H.R. 2500—FY20 NATIONAL DEFENSE AUTHORIZATION BILL

SUBCOMMITTEE ON STRATEGIC FORCES

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This section would provide the sense of Congress on the history and benefits of the Open Skies Treaty. This section would also prohibit the use of Department of Defense funds to suspend, terminate, or withdraw from the Open Skies Treaty, unless certain certification requirements are made and a joint waiver is submitted to the congressional defense and House Committee on Foreign Affairs and the Senate Committee on Foreign Relations by the Secretary of Defense and the Secretary of State. This section would further update reporting requirements on flights conducted under the Open Skies Treaty.

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This section would require that the Secretary provide an assessment of various benefits and risks of using each signal that could be used in the prototype receiver and of including U.S. and allied monitoring networks, and assess the impact on current receiver and antenna designs and the value of cooperative efforts with U.S. allies.

This section would require the SDA Director to provide a briefing to the congressional defense committees, not later than 90 days after the date of the enactment of this Act, on the costs, timelines, and plan for how the results of the program could be incorporated into future blocks of the Global Positioning System (GPS) Military User Equipment program, and on the analysis and recommendations of the related MITRE Corporation report.

This section would also require the SDA Director to submit to the congressional defense committees, the House Committee on Foreign Affairs, and the Senate Committee on Foreign Relations, not later than 120 days after date of the enactment of this Act, a report including an explanation of how the Secretary intends to comply with section 1609 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115–232); an outline of any potential cooperative efforts acting in accordance with the North Atlantic Treaty Organization, the European Union, or Japan that would support such compliance; an assessment of the potential to host, or incorporate through software defined payloads, Global Positioning System M-code functionality onto allied GNSS systems; and an assessment of new or enhanced monitoring capabilities that would be needed to incorporate GNSS functionality into weapon systems of the Department.

This section would limit the obligation or expenditure of funds to 75 percent of funds for the Military GPS User Equipment program until the required briefing and report have been submitted to Congress.

Section 16XX—Modification to Reports on Certain Solid Rocket Motors

This section would include a technical amendment to section 1696 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115-232).

Section 16XX—Commercial Space Situational Awareness Capabilities

This section would require the Secretary of Defense, acting through the Director of the Space Development Agency, to procure, not later than 90 days after the date of the enactment of this Act, commercial space situational awareness (SSA) services by awarding at least two contracts for such services. This section would also limit the obligation or expenditure of funds to 75 percent of funds for fiscal year 2020 for the enterprise space battle management command and control until the date on which the Secretary certifies to the congressional defense committees that the Secretary has awarded these contracts. This section would also require a report from the Director of the Space Development Agency, in coordination with the Secretary of the Air Force, on using commercial SSA services to fill the SSA requirements that were not filled in the Joint Space Operations Center Mission Center.

Section 16XX—Annual Determination on Plan on Full Integration and Exploitation of Overhead Persistent Infrared Capability

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This section would require the Secretary of Defense to notify Congress of official Nuclear Weapons Council meetings and share, within 30 days, a summary, decision documents, related materials, agendas, and decisions.

Section 16xx—Prohibition on Availability of Funds for Deployment of Low-Yield Ballistic Missile Warhead

This section would prohibit funds for the deployment of the W76-2 low-yield warhead.

Section 16xx—Permanent Prohibition on Availability of Funds for Mobile Variant of the Ground-Based Strategic Deterrent Missile

This section would make permanent the prohibition on a mobile variant of the Ground-Based Strategic Deterrent.

Section 16XX—Plan on Nuclear Command, Control, and Communications Systems

This section would require a report from the Secretary of Defense, in coordination with the Commander of United States Strategic Command, not later than 270 days after the date of the enactment of this Act, on near-term and long-term plans for nuclear command, control, and communications, including planned architectures, requirements, classification requirements, supply chain security, timeline and cost estimates for long-term investments, options for potential negotiation with adversaries, and any other matters the Secretary wishes to include. This section would also require an interim briefing on these issues not later than 90 days after the date of the enactment of this Act.

Section 16xx—Elimination of Conventional Requirement for Long-Range Standoff Weapon

This provision would eliminate the requirement for a conventional variant of the Long-Range Standoff Weapon.

Section 16XX—Extension of Annual Briefing on the Costs of Forward-Deploying Nuclear Weapons in Europe

This section would extend the requirement for the Secretary of Defense to provide a briefing on costs to forward-deploy nuclear weapons in Europe to 2024.

SUBTITLE E—MISSILE DEFENSE PROGRAMS

Section 16XX—Organization, Authorities, and Billets of the Missile Defense Agency

This section would require an independent federally funded research and development center assessment of the Missile Defense Agency (MDA) alignment to the Under Secretary of Defense for Research and Engineering.

Further, this section would require the Secretary of Defense to notify the congressional defense committees before any of MDA's unique acquisition authorities were changed, and would prohibit changing the missile defense requirements generation process managed by U.S. Strategic Command. This section would also require congressional notification prior to transfer of civilian and military billets from MDA to other organizations within the Under Secretary of Defense for Research and Engineering.

Section 16XX—National Missile Defense Policy

This section would update U.S. national missile defense policy, in accordance with the 2019 Missile Defense Review, and would require the Director of Cost Assessment and Program Evaluation to provide a briefing to the House

Committee on Armed Services on the programmatic impacts resulting from implementation of the 2019 Missile Defense Review.

Section 16XX—Limitation on Availability of Funds for Lower Tier Air and Missile Sensor

This section would limit the obligation or expenditure of funds to 75 percent of funds for fiscal year 2020 for the Army for the Lower Tier Air and Missile Defense Sensor until the Secretary of the Army provides a report to the congressional defense committees on the results garnered in the test events held in the third quarter of fiscal year 2019, and the decision of the Army to award a contract for initial operational capability based on those test events.

Section 16XX—Development of Hypersonic and Ballistic Missile Tracking Space Sensor Payload

This section would direct the Director of the Missile Defense Agency to continue development of a sensor payload for a space sensor layer for hypersonic and ballistic missile tracking, in coordination with the Director of the Space Development Agency and the Secretary of the Air Force, on the overall constellation architecture. Further, this section would require the Director to submit an updated plan regarding requirements, cost, schedule, and deployment of the architecture and sensor payload to the congressional defense committees.

Section 16XX—Requirement for Testing of Redesigned Kill Vehicle Prior to Production

This section would express the sense of Congress that the Director of the Missile Defense Agency must address technical issues discovered in the redesigned kill vehicle. The section would also update Secretary of Defense waiver requirements of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115-232) should the Missile Defense Agency move forward with procurement of components prior to flight testing.

Section 16XX—Command and Control, Battle Management, and Communications Program

This section would prohibit the Missile Defense Agency (MDA) from releasing command and control, battle management, and communications systems to foreign partners unless certain requirements are met.

Section 16XX—Missile Defense Radar in Hawaii

This section would allow the Missile Defense Agency to construct portions of the homeland defense radar-Hawaii with research, development, test, and evaluation funding.

Section 16XX—Missile Defense Interceptor Site in Contiguous United States

This section would require the Secretary of Defense to designate an interceptor site for potential future deployment in the contiguous United States.

SUBTITLE F—OTHER MATTERS

Section 16XX—Conventional Prompt Global Strike Weapon System

This section would express the sense of Congress that the Under Secretary of Defense for Policy has not responded to a reporting requirement from the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115-232) regarding miscalculation and ambiguity risks of hypersonic weapons. This section would also prohibit development that would be exclusive to a submarine-launched platform and would direct the Secretary of the Navy to submit a report to the congressional defense committees on what would be required to integrate conventional prompt strike capability into surface ships.

DIVISION C—DEPARTMENT OF ENERGY NATIONAL SECURITY AUTHORIZATIONS AND OTHER AUTHORIZATIONS

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This section would raise the number of full-time equivalent positions the Administrator for Nuclear Security would be able to hire before notifying Congress, and amend reporting requirements related to support service contracts.

Section 31XX—Elimination of Limitation on Availability of Funds Relating to Submission of Annual Report on Unfunded Priorities

This section would repeal the limitation on funds related to submission of the annual report on unfunded priorities.

Section 31XX—Office of Cost Estimating and Program Evaluation

This section would express the sense of Congress on the staffing level of the Office of Cost Estimation and Program Evaluation (CEPE), mandate that the Director of CEPE report directly to the National Nuclear Security Administration Administrator, and require the Administrator for Nuclear Security to provide a briefing to the House Committee on Armed Services not later than 180 days after the date of the enactment of this Act on the plan to fully staff CEPE.

Section 31XX—Annual Certification of Shipments to Waste Isolation Pilot Plant

This section would extend the certification of shipments of waste to the Waste Isolation Pilot Plant from a 3-year period to a 10-year period.

Section 31xx—Repeal of Limitation on Availability of Funds for Acceleration of Nuclear Weapons Dismantlement

This section would amend section 3125 of the National Defense Authorization Act for Fiscal Year 2017 (Public Law 114-328) to terminate the prohibition on accelerating nuclear weapons dismantlement and the maximum funds that may be obligated or expended to carry out nuclear weapons dismantlement and disposition activities.

Section 31xx—Modification to Plutonium Pit Production Capacity

This section would repeal the requirement for the Secretary of Energy to demonstrate the capability to produce war reserve plutonium pits at a rate sufficient to produce 80 pits per year by 2027.

TITLE XXXII—DEFENSE NUCLEAR FACILITIES SAFETY BOARD

LEGISLATIVE PROVISIONS

Section 32xx—Authorization

This section would authorize $29,450,000 for the Defense Nuclear Facilities Safety Board.

Section 32XX—Improvements to the Defense Nuclear Facilities Safety Board

This section would create a director of operations for the Defense Nuclear Facilities Safety Board, establish a floor for the number of full-time equivalent employees, and codify the Board's prompt and unfettered access to defense nuclear facilities.

BILL LANGUAGE

SEC. 2___[Log 69888]. CONTRACT FOR NATIONAL SECURITY RESEARCH STUDIES.

(a) CONTRACT AUTHORITY.—The Secretary of Defense, acting through the Under Secretary of Defense for Acquisition and Sustainment, shall seek to enter into a contract with a federally funded research and development center under which the private scientific advisory group known as ''JASON'' will provide national security research studies to the Department of Defense.

(b) TERMS OF CONTRACT.—The contract entered into under subsection (a) shall be an indefinite delivery-indefinite quantity contract with terms substantially similar to the terms of the contract in effect before March 28, 2019, under which JASON provided national security research studies to the Department of Defense (solicitation number HQ0034-19-R-0011 for JASON National Security Research Studies).

(c) TERMINATION.—The Secretary of Defense may not terminate the contract under subsection (a) until a period of 90 days has elapsed following the date on which the Secretary notifies the congressional defense committees of the intent of the Secretary to terminate the contract.

SEC. ___. [LOG 69309] PROHIBITION ON THE USE OF FUNDS TO SUSPEND, TERMINATE, OR WITHDRAW THE UNITED STATES FROM THE OPEN SKIES TREATY.

(a) FINDINGS.—Congress finds the following:

(1) Since 1992, the United States has supported the Open Skies Treaty with dedicated aircraft and observation mission teams, conducting several hundred training and observation missions with other countries.

(2) This commitment by the United States has helped to confirm and refine operational procedures, to improve implementation and effectiveness of the Open Skies Treaty, and provide United States leadership and engagement opportunities that have supported broader objectives and improved European transparency.

