

**H.R. 2500—FY20 NATIONAL DEFENSE
AUTHORIZATION BILL**

**SUBCOMMITTEE ON STRATEGIC
FORCES**

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TITLE II—RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

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SUBTITLE B—PROGRAM REQUIREMENTS, RESTRICTIONS, AND LIMITATIONS

Section 212—Contract for National Security Research Studies

This section would direct the Secretary of Defense, acting through the Under Secretary of Defense for Acquisition and Sustainment, to seek to enter into a contract to support the JASON scientific advisory group, and would require notification to the congressional defense committees 90 days before termination of such contract. The committee also expects the Department of Defense to provide notification to the congressional defense committees if the contract expires without renewal.

TITLE XII—MATTERS RELATING TO FOREIGN NATIONS

LEGISLATIVE PROVISIONS

SUBTITLE D—MATTERS RELATING TO RUSSIA

Section 1231—Prohibition on the Use of Funds to Suspend, Terminate, or Withdraw the United States from the Open Skies Treaty

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.

TITLE XVI—STRATEGIC PROGRAMS, CYBER, AND INTELLIGENCE MATTERS

LEGISLATIVE PROVISIONS

SUBTITLE A—SPACE ACTIVITIES

Section 1602—Annual Determination on Plan on Full Integration and Exploitation of Overhead Persistent Infrared Capability

This section would add a sunset clause to the requirement for annual determination on plan on full integration and exploitation of overhead persistent infrared capability.

Section 1604—Prototype Program for Multi-Global Navigation Satellite System Receiver Development

This section would require the Secretary of Defense to establish under the Space Development Agency (SDA) a program to prototype an M-code based, multi-global navigation satellite system (GNSS) receiver that would incorporate both allied and non-allied, trusted and open GNSS signals to increase the resilience and capability of military positioning, navigation, and timing (PNT) equipment.

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 1605—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.

SUBTITLE D—NUCLEAR FORCES

Section 1642—Notification of Meetings Held by the Nuclear Weapons Council

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 1643—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 1644—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.

Section 1645—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 1646—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 1648—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.

SUBTITLE E—MISSILE DEFENSE PROGRAMS

Section 1661—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 1662—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 1663—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 1666—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 1667—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.

Section 1668—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 1669—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 1670—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.

SUBTITLE F—OTHER MATTERS

Section 1681—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 1683—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

TITLE XXXI—DEPARTMENT OF ENERGY NATIONAL SECURITY PROGRAMS

LEGISLATIVE PROVISIONS

SUBTITLE B—PROGRAM AUTHORIZATIONS, RESTRICTIONS, AND LIMITATIONS

Section 3111—Personnel Levels of the Office of the Administrator for Nuclear Security

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 3112—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 3114—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.

Section 3115—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 3116—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 3117—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.

TITLE XXXII—DEFENSE NUCLEAR FACILITIES SAFETY BOARD

LEGISLATIVE PROVISIONS

Section 3201—Authorization

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

Section 3202—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

1 **SEC. 212 [Log 69888]. CONTRACT FOR NATIONAL SECURITY**
2 **RESEARCH STUDIES.**

3 (a) **CONTRACT AUTHORITY.**—The Secretary of De-
4 fense, acting through the Under Secretary of Defense for
5 Acquisition and Sustainment, shall seek to enter into a
6 contract with a federally funded research and development
7 center under which the private scientific advisory group
8 known as “JASON” will provide national security re-
9 search studies to the Department of Defense.

10 (b) **TERMS OF CONTRACT.**—The contract entered
11 into under subsection (a) shall be an indefinite delivery-
12 indefinite quantity contract with terms substantially simi-
13 lar to the terms of the contract in effect before March
14 28, 2019, under which JASON provided national security
15 research studies to the Department of Defense (solicita-
16 tion number HQ0034-19-R-0011 for JASON National Se-
17 curity Research Studies).

18 (c) **TERMINATION.**—The Secretary of Defense may
19 not terminate the contract under subsection (a) until a
20 period of 90 days has elapsed following the date on which
21 the Secretary notifies the congressional defense commit-
22 tees of the intent of the Secretary to terminate the con-
23 tract.

