less than 34 metric tons of weapon-grade plutonium removed from their respective defense programs. There is no binding timetable for such disposition, but the agreement contains a non-binding target date to begin disposition in 2018.

FINDING

Although there is no indication the Russian Federation (Russia) violated its obligations under the PMDA, Russia's October 2016 announcement of a decision to "suspend" the PMDA raises concerns regarding its future adherence to obligations under this Agreement.

CONDUCT GIVING RISE TO COMPLIANCE CONCERN

The PMDA along with two protocols entered into force on July 13, 2011, although it had been provisionally applied since its signature in 2000. This is the first year the PMDA has been addressed in the Compliance Report.

The President of the Russian Federation announced a decision in October 2016 to "suspend" implementation of the PMDA and to notify the United States of this "suspension." The decree also stated that Russia would not return any of its PMDA plutonium to military programs. The decree did not articulate a valid basis under the PMDA or international law for such a "suspension."

ANALYSIS OF COMPLIANCE CONCERN

Russia's "suspension" of implementation of the PMDA could preclude achievement of this Agreement's important nonproliferation objectives. Additional information is provided in higher classification versions of this report.

EFFORTS TO RESOLVE COMPLIANCE CONCERN

The United States has raised our concerns about Russia's purported suspension with the Russian government. Additional information is provided in higher classification versions of this Report. The United States remains committed to fulfilling its obligations under the PMDA.

**PART III: COMPLIANCE BY STATES PARTY
(INCLUDING SUCCESSOR STATES PARTY) WITH
MULTILATERAL TREATIES AND AGREEMENTS CONCLUDED WITH
THE UNITED STATES**

**CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT,
PRODUCTION AND STOCKPILING OF BACTERIOLOGICAL
(BIOLOGICAL) AND TOXIN WEAPONS AND ON THEIR
DESTRUCTION**

The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction (BWC or Convention) opened for signature in 1972 and entered into force in 1975. As of the end of 2016, there were 178 States Party to the BWC and six Signatory States for which the Treaty is not yet in force. There are 12 States that have neither signed nor ratified the Convention. In 1987, BWC States Party established an annual data exchange, referred to as the Confidence-Building Measures (CBMs). The CBMs were modified and expanded in 1991 and streamlined in 2011. The arrangement establishing CBMs is not legally binding; CBMs are based on political commitments made by States Party. The CBMs are submitted in voluntary annual reports, and not all States Party provide a submission.

This chapter addresses BWC-related compliance concerns regarding Russia, which is a State Party to the BWC. There is insufficient information to support the inclusion of other countries in this year's unclassified Report.

COUNTRY ASSESSMENTS

THE RUSSIAN FEDERATION (RUSSIA)

FINDING

The Russian Federation (Russia) previously acknowledged both that it is the BWC successor State to the Soviet Union and that it inherited past Soviet offensive programs of biological research and development. Russia's annual BWC CBM submissions since 1992 have not satisfactorily documented whether these

programs were destroyed or diverted to peaceful purposes in accordance with Article II of the BWC. It remains unclear whether Russia has fulfilled its BWC Article II obligations in regard to the items specified in Article I of the Convention that it inherited.

CONDUCT GIVING RISE TO COMPLIANCE CONCERNS

The Soviet Union became a State Party to the BWC in 1975. Russia's BWC compliance was first addressed in the 1993 Report, though the Soviet Union's BWC noncompliance was first addressed in the January 1984 Report to Congress on Soviet Non-compliance with Arms Control Agreements.

In January 1992, then-Russian President Yeltsin announced that Russia would withdraw the former Soviet Union's reservation to the 1925 Geneva Protocol that retained for Russia the right not to be bound by the protocol if another State or its allies did not observe the prohibitions in the protocol. (The Duma voted to withdraw Russia's reservations in 2001.) In April 1992, President Yeltsin signed a decree committing Russia as the BWC successor State to the Soviet Union and prohibiting illegal biological warfare activity in Russia. During discussions in Moscow in September 1992, Russian officials confirmed the existence of a biological weapons program inherited from the Soviet Union and their commitment to the program's destruction.

Although Russia had inherited past offensive programs of biological research and development from the Soviet Union, Russia's annual BWC CBM submissions since 1992 have not satisfactorily documented whether the BW items under these programs were destroyed or diverted to peaceful purposes, as required by Article II of the BWC.

In addition, Russian government entities remained engaged in dual-use activities during the reporting period.

ANALYSIS OF COMPLIANCE CONCERNS

BWC States Party have a political commitment to declare past offensive BW programs, and under Article II of the BWC, Russia is required to "destroy or to divert to peaceful purposes" BW items specified in Article I of the BWC. Article I requires States Party "never in any circumstance to develop, produce, stockpile, or otherwise acquire or retain" such biological items. It remains unclear whether Russia has fulfilled its obligations under Article II to "destroy or to divert to

peaceful purposes” the BW items specified in Article I of the BWC that it inherited from the Soviet Union because Russia’s BWC CBM submissions since 1992 have not satisfactorily documented whether the BW items of these programs were destroyed or diverted to peaceful purposes.

EFFORTS TO RESOLVE COMPLIANCE CONCERNS

The United States routinely informs Russia of U.S. compliance findings and discusses with Russian officials, more broadly, BWC implementation. The United States continued to address BWC concerns with Russian officials in 2016.

TREATY ON CONVENTIONAL ARMED FORCES IN EUROPE (CFE)

For a discussion of other nations' adherence to their obligations under the CFE Treaty, see the Report on Compliance with the Treaty on Conventional Armed Forces in Europe, dated January 2017, submitted pursuant to Condition 5(C) of the Senate Resolution of Advice and Consent to Ratification of the CFE Flank Document (also known as the "Condition 5(C) Report"), and appended to this Report.

CHEMICAL WEAPONS CONVENTION (CWC)

For a discussion of other nations' adherence to their obligations under the Chemical Weapons Convention, see the Report on Chemical Weapons Compliance, dated March 2017, submitted pursuant to Condition 10(C) of the Senate Resolution of Advice and Consent to the Chemical Weapons Convention (also known as the "Condition 10(C) Report"), and appended to this Report.

NUCLEAR NON-PROLIFERATION TREATY (NPT)

This chapter of the Report covers developments relevant to other nations' compliance with the 1968 Nuclear Non-Proliferation Treaty (NPT), including their compliance with their related obligation to conclude and implement a Comprehensive Safeguards Agreement (CSA) with the International Atomic Energy Agency (IAEA).^b The chapter also addresses, where relevant, the status of countries' efforts to conclude and implement a modified Small Quantities Protocol (SQP) to their CSA and their efforts to conclude and implement an Additional Protocol to the Safeguards Agreement (AP).^c The chapter focuses on developments in Burma, Iran, North Korea, and Syria.

As of the end of 2016, there were 11 non-nuclear-weapon States Party (NNWS) to the NPT that had not yet brought into force a CSA with the IAEA.^d The NPT does not require adherence to an IAEA AP, which contains measures that increase the IAEA's ability to verify the non-diversion of declared nuclear material and to provide assurances as to the absence of undeclared nuclear material and activities in a State. The United States supports universal adoption of the AP by States Party to the NPT. As of the end of 2016, 148 States had an AP approved by the IAEA Board of Governors (BOG), 146 of those had been signed, and 129 had entered into force. The Protocol Additional to the Agreement between the United States of America and the IAEA for the Application of Safeguards in the United States of America (U.S. Additional Protocol) entered into force for the United States on January 6, 2009.

^b Article III of the NPT requires each NPT non-nuclear weapons State (NNWS) to accept safeguards "for the exclusive purpose of verification of the fulfillment of its obligations assumed under [the] Treaty with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons." Concluding and implementing a CSA with the IAEA fulfills this obligation. In the case of States with very limited quantities of nuclear material, the State also may enter into a Small Quantities Protocol (SQP) to the CSA that reduces the safeguards implementation burden for such States.

^c The Model Protocol Additional to the Agreement(s) between State(s) and the International Atomic Energy Agency for the Application of Safeguards (AP) was developed in 1997 to provide the IAEA with broader access to information and locations, and thereby to increase the IAEA's ability to provide assurance of the absence of undeclared nuclear material and activities in States Party. The NPT does not require States to sign and implement an AP. However, with a supermajority of NPT States Party now implementing APs, in practice the combination of a CSA together with an AP has become the international standard for IAEA verification.