(3) The Open Skies Treaty provides signatories with the ability to gather information through aerial imaging on military forces and activities of concern to them which contributes to greater transparency and stability in the Euro-Atlantic region, which benefits both the United States and United States allies and partners.

(4) In order to maximize United States benefits from the Open Skies Treaty, the United States needs to recapitalize and modernize its aircraft and sensors, and the ongoing work to certify the Digital Visual Imaging System and the new effort for the Open Skies Treaty Aircraft Recapitalization (OSTAR) are critical to United States leadership and involvement in the Treaty.

(5) The current 1960s-era United States aircraft used with respect to the Open Skies Treaty are ill-suited to extreme operating environments in Russia and experience regular, unplanned maintenance issues, often resulting in mission delays or cancellations.

(6) The OSTAR effort will provide a United States aircraft capability that allows the United States to fully implement the goals and objectives of the Open Skies Treaty.

(7) The United States also demonstrated in December 2018, along with United States allies of Canada, the United Kingdom, France, Germany, and Romania, that Open Skies Treaty mechanisms can be used during times of crisis.

(8) Following Russia's unprovoked attack on Ukrainian vessels near the Kerch Strait, the United

States and United States allies conducted an ''extraordinary'' Open Skies Treaty observation mission over Ukraine to reaffirm commitment to Ukraine.

(b) SENSE OF CONGRESS.—It is the sense of Congress that—

(1) the United States should forcefully address Russian violations of its obligations under the Open Skies Treaty; and

(2) due to the significant benefits that observation missions under the Open Skies Treaty provide to the United States and United States allies, the United States should commit to continued participation in the Treaty.

(c) PROHIBITION.—

(1) IN GENERAL.—Except as provided in paragraph (2), none of the funds authorized to be appropriated by this Act or otherwise made available to the Department of Defense for fiscal year 2020 may be obligated or expended to take any action to suspend, terminate, or withdraw the United States from the Open Skies Treaty.

(2) EXCEPTION.—The prohibition in paragraph (1) shall not apply if the Secretary of Defense and the Secretary of State jointly determine and certify to the congressional defense committees, the Com-

mittee on Foreign Affairs of the House of Representatives, and the Committee on Foreign Relations of the Senate, that—

(A) Russia is in material breach of its obligations under the Open Skies Treaty and is not taking steps to return to compliance with such obligations; and

(B) all other state parties to the Open Skies Treaty concur in the determination of the Secretaries pursuant to subparagraph (A).

(d) REPEAL OF LIMITATION ON USE OF FUNDS TO VOTE TO APPROVE OR OTHERWISE ADOPT ANY IMPLEMENTING DECISION OF THE OPEN SKIES CONSULTATIVE COMMISSION AND MODIFICATIONS TO REPORT.—

(1) IN GENERAL.—Section 1236 of the National Defense Authorization Act for Fiscal Year 2017 (Public Law 114–328; 130 Stat. 2491) is amended—

(A) by striking subsections (a) and (b); and

(B) by redesignating subsections (c), (d), (e), and (f) as subsections (a), (b), (c), and (d), respectively.

(2) MODIFICATIONS TO REPORT.—Subsection (a) of such section, as so redesignated, is amended—

(A) in the heading, by striking ''QUARTERLY'' and inserting ''BI-ANNUAL'';

(B) in paragraph (1)—

(i) by inserting ''the Secretary of State,'' before ''the Secretary of Energy'';

(ii) by striking ''quarterly basis'' and inserting ''bi-annual basis'';

(iii) by striking ''by the Russian Federation over the United States'' and inserting ''by all parties to the Open Skies Treaty, including the United States, under the Treaty''; and

(iv) by striking ''calendar quarter'' and inserting ''preceding 6-month period''; and

(C) in paragraph (2), by striking subparagraphs (B), (C), and (D) and inserting the following:

''(B) In the case of an observation flight by the United States, including an observation flight over the territory of the Russian Federation—

''(i) an analysis of data collected that supports United States intelligence and military collection goals; and

''(ii) an assessment of data collected regarding military activity that could not be collected through other means.

''(C) In the case of an observation flight over the territory of the United States—

''(i) an analysis of whether and the extent to which any United States critical infrastructure was the subject of image capture activities of such observation flight;

''(ii) an estimate for the mitigation costs imposed on the Department of Defense or other United States Government agencies by such observation flight; and

''(iii) assessment of how such information is used by party conducting the observation flight, for what purpose, and how the information fits into the overall collection posture.''.

(3) FORM.—Subsection (c) of such section, as so redesignated, is amended by striking ''certification, report, and notice'' and inserting ''report''.

(4) DEFINITIONS.—Subsection (d) of such section, as so redesignated, is amended—

(A) by striking paragraphs (3) and (6); and

(B) by redesignating paragraphs (4), (5), and (7) as paragraphs (3), (4), and (5), respectively.

(e) OPEN SKIES: IMPLEMENTATION PLAN.—Section 1235(a) of the National Defense Authorization Act for Fiscal Year 2018 (Public Law 115–91; 131 Stat. 1660) is amended—

(1) in paragraph (1)—

(A) by striking ''during such fiscal year'' and inserting ''during a calendar year''; and

(B) by striking ''the President submits'' and all that follows and inserting ''the Secretary of Defense provides to the appropriate congressional committees a briefing on a plan described in paragraph (2) with respect to such calendar year.'';

(2) in paragraph (2), by striking ''such fiscal year'' and inserting ''such calendar year''; and

(3) in paragraph (3), by striking ''a fiscal year and submit the updated plan'' and inserting ''a calendar year and provide a briefing on the updated plan''.

(f) DEFINITION OF OPEN SKIES TREATY; TREATY.—In this section, the term ''Open Skies Treaty'' or ''Treaty'' means the Treaty on Open Skies, done at Helsinki March 24, 1992, and entered into force January 1, 2002.

SEC. 16___.[Log 69498] PROTOTYPE PROGRAM FOR MULTI-GLOBAL NAVIGATION SATELLITE SYSTEM RECEIVER DEVELOPMENT.

(a) PROTOTYPE MULTI-GNSS PROGRAM.—The Secretary of Defense shall establish under the Space Development Agency a program to prototype an M-code based, multi-global navigation satellite system receiver that is capable of receiving covered signals to increase the resilience and capability of military position, navigation, and timing equipment against threats to the Global Positioning System and to deter the likelihood of attack on the worldwide Global Positioning System by reducing the benefits of such an attack.

(b) ELEMENTS.—In carrying out the program under subsection (a), the Secretary shall—

(1) with respect to each covered signal that could be received by the prototype receiver under such program, conduct an assessment of the relative benefits and risks of using that signal, including with respect to any existing or needed monitoring infrastructure that would alert users of the Department of Defense of potentially corrupted signal information, and the cyber risks and challenges of in-

corporating such signals into a properly designed receiver;

(2) ensure that monitoring systems are able to include any monitoring network of the United States or allies of the United States;

(3) conduct an assessment of the benefits and risks, including with respect to the compatibility of non-United States global navigation satellite system signals with existing position, navigation, and timing equipment of the United States, and the extent to which the capability to receive such signals would impact current receiver or antenna design; and

(4) conduct an assessment of the desirability of establishing such program in a manner that—

(A) is a cooperative effort, coordinated with the Secretary of State, between the United States and the allies of the United States that may also have interest in funding a multi-global navigation satellite system and M-code program;

(B) the Secretary of Defense, in coordination with the Secretary of States, ensures that the United States has access to sufficient insight into trusted signals of allied systems to

assure potential reliance by the United States on such signals.

(c) BRIEFING.—Not later than 90 days after the date of the enactment of this Act, the Director of the Space Development Agency, in coordination with the Air Force GPS User Equipment Program office, shall provide to the congressional defense committees a briefing on a plan to carry out the program under subsection (a) that includes—

(1) the estimated cost, including total cost and out-year funding requirements;

(2) the schedule for such program;

(3) a plan for how the results of the program could be incorporated into future blocks of the Global Positioning System military user equipment program; and

(4) the recommendations and analysis contained in the study sponsored by the Department of Defense conducted by the MITRE Corporation on the risks, benefits, and approaches to adding multi-global navigation satellite system capabilities to military user equipment.

(d) REPORT.—Not later than 120 days after the date of the enactment of this Act, the Secretary of Defense shall submit to the congressional defense committees, the

Committee on Foreign Affairs of the House of Representatives, and the Committee on Foreign Relations of the Senate a report containing—

(1) an explanation of how the Secretary intends to comply with section 1609 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115–232; 132 Stat. 2110);

(2) an outline of any potential cooperative efforts acting in accordance with the North Atlantic Treaty Organization, the European Union, or Japan that would support such compliance;

(3) an assessment of the potential to host, or incorporate through software defined payloads, Global Positioning System M-code functionality onto allied global navigation satellite system systems; and

(4) an assessment of new or enhanced monitoring capabilities that would be needed to incorporate global navigation satellite system functionality into weapon systems of the Department.

(e) LIMITATION.—Of the funds authorized to be appropriated by this Act or otherwise made available for fiscal year 2020 for increment 2 of the acquisition of military Global Positioning System user equipment terminals, not more than 75 percent may be obligated or expended until

the date on which the briefing has been provided under subsection (c) and the report has been submitted under subsection (d).

(f) DEFINITIONS.—In this section:

(1) The term ''allied systems'' means—

(A) the Galileo system of the European Union;

(B) the QZSS system of Japan; and

(C) upon designation by the Secretary of Defense, in consultation with the Director of National Intelligence—

(i) the NAVIC system of India; and

(ii) any similarly associated wide area augmentation systems.

(2) The term ''covered signals''—

(A) means global navigation satellite system signals from—

(i) allied systems; and

(ii) non-allied systems; and

(B) includes both trusted signals and open signals.

(3) The term ''M-code'' means, with respect to global navigation satellite system signals, military code that provides enhanced positioning, navigation,

and timing capabilities and improved resistance to existing and emerging threats, such as jamming.

(4) The term ''non-allied systems'' means—

(A) the Russian GLONASS system; and

(B) the Chinese Beidou system.

(5) The term ''open signals'' means global navigation satellite system that do not include encryption or other internal methods to authenticate signal information.

(6) The term ''trusted signals'' means global navigation satellite system signals that incorporate encryption or other internal methods to authenticate signal information.

SEC. 16___.[Log 69803] MODIFICATION TO REPORTS ON CERTAIN SOLID ROCKET MOTORS.

Section 1696(b) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115–232; 132 Stat. 2171) is amended—

(1) by striking ''rockets or missiles'' and inserting ''rockets, missiles, or space launch services'' each place it appears; and

(2) in paragraph (2)(C), by striking ''rocket or missile'' and inserting ''rocket, missile, or space launch service''.

SEC. 16___.[Log 69891] COMMERCIAL SPACE SITUATIONAL AWARENESS CAPABILITIES.

(a) FINDINGS.—Congress finds the following:

(1) The Secretary of the Air Force is responsible for developing the hardware and software systems to provide space situational awareness data to the Commander of the United States Strategic Command to meet warfighter requirements.

(2) There have been significant delays and cost increases in the program of record that underpin space situational awareness.

(3) The Secretary terminated the Joint Space Operations Center mission center and decided to operationally accept the Joint Space Operations Center mission center Increment 2 despite the fact that only three of 12 planned capabilities in Joint Space Operations Center Mission Center Increment 2 were accepted for use in operations.