1 **Subtitle D—Matters Relating to**
2 **Russia**

3 **SEC. 1231. [LOG 69309] PROHIBITION ON THE USE OF**
4 **FUNDS TO SUSPEND, TERMINATE, OR WITH-**
5 **DRAW THE UNITED STATES FROM THE OPEN**
6 **SKIES TREATY.**

7 (a) FINDINGS.—Congress finds the following:

8 (1) Since 1992, the United States has sup-
9 ported the Open Skies Treaty with dedicated aircraft
10 and observation mission teams, conducting several
11 hundred training and observation missions with
12 other countries.

13 (2) This commitment by the United States has
14 helped to confirm and refine operational procedures,
15 to improve implementation and effectiveness of the
16 Open Skies Treaty, and provide United States lead-
17 ership and engagement opportunities that have sup-
18 ported broader objectives and improved European
19 transparency.

20 (3) The Open Skies Treaty provides signatories
21 with the ability to gather information through aerial
22 imaging on military forces and activities of concern
23 to them which contributes to greater transparency
24 and stability in the Euro-Atlantic region, which ben-

1 efits both the United States and United States allies
2 and partners.

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

11 (5) The current 1960s-era United States air-
12 craft used with respect to the Open Skies Treaty are
13 ill-suited to extreme operating environments in Rus-
14 sia and experience regular, unplanned maintenance
15 issues, often resulting in mission delays or cancella-
16 tions.

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

21 (7) The United States also demonstrated in De-
22 cember 2018, along with United States allies of
23 Canada, the United Kingdom, France, Germany,
24 and Romania, that Open Skies Treaty mechanisms
25 can be used during times of crisis.

1 (8) Following Russia’s unprovoked attack on
2 Ukrainian vessels near the Kerch Strait, the United
3 States and United States allies conducted an “ex-
4 traordinary” Open Skies Treaty observation mission
5 over Ukraine to reaffirm commitment to Ukraine.

6 (b) SENSE OF CONGRESS.—It is the sense of Con-
7 gress that—

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

11 (2) due to the significant benefits that observa-
12 tion missions under the Open Skies Treaty provide
13 to the United States and United States allies, the
14 United States should commit to continued participa-
15 tion in the Treaty.

16 (c) PROHIBITION.—

17 (1) IN GENERAL.—Except as provided in para-
18 graph (2), none of the funds authorized to be appro-
19 priated by this Act or otherwise made available to
20 the Department of Defense for fiscal year 2020 may
21 be obligated or expended to take any action to sus-
22 pend, terminate, or withdraw the United States from
23 the Open Skies Treaty.

24 (2) EXCEPTION.—The prohibition in paragraph
25 (1) shall not apply if the Secretary of Defense and

1 the Secretary of State jointly determine and certify
2 to the congressional defense committees, the Com-
3 mittee on Foreign Affairs of the House of Rep-
4 resentatives, and the Committee on Foreign Rela-
5 tions of the Senate, that—

6 (A) Russia is in material breach of its obli-
7 gations under the Open Skies Treaty and is not
8 taking steps to return to compliance with such
9 obligations; and

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

13 (d) REPEAL OF LIMITATION ON USE OF FUNDS TO
14 VOTE TO APPROVE OR OTHERWISE ADOPT ANY IMPE-
15 MENTING DECISION OF THE OPEN SKIES CONSULTATIVE
16 COMMISSION AND MODIFICATIONS TO REPORT.—

17 (1) IN GENERAL.—Section 1236 of the Na-
18 tional Defense Authorization Act for Fiscal Year
19 2017 (Public Law 114–328; 130 Stat. 2491) is
20 amended—

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

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

- 1 (2) MODIFICATIONS TO REPORT.—Subsection
- 2 (a) of such section, as so redesignated, is amended—
- 3 (A) in the heading, by striking “QUAR-
- 4 TERLY” and inserting “BI-ANNUAL”;
- 5 (B) in paragraph (1)—
- 6 (i) by inserting “the Secretary of
- 7 State,” before “the Secretary of Energy”;
- 8 (ii) by striking “quarterly basis” and
- 9 inserting “bi-annual basis”;
- 10 (iii) by striking “by the Russian Fed-
- 11 eration over the United States” and insert-
- 12 ing “by all parties to the Open Skies Trea-
- 13 ty, including the United States, under the
- 14 Treaty”; and
- 15 (iv) by striking “calendar quarter”
- 16 and inserting “preceding 6-month period”;
- 17 and
- 18 (C) in paragraph (2), by striking subpara-
- 19 graphs (B), (C), and (D) and inserting the fol-
- 20 lowing:
- 21 “(B) In the case of an observation flight
- 22 by the United States, including an observation
- 23 flight over the territory of Russia—

1 “(i) an analysis of data collected that
2 supports United States intelligence and
3 military collection goals; and

4 “(ii) an assessment of data collected
5 regarding military activity that could not
6 be collected through other means.