^d The States without a CSA as of December 31, 2016 are, as follows: Benin, Cape Verde, Equatorial Guinea, Eritrea, Guinea, Guinea Bissau, Liberia, Micronesia, Sao Tome and Principe, Somalia, and Timor-Leste. In 2015, the Palestinians deposited an instrument of accession to the NPT. The United States does not believe the "State of Palestine" qualifies as a sovereign State and does not recognize it as such. Accession to the NPT is limited to sovereign States; therefore, the United States believes that the "State of Palestine" is not qualified to accede to the NPT and does not consider itself to be in a treaty relationship with the "State of Palestine" under the NPT.

COUNTRY ASSESSMENTS

MYANMAR (BURMA)

FINDING

The available evidence does not support a conclusion that Myanmar (Burma) violated the NPT; however, the United States remains concerned about Burma's lack of transparency regarding past nuclear work, as much of this knowledge remains within the military and is not reported to the civilian government. Burma's signing of an AP in 2013 and its announcement that it would adhere to the modified SQP contributed significantly to U.S. confidence in the civilian leadership's peaceful intentions regarding its nascent nuclear program. Neither the AP nor the modified SQP have yet entered into force and efforts to bring into force and implement them will require cooperation between the civilian and military elements of the Burmese Government to succeed. Burma's implementation of the AP and a modified SQP will improve confidence regarding an assessment of Burma's NPT compliance.

CONDUCT GIVING RISE TO COMPLIANCE CONCERNS

Burma became a State Party to the NPT in 1992, its CSA with the IAEA entered into force in 1995, and it signed an AP with the IAEA in 2013. Entry into force (EIF) of the AP will occur when Burma notifies the IAEA that its domestic statutory requirements have been met, after which Burma will have 180 days to submit its initial declaration to the IAEA. As a country with little to no nuclear material, Burma concluded an SQP to its Safeguards Agreement in 1995, which holds in abeyance key provisions in the Safeguards Agreement as long as Burma does not possess quantities of nuclear material that exceed a defined threshold or "in a facility as defined in" its Safeguards Agreement. In 2005, the IAEA approved an update of the Model SQP. Burma has not yet modified its SQP to conform to the update, but in 2012, then-President Thein Sein announced Burma's intention to do so.

As early as 2002, Burma had publicly announced its intention to acquire a nuclear research reactor for peaceful purposes, and in 2007 it signed an agreement with Russia for assistance building a nuclear research center, including a light-water research reactor. In 2010, an analysis commissioned by a dissident group alleged that Burma was seeking nuclear technology, concluding, "This technology

is only for nuclear weapons and not for civilian use or nuclear power.” The Burmese Government at the time dismissed the claims as “groundless allegations.” Burma reported in 2010 that it had suspended its reactor plan with Russia “due to inadequacy of resources and the government’s concern for misunderstanding it may cause.” Russia and Burma did sign a Memorandum of Understanding (MOU) for cooperation in peaceful use of nuclear energy on June 18, 2015. The Burmese Government describes the MOU as addressing cooperation on research and development of nuclear energy for peaceful purposes, as well as nuclear safety, assessments of the environmental impact of nuclear energy, and nuclear medical technology.

ANALYSIS OF COMPLIANCE CONCERNS

Under NPT Article II, each non-nuclear-weapon State (NNWS) Party undertakes, among other things, “not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices.” In NPT Article III, each NNWS Party “undertakes to accept safeguards ... for the exclusive purpose of verification of the fulfillment of its obligations assumed under this Treaty with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons” This obligation requires conclusion and implementation of a CSA with the IAEA.

When Burma’s AP enters into force, it will be obligated to, among other things, provide the IAEA with a declaration that includes extensive information on its nuclear facilities and nuclear-related activities. It will also provide the IAEA with expanded inspection access, including to additional parts of Burma’s nuclear research program, and the ability to collect samples and information to verify compliance. When Burma modifies its SQP to conform to the 2005 update, it will, among other things, require it to declare all nuclear material subject to safeguards under its Safeguards Agreement. Additionally, Burma will be required to provide early design information for any planned nuclear facilities and corresponding inspection access, which are currently held in abeyance under the existing SQP.

The United States retains confidence in Burma’s civilian leadership’s intentions to pursue a purely peaceful civilian nuclear program. Although the United States continues to be concerned about Burma’s willingness to be transparent about its previous nuclear work given that much of this knowledge remains within the military, which is not under the civilian government’s control, we have no evidence of ongoing activities under Burma’s civilian government that raise compliance concerns. Burma’s declarations of nuclear-related activities and locations under an AP, its initial declaration of nuclear material under a modified

SQP, and its responsiveness to IAEA questions following EIF and implementation of an AP and modified SQP will be key to assessing activities that have raised concerns in the past regarding its military's nuclear intentions and activities.

EFFORTS TO RESOLVE COMPLIANCE CONCERNS

The United States has held a series of workshops for Burmese stakeholders, which included a complementary access exercise to increase awareness of the AP and SQP, and to help prepare for their future implementation.

The United States continues to emphasize the importance of ensuring the cooperation of all relevant agencies, particularly the Burmese military, to provide complete reporting to the IAEA, address all IAEA outstanding questions and concerns regarding Burma's nuclear activities, and fully implement an AP and SQP.

ISLAMIC REPUBLIC OF IRAN (IRAN)

FINDING

Previous issues leading to findings of violations of both Article II and Article III of the NPT by the Islamic Republic of Iran (Iran) were resolved as of the 2015 reporting period, despite Iran's continued refusal to acknowledge or provide certain information about the military dimensions of its past nuclear activities. At the end of December 2016, Iran continued to fulfill its nuclear-related commitments under the Joint Comprehensive Plan of Action (JCPOA), resolving for now implementation issues that occurred during the 2016 reporting period. While key limitations contained in the deal will expire in 2026 and 2031, Iran's commitments to allow increased verification and monitoring by the IAEA under the Additional Protocol and modified Code 3.1 and not to engage in certain work that could contribute to the development of a nuclear weapon continue indefinitely. Tehran's adherence to these ongoing commitments will hinder its ability to produce a nuclear weapon after the time-bound provisions of the deal expire, helping to ensure that Iran's nuclear program remains exclusively peaceful in nature.

The JCPOA was concluded on July 14, 2015, and came into effect on October 18, 2015, known as "Adoption Day." On January 16, 2016, the United States confirmed that the IAEA had verified that Iran implemented the key nuclear

related commitments necessary to reach “Implementation Day” under the JCPOA, at which point U.S. nuclear-related secondary sanctions on Iran were lifted, and the provisions of UN Security Council Resolutions (UNSCR) 1696, 1737, 1747, 1803, 1929, and 2224 were terminated in accordance with UNSCR 2231. Completion and maintenance of Iran’s nuclear related commitments increased for a decade the breakout timeline for Iran to acquire enough fissile material for one nuclear weapon if it chose to do so from two to three months before the JCPOA was concluded to about one year, with the breakout timeline subsequently decreasing gradually through year 15.

In addition, as required by the Iran Nuclear Agreement Review Act of 2015, the Secretary of State certified to Congress on several occasions during the reporting period that: Iran is transparently, verifiably, and fully implementing the JCPOA; it has not committed a material breach with respect to the JCPOA; and Iran has not taken any action during the reporting period, including covert activities, that could significantly advance an Iranian nuclear weapons program.

CONDUCT GIVING RISE TO COMPLIANCE CONCERNS

Iran became a State Party to the NPT in 1970, and its CSA entered into force in 1974. Iran signed but did not ratify an AP to its Safeguards Agreement in 2003 and voluntarily implemented AP measures from late 2003 to early 2006, when it stopped such implementation.

As also described in previous editions of this Report, Iran’s violations of its obligations under Articles II and III of the NPT and its IAEA Safeguards Agreement had been ongoing since the early 1980s. In 2002, an Iranian opposition group publicly revealed covert nuclear facilities under construction at Natanz and Arak that Iran had failed to declare to the IAEA. Reports from the resulting IAEA investigation led the IAEA BOG to find Iran in noncompliance with its Safeguards Agreement in 2005 and to report the case to the UNSC in 2006. In 2009, Iran announced another previously undisclosed uranium enrichment facility under construction near the city of Qom, Iran. The IAEA reported extensively in dozens of reports since 2003 on Iran’s violations of its Safeguards Agreement. From 2006 to 2011, the Security Council adopted multiple resolutions on Iran, four of which imposed binding obligations under Chapter VII of the UN Charter (UNSCRs 1737, 1747, 1803, and 1929).