(4) Multiple commercial vendors have the current capability to detect, maintain custody of, and provide analytical products that can address the warfighter space situational awareness requirements that were not filled in the Joint Space Operations

Center Mission Center and that have been impacted by significant delays in the program of record.

(b) PROCUREMENT.—Not later than 90 days after the date of the enactment of this Act, the Director of the Space Development Agency shall procure commercial space situational awareness services by awarding at least two contracts for such services.

(c) LIMITATION.—Of the funds authorized to be appropriated by this Act or otherwise made available for fiscal year 2020 for the enterprise space battle management command and control, not more than 75 percent may be obligated or expended until the date on which the Secretary of Defense, without delegation, certifies to the congressional committees that the Secretary has awarded the contracts under subsection (b).

(d) REPORT.—Not later than January 31, 2020, the Director of the Space Development Agency, in coordination with the Secretary of the Air Force, shall submit to the congressional defense committees a report on using commercial space situational awareness services to fill the space situational awareness requirements that were not filled in the Joint Space Operations Center Mission Center. The report shall include the following:

(1) A description of current domestic commercial capabilities to detect and track space objects in

low earth orbit below the 10 centimeter threshold of legacy systems.

(2) A description of current domestic best-in-breed commercial capabilities that can meet such requirements.

(3) Estimates of the timelines, milestones, and funding requirements to procure a near-term solution to meet such requirements until the development programs of the Air Force are projected to be operationally fielded.

(e) COMMERCIAL SPACE SITUATIONAL AWARENESS SERVICES DEFINED.—In this section, the term ''commercial space situational awareness services'' means commercial space situational awareness processing software and data to address warfighter requirements and fill gaps in current space situational capabilities of the Air Force.

SEC. 16___.[Log 70108] ANNUAL DETERMINATION ON PLAN ON FULL INTEGRATION AND EXPLOITATION OF OVERHEAD PERSISTENT INFRARED CAPABILITY.

Section 1618(c) of the National Defense Authorization Act for Fiscal Year 2016 (Public Law 114–92; 10 U.S.C. 2431 note) is amended by striking ''for a fiscal year'' and inserting ''for each fiscal year preceding fiscal year 2029''.

SEC. 16___.[Log 69448] NOTIFICATION OF MEETINGS HELD BY THE NUCLEAR WEAPONS COUNCIL.

Section 179(b)(3) of title 10, United States Code, is amended by adding at the end the following new sentence: ''Not later than 30 days after such meeting, the Chairman shall submit to Congress a notification of such meeting, including such agenda and documents and a summary of any decisions made at such meeting relating to the matters under subsection (d).''.

SEC. 16___.[Log 69758] PROHIBITION ON AVAILABILITY OF FUNDS FOR DEPLOYMENT OF LOW-YIELD BALLISTIC MISSILE WARHEAD.

None of the funds authorized to be appropriated by this Act or otherwise made available for fiscal year 2020 for the Department of Defense may be used to deploy the W76–2 low-yield warhead.

SEC. 16___.[Log 69773] PERMANENT PROHIBITION ON AVAILABILITY OF FUNDS FOR MOBILE VARIANT OF GROUND-BASED STRATEGIC DETERRENT MISSILE.

Section 1664 of the National Defense Authorization Act for Fiscal Year 2017 (Public Law 114–328; 130 Stat. 2615), as most recently amended by section 1666 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115–232), is amended by striking ''for any of fiscal years 2017 through 2020'' and inserting ''for fiscal year 2017 or any fiscal year thereafter''.

SEC. 16___.[Log 69999] PLAN ON NUCLEAR COMMAND, CONTROL, AND COMMUNICATIONS SYSTEMS.

(a) PLAN.—Not later than 270 days after the date of the enactment of this Act, the Secretary of Defense, in coordination with the Commander of the United States Strategic Command, shall submit to the appropriate congressional committees a plan on the future of the nuclear command, control, and communications systems.

(b) MATTERS INCLUDED.—The plan under subsection (a) shall address the following:

(1) Near- and long-term plans and options to recapitalize the nuclear command, control, and communications systems to ensure the resilience of such systems.

(2) Requirements for such systems, including with respect to survivability and reliability.

(3) The risks and benefits of replicating the current architecture for such systems as of the date of the plan.

(4) The risks and benefits of using different architectures for such systems, including, at a minimum, using hosted payloads.

(5) Whether such architectures should be classified or unclassified.

(6) Requirements and plans to ensure the security of the supply chain of nuclear command, control, and communications systems.

(7) Timelines and general cost estimates for long-term investments in such systems.

(8) Options for potential negotiation with adversaries, including with respect to agreements to not target nuclear command, control, and communications systems through kinetic, nonkinetic, or cyber attacks.

(9) Any other matters the Secretary determines appropriate.

(c) INTERIM BRIEFING.—Not later than 90 days after the date of the enactment of this Act, the Secretary, in coordination with the Commander, shall provide to the congressional defense committees a briefing on the plan under subsection (a).

SEC. 16___.[Log 70004] ELIMINATION OF CONVENTIONAL REQUIREMENT FOR LONG-RANGE STANDOFF WEAPON.

Subsection (a) of section 217 of the National Defense Authorization Act for Fiscal Year 2014 (Public Law 113–66; 127 Stat. 706), as amended by section 1662 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115–232; 132 Stat. 2152), is amended to read as follows:

''(a) LONG-RANGE STANDOFF WEAPON.—The Secretary of the Air Force shall develop a follow-on air-launched cruise missile to the AGM–86 that—

''(1) achieves initial operating capability for nuclear missions prior to the retirement of the nuclear-armed AGM–86; and

''(2) is capable of internal carriage and employment for nuclear missions on the next-generation long-range strike bomber.''.

SEC. 16___.[Log 70103] EXTENSION OF ANNUAL BRIEFING ON THE COSTS OF FORWARD-DEPLOYING NUCLEAR WEAPONS IN EUROPE.

Section 1656(a) of the National Defense Authorization Act for Fiscal Year 2016 (Public Law 114–92; 129 Stat. 1124) is amended—

(1) by striking ''2021'' and inserting ''2024''; and

(2) by inserting '', the Committee on Foreign Affairs of the House of Representatives, and the Committee on Foreign Relations of the Senate'' after ''the congressional defense committees''.

SEC. 16___.[Log 69303] ORGANIZATION, AUTHORITIES, AND BILLETS OF THE MISSILE DEFENSE AGENCY.

(a) INDEPENDENT STUDY.—

(1) ASSESSMENT.—In accordance with paragraph (2), the Secretary of Defense shall seek to enter into a contract with a federally funded research and development center to conduct a study assessing—

(A) the organization of the Missile Defense Agency under the Under Secretary of Defense for Research and Engineering pursuant to section 205(b) of title 10, United States Code;

(B) alternative ways to organize the Agency under other officials of the Department of Defense, including the Under Secretary for Acquisition and Sustainment and any other official of the Department the federally funded research and development center determines appropriate; and

(C) transitioning the Agency to the standard acquisition process pursuant to Department of Defense Instruction 5000, including both the risks and benefits of making such a transition.

(2) SCOPE OF STUDY.—Before entering into the contract with a federally funded research and development center to conduct the study under paragraph (1), the Secretary shall provide to the congressional defense committees an update on the scope of such study.

(3) SUBMISSION TO DOD.—Not later than 150 days after the date of the enactment of this Act, the federally funded research and development center shall submit to the Secretary a report containing the study conducted under paragraph (1).

(4) SUBMISSION TO CONGRESS.—Not later than 180 days after the date of the enactment of this Act, the Secretary shall submit to the congressional defense committees the study under paragraph (1), without change.

(b) NOTIFICATION ON CHANGES TO NON-STANDARD ACQUISITION PROCESSES AND RESPONSIBILITIES.—

(1) LIMITATION.—None of the funds authorized to be appropriated by this Act or otherwise made available for fiscal year 2020 for the Secretary of Defense may be obligated or expended to change the non-standard acquisition processes and responsibilities described in paragraph (2) until—

(A) the Secretary notifies the congressional defense committees of such proposed change; and

(B) a period of 90 days has elapsed following the date of such notification.

(2) NON-STANDARD ACQUISITION PROCESSES AND RESPONSIBILITIES DESCRIBED.—The non-standard acquisition processes and responsibilities described in this paragraph are such processes and responsibilities described in—

(A) the memorandum of the Secretary of Defense titled ''Missile Defense Program Direction'' signed on January 2, 2002;

(B) Department of Defense Directive 5134.09, as in effect on the date of the enactment of this Act; and

(C) United States Strategic Command Instruction 583–3.

(c) LIMITATION ON CERTAIN TRANSFERS OF BILLETS.—During fiscal year 2020, the Secretary of Defense may not transfer civilian or military billets from the Missile Defense Agency to any element of the Department under the Under Secretary of Defense for Research and Engineering until, for each such transfer—

(1) the Secretary notifies the congressional defense committees of such proposed transfer; and

(2) a period of 90 days has elapsed following the date of such notification.

SEC. 16___.[Log 69324] NATIONAL MISSILE DEFENSE POLICY.

(a) POLICY.—Subsection (a) of section 1681 of the National Defense Authorization Act for Fiscal Year 2017 (Public Law 114–328; 10 U.S.C. 2431 note) is amended to read as follows:

''(a) POLICY.—It is the policy of the United States to—

''(1) maintain and improve, with funding subject to the annual authorization of appropriations and the annual appropriation of funds for National Missile Defense—

''(A) an effective protection of the homeland of the United States against offensive missile threats posed by rogue states; and

''(B) an effective regional missile defense system capable of defending the allies, partners, and deployed forces of the United States against increasingly complex missile threats; and

''(2) rely on nuclear deterrence to address more sophisticated and larger quantity near-peer intercontinental ballistic missile threats.''.

(b) BRIEFING.—Not later than January 31, 2020, the Director of Cost Assessment and Program Evaluation shall provide to the Committee on Armed Services of the House of Representatives a briefing on the programmatic impacts across the Department of Defense with respect to the implementation of the Missile Defense Review issued in 2019.

SEC. 16___.[Log 69330] LIMITATION ON AVAILABILITY OF FUNDS FOR LOWER TIER AIR AND MISSILE SENSOR.

(a) LIMITATION.—Of the funds authorized to be appropriated by this Act or otherwise made available for fiscal year 2020 for the Army for the lower tier air and missile defense sensor, not more than 75 percent may be obligated or expended until the Secretary of the Army submits the report under subsection (b).

(b) REPORT.—The Secretary of the Army shall submit to the congressional defense committees a report on the test and demonstration of lower tier air and missile defense sensors that occurred during the third quarter of fiscal year 2019. Such report shall include the following:

(1) An explanation of how the test and demonstration was conducted and what the test and demonstration set out to achieve, including—

(A) an explanation of the performance specifications used; and

(B) a description of the emulated threats used in the test and demonstration and how such threats compare to emerging regional air and missile threats.

(2) An explanation of the capability of the sensor system that the Secretary determined to be the winner of the test and demonstration, including with respect to—

(A) the capability of such sensor system against key threats and requirements, including whether such sensor system will be delivered with full 360-degree coverage and the ability of such sensor system to detect, track, and surveil targets;

(B) the estimated procurement and life-cycle costs of operating such sensor system; and

(C) the cost, timeline, and approach that will be used to integrate the lower tier air and missile defense sensor with other sensors using the Integrated Air and Missile Defense Battle Command System.