7 “(C) In the case of an observation flight
8 over the territory of the United States—

9 “(i) an analysis of whether and the
10 extent to which any United States critical
11 infrastructure was the subject of image
12 capture activities of such observation
13 flight;

14 “(ii) an estimate for the mitigation
15 costs imposed on the Department of De-
16 fense or other United States Government
17 agencies by such observation flight; and

18 “(iii) assessment of how such informa-
19 tion is used by party conducting the obser-
20 vation flight, for what purpose, and how
21 the information fits into the overall collec-
22 tion posture.”.

23 (3) FORM.—Subsection (c) of such section, as
24 so redesignated, is amended by striking “certifi-
25 cation, report, and notice” and inserting “report”.

1 (4) DEFINITIONS.—Subsection (d) of such sec-
2 tion, as so redesignated, is amended—

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

5 (B) by redesignating paragraphs (4), (5),
6 and (7) as paragraphs (3), (4), and (5), respec-
7 tively.

8 (e) OPEN SKIES: IMPLEMENTATION PLAN.—Section
9 1235(a) of the National Defense Authorization Act for
10 Fiscal Year 2018 (Public Law 115–91; 131 Stat. 1660)
11 is amended—

12 (1) in paragraph (1)—

13 (A) by striking “during such fiscal year”
14 and inserting “during a calendar year”; and

15 (B) by striking “the President submits”
16 and all that follows and inserting “the Sec-
17 retary of Defense provides to the appropriate
18 congressional committees a briefing on a plan
19 described in paragraph (2) with respect to such
20 calendar year.”;

21 (2) in paragraph (2), by striking “such fiscal
22 year” and inserting “such calendar year”; and

23 (3) in paragraph (3), by striking “a fiscal year
24 and submit the updated plan” and inserting “a cal-

1 endar year and provide a briefing on the updated
2 plan”.

3 (f) DEFINITION OF OPEN SKIES TREATY; TREATY.—

4 In this section, the term “Open Skies Treaty” or “Treaty”
5 means the Treaty on Open Skies, done at Helsinki March
6 24, 1992, and entered into force January 1, 2002.

1 **SEC. 1602.**[Log 70108] **ANNUAL DETERMINATION ON PLAN**
2 **ON FULL INTEGRATION AND EXPLOITATION**
3 **OF OVERHEAD PERSISTENT INFRARED CAPA-**
4 **BILITY.**

5 Section 1618(c) of the National Defense Authoriza-
6 tion Act for Fiscal Year 2016 (Public Law 114–92; 10
7 U.S.C. 2431 note) is amended by striking “for a fiscal
8 year” and inserting “for each fiscal year preceding fiscal
9 year 2029”.

1 **SEC. 1604.[Log 69498] PROTOTYPE PROGRAM FOR MULTI-**
2 **GLOBAL NAVIGATION SATELLITE SYSTEM RE-**
3 **CEIVER DEVELOPMENT.**

4 (a) PROTOTYPE MULTI-GNSS PROGRAM.—The Sec-
5 retary of Defense shall establish under the Space Develop-
6 ment Agency a program to prototype an M-code based,
7 multi-global navigation satellite system receiver that is ca-
8 pable of receiving covered signals to increase the resilience
9 and capability of military position, navigation, and timing
10 equipment against threats to the Global Positioning Sys-
11 tem and to deter the likelihood of attack on the worldwide
12 Global Positioning System by reducing the benefits of such
13 an attack.