From 2006 through 2013, in contravention of UNSC and IAEA BOG resolutions, Iran continued research and development work on advanced

centrifuges; enriched uranium up to nearly twenty percent at both the Natanz Pilot Fuel Enrichment Plant and the Fordow Fuel Enrichment Plant; continued to construct the IR-40 heavy water-moderated research reactor at Arak; and operated its heavy water production plant at Arak. During this timeframe, Iran did not fully cooperate with the IAEA in regard to its declared facilities; in particular, as noted in previous editions of the Compliance Report, Iran did not provide design information or report design changes well in advance of any action taken to modify existing facilities or construct new ones, as required by modified Code 3.1 of the Subsidiary Arrangements to Iran's Safeguards Agreement.

From 2008 through 2014, the IAEA Director General (DG) reports on Iran stated that concerns remained about the possible existence in Iran of undisclosed nuclear-related activities, both past and current, involving military-related organizations. The Annex to the November 2011 DG's report detailed the basis for concerns regarding the "possible military dimensions" (PMD) of Iran's nuclear program. It stated that, according to credible reports from multiple sources, Iran had a structured military program through 2003, including activities related to the development of a nuclear payload for a missile, and that some nuclear weapons related activities may have continued post-2003.

On November 24, 2013, the P5+1 (United States, United Kingdom, France, Russia, China, and Germany) and Iran entered into the Joint Plan of Action (JPOA), the predecessor arrangement to the JCPOA, designed to keep Iran's nuclear program from advancing while negotiations on a long-term comprehensive solution continued. Under the JPOA, Iran took a series of initial steps to stop and roll back key elements of its nuclear program. The JPOA went into effect on January 20, 2014, and its terms were extended by the P5+1 and Iran pending the conclusion of negotiations on a long-term, comprehensive solution.

On July 14, 2015, the P5+1, the European Union, and Iran concluded the JCPOA to address the international community's concerns regarding the nature of Iran's nuclear program. By its terms, the JCPOA came into effect on October 18, 2015, known as "Adoption Day." On December 7, 2015, the P5+1 submitted a resolution to the IAEA BOG with a view to closing consideration of the PMD of Iran's past nuclear program. The resolution was subsequently adopted by the BOG by consensus on December 15, 2015. In the resolution, the BOG noted the Director General's "Final Assessment on Past and Present Outstanding Issues regarding Iran's Nuclear Programme," and also noted the successful implementation of the "road map" that enabled this final assessment, despite Iran's continued refusal to acknowledge or provide certain information about the military

dimensions of its past nuclear activities. With this resolution, the BOG closed its consideration of the PMD agenda item and decided to remain seized of a new agenda item covering JCPOA implementation and verification and monitoring in Iran. The resolution also terminated previous BOG resolutions, effective as of “Implementation Day” under the JCPOA, including those that found Iran in noncompliance with its safeguards obligations. Closing the PMD agenda item does not preclude the IAEA from investigating if there is reason to believe Iran is pursuing any covert nuclear activities, including nuclear weapons work.

On January 16, 2016, the IAEA reported that Iran had completed the nuclear-related steps necessary to reach Implementation Day, at which point JCPOA-related sanctions relief became effective. The nuclear steps Iran completed to reach Implementation Day are specified in paragraphs 15.1 to 15.11 of Annex V of the JCPOA. As of the end of the reporting period, Iran continued to adhere to these key JCPOA commitments, including limits on centrifuge numbers, a cap on its stockpile of enriched material, and allowing enhanced IAEA monitoring measures.

Under the JCPOA, Iran committed not to accumulate more than 130 metric tons of nuclear grade heavy water or its equivalent in different enrichments for 15 years, and to make any excess heavy water available for export and deliver it to an international buyer. In February and again in early November, Iran slightly exceeded the JCPOA limit on its heavy water inventory for brief periods. In both instances, this issue was resolved after Iran shipped out sufficient amounts of material to get back under the limit. Most of this excess heavy water has been sold and delivered to international buyers; the remainder is stored in a location outside Iran, under IAEA seal, though it remains Iranian property.

ANALYSIS OF COMPLIANCE CONCERNS

As noted in the previous report, in December 2015, the IAEA issued its Final Assessment on Past and Present Outstanding Issues regarding Iran's Nuclear Program. The IAEA BOG subsequently closed consideration of the agenda item relating to PMD of Iran's nuclear program and instead shifted to a new agenda item relating to JCPOA implementation and verification and monitoring in Iran. The IAEA continues to exercise its full authorities in pursuing any new safeguards-relevant or JCPOA-related information in Iran, including any new concerns regarding weaponization, should they arise, through implementation of Iran's Safeguards Agreement, Additional Protocol, and the enhanced transparency and verification measures contained in the JCPOA.

The U.S. Intelligence Community assessed with high confidence in November 2007 (and made public in the December 2007 National Intelligence Estimate) that Iran in 2003 halted its nuclear weapons program, which was defined as comprising Iran's nuclear weapon design and weaponization work and covert uranium conversion-related and uranium enrichment-related work, but excluding Iran's declared civil work related to uranium conversion and enrichment. Some of Iran's now-declared civil nuclear R&D, however, was conducted covertly for several years. It was also assessed with high confidence that as of the time of that assessment, Iran had conducted research and development projects with commercial and conventional military applications – some of which would also be of limited use to nuclear weapons. According to the IAEA, some Iranian activities relevant to the development of a nuclear explosive device continued after 2003, but these were not part of a coordinated effort. The IAEA has no credible indication of activities in Iran relevant to the development of a nuclear explosive device after 2009.

During this reporting period, the IAEA confirmed that it continues to verify and monitor the wide range of steps Iran is undertaking to implement its nuclear-related commitments under the JCPOA. These include verifying the limits on Iran's enrichment capacity, uranium stockpile, and heavy water accumulation; verifying Iran's enrichment research and development in line with the JCPOA; and implementing an array of additional monitoring and transparency measures designed to ensure Iran's nuclear program is and remains exclusively peaceful. The IAEA has established regular inspections at declared Iranian nuclear facilities, and Iran has provided the IAEA with timely access as required by the JCPOA. In addition, Iran is provisionally applying the Additional Protocol to its Comprehensive Safeguards Agreement with the IAEA in accordance with Article 17(b) of the Additional Protocol, and is implementing modified Code 3.1 of the subsidiary arrangements to its Safeguards Agreement, which requires that Iran provide early and updated reporting on planned and modified nuclear facilities. These measures provide the IAEA with additional transparency and access authorities for the monitoring and verification of the JCPOA and Iran's Comprehensive Safeguards Agreement. During the reporting period, the IAEA reported that it has conducted complementary access inspections under the Additional Protocol to sites and other locations in Iran to ensure the absence of undeclared activity at those locations.

Under the JCPOA, Iran has taken significant steps to stop and roll back key elements of its ongoing civil nuclear program. Iran exported nearly its entire

stockpile of enriched uranium in furtherance of meeting the JCPOA limit on its enriched uranium stockpile of no more than 300 kg of up to 3.67 percent enriched UF₆ or equivalent, eliminated nearly all of its previous stock of uranium enriched up to 20 percent U-235, removed and disabled the core of the IR-40 reactor at Arak by filling the calandria with concrete, and removed and placed under IAEA monitoring thousands of centrifuges in order to meet its JCPOA limit of no more than 5,060 centrifuges for uranium enrichment. Iran has allowed IAEA inspectors' daily access to enrichment facilities when requested and permitted continuous monitoring of other declared key nuclear-related facilities, including uranium mines, mills, and centrifuge production and storage facilities.

Continued implementation of the JCPOA closes off Iran's pathways to produce fissile material for a nuclear weapon. The JCPOA's constraints on Iran's program, as well as the enhanced monitoring and transparency measures contained in the JCPOA, ensure that any attempt to break out would be detected quickly enough for the international community to effectively respond.