(3) An explanation of whether future performance improvements to the lower tier air and missile defense sensor are conditional on intellectual property and how such improvements will be made if the United States does not own such intellectual property.

SEC. 16___.[Log 69376] DEVELOPMENT OF HYPERSONIC AND BALLISTIC MISSILE TRACKING SPACE SENSOR PAYLOAD.

(a) DEVELOPMENT.—Section 1683 of the National Defense Authorization Act for Fiscal Year 2018 (Public Law 115–91; 10 U.S.C. 2431 note) is amended—

(1) by redesignating subsections (d), (e), (f), (g), and (h), as subsections (e), (f), (g), (h), and (j), respectively; and

(2) by inserting after subsection (c) the following new subsection (d):

''(d) HYPERSONIC AND BALLISTIC MISSILE TRACKING SPACE SENSOR PAYLOAD.—The Director, in coordination with the Director of the Space Development Agency and the Secretary of the Air Force, shall—

''(1) develop a hypersonic and ballistic missile tracking space sensor payload; and

''(2) include such payload as a component of the sensor architecture developed under subsection (a).''.

(b) UPDATED PLAN.—Such section is further amended by inserting after subsection (h), as redesignated by subsection (a), the following new subsection:

''(i) UPDATED PLAN.—Not later than 90 days after the date of the enactment of the National Defense Authorization Act for Fiscal Year 2020, the Director of the Missile Defense Agency, in coordination with the Director of the Space Development Agency and the Secretary of the Air Force, shall submit to the appropriate congressional committees an update to the plan under subsection (h), including the following:

''(1) How the Director of the Missile Defense Agency, in coordination with the Director of the Space Development Agency and the Secretary, will develop the payload under subsection (d) and include such payload in the sensor architecture developed under subsection (a).

''(2) How such payload will address the requirement of the United States Strategic Command for a hypersonic and ballistic missile tracking space sensing capability.

''(3) The estimated costs (in accordance with subsection (e)) to develop, acquire, and deploy, and the lifecycle costs to operate and sustain, the payload under subsection (f) and include such payload in the sensor architecture developed under subsection (a).''.

(c) CONFORMING AMENDMENT.—Subsection (h)(1) of such section, as redesignated by subsection (a), is amended by striking ''with subsection (d)'' and inserting ''with subsection (e)''.

SEC. 16___.[Log 69397] REQUIREMENT FOR TESTING OF REDESIGNED KILL VEHICLE PRIOR TO PRODUCTION.

(a) SENSE OF CONGRESS.—It is the sense of Congress that the Director of the Missile Defense Agency must address the technical issues of the redesigned kill vehicle prior to moving forward with development, procurement, and fielding of the vehicle.

(b) MODIFICATIONS TO WAIVER REQUIREMENTS.—Subsection (b) of section 1683 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115–232; 132 Stat. 2163) is amended to read as follows:

''(b) WAIVER.—The Secretary of Defense, without delegation, may waive subsection (a) if—

''(1) the Secretary determines that the waiver is in the interest of national security;

''(2) the Secretary conducts an assessment of the missile developments of both North Korea and Iran during the 18-month period preceding the date of the waiver;

''(3) the Secretary determines that the threat of missiles is advancing at a pace that requires additional capacity of the ground-based midcourse de-

fense system by 2023, including in light of the assessment conducted under paragraph (2);

''(4) the Secretary determines that the waiver is appropriate in light of the assessment conducted by the Director of Operational Test and Evaluation under subsection (c);

''(5) the Secretary submits to the congressional defense committees a report containing—

''(A) a notice of the waiver, including the rationale of the Secretary for making the waiver; and

''(B) a certification by the Secretary that the Secretary has analyzed and accepts the risk of making and implementing a lot production decision for the redesigned kill vehicle prior to the vehicle undergoing a successful flight intercept test; and

''(6) a period of 30 days elapses following the date on which the Secretary submits the report under paragraph (5).''.

(c) MODIFICATION TO ASSESSMENT.—Subsection (c) of such section is amended by inserting ''and to the congressional defense committees'' after ''to the Secretary of Defense''.

SEC. 16___.[Log 69444] COMMAND AND CONTROL, BATTLE MANAGEMENT, AND COMMUNICATIONS PROGRAM.

(a) LIMITATION ON SALE.—The Director of the Missile Defense Agency may not pursue release of the command and control, battle management, and communications program (or any variants thereof) for export until the date on which the Director submits the report under subsection (b).

(b) REPORT.—Not later than 90 days after the date of the enactment of this Act, the Director shall submit to the congressional defense committees a report containing the following:

(1) An explanation of the rationale of the Director for considering to export the command and control, battle management, and communications program (or any variants thereof) in light of the critical role of the program in the strategic national defense of the United States and the allies of the United States against ballistic missile attack.

(2) The findings of the market research and analysis conducted by the Director regarding exportable command and control solutions for ballistic mis-

sile defense, including such solutions that are internationally available.

SEC. 16___.[Log 69677] MISSILE DEFENSE RADAR IN HAWAII.

(a) CONSTRUCTION OF HOMELAND DEFENSE RADAR—HAWAII.—Subject to subsection (b), the Director of the Missile Defense Agency may use funds authorized to be appropriated by this Act or otherwise made available for fiscal year 2020 for research, development, test, and evaluation for the Missile Defense Agency to design, build, and integrate the foundation of the homeland defense radar in Hawaii and the thermal control system of the radar.

(b) LIMITATION.—Of the funds authorized to be appropriated by this Act or otherwise made available for fiscal year 2020 for research, development, test, and evaluation for the homeland defense radar in Hawaii, not more than 85 percent may be obligated or expended until the Director—

(1) completes the critical design review of the radar;

(2) submits to the congressional defense committees an assessment conducted by the Army Corps of Engineers on the research, development, test, and evaluation proposal to design, build, and integrate the foundation of the radar and the thermal control

system of the radar that highlights any unique components of such proposal; and

(3) provides to such committees a briefing on incorporating the foundation and thermal control system into the overall design of the radar.

SEC. 16___.[Log 70190] MISSILE DEFENSE INTERCEPTOR SITE IN CONTIGUOUS UNITED STATES.

(a) DESIGNATION.—The Secretary shall designate the preferred location of a missile defense site in the contiguous United States from among the locations evaluated pursuant to section 227 of the National Defense Authorization Act for Fiscal Year 2013 (Public Law 112–239; 126 Stat. 1678). The Secretary shall make such designation based on the following:

(1) The environmental impact statement prepared pursuant to section 227 of the National Defense Authorization Act for Fiscal Year 2013 (Public Law 112–239; 126 Stat. 1678).

(2) Strategic and operational effectiveness, including with respect to the location that is the most advantageous site in providing coverage to the entire contiguous United States, including having the capability to provide shoot-assess-shoot coverage to the entire contiguous United States.

(3) Construction remediation efforts and impacts to the existing environment at the site.

(4) The existing infrastructure at the site.

(5) The costs to construct, equip, and operate the site.

(b) REPORT.—Not later than January 31, 2020, the Secretary shall submit to the congressional defense committees a report on the designation made under subsection (a) with respect to each factor specified in paragraphs (1) through (5) of such subsection.

(c) RULE OF CONSTRUCTION.—Nothing in this section may be construed—

(1) as requiring the Secretary of Defense to begin a military construction project relating to the missile defense site in the contiguous United States; or

(2) as a statement that there is any current military requirement for such a site.

(d) CONFORMING REPEAL.—Section 1681 of the National Defense Authorization Act for Fiscal Year 2018 (Public Law 115–91; 131 Stat. 1776) is repealed.

SEC. 16___.[Log 69294] CONVENTIONAL PROMPT GLOBAL STRIKE WEAPON SYSTEM.

(a) SENSE OF CONGRESS.—It is the sense of Congress that—

(1) the Under Secretary of Defense for Policy has not adequately responded to Congress regarding the miscalculation and ambiguity risks posed by hypersonic weapons, specifically from submarine-launched platforms, including pursuant to the report required by section 1698 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115-232; 132 Stat. 2172); and

(2) the Secretary of Defense should coordinate technology maturation efforts to develop common technologies for hypersonics, and should leverage defense laboratories and university partners to lead foundational hypersonic research in areas the Secretary determines appropriate for the Department of Defense.

(b) PROHIBITION.—None of the funds authorized to be appropriated by this Act or otherwise made available for fiscal year 2020 for the conventional prompt global strike weapon system may be used for a submarine-launched conventional prompt global strike capability, in-

cluding with respect to developing or testing such a capability, unless such capability—

(1) is transferrable to a surface-launched platform; and

(2) is not exclusive to submarines.

(c) REPORT.—Not later than 120 days after the date of the enactment of this Act, the Secretary of the Navy shall submit to the congressional defense committees a report on the programmatic changes required to integrate the conventional prompt global strike weapon system into the DDG–1000 program or other surface ships.

SEC. 31___.[Log 69453] PERSONNEL LEVELS OF THE OFFICE OF THE ADMINISTRATOR FOR NUCLEAR SECURITY.

(a) PERSONNEL LEVELS.—

(1) INCREASE.—Subsection (a) of section 3241A of the National Nuclear Security Administration Act (50 U.S.C. 2441a) is amended by striking ''1,690'' both places it appears and inserting ''1,890''.

(2) TECHNICAL AMENDMENTS.—Such subsection is further amended—

(A) in paragraph (1), by striking ''By October 1, 2015, the'' and inserting ''The''; and

(B) in paragraph (2), by striking ''2016'' and inserting ''2020''.

(b) REPORTS ON SERVICE SUPPORT CONTRACTS.—Subsection (f) of such section is amended—

(1) in the matter preceding paragraph (1), by striking ''as of the date of the report'' and inserting ''for the most recent fiscal year for which data is available''; and

(2) by striking paragraph (5) and inserting the following new paragraphs:

"(5) With respect to each contract identified under paragraph (2)—

"(A) identification of each appropriations account that supports the contract; and

"(B) the amount obligated under the contract during the fiscal year, listed by each such account.

"(6) With respect to each appropriations account identified under paragraph (5)(A), the total amount obligated for contracts identified under paragraph (2).".

SEC. 31___.[Log 69455] ELIMINATION OF LIMITATION ON AVAILABILITY OF FUNDS RELATING TO SUBMISSION OF ANNUAL REPORTS ON UNFUNDED PRIORITIES.

Section 4716 of the Atomic Energy Defense Act (50 U.S.C. 2756) is amended—

(1) by striking subsection (c); and

(2) by redesignating subsection (d) as subsection (c).

SEC. 31___.[Log 69458] OFFICE OF COST ESTIMATING AND PROGRAM EVALUATION.

(a) SENSE OF CONGRESS.—It is the sense of Congress that Congress is concerned that the staffing levels of the Office of Cost Estimating and Program Evaluation of the National Nuclear Security Administration have been persistently below the authorized level.

(b) REPORTING.—Section 3221(b)(1) of the National Nuclear Security Administration Act (50 U.S.C. 2411(b)(1)) is amended by adding at the end the following new sentence: ''The Director shall report directly to the Administrator.''.