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

16 (1) with respect to each covered signal that
17 could be received by the prototype receiver under
18 such program, conduct an assessment of the relative
19 benefits and risks of using that signal, including
20 with respect to any existing or needed monitoring in-
21 frastructure that would alert users of the Depart-
22 ment of Defense of potentially corrupted signal in-
23 formation, and the cyber risks and challenges of in-
24 corporating such signals into a properly designed re-
25 ceiver;

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

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

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

13 (A) is a cooperative effort, coordinated
14 with the Secretary of State, between the United
15 States and the allies of the United States that
16 may also have interest in funding a multi-global
17 navigation satellite system and M-code pro-
18 gram;

19 (B) the Secretary of Defense, in coordina-
20 tion with the Secretary of States, ensures that
21 the United States has access to sufficient in-
22 sight into trusted signals of allied systems to
23 assure potential reliance by the United States
24 on such signals.

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

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

10 (2) the schedule for such program;

11 (3) a plan for how the results of the program
12 could be incorporated into future blocks of the Glob-
13 al Positioning System military user equipment pro-
14 gram; and

15 (4) the recommendations and analysis contained
16 in the study sponsored by the Department of De-
17 fense conducted by the MITRE Corporation on the
18 risks, benefits, and approaches to adding multi-glob-
19 al navigation satellite system capabilities to military
20 user equipment.

21 (d) REPORT.—Not later than 120 days after the date
22 of the enactment of this Act, the Secretary of Defense
23 shall submit to the congressional defense committees, the
24 Committee on Foreign Affairs of the House of Representa-

1 tives, and the Committee on Foreign Relations of the Sen-
2 ate a report containing—

3 (1) an explanation of how the Secretary intends
4 to comply with section 1609 of the John S. McCain
5 National Defense Authorization Act for Fiscal Year
6 2019 (Public Law 115–232; 132 Stat. 2110);

7 (2) an outline of any potential cooperative ef-
8 forts acting in accordance with the North Atlantic
9 Treaty Organization, the European Union, or Japan
10 that would support such compliance;

11 (3) an assessment of the potential to host, or
12 incorporate through software defined payloads, Glob-
13 al Positioning System M-code functionality onto al-
14 lied global navigation satellite system systems; and

15 (4) an assessment of new or enhanced moni-
16 toring capabilities that would be needed to incor-
17 porate global navigation satellite system
18 functionality into weapon systems of the Depart-
19 ment.

20 (e) LIMITATION.—Of the funds authorized to be ap-
21 propriated by this Act or otherwise made available for fis-
22 cal year 2020 for increment 2 of the acquisition of military
23 Global Positioning System user equipment terminals, not
24 more than 75 percent may be obligated or expended until
25 the date on which the briefing has been provided under

1 subsection (c) and the report has been submitted under
2 subsection (d).

3 (f) DEFINITIONS.—In this section:

4 (1) The term “allied systems” means—

5 (A) the Galileo system of the European
6 Union;

7 (B) the QZSS system of Japan; and

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

11 (i) the NAVIC system of India; and

12 (ii) any similarly associated wide area
13 augmentation systems.

14 (2) The term “covered signals”—

15 (A) means global navigation satellite sys-
16 tem signals from—

17 (i) allied systems; and

18 (ii) non-allied systems; and

19 (B) includes both trusted signals and open
20 signals.

21 (3) The term “M-code” means, with respect to
22 global navigation satellite system signals, military
23 code that provides enhanced positioning, navigation,
24 and timing capabilities and improved resistance to
25 existing and emerging threats, such as jamming.

1 (4) The term “non-allied systems” means—

2 (A) the Russian GLONASS system; and

3 (B) the Chinese Beidou system.

4 (5) The term “open signals” means global navi-
5 gation satellite system that do not include encryption
6 or other internal methods to authenticate signal in-
7 formation.

8 (6) The term “trusted signals” means global
9 navigation satellite system signals that incorporate
10 encryption or other internal methods to authenticate
11 signal information.

1 **SEC. 1605.[Log 69891] COMMERCIAL SPACE SITUATIONAL**
2 **AWARENESS CAPABILITIES.**

3 (a) FINDINGS.—Congress finds the following:

4 (1) The Secretary of the Air Force is respon-
5 sible for developing the hardware and software sys-
6 tems to provide space situational awareness data to
7 the Commander of the United States Strategic Com-
8 mand to meet warfighter requirements.