EFFORTS TO RESOLVE COMPLIANCE CONCERNS

On two occasions during the reporting period, in February and November 2016, the IAEA Director General reported that Iran's stock of heavy water briefly exceeded, by less than one metric ton, the 130 metric ton limit established by the JCPOA. In both instances, Iran reported this activity promptly to the IAEA, and quickly took steps to remedy the issue. In December 2016, the IAEA verified that Iran's stock of heavy water remains under the 130 metric ton limit. Iran continues to produce heavy water.

The United States will continue its work with our partners in JCPOA implementation – the P5+1, the European Union, and the IAEA – and with Iran to ensure that the significant nuclear-related steps Iran has taken in accordance with the JCPOA remain fully implemented, and to ensure Iran's compliance with its obligations under the NPT and its Safeguard Agreement. The United States has the ability to reapply unilateral sanctions and to cause the reimposition of UN multilateral sanctions if Iran does not abide by its commitments under the JCPOA.

DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA (NORTH KOREA)

FINDING

The Democratic People's Republic of Korea (North Korea) was in violation of its obligations under Articles II and III of the NPT and in noncompliance with its IAEA Safeguards Agreement at the time it announced its withdrawal from the NPT in 2003. The United States assesses that the nuclear activities of North Korea contravene North Korea's commitments under the 2005 Joint Statement of Six-Party Talks and stand in clear violation of UNSCRs 1718, 1874, 2087, 2094, 2270, and 2321. North Korea's continuing nuclear activities and statements attest that it currently has no intention to adhere to its 2005 Joint Statement commitments and comply with its UNSCR obligations.

CONDUCT GIVING RISE TO COMPLIANCE CONCERNS

North Korea acceded to the NPT in December 1985, and its IAEA Safeguards Agreement entered into force in 1992.

Previous editions of this Report have described violations by North Korea of its obligations under Articles II and III of the NPT and its Safeguards Agreement before it announced its withdrawal from the NPT in 2003. This Report will focus primarily on calendar year 2016 (the reporting period), with updates on activities and the status of the key North Korean nuclear facilities.

Production Facilities

In February 2016, Director of National Intelligence James R. Clapper testified before a Congressional committee that North Korea had been running its Yongbyon reactor long enough that it could begin to recover plutonium from the reactor's spent fuel within a matter of weeks to months. In August 2016, Japan's Kyodo News reported that in a written interview, North Korea's Atomic Energy Institute confirmed North Korea had "reprocessed spent nuclear fuel rods removed from a graphite-moderated reactor." In the same interview, North Korea's Atomic Energy Institute claimed it had been producing highly enriched uranium for nuclear arms and power "as scheduled" without offering further details.

Yongbyon has an experimental light water reactor (LWR) under construction, which North Korea revealed publicly in 2010. If successfully completed and operated, the LWR could provide North Korea with a relatively small source of electricity. It also provides North Korea with a civilian justification to possess uranium enrichment technology that could be used to produce fissile material for nuclear weapons.

The United States believes there is a clear likelihood of additional unidentified nuclear facilities in North Korea.

Testing

During the reporting period, North Korea conducted two nuclear tests. On January 6, North Korea claimed it had successfully carried out its first underground test of a hydrogen bomb – a thermonuclear warhead that is much more powerful than an atomic bomb. On September 9, North Korea claimed to have successfully detonated “a nuclear warhead that has been standardized to be able to be mounted” on ballistic missiles.

ANALYSIS OF COMPLIANCE CONCERNS

Under the 2005 Joint Statement of the Six-Party Talks, North Korea committed to abandoning all nuclear weapons and existing nuclear programs, and to return at an early date to the NPT and IAEA safeguards. Multiple UNSCRs require North Korea to abandon all nuclear weapons and existing nuclear programs in a complete, verifiable, and irreversible manner, and immediately cease all related activities. UNSCRs also demand North Korea return to the NPT and IAEA safeguards; require that it act strictly in accordance with the obligations applicable to States Party to the NPT and the terms and conditions of its IAEA Safeguards Agreement; and that require North Korea implement such transparency measures as may be required and deemed necessary by the IAEA. During the reporting period, North Korea did not take any steps toward fulfilling its denuclearization commitments and obligations. North Korea’s nuclear tests and continuing nuclear activities stand in clear violation of multiple UNSCRs. North Korea was in violation of its obligations under Articles II and III of the NPT and in noncompliance with its Safeguards Agreement before it announced withdrawal from the NPT in 2003.

EFFORTS TO RESOLVE COMPLIANCE CONCERNS

The United States and North Korea last engaged in formal bilateral dialogue on North Korea’s nuclear program in February 2012. During the reporting period, the United States consistently urged North Korea to demonstrate genuine willingness to fulfill its denuclearization obligations and commitments to create the conditions necessary for meaningful dialogue through resumption of Six-Party Talks. North Korean statements and activities during the reporting period did not

signal any intention or commitment to denuclearization.

During the reporting period, in several multilateral fora, including the UN General Assembly, UNSC discussions, and the IAEA, countries from every region of the world strongly condemned North Korea's two nuclear tests and the more than 20 UN Security Council-proscribed ballistic missile tests designed to improve nuclear weapons delivery, and urged North Korea to return to dialogue on denuclearization. NPT Member States urged North Korea to comply with its international commitments and live up to its obligations under UNSCRs, its IAEA Safeguards Agreement, and the 2005 Joint Statement.

SYRIAN ARAB REPUBLIC (SYRIA)

FINDING

The Syrian Arab Republic (Syria) remains in violation of its obligations under Article III of the NPT and its IAEA Safeguards Agreement. Syria failed to declare and provide design information to the IAEA for the construction of the reactor at Al Kibar (also known as Dair Alzour), which was destroyed in an Israeli airstrike on September 6, 2007. Syria's clandestine construction of the Al Kibar reactor and its continued denial of IAEA requests for access and information concerning the Al Kibar reactor and information concerning three functionally related locations are clear violations of its Safeguards Agreement, including its obligations under modified Code 3.1 of the Subsidiary Arrangements to its Safeguards Agreement. In addition to having violated Article III of the NPT, to the extent that these activities were undertaken in connection with an effort to develop nuclear weapons, Syria may also have violated Article II.

CONDUCT GIVING RISE TO COMPLIANCE CONCERNS

Syria became a State Party to the NPT in 1968, and its Safeguards Agreement entered into force in 1992. It had not signed the AP as of the end of 2016.

Al Kibar Site. The United States concluded that, until September 2007, Syria covertly was building, with North Korean assistance, an undeclared nuclear reactor at Al Kibar (in the province of Dair Alzour) in Syria's eastern desert. Given its assessed design, the reactor would have been capable of producing weapon-grade plutonium. The reactor was destroyed on September 6, 2007, before

it became operational. The United States assesses that the reactor's intended purpose was the production of plutonium because the reactor was not configured for power production, was isolated from any civilian population, and was ill-suited for research. Following the reactor's destruction, Syria went to great lengths to clean up the site and to destroy evidence of what had previously existed at the site. By December 2007, Syria had constructed a large building over the location where the reactor once stood.

During the reporting period, the IAEA continued to seek information to address outstanding issues related to the site, including the nature of the destroyed facility and the origin of chemically processed natural uranium particles found in samples taken at the site. (The particles were of a type not included in Syria's declared inventory of nuclear material.)

ANALYSIS OF COMPLIANCE CONCERNS

Article 41 of Syria's Safeguards Agreement with the IAEA specifies that "the provision of design information in respect of the new facilities ... shall be provided as early as possible before nuclear material is introduced into a new facility." Article 42 states, among other requirements, that "design information to be provided to the Agency shall include, when applicable: (a) the identification of the facility, stating its general character, purpose, nominal capacity and geographic location, and the name and address to be used for routine business purposes" The NPT states in Article III.1 that "the safeguards required by this article shall be applied on all source or special fissionable material in all peaceful nuclear activities within the territory of such State, under its jurisdiction, or carried out under its control anywhere."

On May 24, 2011, the DG released a report assessing that the building destroyed at Al Kibar was very likely a nuclear reactor that should have been declared by Syria pursuant to Articles 41 and 42 of its Safeguards Agreement and modified Code 3.1 of the Subsidiary Arrangements to its Safeguards Agreement. The United States agreed with this finding. In addition, as noted in the above analysis, the United States considers Syria to be in violation of its obligations under the NPT.