(c) BRIEFING.—Not later than 180 days after the date of the enactment of this Act, the Administrator for Nuclear Security shall provide to the congressional defense committees a briefing on the plan of the Administrator to fully staff the Office of Cost Estimating and Program Evaluation of the National Nuclear Security Administration pursuant to section 3221(f) of the National Nuclear Security Administration Act (50 U.S.C. 2411(f)).

SEC. 31___.[Log 69729] ANNUAL CERTIFICATION OF SHIPMENTS TO WASTE ISOLATION PILOT PLANT.

Section 3115(a) of the National Defense Authorization Act for Fiscal Year 2017 (Public Law 114–328; 130 Stat. 2759), as amended by section 3137 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115–232; 132 Stat. 2303), is further amended, in the matter preceding paragraph (1), by striking ''three-year period'' and inserting ''10-year period''.

SEC. 31___.[Log 69733] REPEAL OF LIMITATION ON AVAILABILITY OF FUNDS FOR ACCELERATION OF NUCLEAR WEAPONS DISMANTLEMENT.

Section 3125 of the National Defense Authorization Act for Fiscal Year 2017 (Public Law 114–328; 130 Stat. 2766) is repealed.

SEC. 31___.[69752] MODIFICATION TO PLUTONIUM PIT PRODUCTION CAPACITY.

(a) FINDING AND SENSE OF CONGRESS.—

(1) FINDING.—Congress finds that a recent study by the Institute of Defense Analyses notes, ''a key milestone will be achieving the Plutonium Sustainment Program goal of 30 pits per year at Los Alamos National Laboratory''.

(2) SENSE OF CONGRESS.—It is the sense of Congress that the National Nuclear Security Administration should prioritize achieving production of 30 pits per year at Los Alamos National Laboratory and ensure that efforts to design and construct a second site do not divert resources, including personnel and funding, from Los Alamos National Laboratory.

(b) 2027 REQUIREMENT.—Section 4219 of the Atomic Energy Defense Act (50 U.S.C. 2538a) is amended—

(1) in subsection (a)—

(A) in paragraph (3), by inserting ''and'' after the semicolon;

(B) in paragraph (4), by striking ''; and'' and inserting a period; and

(C) by striking paragraph (5);

(2) by striking subsection (b); and

(3) by redesignating subsections (c) and (d) as subsections (b) and (c), respectively.

(c) CONFORMING AMENDMENT.—Subsection (b) of such section, as redesignated by subsection (b), is amended by striking ''(or, if the authority under subsection (b) is exercised, 2029)''.

SEC. 32___.[Log 70208] AUTHORIZATION.

There are authorized to be appropriated for fiscal year 2020, $29,450,000 for the operation of the Defense Nuclear Facilities Safety Board under chapter 21 of the Atomic Energy Act of 1954 (42 U.S.C. 2286 et seq.).

SEC. 32___.[Log 69454] IMPROVEMENTS TO DEFENSE NUCLEAR FACILITIES SAFETY BOARD.

(a) STAFF.—

(1) SENSE OF CONGRESS.—It is the sense of Congress that the Defense Nuclear Facilities Safety Board is not adequately staffed, particularly given the ongoing increase in defense nuclear activities during the decade following the date of the enactment of this Act.

(2) EXECUTIVE DIRECTOR OF OPERATIONS.—

(A) ESTABLISHMENT OF POSITION.—Subsection (b) of section 313 of the Atomic Energy Act of 1954 (42 U.S.C. 2286b) is amended by adding at the end the following new paragraph:

''(3)(A) The Board shall have an Executive Director of Operations who shall be appointed under section 311(c)(7).

''(B) The Executive Director of Operations shall report to the Chairman.

''(C) The Executive Director of Operations shall be the senior employee of the Board responsible for—

''(i) general administration and technical matters;

''(ii) ensuring that the members of the Board are fully and currently informed with respect to matters for which the members are responsible; and

''(iii) the functions delegated by the Chairman pursuant to section 311(c)(3)(B).''.

(B) DELEGATION OF FUNCTIONS.—Paragraph (3) of section 311(c) of such Act (42 U.S.C. 2286(c)) is amended—

(i) by striking ''The Chairman'' and inserting ''(A) The Chairman''; and

(ii) by adding at the end the following new subparagraph:

''(B) In carrying out subparagraph (A), the Chairman shall delegate to the Executive Director of Operations established under section 313(b)(3) the following functions:

''(i) Administrative functions of the Board.

''(ii) Appointment and supervision of employees of the Board not specified under paragraph (7).

''(iii) Distribution of business among the employees and administrative units and offices of the Board.

''(iv) Preparation of—

''(I) proposals for the reorganization of the administrative units or offices of the Board;

''(II) the budget estimate for the Board; and

''(III) the proposed distribution of funds according to purposes approved by the Board.''.

(3) APPOINTMENT AND REMOVAL POWERS.—Paragraph (7) of such section 311(c) is amended to read as follows:

''(7)(A) The Chairman, subject to the approval of the Board, shall appoint the senior employees described in subparagraph (C). Any member of the Board may propose to the Chairman an individual to be so appointed.

''(B) The Chairman, subject to the approval of the Board, may remove a senior employee described in subparagraph (C). Any member of the Board may propose to the Chairman an individual to be so removed.

''(C) The senior employees described in this subparagraph are the following senior employees of the Board:

''(i) The Executive Director of Operations established under section 313(b)(3).

''(ii) The general counsel.''.

(4) FULL-TIME EQUIVALENT PERSONNEL LEVELS.—Section 313(b)(1)(A) of such Act (42 U.S.C. 2286b(b)(1)(A)) is amended by striking ''but not'' and all that follows through the semicolon and inserting ''but not fewer than the equivalent of 110

full-time employees and not more than the equivalent of 130 full-time employees;''.

(b) PUBLIC HEALTH AND SAFETY.—Section 312(a) of such Act (42 U.S.C. 2286a(a)) is amended by inserting before the period at the end the following: '', including with respect to the health and safety of employees and contractors at such facilities''.

(c) ACCESS TO FACILITIES, PERSONNEL, AND INFORMATION.—Section 314 of such Act (42 U.S.C. 2286c) is amended—

(1) in subsection (a)—

(A) by striking ''The Secretary of Energy'' and inserting ''Except as specifically provided by this section, the Secretary of Energy'';

(B) by striking ''ready access'' both places it appears and inserting ''prompt and unfettered access''; and

(C) by adding at the end the following new sentence: ''The access provided to facilities, personnel, and information under this subsection shall be provided without regard to the hazard or risk category assigned to a facility by the Secretary.''; and

(2) by striking subsection (b) and inserting the following new subsections:

''(b) AUTHORITY OF SECRETARY DENY INFORMATION.—The Secretary may only deny access to information pursuant to subsection (a)—

''(1) to any person who—

''(A) has not been granted an appropriate security clearance or access authorization by the Secretary; or

''(B) does not need such access in connection with the duties of such person; or

''(2) if such denial is authorized by a provision of Federal law that specifically limits the right of the Board to access such information.

''(c) APPLICATION OF NONDISCLOSURE PROTECTIONS BY BOARD.—The Board may not publicly disclose information provided under this section if such information is otherwise protected from disclosure by law, including deliberative process information.''.

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TITLE XVI—STRATEGIC PROGRAMS, CYBER, AND INTELLIGENCE MATTERS

ITEMS OF SPECIAL INTEREST

SPACE ACTIVITIES

Centers of Innovation for Space Operational Testing

The committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services not later than September 30, 2019, on a plan regarding the opportunities and costs to expand activities at existing defense facilities and partnerships to support operational testing and development of innovative technologies for multi-domain national security space missions. The briefing shall include an assessment of entities, partnerships, programs, and residual Department of Defense space assets that enable the iterative development, testing, and transfer of innovative space capabilities to the Department of Defense; a plan for utilizing applicable entities and residual Department of Defense space assets for the operational testing of innovative national security space technologies; the operational benefits created by engagement and utilization of industry and academic partnerships to accelerate development and testing technologies; the costs and value of leveraging these opportunities; and such other matters as the Secretary considers appropriate.

Efficient Acquisition of Commercial Satellite Communications

The committee supports the Department of Defense's continued efforts to integrate commercial satellite communications (COMSATCOM) capabilities into the Department's satellite communications (SATCOM) architecture and transition to a more efficient partnership with commercial operators. This new approach would ensure that the Department maximizes SATCOM value on a more secure, cost-effective, and resilient basis. The committee notes the Air Force is transferring COMSATCOM procurement authority from the Defense Information Systems Agency to Air Force Space Command, as legislatively mandated.

The committee directs the Secretary of Defense to provide a briefing to the House Committee on Armed Services not later than September 1, 2019, on efforts to integrate commercial satellite communications capabilities into the Department of Defense satellite communications architecture. The briefing should include an assessment of several matters, including establishing clear lines of authority for integration of COMSATCOM capabilities into a SATCOM architecture; tools and technologies necessary to improve efficiency, resiliency, usability, and functionality for the Department of Defense COMSATCOM user community; funding and

resourcing required to adequately prioritize and accelerate commercial satellite communications integration; and innovative acquisition approaches that increase value for the Department and the warfighter with regard to acquiring commercial satellite communications services.

As the Department recapitalizes its space architecture for wideband and protected communications and transitions to greater reliance on commercial capabilities, the committee encourages the Department to prioritize adequate and stable funding for related activities.

Global Positioning System III Satellite Acquisition

The committee notes that the Department of Defense is continuing its investment in new Global Positioning System (GPS) satellites to maintain worldwide, persistent, all-weather capability to ensure accurate time source for military and civilian users. GPS III will provide significant enhancements to the current constellation including higher-power military signals, new civilian signals, and hosted search-and-rescue payloads. The committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services not later than September 30, 2019, on the timelines and costs for procuring GPS III satellites, on options to improve the efficiency of GPS III satellite procurement to ensure optimum value in line with military requirements.

Improving Resilience of Space Architectures

The committee notes the importance of increasing resilience and developing new architectures to protect US national security assets in space and to strengthen deterrence in space. The committee supports the Air Force and Defense Advanced Research Projects Agency's (DARPA) investments in demonstrating a proliferated low earth orbit (LEO) architecture that has the potential to offer increased resilience for U.S. national security space missions, including missile warning. If successful, this approach could significantly and cost-effectively increase resilience in space, and allow more rapid technology insertions.

Therefore, the committee directs the Secretary of Defense to provide a briefing to the House Armed Services Committee not later than December 1, 2019, on progress made through the Blackjack program, and any other related program, to demonstrate the value and feasibility of a proliferated, global LEO constellation and other innovative space architectures.

The committee also directs the Secretary, in coordination with the Director of the Space Development Agency and the Director of DARPA, to provide a report not later than February 15, 2020, detailing the progress made, and if is successful, how such a proliferated LEO architecture could enhance the resilience of space architectures, enhance deterrence in space, and how such a constellation would be integrated into the national security space strategy and architecture, the planned applications of this approach to national security space missions, the timelines for development and production, and funding requirements.