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

12 (3) The Secretary terminated the Joint Space
13 Operations Center mission center and decided to
14 operationally accept the Joint Space Operations
15 Center mission center Increment 2 despite the fact
16 that only three of 12 planned capabilities in Joint
17 Space Operations Center Mission Center Increment
18 2 were accepted for use in operations.

19 (4) Multiple commercial vendors have the cur-
20 rent capability to detect, maintain custody of, and
21 provide analytical products that can address the
22 warfighter space situational awareness requirements
23 that were not filled in the Joint Space Operations
24 Center Mission Center and that have been impacted
25 by significant delays in the program of record.

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

6 (c) LIMITATION.—Of the funds authorized to be ap-
7 propriated by this Act or otherwise made available for fis-
8 cal year 2020 for the enterprise space battle management
9 command and control, not more than 75 percent may be
10 obligated or expended until the date on which the Sec-
11 retary of Defense, without delegation, certifies to the con-
12 gressional committees that the Secretary has awarded the
13 contracts under subsection (b).

14 (d) REPORT.—Not later than January 31, 2020, the
15 Director of the Space Development Agency, in coordina-
16 tion with the Secretary of the Air Force, shall submit to
17 the congressional defense committees a report on using
18 commercial space situational awareness services to fill the
19 space situational awareness requirements that were not
20 filled in the Joint Space Operations Center Mission Cen-
21 ter. The report shall include the following:

22 (1) A description of current domestic commer-
23 cial capabilities to detect and track space objects in
24 low earth orbit below the 10 centimeter threshold of
25 legacy systems.

1 (2) A description of current domestic best-in-
2 breed commercial capabilities that can meet such re-
3 quirements.

4 (3) Estimates of the timelines, milestones, and
5 funding requirements to procure a near-term solu-
6 tion to meet such requirements until the develop-
7 ment programs of the Air Force are projected to be
8 operationally fielded.

9 (e) COMMERCIAL SPACE SITUATIONAL AWARENESS
10 SERVICES DEFINED.—In this section, the term “commer-
11 cial space situational awareness services” means commer-
12 cial space situational awareness processing software and
13 data to address warfighter requirements and fill gaps in
14 current space situational capabilities of the Air Force.

1 **SEC. 1642.[Log 69448] NOTIFICATION OF MEETINGS HELD**
2 **BY THE NUCLEAR WEAPONS COUNCIL.**

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

1 **SEC. 1643.[Log 70004] ELIMINATION OF CONVENTIONAL RE-**
2 **QUIREMENT FOR LONG-RANGE STANDOFF**
3 **WEAPON.**

4 Subsection (a) of section 217 of the National Defense
5 Authorization Act for Fiscal Year 2014 (Public Law 113–
6 66; 127 Stat. 706), as amended by section 1662 of the
7 John S. McCain National Defense Authorization Act for
8 Fiscal Year 2019 (Public Law 115–232; 132 Stat. 2152),
9 is amended to read as follows:

10 “(a) LONG-RANGE STANDOFF WEAPON.—The Sec-
11 retary of the Air Force shall develop a follow-on air-
12 launched cruise missile to the AGM–86 that—

13 “(1) achieves initial operating capability for nu-
14 clear missions prior to the retirement of the nuclear-
15 armed AGM–86; and

16 “(2) is capable of internal carriage and employ-
17 ment for nuclear missions on the next-generation
18 long-range strike bomber.”.

1 **SEC. 1644.[Log 70103] EXTENSION OF ANNUAL BRIEFING ON**
2 **THE COSTS OF FORWARD-DEPLOYING NU-**
3 **CLEAR WEAPONS IN EUROPE.**

4 Section 1656(a) of the National Defense Authoriza-
5 tion Act for Fiscal Year 2016 (Public Law 114–92; 129
6 Stat. 1124) is amended—

7 (1) by striking “2021” and inserting “2024”;

8 and

9 (2) by inserting “, the Committee on Foreign
10 Affairs of the House of Representatives, and the
11 Committee on Foreign Relations of the Senate”
12 after “the congressional defense committees”.