EFFORTS TO RESOLVE COMPLIANCE CONCERNS

UNCLASSIFIED

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On June 9, 2011, the IAEA BOG adopted a resolution finding Syria in noncompliance with its Safeguards Agreement and calling upon Syria to sign and bring into force an AP to its Safeguards Agreement.

The IAEA resolution also referred the matter to the United Nations Security Council. The Security Council met once in 2011, following the IAEA's referral, but took no action. The Security Council did not address Syria's nuclear activities in 2012, 2013, 2014, 2015, or 2016. For 2016, the IAEA noted there were no new developments and continued to urge Syria to cooperate fully with the IAEA in connection with all unresolved issues.

In 2016, the United States did not hold any bilateral discussions with Syria on its nuclear program.

UNCLASSIFIED

TREATY ON OPEN SKIES (OST)

The Treaty on Open Skies (“Treaty” or “OST”) establishes a regime for the conduct of unarmed aerial observation flights by States Party over the territories of other States Party using up to four types of sensors (optical panoramic and framing cameras, video cameras with real-time display, infra-red line-scanning devices, and sideways-looking synthetic aperture radar, although, thus far, only the first two types of sensors are in actual use). The Treaty was signed in Helsinki on March 24, 1992, entered into force on January 1, 2002, and is of unlimited duration. As of December 31, 2016, 34 States Party have signed and ratified the Treaty.

Belarus and the Russian Federation (hereafter, Russia) participate in the Treaty as the Belarus/Russian Federation Group of States Party. The United States first began addressing compliance concerns regarding the Belarus/Russian Federation Group of States Party in the 2004 Compliance Report. All issues that rise to the level of a compliance concern for 2016 are related to Russia alone.

In June 2016, States Party certified Russia’s Tu-154 Open Skies observation aircraft with a digital electro-optical sensor. The certification was conducted consistent with applicable Treaty procedures, including the five decisions adopted by the Open Skies Consultative Commission (OSCC) in March and April 2015, to help States Party verify that certified electro-optical digital sensors could not be used to collect imagery in excess of the Treaty-prescribed parameters.

One compliance concern cited in previous editions of the Compliance Report — a minimum altitude restriction over Chechnya — has been resolved. In early 2016, U.S. implementers observed that Russia stopped including altitude restrictions over Chechnya during pre-mission briefs. On April 18, during the OSCC plenary, the Russian representative confirmed that Russia no longer published altitude restrictions over Chechnya. Russia’s imposition of a minimum altitude for all air traffic over Moscow, in the region designated as UUP-53, continued and impacted one observation flight in 2016. The United States discussed this concern with States Party in 2016, including Russia’s assertion that the altitude restriction is linked to safety of flight, and it became clear that a number of States Party impose altitude restrictions for reasons of flight safety. The United States, Russia, and other interested States Party intend to explore altitude restrictions as part of a broader discussion of air traffic control procedures and Open Skies Treaty implementation. The United States will continue to monitor this issue closely.

**BELARUS/RUSSIAN FEDERATION GROUP OF STATES PARTY
(RUSSIA)**

**FINDING: RESTRICTION RAISING CONCERNS UNDER OSCC
DECISION 03/04**

Russia's conduct continues to raise serious compliance concerns under OSCC Decision 3/04. Russia has imposed and enforced a sublimit of 500 kilometers over Kaliningrad Oblast for all flights originating out of Kubinka Airfield since 2014. As of the end of 2016, the United States was actively engaged in diplomatic efforts to resolve the issue, bilaterally and multilaterally, and a decision on a finding of violation had not been made pending the results of diplomatic efforts.

CONDUCT GIVING RISE TO COMPLIANCE CONCERN

In 2014, Russia introduced a 500-kilometer sublimit on the distance that any observation flight could fly over Kaliningrad Oblast, including any flight that originates from Kubinka Open Skies Airfield, which otherwise has a maximum flight distance of 5,500 kilometers. In 2016, Russia refused two proposed flight plans over Kaliningrad on account of this restriction: in May, Poland proposed a flight plan of 509 kilometers over Kaliningrad, and in August, Poland and Italy jointly proposed a flight plan of 511 kilometers over Kaliningrad. Both flight plans were modified at Russian insistence, and as a result the distances flown over Kaliningrad were less than 500 kilometers, and documented as such in the corresponding mission reports.

ANALYSIS OF COMPLIANCE CONCERN

As established in Section III of Annex A to the Treaty, flights originating from the Kubinka Open Skies Airfield are subject to a maximum flight distance of 5,500 kilometers. No Treaty provision allows a State Party to establish a sublimit within the maximum flight distance of an established Open Skies Airfield, as Russia did for missions originating from the Kubinka Open Skies Airfield for the territory of Kaliningrad. To the contrary, Subparagraph 1(b) of OSCC Decision 3/04 precludes a State Party from decreasing the maximum flight distance of an Open Skies Airfield. Relatedly, Subparagraph 1(a) of this decision requires that the coverage of the entire territory of a State Party shall be ensured in such a way

so as not to increase the number of flights required for the opportunity to observe the entire territory of that State Party. U.S. experts have determined that 500 kilometers is insufficient for the United States and all other States Party to observe the entirety of Kaliningrad in one flight. Russia's 500-kilometer sublimit on flights over Kaliningrad thus raises serious concerns about its adherence to OSCC Decision 3/04, a view that the majority of OST States Party share.

FINDING: RESTRICTIONS RAISING CONCERNS UNDER ARTICLE VI AND ARTICLE VIII

Certain conduct by Russia raises compliance concerns under Article VI and VIII of the OST.

Specifically, Russia has:

- refused access in a ten-kilometer corridor along its border with the Georgian regions of South Ossetia and Abkhazia since 2010; and
- refused to provide air traffic control facilitation, including by improperly invoking the concept of *force majeure* for certain OST flights.

CONDUCT GIVING RISE TO COMPLIANCE CONCERNS

In 2016, no State Party submitted a flight plan that would have approached within ten kilometers of Russia's border with the Georgian regions of Abkhazia and South Ossetia; however, Russia said during the reporting period that it would continue to reject such flight plans, as it did in 2015.

In 2016, Russia did not invoke *force majeure* as a basis to make changes to observation flights due to "VIP" movements, which had previously impacted a United Kingdom mission in 2015 and a U.S. mission in 2014. Russia and the United States discussed the concept of *force majeure* during multilateral consultations in 2016. Russia has requested that this issue be added to the agenda of ongoing air traffic control (ATC) facilitation consultations among OST States Parties in Vienna, and the United States consented to continue discussions in that forum and intends to seek Russia's clarification of its position. The United States is making efforts to resolve this issue in ATC consultations. Provided there are no further improper invocations of *force majeure* by Russian officials affecting OST

flights, the United States may cease reporting on this issue in future editions of the Compliance Report.

ANALYSIS OF COMPLIANCE CONCERNS

Airspace Restrictions Along the Russia-Georgia Border. Article VI, Section II, Paragraph 2 of the Treaty prohibits flight within ten kilometers of a border with a non-State Party. Russia claims that the South Ossetia and Abkhazia regions of Georgia are independent states not party to the Treaty, and thus takes the position that Article VI, Section II, Paragraph 2 prohibits flight within ten kilometers of its border with those regions. However, South Ossetia and Abkhazia are within the internationally recognized borders of Georgia, and are considered by all other States Party to be part of Georgia, which is party to the Treaty. Accordingly, the U.S. position is that there is no basis within the Treaty to exclude observation flights from within ten kilometers of any portion of the Russia-Georgia border. Russia's past rejection of U.S. flight plans in this area, and statements making clear that this policy remains in effect, raise serious concerns about Russia's adherence to its obligations under Articles VI and VIII by denying States Party the right to observe the territory along portions of Russia's border with Georgia.

Failure to Provide Air Traffic Control Facilitation. Article VI, Section I, Paragraph 15 of the Treaty states that the observed Party "shall ensure its air traffic control authorities facilitate the conduct of observation flights in accordance with this Treaty." Once a flight plan is accepted by the observing and observed Parties, the Treaty does not provide for deviations from the flight plan unless "necessitated" by the scenarios specified in Article VIII, Section II, Paragraph 1, which include "air traffic control instructions related to circumstances brought about by *force majeure*."

The term *force majeure* is not defined in the Treaty, but is widely understood in international law to refer to a force or event beyond a state's control. VIP movements are known in advance and are within the control of the government, and therefore do not fit this description and do not constitute *force majeure*. Russia's invocation of *force majeure* under such circumstances as a basis to force deviations of observation missions in flight raises concerns about Russia's adherence to its obligations under Articles VI and VIII of the Treaty.