Leveraging Commercial Satellite Remote Sensing

The committee notes that responsibility for acquiring commercial imagery shifted from the National Geospatial-Intelligence Agency (NGA) to the National Reconnaissance Office (NRO), while the NGA retains responsibility for acquiring commercial geospatial-intelligence services. The committee supports the new leadership role of the NRO in acquiring commercial satellite remote sensing data on behalf of the Department of Defense and the intelligence community. In order to fully leverage U.S. industry capabilities, and avoid any gaps in service as this lead mission role transitions between agencies, the committee urges the NRO to engage industry to the maximum extent practicable. The committee is aware that the NRO is currently evaluating its strategy for acquiring future commercial, high-resolution satellite imagery. In setting requirements for acquisition of commercial satellite imagery, the committee directs the Director of the NRO to be responsive not only to the NGA requirements but also the broader Department of Defense geospatial-intelligence (GEOINT) user community, including the combatant commanders. To meet these broad and diverse requirements, the committee expects the NRO to work with multiple commercial providers, thus leveraging multiple sources for high- and medium-resolution satellite imagery for global coverage and high revisit rates.

The committee directs the Director of the NRO, in coordination with the Director of the NGA, to provide a joint briefing to the House Committee on Armed Services not later than October 1, 2019, on progress toward an open and fair competitive acquisition process to leverage all industry capabilities in the 2020s. This briefing should address how the agencies plan to work together to ensure no gaps in the support provided to the Department of Defense GEOINT user community as a result of the change in roles and responsibilities.

Leveraging Reusable Spacecraft

The committee notes the potential commercial development and use of a dedicated reusable spacecraft to support national security space requirements. The committee believes that the Department of Defense could leverage the National Aeronautics and Space Administration's extensive design development, computational and wind tunnel testing, and funding commitments that led to the production of a reusable spacecraft, and assess the potential for use to address national security requirements. The committee directs the Secretary of the Air Force to provide a briefing to the House Committee on Armed Services not later than September 15, 2019, on the feasibility, potential benefits, and costs of using a reusable spacecraft for launching satellites or to serve as a test platform.

National Geospatial-Intelligence Agency Aviation Mapping Capability

The committee is aware that the National Geospatial-Intelligence Agency (NGA) is planning to shift the aviation mapping capability from a commercial contract to an organic capability within NGA.

The committee directs the Director of NGA to provide a briefing to the House Committee on Armed Services not later than July 30, 2019, on a plan and rationale for this transition. The briefing should include, at a minimum, an assessment of the risks and benefits of this transition, timeline, costs, cost savings, potential gaps, and any other matters the Director would like to include.

Next-Generation Synthetic Aperture Radar

The committee is aware that the Army has undertaken efforts to augment existing collection capabilities with a family of small satellites of varying configurations. Those enhanced, space-based collection capabilities will include a number of smaller, more cost-effective and more survivable Synthetic Aperture Radar (SAR) satellites capable of supporting worldwide tactical operations. SAR, unlike passive collection systems, allows for penetration of clouds, precipitation, and dense vegetation day or night. While SAR space vehicles are historically large and heavy with significant power and heat-management challenges, technological developments have made it possible to produce much smaller and more affordable SAR satellites that can significantly contribute to tactical situational awareness and decision making in support of reconnaissance, surveillance, and target acquisition missions.

Therefore, the committee directs the Secretary of the Army to provide a briefing to the House Committee on Armed Services not later than October 31, 2019, on opportunities and funding requirements for innovative research in the area of downsized, lightweight, and more cost-effective SAR technology. The committee believes that investment in a next-generation SAR tactical satellite could accelerate the development of technology to deliver mission-critical capabilities to military users and integrate space-based, SAR-derived data with other systems.

Rocket Systems Launch Program

The committee continues to support sustained investment to further operationalize integration of new commercial small-launch services into the space enterprise. The committee directs the Secretary of Defense, in coordination with the Director of National Intelligence, to provide a briefing to the House Committee on Armed Services not later than September 15, 2019, on the Air Force's plan to leverage commercial investments in responsive launch capabilities and integrate tactically responsive launch capabilities into the Department of Defense's space operations. The briefing should provide an assessment of responsive launch operational tactics, techniques, and procedures; the operational benefits of responsive space launch demonstrations from military installations; and the required funding and resourcing to employ a contingency capability for rapid reconstitution and tactically responsive space launch.

Space and Atmospheric Burst Reporting System

The committee notes that the Air Force hosts nuclear detonation detection capability in space on Global Positioning System and Defense Support Program satellites. The committee also notes that the Space and Atmospheric Burst Reporting System (SABRS) also contributes to nuclear detonation detection with the third payload launching in 2019 on the Space Test Program-6 satellite. However, the committee is aware that there have been delays in launching the SABRS payloads, and there are no current plans to launch SABRS-4 or future SABRS systems.

Therefore, the committee directs the Secretary of the Air Force, in coordination with the Administrator for Nuclear Security and the Secretary of State, to submit a plan to the congressional defense committees not later than November 15, 2019, to launch the SABRS-4 payload and following SABRS payloads. The plan shall include military and treaty verification requirements for nuclear detection, including requirement for SABRS payloads; identification of satellites that would host such a payload; requirements for ground-processing software; cost, including out-year funding requirements; and timelines for launching additional SABRS payloads.

U.S. Reliance on Foreign In-Space Propulsion Systems

The committee directs the Secretary of Defense to provide a report to the congressional defense committees not later than November 1, 2019, on foreign in-space propulsion systems, including electric propulsion, Hall thrusters, and chemical apogee engines, which are used for transferring a satellite to its final orbital location, in-orbit maneuvering, and transferring to a graveyard orbit at the end of the life of the satellite.

The report should address which national security programs use these systems; whether there are risks from relying on foreign in-space propulsion; the impacts of a change in policy that would require U.S.-made propulsion systems, including impacts on the Department of Defense's ability to use hosted payloads or acquire commercial services; cost estimates associated with a change in policy; what research and development projects would be necessary to contribute to development and testing of U.S.-designed and -manufactured in-space propulsion systems for current and future military satellites in space; and associated costs of these development and acquisition costs.

MISSILE DEFENSE PROGRAMS

Boost-Phase Ballistic Missile Defense Analysis of Alternatives

The committee notes that the President's budget request for fiscal year 2020 includes $34.0 million to initiate development of a neutral particle beam that

would ultimately be deployed in space to conduct intercontinental-range ballistic missile (ICBM) boost-phase defense. The committee further notes ongoing research and development efforts across the Department of Defense to develop ICBM boost-phase intercept capability, to include kinetic interceptors launched from unmanned aerial vehicles and/or aircraft, and multiple directed energy technologies that are being evaluated. The committee is unaware of any analysis of alternatives (AOA) being conducted prior to the determination to move forward with neutral particle beam, and therefore, the committee directs the Director of Cost Assessment and Program Evaluation (CAPE) to conduct a comprehensive AOA on current boost-phase technologies being developed or investigated. The AOA should include aspects such as technical maturity of systems, total development and operational deployment costs, policy implications to strategic stability, and schedule. The committee directs the Director of CAPE to provide a briefing to the House Committee on Armed Services not later than March 31, 2020, on the results of this AOA.

Cybersecurity of Missile Defense Programs

The committee notes positive efforts being made by the Missile Defense Agency (MDA) to address controlled unclassified information (CUI) disseminated throughout the defense industrial base. The committee is supportive of these efforts, and encourages use of cyber assistance teams to be piloted across the Department of Defense.

The committee notes the pilot initiated in 2018 to incorporate cybersecurity program protection plans as a proposal requirement, and used as evaluation criteria in source selection activities. The committee supports the continuation of this pilot, and the potential for cyber protection becoming required evaluation criteria in all future MDA contract awards.

Noting the 2019 Department of Defense Inspector General findings, the committee acknowledges that cybersecurity remains a concern to be addressed on government-owned research, development, test, and evaluation networks. The committee encourages MDA, in coordination with the military services, to address the findings and implement corrective actions to ensure the protection of networks from external and internal threats.

Further, the committee supports efforts to develop and deploy secure information systems and infrastructure ensuring the warfighter can receive, analyze, promulgate, and protect critical information with no risk of accidental exposure of the data to unauthorized individuals. MDA should prioritize developmental efforts within the directorate for advanced technology with the aim of providing the warfighter an operational cyber environment that enhances training, security, mobility, data analytics, and situational awareness.

While assurances have been made regarding operational ballistic missile defense system systems being protected against cyber threats, the committee notes that conducting persistent cyber operations may discover vulnerabilities and

provide an opportunity to proactively address network weaknesses. The committee encourages the Director of MDA to work collaboratively with the Director of Operational Test and Evaluation and the combatant commanders to implement persistent cyber operations on RDT&E and operational networks, on a not-to-interfere basis. To understand the breadth of cybersecurity efforts at MDA, the committee directs the Director of MDA to provide a briefing to the House Committee on Armed Services by January 31, 2020, on all aspects of cybersecurity outlined above.

Low-Cost Patriot Interceptor

The committee acknowledges that the Patriot Integrated Air and Missile Defense System has long been a key component of U.S. ballistic missile defense. With ballistic missile threats increasing globally, combatant commander global force management requirements for missile defense capacity have consistently been increasing.

The committee notes that current unit costs for Patriot missile segment enhancement interceptors is approximately $1.0 million per interceptor. The incorporation of a low-cost interceptor to supplement existing Patriot interceptor variants could assist in increasing U.S. procurement quantities. Further, the committee understands that international partners have requested the Army include such a low-cost interceptor to reduce costs in foreign military sale cases. Therefore, the committee directs the Secretary of the Army to provide a briefing to the House Committee on Armed Services not later than December 31, 2019, on options to incorporate a low-cost interceptor into the Patriot system. The report should include cost, schedule, technical, and operational considerations, in addition to an assessment of potential for foreign military sale.

Missile Defense Agency Undefinitized Contract Actions

The committee notes that since 2016, the Missile Defense Agency (MDA) has increasingly relied on undefinitized contract actions (UCAs) to expand and extend programmatic scope instead of executing traditional contract modifications with predetermined requirements. Particularly in the case of the Ground-Based Midcourse Defense (GMD) contract extension, the use of a UCA resulted in significant scope change through the definitization process. Conducting business in this manner has also been highlighted by the Government Accountability Office as resulting in increased cost.

The committee is concerned by the past several year trend of increasing UCA usage by the Missile Defense Agency, and therefore directs the Director of the Missile Defense Agency to provide a briefing to the House Committee on Armed Services not later than December 15, 2019, on a historical summary of all UCAs executed since 2015; what the final definitized contract included, highlighting changes in scope and cost; plans to definitize all open UCAs at the time of the

briefing; and how MDA plans to reduce the use of UCAs in the future and maximize opportunities to hold contractors accountable to a predetermined scope.

Multi-Agency Sensors for Ballistic Missile Defense

The committee notes an evolution of emerging ballistic missile and hypersonic threats from a growing number of countries. The committee also notes that the U.S. Strategic Command commander has repeatedly stated that our ability to track advanced threats from "birth to death" is a key capability gap. The committee agrees the ability to track advanced threats throughout their entire flight is needed to enable any future defenses against these types of weapons, and further recognizes the challenges associated with developing, procuring, and deploying new sensors capable of meeting enhanced and evolving threats.

The committee is aware that there are numerous ground- and sea-based sensor platforms currently performing measurement and signature intelligence (MASINT) located in strategic regions where current sensing capability gaps exist. It is the committee's understanding that these are very capable sensors that may be able to perform multiple missions including MASINT, space surveillance, and missile defense.