1 **SEC. 1645.[Log 69773] PERMANENT PROHIBITION ON AVAIL-**
2 **ABILITY OF FUNDS FOR MOBILE VARIANT OF**
3 **GROUND-BASED STRATEGIC DETERRENT**
4 **MISSILE.**

5 Section 1664 of the National Defense Authorization
6 Act for Fiscal Year 2017 (Public Law 114–328; 130 Stat.
7 2615), as most recently amended by section 1666 of the
8 John S. McCain National Defense Authorization Act for
9 Fiscal Year 2019 (Public Law 115–232), is amended by
10 striking “for any of fiscal years 2017 through 2020” and
11 inserting “for fiscal year 2017 or any fiscal year there-
12 after”.

1 **SEC. 1646.[Log 69758] PROHIBITION ON AVAILABILITY OF**
2 **FUNDS FOR DEPLOYMENT OF LOW-YIELD**
3 **BALLISTIC MISSILE WARHEAD.**

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

1 **SEC. 1648.[Log 69999] PLAN ON NUCLEAR COMMAND, CON-**
2 **TROL, AND COMMUNICATIONS SYSTEMS.**

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

9 (b) MATTERS INCLUDED.—The plan under sub-
10 section (a) shall address the following:

11 (1) Near- and long-term plans and options to
12 recapitalize the nuclear command, control, and com-
13 munications systems to ensure the resilience of such
14 systems.

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

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

20 (4) The risks and benefits of using different ar-
21 chitectures for such systems, including, at a min-
22 imum, using hosted payloads.

23 (5) Whether such architectures should be classi-
24 fied or unclassified.

1 (6) Requirements and plans to ensure the secu-
2 rity of the supply chain of nuclear command, con-
3 trol, and communications systems.

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

6 (8) Options for potential negotiation with ad-
7 versaries, including with respect to agreements to
8 not target nuclear command, control, and commu-
9 nications systems through kinetic, nonkinetic, or
10 cyber attacks.

11 (9) Any other matters the Secretary determines
12 appropriate.

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

1 **Subtitle E—Missile Defense**
2 **Programs**

3 **SEC. 1661.**[Log 69324] **NATIONAL MISSILE DEFENSE POLICY.**

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

8 “(a) **POLICY.**—It is the policy of the United States
9 to—

10 “(1) maintain and improve, with funding sub-
11 ject to the annual authorization of appropriations
12 and the annual appropriation of funds for National
13 Missile Defense—

14 “(A) an effective protection of the home-
15 land of the United States against offensive mis-
16 sile threats posed by rogue states; and

17 “(B) an effective regional missile defense
18 system capable of defending the allies, partners,
19 and deployed forces of the United States
20 against increasingly complex missile threats;
21 and

22 “(2) rely on nuclear deterrence to address more
23 sophisticated and larger quantity near-peer inter-
24 continental ballistic missile threats.”.

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

1 **SEC. 1662.[Log 69376] DEVELOPMENT OF HYPERSONIC AND**
2 **BALLISTIC MISSILE TRACKING SPACE SEN-**
3 **SOR PAYLOAD.**

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

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

10 (2) by inserting after subsection (c) the fol-
11 lowing new subsection (d):

12 “(d) HYPERSONIC AND BALLISTIC MISSILE TRACK-
13 ING SPACE SENSOR PAYLOAD.—The Director, in coordi-
14 nation with the Director of the Space Development Agency
15 and the Secretary of the Air Force, shall—

16 “(1) develop a hypersonic and ballistic missile
17 tracking space sensor payload; and

18 “(2) include such payload as a component of
19 the sensor architecture developed under subsection
20 (a).”.

21 (b) UPDATED PLAN.—Such section is further amend-
22 ed by inserting after subsection (h), as redesignated by
23 subsection (a), the following new subsection:

24 “(i) UPDATED PLAN.—Not later than 90 days after
25 the date of the enactment of the National Defense Author-
26 ization Act for Fiscal Year 2020, the Director of the Mis-

1 sile Defense Agency, in coordination with the Director of
2 the Space Development Agency and the Secretary of the
3 Air Force, shall submit to the appropriate congressional
4 committees an update to the plan under subsection (h),
5 including the following:

6 “(1) How the Director of the Missile Defense
7 Agency, in coordination with the Director of the
8 Space Development Agency and the Secretary, will
9 develop the payload under subsection (d) and include
10 such payload in the sensor architecture developed
11 under subsection (a).