COMBINED EFFORTS TO RESOLVE COMPLIANCE CONCERNS

The United States and other States Party raised their compliance concerns repeatedly in 2016 at meetings of the OSCC and in bilateral and multilateral consultations with Russia. In the OSCC, the United States continued to oppose any restriction inhibiting an observing Party's right to observe any point on the observed Party's territory in accordance with the Treaty. In 2016, the United States continued to raise these concerns in the Informal Working Group on Rules and Procedures (IWGRP) of the OSCC.

During the reporting period, the United States and like-minded States Party held informal consultations on national Air Traffic Control management of Open Skies flights. Due to the certification of the Russian Tu-154 observation aircraft equipped with the OSDCAM 4060 digital electro-optical sensor and its lower associated minimum altitude, interest among States Party has grown regarding safety of flight and prioritization of Open Skies observation missions in uncontrolled airspace (including at altitudes below radar coverage). At the OSCC plenary on July 18, 2016, the United States provided a briefing on its published air traffic control rules, procedures, and guidelines and has encouraged other States Party to do likewise. The United States also organized and chaired an informal meeting of interested States Party, including Russia, on December 12, 2016. The meeting examined the impact of national air traffic control regulations on Open Skies flights. Consultations on ATC management are continuing and are expected to include discussions on the use of the term *force majeure* within the terms of the Treaty.

In March 2016, Allies and like-minded partners, led by the United States, decided that a small group of States would engage Russia with the aim of resolving our compliance concerns and addressing issues that operationally impact implementation of the Treaty. During the reporting period, the "Small Group" met with Russian representatives in Vienna, in September and October 2016. To date, discussions have been business-like and have resulted in identification of potential paths toward resolution of some of the issues. The United States has expressed willingness to consider ways to address this issue as long as they are consistent with the Treaty and reciprocal to all States Parties.

**FINDING: UKRAINE RESTRICTION RAISING CONCERNS UNDER
OSCC DECISION 2/09**

Russia has stated repeatedly that it would not allow Ukraine to conduct solo observation flights over its territory unless Ukraine paid for each flight in advance.

Although not involving an obligation owed the United States, Russia's conduct raises serious concerns about its adherence to OSCC Decision 2/09. There is a reasonable basis to conclude that Russia's refusal to allow Ukraine to overfly Russia without prepayment could be grounds for a breach determination on the part of Ukraine.

CONDUCT GIVING RISE TO COMPLIANCE CONCERNS

In January 2015, the OSCC decision on the annual distribution of observation flight quotas for 2015 allotted six quotas to Ukraine for observation flights over Russia – some to be flown by Ukraine solo, and some to be flown in partnership with other States Party. Russia has stated on numerous occasions at OSCC Plenary sessions that it would not allow Ukraine to conduct a solo observation flight over its territory unless Ukraine paid for the flight in advance. In light of Russia's requirement for advance payment, Ukraine did not conduct any solo flights over Russian territory during 2015. To avoid delaying adoption of quota allocations, Ukraine chose not to bid on any solo flights over Russia in 2016 and 2017, instead opting only to conduct flights with partners.

ANALYSIS OF COMPLIANCE CONCERNS

OSCC Decision 2/09, Section I, Paragraph 1 provides that, unless otherwise specified in the Decision, or agreed to by the States Party, "an observing Party using its own observation aircraft or an observation aircraft designated by a third Party shall reimburse the observed Party" for certain costs, including fuel, oil, oxygen, de-icing fluid, and ground and technical servicing. Paragraph 6 of the Decision specifies certain other costs, including costs related to meals and accommodation of the observing Party's personnel, which the observing Party shall reimburse "in accordance with the mechanism set forth in this Decision."

The mechanism for such reimbursement is described in Section V of Decision 2/09. As provided in Paragraph 9, "[n]o later than 30 days after completion of an observation flight the observed Party shall transmit an invoice to the observing Party clearly itemizing the costs incurred during that observation flight" Paragraph 10 provides that "[u]nless otherwise agreed, at the end of each calendar year the States Party will exchange requests for payment in EUR or US dollars." Following a review of these requests, "any State Party that is in debt to any other State Party shall pay its debt in EUR or US dollars to that State Party no later than 1 March of the following year – unless the debt is still under discussion."

The pre-payment procedures imposed by Russia in its Treaty notifications appear to be plainly inconsistent with the reimbursement procedures prescribed by Decision 2/09. Accordingly, it could reasonably be argued that Ukraine had no obligation to comply with the Russian procedures, and Russia had no basis to condition Ukraine's ability to conduct observation flights over Russian territory upon Ukraine's submission to the pre-payment procedures. During the period 2014-2016, Ukraine has conducted 20 missions over eight other countries, and has successfully utilized the procedures prescribed by Decision 2/09 to provide payment and compensation without incident.

EFFORTS TO RESOLVE COMPLIANCE CONCERNS

During 2016, the United States, Ukraine, and several other like-minded States Party objected to this practice during meetings of the OSCC, and this issue was also raised with Russia during "Small Group" discussions on compliance and implementation issues in September and October 2016. Russia continues to insist Ukraine prepay for its solo flights. The United States will continue to support Ukraine in its effort to resolve this issue in the OSCC and explore options to resolve this issue during ongoing discussions with Russia.

PART IV: ADHERENCE BY PARTICIPATING STATES (INCLUDING SUCCESSOR STATES) TO POLITICALLY BINDING BILATERAL AND MULTILATERAL COMMITMENTS

VIENNA DOCUMENT ON CONFIDENCE- AND SECURITY-BUILDING MEASURES

On November 30, 2011, the participating States of the Organization for Security and Cooperation in Europe (OSCE) adopted Vienna Document 2011 (VD11), which added to and built upon the commitments in previous versions of the Vienna Document (1990, 1992, 1994, and 1999); subsequent “Vienna Document Plus” Decisions build on VD11. The confidence- and security-building measures (CSBMs) contained in VD11 and Vienna Document Plus Decisions are politically binding upon the participating States.

This chapter covers VD11 adherence by participating States during 2016. Four of the five OSCE participating States that were reported on in this chapter of last year’s edition of the Report are included again this year. The fifth participating State, Armenia, is not reported because the underlying conduct involving failure to provide accurate notification in the appropriate format for a large scale training exercise, which was in the Report edition covering 2014, was not repeated in 2015 or in 2016. Armenia provided the appropriate notification in question in 2015 and in 2016 via its annual calendar in accordance with VD11 requirements. As a result, this issue is considered resolved.

In 2016, 100 inspections and 41 evaluation visits of units and formations were conducted by the participating States under the provisions of VD11, Chapter IX. In addition, 23 inspections and 35 evaluation visits were conducted using VD11 procedures under bilateral agreements, regional measures, or other arrangements that provided additional inspection opportunities to the participants in those arrangements.

The most recent annual VD11 exchange of CSBMs data was held on December 15, 2016, for participating States with military forces in the zone of application, to provide CSBMs data valid as of January 1, 2017.^e

^e Under the terms of VD11, participating States provide data each December regarding their forces in the zone of application as of January 1 of the following year.

COUNTRY ASSESSMENTS

THE RUSSIAN FEDERATION (RUSSIA)

FINDING

The United States assesses that the Russian Federation's (Russia's) selective implementation of certain provisions of VD11 and the resultant loss of transparency about Russian military activities has limited the effectiveness of the CSBMs regime. Russia's selective implementation also raises concerns as to Russia's adherence to VD11.

In 2016, Russia's continued occupation and attempted annexation of Crimea, Ukraine, as well as its arming, training, and fighting alongside separatists in Eastern Ukraine was contrary to paragraph 3 of VD11, in which the participating States stress the continued validity of commitments on refraining from the threat or use of force contained in the Stockholm Document, as seen in the light of the Charter of Paris and the Charter for European Security.

In 2016, Russia again failed to provide information on its military forces located in the separatist regions of Georgia, as well as on two Russian units in Crimea, Ukraine. With regard to reporting major weapons and equipment in its VD11 data, Russia continued to exclude improperly the BRM-1K armored combat vehicle. Additionally, Russia failed to provide information on one type of combat aircraft and one type of helicopter that were deployed to units in the zone of application.