Therefore, the committee directs the Director, Missile Defense Agency, in coordination with the Director of National Intelligence, to provide a briefing to the House Committee on Armed Services by January 31, 2020, detailing the current global ground- and sea-based MASINT sensors and the capability of the sensors to integrate into the U.S. homeland missile defense architecture. The report shall include the current participation of intelligence sensor assets in the U.S. ballistic missile defense system as well as the operational impacts, costs, and timelines associated with activating a U.S. homeland missile defense mission for each sensor.

On-Board Vehicle Power Technology

The committee notes that electrical power generation requirements continue to grow to meet the needs of our weapon systems and command and control infrastructure deployed around the world. Traditional electrical power generation in the field requires an increased logistical footprint that reduces maneuverability and deployability of operational units in austere conditions. The committee is aware of efforts by the Missile Defense Agency (MDA) to evaluate low-cost, non-developmental mature technologies that harness the electrical energy generated by a vehicle's transmission to produce mobile electrical power. The committee notes that the MDA is seeking to integrate on-board vehicle power for Terminal High Altitude Area Defense in order to provide increased capability, readiness, and the ability to conduct extended operations with greater energy efficiency than current systems.

The committee supports the efforts of the MDA and U.S. Army to evaluate ways to make ballistic missile defense systems more efficient in energy use and allow them more flexibility, readiness, and lethality on the battlefield. Therefore,

the committee directs the Director of the Missile Defense Agency, in coordination with the Secretary of the Army, to provide a briefing to the House Committee on Armed Services by January 31, 2020, on candidate technologies being evaluated for integration onto ground vehicle platforms to make missile batteries more expeditionary, maneuverable, and fuel efficient. The report should include:

(1) preliminary results from the evaluation and fielding focused on interoperability, logistics, and installation of the systems;

(2) performance and recommendations on adoption of the technology by the other services; and

(3) a breakdown of costs expended to date on developing this technology, and any future costs needed to complete the effort.

Review of Ground-Based Midcourse Defense Contract Structure

The committee notes that in 2017 the Missile Defense Agency abandoned plans to re-compete the Ground-Based Midcourse Defense (GMD) system contract, and instead maintained the contract structure to execute missile defense and defeat enhancement efforts. With the recent definitization of the contract, the committee notes significant changes in scope and total value from the initial not-to-exceed agreement. Therefore, the committee directs the Comptroller General of the United States to complete an assessment of the GMD contract structure, and provide recommendations that could improve government management and increase contractor accountability. The assessment should also include managing interfaces and specifications between the multiple system components; assessing which elements or missions, if any, could benefit from direct reporting to the Missile Defense Agency versus the prime contractor; and highlighting any areas that could be improved with regard to the path forward on the redesigned kill vehicle effort and its integration into the overall GMD system. The committee directs the Comptroller General to provide a briefing to the House Committee on Armed Services by February 28, 2020, on the initial findings of the assessment, and to submit a final report at a date agreed to at the time of the briefing.

Terminal High Altitude Area Defense Future Deployment

The committee notes that the terminal high altitude area defense (THAAD) system has previously been deployed to perform a layered U.S. homeland mission in Hawaii when the threat and indications and warnings dictated the need. The committee also understands that regional demands of this system, for which it was designed, are high and the limited number of batteries are prioritized to address growing regional threats.

The committee directs the Commander, U.S. Northern Command (NORTHCOM), in coordination with the Under Secretary of Defense for Policy, Commander, U.S. Indo-Pacific Command (INDOPACOM) (as appropriate), Secretary of the Army, and Director, Missile Defense Agency, to provide a report, with a classified annex if needed, to the congressional defense committees not later

than February 28, 2020, on the following aspects should a THAAD homeland defense deployment be considered in the future:

(1) military requirement to deploy THAAD for homeland defense;

(2) how THAAD could contribute to current layered homeland defense architectures;

(3) changes in threat posture that would warrant such a deployment, and the mechanics of how NORTHCOM and INDOPACOM would determine the requirement and submit the force management request;

(4) timelines to deploy a THAAD battery, including the continental United States, Hawaii, and Alaska, should the decision be made to do so;

(5) impacts to global missile defense should one or more THAAD batteries be deployed for a homeland defense mission, and how that could be addressed with future procurement of additional THAAD batteries;

(6) how lessons learned from recent regional deployments would be incorporated into future planning;

(7) impacts to training and readiness of U.S. Army personnel to support such deployment; and

(8) policy implications and risks to strategic stability of deploying a regional THAAD capability for a homeland defense mission.

NUCLEAR FORCES

Air Force Global Strike Command Enterprise Analysis Center

The committee continues to oversee Air Force Global Strike Command (AFGSC) as it leads and coordinates efforts across the Air Force for both nuclear deterrence operations and contributions to nuclear command, control, and communications. The committee believes sustained attention on these missions will be required in the context of the nuclear weapons modernization program.

The committee believes that AFGSC should provide an analytical basis for cost and capability trades to drive cost-effective acquisition solutions. Traditional requirements analysis maturation methodologies may be insufficient to support the tradeoff decisions related to nuclear enterprise systems. To address these challenges, AFGSC has proposed the use of digital models and dynamic analysis to improve requirements analysis. The committee is interested in understanding how these analytical efforts and AFGSC's planned Enterprise Analysis Center will contribute a cost-effective nuclear enterprise modernization program. Therefore, the committee directs the Secretary of the Air Force to provide a briefing to the Committee on Armed Services of the House of Representatives not later than November 15, 2019, on the Air Force Major Command Innovation Program and AFGSC's Enterprise Analysis Center regarding how these efforts will contribute to decision making and integrate into AFGSC's existing innovation strategy and planned nuclear institute.

Climate Change and the Nuclear Enterprise

The committee notes that climate change is a national security issue with impacts to Department of Defense missions, operational plans, and installations. The committee also notes that the United States is undergoing the most extensive modernization of its nuclear forces in at least three decades. This modernization effort will ensure the United States nuclear deterrent is safe, secure, and effective through 2080. The Department must plan to ensure the viability of the nuclear enterprise through this timeframe. In January 2019, the Department's "Report on Effects of a Changing Climate to the Department of Defense" noted that the Department "must be able to adapt current and future operations to address the impacts of a variety of threats and conditions, including those from weather and natural events. To that end, the Department of Defense factors in the effects of the environment into its mission planning and execution to build resilience."

Therefore, the committee directs the Secretary of Defense, in consultation with the Secretary of Energy, to provide a report to the House Committee on Armed Services not later than March 31, 2020, assessing the effects of climate change on the U.S. nuclear enterprise, to include bases, ports, laboratories, plants, sites, and testing facilities, through 2080.

Comptroller General Review of Implications of 2018 Nuclear Posture Review

The committee notes that the Department of Defense and the National Nuclear Security Administration (NNSA) are undertaking an extensive, multifaceted effort to recapitalize and modernize the U.S. nuclear weapons enterprise, including the nuclear weapons stockpile, dual-capable aircraft, submarine-launched ballistic missiles, intercontinental ballistic missiles, and nuclear-capable heavy bombers, as well as their associated warheads. The administration is also planning to develop new missiles and warheads—including developing low-yield warheads to be carried on ballistic missiles on submarines—and pursuing the reintroduction of nuclear-armed sea-launched cruise missiles, consistent with recommendation from the 2018 Nuclear Posture Review.

The committee notes the significant level of investment and high concurrence of many of these modernization programs and the associated risks of schedule slips and increased costs, in addition to the need to sustain existing platforms and systems until the new systems are operational. The committee therefore recognizes the importance of risk mitigation plans and prioritization of modernization efforts as well as force structure decisions.

The committee directs the Comptroller General of the United States to provide a report to the congressional defense committees not later than April 1, 2020, assessing the Department and NNSA plans for prioritization of modernization efforts recommended by the Nuclear Posture Review and plans in the event of cost increases or delays. The committee further directs the Comptroller General to provide a briefing to the House Committee on Armed Services not later than February 15, 2020, on the Comptroller General's preliminary findings.

Domestic Production of Large Solid Rocket Motors

The committee notes that the Air Force continues development of the Ground-Based Strategic Deterrent (GBSD). As the follow-on to the Minuteman III Intercontinental Ballistic Missile, the GBSD will have two to three large solid rocket motor boosters. The committee notes that there are only two suppliers of large solid rocket motors in the United States. The committee commends the Secretary of Defense for submitting the report required in section 1699 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law 115-232). The committee also notes the importance of maintaining the large solid rocket motor industrial base, as well as the careful analysis done by the Secretary of Defense. The committee wishes to follow up on this report with an update.

Therefore, the committee directs the Under Secretary of Defense for Acquisition and Sustainment to provide an updated report to the House Committee on Armed Services not later than December 1, 2019, assessing the following:

(1) the risks and benefits of utilizing both domestic producers of large solid rocket motors for the design, development, and production of rocket motors for the Ground-Based Strategic Deterrent Program, including any specific mitigation recommendations being considered or implemented;

(2) costs or cost savings associated with using two domestic producers, including with respect to the cost of the GBSD program;

(3) timelines for decision making on the number of producers; and

(4) a plan, if two producers were used.

Managing Risks of Nuclear Escalation

The committee notes the importance of nuclear deterrence in the U.S. national security strategy. As the 2018 Nuclear Posture Review notes, "effective U.S. deterrence of nuclear attack and non-nuclear strategic attack requires ensuring that potential adversaries do not miscalculate regarding the consequences of nuclear first use, either regionally or against the United States itself." However, the committee also notes the increasing number and diversity of strategic, including non-nuclear, capabilities and the increasing number of states deploying such capabilities. These factors may decrease decision time for policy makers and increase the potential for miscalculation and misconception.

The committee directs the Under Secretary of Defense for Policy to provide a report to the House Committee on Armed Services not later than January 31, 2020, detailing the Department's efforts to develop and implement guidance to ensure that the risks of inadvertent escalation to a nuclear war are considered within the decision-making processes with regard to relevant Department activities. The committee further directs the Under Secretary of Defense to identify the capabilities and factors taken into account in developing such guidance. The committee directs the report to be provided in unclassified form, with a classified annex as necessary.

Radiation Exposure Compensation Act

The committee notes that the United States conducted nearly 200 atmospheric nuclear weapons development tests from 1945 to 1962. Also essential to the nation's nuclear weapons development was uranium mining and processing, carried out by tens of thousands of U.S. workers. The committee notes that the Radiation Exposure Compensation Act (RECA) provides for an administrative program for claims relating to atmospheric nuclear testing and claims relating to uranium industry employment. The committee notes that the Department of Justice has awarded more than $2.3 billion in awards under RECA.

Therefore, the committee directs the Secretary of Defense, in consultation with the Attorney General of the United States, to provide a report to the House Committee on Armed Services not later than December 13, 2019, assessing the extent to which those affected by government nuclear testing are prevented from receiving compensation under RECA. The committee requests that the report describe the different groups, and estimated number of people in each group, who are affected by government nuclear testing but are not compensated under RECA, including but not limited to those Americans who live in close proximity to where testing occurred.

Report on the Nuclear-Armed Sea-Launched Cruise Missile

The committee notes that the 2018 Nuclear Posture Review (NPR) proposes to pursue a nuclear-armed sea-launched cruise missile (SLCM). The committee seeks additional clarification from the Department of Defense on why the capability is required and what impacts the deployment of a nuclear SLCM would have on the Navy. The committee notes that the Department is conducting an analysis of alternatives for the low-yield nuclear-armed SLCM.