12 “(2) How such payload will address the require-
13 ment of the United States Strategic Command for a
14 hypersonic and ballistic missile tracking space sens-
15 ing capability.

16 “(3) The estimated costs (in accordance with
17 subsection (e)) to develop, acquire, and deploy, and
18 the lifecycle costs to operate and sustain, the pay-
19 load under subsection (f) and include such payload
20 in the sensor architecture developed under sub-
21 section (a).”.

22 (c) CONFORMING AMENDMENT.—Subsection (h)(1)
23 of such section, as redesignated by subsection (a), is
24 amended by striking “with subsection (d)” and inserting
25 “with subsection (e)”.

1 **SEC. 1663.[Log 69397] REQUIREMENT FOR TESTING OF RE-**
2 **DESIGNED KILL VEHICLE PRIOR TO PRODUC-**
3 **TION.**

4 (a) SENSE OF CONGRESS.—It is the sense of Con-
5 gress that the Director of the Missile Defense Agency
6 must address the technical issues of the redesigned kill
7 vehicle prior to moving forward with development, pro-
8 curement, and fielding of the vehicle.

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

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

16 “(1) the Secretary determines that the waiver is
17 in the interest of national security;

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

22 “(3) the Secretary determines that the threat of
23 missiles is advancing at a pace that requires addi-
24 tional capacity of the ground-based midcourse de-
25 fense system by 2023, including in light of the as-
26 sessment conducted under paragraph (2);

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

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

7 “(A) a notice of the waiver, including the
8 rationale of the Secretary for making the waiv-
9 er; and

10 “(B) a certification by the Secretary that
11 the Secretary has analyzed and accepts the risk
12 of making and implementing a lot production
13 decision for the redesigned kill vehicle prior to
14 the vehicle undergoing a successful flight inter-
15 cept test; and

16 “(6) a period of 30 days elapses following the
17 date on which the Secretary submits the report
18 under paragraph (5).”.

19 (c) MODIFICATION TO ASSESSMENT.—Subsection (c)
20 of such section is amended by inserting “and to the con-
21 gressional defense committees” after “to the Secretary of
22 Defense”.

1 **SEC. 1666.[Log 69303] ORGANIZATION, AUTHORITIES, AND**
2 **BILLETS OF THE MISSILE DEFENSE AGENCY.**

3 (a) INDEPENDENT STUDY.—

4 (1) ASSESSMENT.—In accordance with para-
5 graph (2), the Secretary of Defense shall seek to
6 enter into a contract with a federally funded re-
7 search and development center to conduct a study
8 assessing—

9 (A) the organization of the Missile Defense
10 Agency under the Under Secretary of Defense
11 for Research and Engineering pursuant to sec-
12 tion 205(b) of title 10, United States Code;

13 (B) alternative ways to organize the Agen-
14 cy under other officials of the Department of
15 Defense, including the Under Secretary for Ac-
16 quisition and Sustainment and any other offi-
17 cial of the Department the federally funded re-
18 search and development center determines ap-
19 propriate; and

20 (C) transitioning the Agency to the stand-
21 ard acquisition process pursuant to Department
22 of Defense Instruction 5000, including both the
23 risks and benefits of making such a transition.

24 (2) SCOPE OF STUDY.—Before entering into the
25 contract with a federally funded research and devel-
26 opment center to conduct the study under paragraph

1 (1), the Secretary shall provide to the congressional
2 defense committees an update on the scope of such
3 study.

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

9 (4) SUBMISSION TO CONGRESS.—Not later than
10 180 days after the date of the enactment of this Act,
11 the Secretary shall submit to the congressional de-
12 fense committees the study under paragraph (1),
13 without change.

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

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

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

1 (B) a period of 90 days has elapsed fol-
2 lowing the date of such notification.

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

8 (A) the memorandum of the Secretary of
9 Defense titled “Missile Defense Program Direc-
10 tion” signed on January 2, 2002;

11 (B) Department of Defense Directive
12 5134.09, as in effect on the date of the enact-
13 ment of this Act; and

14 (C) United States Strategic Command In-
15 struction 583–3.