CONDUCT GIVING RISE TO ADHERENCE CONCERNS

Russia has joined the consensus adoption of each version of the Vienna Document (1990, 1992, 1994, 1999, and 2011) and of subsequent "Vienna Document Plus" Decisions. Russia's adherence to the Vienna Document was first addressed in the 1999 Compliance Report.

Russia's implementation of VD11, including with respect to Ukraine, continued to be of concern in 2016. On November 12, 2015, Russia used its annual calendar notification to notify OSCE participating States of the Kavkaz-2016 strategic command exercise, scheduled for September 5-10, 2016.

Subsequently, in a more detailed notification on July 22, 2016, Russia reported that the exercise would involve 12,600 troops. On August 25, 2016, Russia notified OSCE participating States of a “snap” inspection of troops and forces from the Central, Western, and Southern Military Districts that began on that same day, noting that, for the troops in the Southern Military District, it was the concluding training stage for the September 5-10 Kavkaz-2016 exercise. Russia indicated that approximately 100,000 personnel would participate in the August 2016 “snap” inspection overall, but stated that no more than 12,600 personnel were subject to VD11, that the notification provisions did not apply, and that Russia was providing the information about the “snap” inspection voluntarily “in a spirit of good will.” No further explanation for the differing personnel figures was provided (none is required under VD11), and it is not clear to the United States which forces were not subject to counting under VD11. The VD11 thresholds for notification and observation are 9,000 troops and 13,000 troops, respectively.

Russia’s continued occupation and attempted annexation of Crimea in 2016, as well as arming, training, and fighting alongside separatists in Eastern Ukraine, runs counter to the declaration on Refraining from the Threat or Use of Force contained in paragraphs 9 to 27 of the Document of the Stockholm Conference and reaffirmed in paragraph 3 of the VD11.

In its VD11 data valid as of January 1, 2016, Russia again failed to provide information on its military forces located in the separatist regions of Georgia, neither reporting such forces at normal peacetime locations in Russia as it had done from 2008 through 2011, nor identifying normal peacetime locations in the Abkhazia and South Ossetia regions. Russia also failed to provide information on two Russian units located in Crimea, Ukraine, that were established in 2014, although it declared the continued presence of other Russian units there.

In its VD11 data valid as of January 2016, Russia continued its practice of improperly excluding the BRM-1K armored combat vehicle. Russia reported the BRM-1K as an armored combat vehicle look-alike in its data as of January 2005 and January 2006, but has not reported it since that time. Additionally, Russia failed to include two types of equipment – the Su-30SM multirole fighter and the Ka-52 attack helicopter – in its data as of January 1, 2017, despite their deployment in the zone of application since 2014.

ANALYSIS OF ADHERENCE CONCERNS

VD11, Chapter I, paragraph 9, states that the OSCE participating States will annually exchange information on their military forces in the zone of application concerning the military organization, manpower, and major weapon and equipment systems, including armored infantry fighting vehicle look-alikes. Also, Chapter I, paragraph 11.2, states that a participating State will provide data on new types or versions of major weapon and equipment systems at the latest, when it deploys the systems concerned for the first time in the zone of application for CSBMs, and paragraph 13 calls for exchanging information on plans for the deployment of major weapon and equipment systems.

Russia has failed again to provide information on its military forces in Georgia's separatist regions of Abkhazia and South Ossetia and claims their territory is not part of the VD11 zone of application. However, Abkhazia and South Ossetia are within the internationally recognized borders of Georgia and are considered by all other participating States to be part of Georgia and thus part of the VD11 zone of application.

Russia also failed to provide information on two Russian units in Crimea, Ukraine, in its VD11 data as of January 1, 2016, and did not include these units in its annual data as of January 1, 2017, although it provided information on other units in Crimea, Ukraine. Both units – the 126th Coastal Defense Brigade and the 68th Naval Engineering Regiment – were established in 2014 and featured prominently in military exercises in Crimea during 2016, according to statements by senior Russian military officials and Russian press reports. Russia currently declares one other naval engineering unit located in Kaliningrad.

Russia failed again to report the BRM-1K armored combat vehicle. Additionally, Russia failed to include the Su-30SM multirole fighter and the Ka-52 attack helicopter in its data as of January 1, 2016, and did not include them in its annual data as of January 1, 2017. In addition, Russia has not provided data about either system as VD11 requires for new types or versions of major weapon and equipment systems.

VD11, Chapter V, paragraph 38, states that participating States will provide notification in writing to all other participating States 42 days or more in advance of the start of notifiable military activities. Chapter V, paragraph 41, states no-notice exercises that exceed notification thresholds need not be notified in advance, but are to be notified at the time the troops involved commence such activities and are otherwise subject to Chapter V reporting criteria. In addition, Chapter VI, paragraph 58 stipulates that no-notice notifiable activities with a duration of more

than 72 hours are subject to observation when such activities continue beyond 72 hours while the VD11 observation thresholds are met or exceeded.

Russia continues to conduct no-notice large-scale exercises, including in its Southern Military District, and to report them as being below VD11 thresholds and thus not subject to VD11 notification and observation requirements. In addition to the August 2016 “snap” inspection notification indicating that over 100,000 personnel would participate overall, Russia provided information in February 2016 about a no-notice combat readiness inspection of units in the Southern and Central Military Districts, the Airborne Troops, and Military Transport aviation. In June 2016, it provided a separate notification of an inspection in all military districts. Both notifications cited personnel numbers below Chapter V notification thresholds stated that VD11 notification provisions did not apply, and noted that the information was “provided in the spirit of good will.”

Although the overall personnel numbers of 100,000 troops for the August 2016 “snap” inspection are well above VD11 notification and observation thresholds, not all forces or types of activity are, in fact, subject to counting under VD11. It is also not clear whether the higher numbers were peak or cumulative, which could affect whether VD11 thresholds were exceeded. There is no explicit requirement for a participating State to account for differences between numbers provided in VD11 notifications and overall personnel numbers otherwise associated with an exercise or military activity, which are likely to include categories of military activity that are not required to be notified under the VD11.^f Russia did not respond to calls to explain these differences, and it cannot be determined whether the August “snap” inspection, in particular, met the criteria for notification and observation in VD11.

EFFORTS TO RESOLVE ADHERENCE CONCERNS

During 2016, the United States and other participating States continued to raise in the OSCE the grave issues of Russia’s attempted annexation of Crimea and Russian aggression in Eastern Ukraine, which run counter to OSCE security commitments recalled in VD11. The United States has raised concerns about large-scale “snap” inspections and no-notice exercises that could be in excess of

^f Examples of activities that are not required to be notified under VD11 but could be included in publicly announced numbers include command post exercises that do not involve activities in the field, military activities that are not conducted as a single activity under a single command structure, military activities outside the zone of application, or the activities of internal security forces, seagoing naval forces (except for amphibious operations), air defense forces; strategic, transport, and most tactical aviation; and strategic rocket forces.

VD11 Chapter V notification thresholds if they correspond to activities notifiable under VD11 and has called on Russia to provide greater transparency. The United States and other OSCE partners proposed updates to VD11 to provide additional transparency on these types of military activities, but Russia has thus far refused to engage in any serious discussion of these proposals.

REPUBLIC OF AZERBAIJAN (AZERBAIJAN)

FINDING

The Republic of Azerbaijan (Azerbaijan) failed to notify at least one major military exercise or activity for calendar year 2016.

CONDUCT GIVING RISE TO ADHERENCE CONCERNS

Azerbaijan has joined the consensus adoption of each version of the Vienna Document (1990, 1992, 1994, 1999, and 2011) and of subsequent “Vienna Document Plus” Decisions. Azerbaijan’s adherence to the Vienna Document was first addressed in the Compliance Report in 1998.

Azerbaijan failed to provide notification of at least one major military exercise or activity during calendar year 2016.

ANALYSIS OF ADHERENCE CONCERNS

VD11, Chapter V, paragraph 38, states that participating States will provide notification in writing to all other participating States 42 days or more in advance of the start of notifiable military activities. Chapter V, paragraph 41, states no-notice exercises that exceed notification thresholds need not be notified in advance, but are to be notified at the time the troops involved commence such activities and are otherwise subject to Chapter V reporting criteria. Per the Vienna Document Plus Decision No. 9/12, at least one major military exercise or activity is to be notified if no military activity meets Chapter V notification thresholds.