The committee therefore directs the Chief of Naval Operations to submit a report to the House Committee on Armed Services not later than February 28, 2020, on the nuclear-armed SLCM. The report should include an assessment of the following:

(1) operational impacts to the conventional surface or submarine fleet, in particular with regard to port calls, base security, crew training, Personnel Reliability Program requirements, and crew certification;

(2) other impacts to missions of the conventional surface or submarine fleet if a nuclear SLCM were deployed; and

(3) any other risks and benefits to the Navy's surface fleet should a nuclear SLCM be deployed.

The report should be provided in unclassified form, with a classified annex as necessary. The committee further directs the Chief of Naval Operations to provide a briefing to the House Committee on Armed Services on analysis of alternatives once completed.

OTHER MATTERS

Next Generation Inertial Measurement Unit

The committee notes the ongoing efforts to design, develop, and manufacture next generation inertial measurement units (IMU) for use on strategic, hypersonic, and precision weapon systems. Multiple efforts across the Navy, Air Force, and Missile Defense Agency are looking to address both IMU obsolescence issues and implement capability improvements, primarily in the Trident D-5 ballistic missile, ground based strategic deterrent, conventional prompt strike programs, and ground-based midcourse defense system.

To fully understand the breadth and scope of the ongoing IMU efforts, the committee directs the Assistant Secretary of the Navy for Research, Development and Acquisition, in coordination with the Assistant Secretary of the Air Force for Acquisition, Technology and Logistics, and the Director of the Missile Defense Agency, to provide a briefing to the House Committee on Armed Services not later than December 15, 2019, on the development of next generation IMUs to address obsolescence and implement capability improvements.

DIVISION C—DEPARTMENT OF ENERGY NATIONAL SECURITY AUTHORIZATIONS AND OTHER AUTHORIZATIONS

TITLE XXXI—DEPARTMENT OF ENERGY NATIONAL SECURITY PROGRAMS

ITEMS OF SPECIAL INTEREST

NATIONAL NUCLEAR SECURITY ADMINISTRATION

Weapons Activities

Report on unobligated enriched uranium and domestic uranium requirements

The committee believes the Department of Energy must ensure the availability of the supply of unobligated enriched uranium for national security purposes, notably for producing tritium and to power naval reactors. In addition, the Department of Energy recently announced plans to support a demonstration program for the enrichment of high-assay low enriched uranium (HALEU) for use in potential future advanced commercial reactors and micro-reactors for the Department of Defense. The National Nuclear Security Administration shifted the need for domestically-produced low-enriched uranium (LEU) from 2027 to 2041 after additional review. Other options could delay the need to build a uranium enrichment facility: declaring additional excess highly-enriched uranium (HEU);

negotiating an agreement with the European enrichment services company Urenco to allow the United States, as it does with France, to use the LEU it produces for military, but non-explosive purposes; reconsidering the amount of unobligated uranium required to produce tritium; building a new, smaller non-power-generating government reactor dedicated to the production of tritium for national security purposes; and using LEU for naval reactors. Serious consideration of these options would delay the need to build a new U.S. enrichment facility that the Department of Energy has estimated will cost $3.1 to $11.3 billion depending on its size.

In 2016, the Department of Energy initiated an analysis of alternatives (AOA) to provide a supply of unobligated enriched uranium for the long-term. The committee expects the Department of Energy to comprehensively consider all alternatives, consistent with Department of Energy guidance and the Government Accountability Office's 2018 report on enriched uranium and its 2015 report on best practices for AOA processes, and to consider costs, including life-cycle costs, need dates, domestic industrial base impacts, and opportunities to change existing policy. The Department of Energy should work closely with the Department of State to engage allies in discussions on potential policy changes.

The committee therefore directs the Administrator for Nuclear Security to provide a report to the congressional defense committees not later than November 1, 2019, including: information on size, costs and timelines for a new enrichment facility; options to declare additional HEU as excess and down-blend it; what percentage of LEU is used specifically for producing tritium, rather the total amount of LEU needed to fuel the TVA reactor; options to load the Tennessee Valley Authority (TVA) reactor cores with a mix of unobligated and obligated LEU, a plan to engage URENCO and European allies about the use of obligated LEU, options to reflag LEU used in TVA reactors and any related change in U.S. policy; amount and timelines related to HEU stocks for naval reactors and how much would be available if LEU (not from blend-down of HEU) fuel were available to use in aircraft carrier reactors and potentially in submarine reactors; the technical and cost considerations for building a government reactor dedicated to national security purposes; and the impact of the commercial HALEU production plans on the ability of the Department of Energy to meet unobligated fuel supply for national security missions, and why those fuels must utilize unobligated enriched uranium.

Reports of sexual assault in the protective force

The committee is concerned about recent reports of sexual harassment and assault within the National Nuclear Security Administration's (NNSA) protective force and the NNSA's response to these serious allegations. The protective force provides, among other things, the physical security for the Nation's most sensitive nuclear sites and facilities. A culture that is permissive of sexual harassment and assault cannot effectively perform its responsibilities and would pose serious national security risks. The committee encourages the NNSA to address these incidents must ensure their system for reporting, investigating, and addressing

allegations of sexual harassment and assault by Government contractors within the protective force is independently reviewed to assure its effectiveness.

Therefore, the committee directs the Comptroller General of the United States to comprehensively review the issue of sexual harassment and assault within the NNSA protective force. Specifically, the Comptroller General shall assess the impact of sexual harassment on security of the nuclear security enterprise; how NNSA's security contracts and its oversight and management mechanisms for these contracts integrate sexual harassment prevention and reporting into the safety culture; how NNSA's security contracts are awarded, managed, and overseen; how the NNSA's security oversight model and management mechanisms integrate sexual harassment prevention into its promotion of security culture; and the extent to which NNSA has held those responsible for sexual harassment or assault accountable. The Comptroller General shall provide an interim briefing to the House Committee on Armed Services not later than October 7, 2019, with a report to follow not later than December 20, 2019.

Risks and sustainment plan for Plutonium Facility at Los Alamos National Laboratory

The Department of Energy's Plutonium Facility (PF-4) at the Los Alamos National Laboratory is the Nation's enduring Plutonium Research and Development and production capability. The facility has been operational since 1978, and is currently undergoing major upgrades to ensure a pit production capability of 30 pits per year by 2026. Given the age and use of the facility, which includes additional plutonium activities, the committee is concerned about the continued viability of the site in the long-term.

To better understand the risks to PF-4 and plans to continue its mission, the committee directs the Administrator for Nuclear Security to provide a report to the congressional defense committees not later than December 31, 2019, assessing the risks to the continued viability of PF-4 through 2045 and plans for either sustaining the facility or replacing it, including timelines and estimated costs.

Stockpile Stewardship 2.0

The Department of Energy's science-based stockpile stewardship program has allowed the Department of Defense and the Department of Energy to certify to the President for the 22nd consecutive year that the U.S. nuclear weapons stockpile remains safe, secure, and effective without the use of nuclear explosive testing. This impressive scientific achievement is enabled by National Nuclear Security Administration's (NNSA) most valuable resource, its workforce. NNSA's ability to recruit, train, and retain the next generation of world-class scientists, engineers, and technicians is a major priority.

To ensure the NNSA's workforce achieved its stockpile stewardship goals over the past two decades, the NNSA constructed numerous world-class scientific facilities at its laboratories and production sites. These facilities have yielded

important scientific insight of benefit to the nuclear enterprise, as well as the broader scientific community. As the NNSA continues to recruit, train, and retain the next generation of world-class scientists, engineers and technicians, it must also remain on the cutting-edge of science and look to future scientific challenges facing the nuclear stockpile.

To better understand how the National Nuclear Security Administration will approach the next set of long-term science questions related to the nuclear stockpile, the committee directs the Administrator for Nuclear Security to provide a detailed report to the House Committee on Armed Services not later than March 13, 2020, assessing the major science questions facing the stockpile stewardship program over the next 20 years, and a plan to address them. The committee requests that the Department of Energy conduct this activity in consultation with the national laboratories and other partners as appropriate.

Defense Nuclear Nonproliferation

Nuclear Verification Plan

The committee notes that once the United States withdraws, absent Russia returning to compliance, from the Intermediate-Nuclear Forces Treaty (INF), only Russia's strategic forces accountable under the New START Treaty will be subject to constraints, inspection, and verification. The committee also notes that the United States, per the 2018 Nuclear Posture Review, is "prepared to consider arms control opportunities that return parties to compliance, predictability, and transparency, and remain receptive to future arms control negotiations if conditions permit and the potential outcome improves the security of the United States, its allies, and partners." As such, the committee notes that the United States must be prepared to address Russia's significantly larger non-strategic nuclear arsenal through arms control, should Russia accept such limits through a nuclear arms control negotiation.

Therefore, the committee directs the Administrator for Nuclear Security to provide a report to the House Committee on Armed Services not later than March 13, 2020, with a detailed plan for ensuring the United States is prepared, from a technology perspective, to inspect and verify non-strategic nuclear warheads as part of a future arms control agreement. The report should detail domestic and international efforts that the Department is undertaking. The report should also assess the costs and timeline required to ensure full U.S. preparedness in the event the United States and Russia were to agree to limits on nonstrategic nuclear forces. The committee directs the report to be provided in unclassified form, with a classified annex as necessary.

Excess Plutonium Disposition

The committee notes the United States' commitment to dispose of 34 metric tons of excess plutonium as part of the Management and Disposition of Plutonium

Agreement, signed in 2000, with Russia. The committee also notes that in October 2018, the Secretary of Energy delivered official notice of contract termination of the Mixed-Oxide Fuel Fabrication Facility (MFFF) due to significant costs, delays and difficulties executing this program. The committee also emphasizes that the Secretary proposed to dispose of this material through the Dilute and Dispose program which was more affordable and required a fraction of the funding MOX would have required. The MFFF would have disposed of the 34 metric tons by creating mixed-oxide fuel for use in commercial power reactions. The committee notes the commitment to dispose of the 34 metric tons of excess plutonium and is concerned that funding has not been prioritized to implement this program due to prioritizing plutonium pit production at the Savannah River Site, leading to questions about the U.S. nuclear nonproliferation commitment to disposal of this excess material.

Therefore, the committee directs the Administrator for Nuclear Security to submit a report to the congressional defense committees not later than February 28, 2020, with a detailed plan, including timelines, plans to engage the State of New Mexico and Russia on any necessary negotiations to pursue the Dilute and Dispose approach, funding requirements, including funding requirements over the next 5 years, to begin disposing of this excess plutonium.

ENVIRONMENTAL AND OTHER DEFENSE ACTIVITIES

Defense Environmental Cleanup

Savannah River Advanced Manufacturing Collaborative

The committee notes that the fiscal year 2020 budget request included a request for the Advanced Manufacturing Collaborative to support design and construction of a modern research and development facility accessible by commercial industry and academia. The committee further notes the goal of the facility would be to develop safer, faster, and more cost effective nuclear chemical manufacturing and cleanup technologies and expertise to tackle the remaining challenges in the cleanup of radioactive and chemical waste from Cold War activities, nuclear research, and non-proliferation missions.

Therefore, the committee directs the Administrator for Nuclear Security to provide a report to the House Committee on Armed Services not later than March 13, 2020, with a detailed plan of the construction and operations process for the Advanced Manufacturing Collaborative, including an option for the site's location being outside of the site to encourage local community engagement.