Azerbaijan conducts and publicizes exercises, while continuing to fail to provide notification of at least one major military exercise or activity. On June 17, 2016, Azerbaijani press reported that the Defense Ministry was conducting an exercise from June 19-24, 2016, involving 25,000 servicemembers, more than 300 tanks and armored combat vehicles and up to 40 military aircraft. In November

2016, Azerbaijan released a public statement announcing that it would conduct command and staff exercises involving land, air, air defense, and seagoing naval forces from November 12-18, 2016, involving “up to” 60,000 military personnel, 50 aircraft/helicopters, and more than 150 battle tanks. In both instances the number of personnel would exceed VD11 thresholds for notification if over 9,000 personnel were determined to be subject to notification.

EFFORTS TO RESOLVE ADHERENCE CONCERNS

The United States shared with Azerbaijan concerns about lack of transparency for large-scale exercises. In response to questions as to why the November exercise had not been notified, Azerbaijan stated that each component command or other involved unit was inspected separately and consecutively over a period of seven days and that given the scenario of the exercises and number of weapons systems involved, the exercise was not subject to notification under VD11. Azerbaijan did not provide any information on peak exercise participation, for any given day of the exercise, out of the 25,000 total participating troops reported in the press or on its failure to provide annual notification of at least one exercise or activity even if no military activity meets Chapter V thresholds.

KYRGYZ REPUBLIC (KYRGYZSTAN)

FINDING

The Kyrgyz Republic (Kyrgyzstan) failed to provide CSBMs data on its armed forces (as of January 1, 2016) by December 31, 2016. Also, Kyrgyzstan failed to notify at least one major military exercise or activity for calendar year 2016.

CONDUCT GIVING RISE TO ADHERENCE CONCERNS

Kyrgyzstan has joined the consensus adoption of each version of the Vienna Document (1990, 1992, 1994, 1999, and 2011) and of subsequent “Vienna Document Plus” Decisions. Kyrgyzstan’s adherence to the Vienna Document was first addressed in the Compliance Report in 2001.

Kyrgyzstan did not provide by December 15, 2015, its annual VD11 data valid as of January 1, 2016. Kyrgyzstan did not provide VD11 data at any time during 2016, including at the most recent annual VD11 exchange of CSBMs data

on December 15, 2016. Kyrgyzstan has not provided data since it provide data valid as of January 1, 2014.

Kyrgyzstan failed to provide advance notification of at least one major military exercise or activity during calendar year 2016.

ANALYSIS OF ADHERENCE CONCERNS

VD11, Chapter I, paragraph 10, states that participating States will exchange annually information on their military forces in the zone of application not later than December 15 of each year.

VD11, Chapter V, paragraph 38, states that participating States will provide notification in writing to all other participating States 42 days or more in advance of the start of notifiable military activities. Per the Vienna Document Plus Decision No. 9/12, at least one major military exercise or activity is to be notified if no military activity meets Chapter V notification thresholds.

EFFORTS TO RESOLVE ADHERENCE CONCERNS

The United States has discussed bilaterally with Kyrgyzstan its VD11 commitments and has encouraged Kyrgyzstan to provide its overdue CSBM data and to return to its previous practice of providing an annual CSBMs data declaration.

REPUBLIC OF UZBEKISTAN (UZBEKISTAN)

FINDING

The Republic of Uzbekistan (Uzbekistan) failed to provide CSBMs data on its armed forces (as of January 1, 2016) by December 31, 2016. Also, Uzbekistan failed to notify at least one major military exercise or activity for calendar year 2016.

CONDUCT GIVING RISE TO ADHERENCE CONCERNS

Uzbekistan has joined the consensus adoption of each version of the Vienna Document (1990, 1992, 1994, 1999, and 2011) and of subsequent “Vienna

Document Plus” Decisions. Uzbekistan’s adherence to the Vienna Document was first addressed in the Compliance Report in 2000.

Uzbekistan did not provide by December 15, 2015 its annual VD11 data valid as of January 1, 2016. Uzbekistan did not provide VD11 data at any time during 2016, including at the most recent annual VD11 exchange of CSBMs data on December 15, 2016. Uzbekistan has not provided data since February 12, 2003, when it provided data valid as of January 1, 2003.

Uzbekistan failed to provide advance notification of at least one major military exercise or activity during calendar year 2016.

ANALYSIS OF ADHERENCE CONCERNS

VD11, Chapter I, paragraph 10, states that participating States will exchange annually information on their military forces in the zone of application not later than December 15 of each year.

VD11, Chapter V, paragraph 38, states that participating States will provide notification in writing to all other participating states 42 days or more in advance of the start of notifiable military activities. Per the Vienna Document Plus Decision No. 9/12, at least one major military exercise or activity is to be notified if no military activity meets Chapter V notification thresholds.

EFFORTS TO RESOLVE ADHERENCE CONCERNS

The United States has discussed bilaterally with Uzbekistan its VD11 commitments and failure to provide an annual CSBMs data declaration and has encouraged Uzbekistan to provide its overdue CSBMs data and to return to its previous practice of providing an annual CSBMs data declaration.

MISSILE NONPROLIFERATION COMMITMENTS

The Missile Technology Control Regime (MTCR) is the key multilateral mechanism addressing the proliferation of missiles and missile-related technology. In addition, the United States holds frequent bilateral discussions on missile-related nonproliferation issues, often with States that are not members of multilateral regimes.

Missile Technology Control Regime. The MTCR is a voluntary arrangement among Partner countries sharing a common interest in controlling missile proliferation. The MTCR is not a treaty and it does not impose legally binding obligations on participating countries. Rather, it is an informal political understanding among States that seek to limit the proliferation of missiles and missile technology. The MTCR Partner countries control exports of a common list of controlled items (the MTCR Equipment, Software, and Technology Annex, also referred to as the MTCR Annex) according to a common export control policy (the MTCR Guidelines). The Guidelines and Annex are implemented according to each country's national legislation and regulations. Membership in the MTCR has grown steadily since the Regime's creation in 1987, and 35 countries are now members.

The United States has sought and received separate, bilateral political commitments from nations to limit missile proliferation activities that are addressed below. Additional country information is provided in higher classification reporting.

COUNTRY ASSESSMENTS FOR NON-MTCR MISSILE PROLIFERATION-RELATED COMMITMENTS

PEOPLE'S REPUBLIC OF CHINA (CHINA)

FINDING

In 2016, Chinese entities continued to supply missile programs of proliferation concern.

CONDUCT GIVING RISE TO ADHERENCE CONCERNS

In November 2000, the People's Republic of China (China) made a public commitment not to assist "in any way, any country in the development of ballistic missiles that can be used to deliver nuclear weapons (i.e., missiles capable of delivering a payload of at least 500 kilograms to a distance of at least 300 kilometers)."

ANALYSIS OF ADHERENCE CONCERNS

As mentioned above, China committed in a November 2000 public statement not to assist "in any way, any country in the development of ballistic missiles that can be used to deliver nuclear weapons (i.e., missiles capable of delivering a payload of at least 500 kilograms to a distance of at least 300 kilometers)."

EFFORTS TO RESOLVE ADHERENCE CONCERNS

The United States continues to engage regularly with China on missile nonproliferation issues.

**PART V: STATES' ADHERENCE TO
CERTAIN UNILATERAL COMMITMENTS**

This part of the Compliance Report concerns States' adherence to certain commitments undertaken unilaterally by those States that do not impose obligations under international law. Although the United States is not a participant in these commitments, they are included in the Compliance Report as a matter of discretion.

MORATORIA ON NUCLEAR TESTING

By September 1996, each of the nuclear-weapons States (NWS) under the NPT – China, France, Russia, the United Kingdom, and the United States – had unilaterally declared a nuclear testing moratorium. The United States currently defines its own nuclear testing moratorium as a commitment not to conduct “nuclear explosive” tests, and has made clear that this means any test that produces a self-sustaining, supercritical chain reaction of any kind whether for weapons or peaceful purposes. The scope of the other unilateral policy declarations has not been publically defined by the declaring state. Thus, it is difficult to assess the adherence of a given state with its own moratorium. Additional country information is provided in higher classification reporting.

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**U.S. Department of State
Bureau of Arms Control, Verification and Compliance
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UNCLASSIFIED