16 (c) LIMITATION ON CERTAIN TRANSFERS OF BIL-
17 LETS.—During fiscal year 2020, the Secretary of Defense
18 may not transfer civilian or military billets from the Mis-
19 sile Defense Agency to any element of the Department
20 under the Under Secretary of Defense for Research and
21 Engineering until, for each such transfer—

22 (1) the Secretary notifies the congressional de-
23 fense committees of such proposed transfer; and

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

1 **SEC. 1667.[Log 70190] MISSILE DEFENSE INTERCEPTOR**
2 **SITE IN CONTIGUOUS UNITED STATES.**

3 (a) DESIGNATION.—The Secretary shall designate
4 the preferred location of a missile defense site in the con-
5 tiguous United States from among the locations evaluated
6 pursuant to section 227 of the National Defense Author-
7 ization Act for Fiscal Year 2013 (Public Law 112–239;
8 126 Stat. 1678). The Secretary shall make such designa-
9 tion based on the following:

10 (1) The environmental impact statement pre-
11 pared pursuant to section 227 of the National De-
12 fense Authorization Act for Fiscal Year 2013 (Pub-
13 lic Law 112–239; 126 Stat. 1678).

14 (2) Strategic and operational effectiveness, in-
15 cluding with respect to the location that is the most
16 advantageous site in providing coverage to the entire
17 contiguous United States, including having the capa-
18 bility to provide shoot-assess-shoot coverage to the
19 entire contiguous United States.

20 (3) Construction remediation efforts and im-
21 pacts to the existing environment at the site.

22 (4) The existing infrastructure at the site.

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

25 (b) REPORT.—Not later than January 31, 2020, the
26 Secretary shall submit to the congressional defense com-

1 mitted a report on the designation made under subsection
2 (a) with respect to each factor specified in paragraphs (1)
3 through (5) of such subsection.

4 (c) RULE OF CONSTRUCTION.—Nothing in this sec-
5 tion may be construed—

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

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

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

1 **SEC. 1668.[Log 69677] MISSILE DEFENSE RADAR IN HAWAII.**

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

11 (b) LIMITATION.—Of the funds authorized to be ap-
12 propriated by this Act or otherwise made available for fis-
13 cal year 2020 for research, development, test, and evalua-
14 tion for the homeland defense radar in Hawaii, not more
15 than 85 percent may be obligated or expended until the
16 Director—

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

19 (2) submits to the congressional defense com-
20 mittees an assessment conducted by the Army Corps
21 of Engineers on the research, development, test, and
22 evaluation proposal to design, build, and integrate
23 the foundation of the radar and the thermal control
24 system of the radar that highlights any unique com-
25 ponents of such proposal; and

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

1 **SEC. 1669.[Log 69330] LIMITATION ON AVAILABILITY OF**
2 **FUNDS FOR LOWER TIER AIR AND MISSILE**
3 **SENSOR.**

4 (a) LIMITATION.—Of the funds authorized to be ap-
5 propriated by this Act or otherwise made available for fis-
6 cal year 2020 for the Army for the lower tier air and mis-
7 sile defense sensor, not more than 75 percent may be obli-
8 gated or expended until the Secretary of the Army submits
9 the report under subsection (b).

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

15 (1) An explanation of how the test and dem-
16 onstration was conducted and what the test and
17 demonstration set out to achieve, including—

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

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

24 (2) An explanation of the capability of the sen-
25 sor system that the Secretary determined to be the

1 winner of the test and demonstration, including with
2 respect to—

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

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

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

16 (3) An explanation of whether future perform-
17 ance improvements to the lower tier air and missile
18 defense sensor are conditional on intellectual prop-
19 erty and how such improvements will be made if the
20 United States does not own such intellectual prop-
21 erty.

1 **SEC. 1670.[Log 69444] COMMAND AND CONTROL, BATTLE**
2 **MANAGEMENT, AND COMMUNICATIONS PRO-**
3 **GRAM.**

4 (a) **LIMITATION ON SALE.**—The Director of the Mis-
5 sile Defense Agency may not pursue release of the com-
6 mand and control, battle management, and communica-
7 tions program (or any variants thereof) for export until
8 the date on which the Director submits the report under
9 subsection (b).

10 (b) **REPORT.**—Not later than 90 days after the date
11 of the enactment of this Act, the Director shall submit
12 to the congressional defense committees, the Committee on
13 Foreign Affairs of the House of Representatives, and the
14 Committee on Foreign Relations of the Senate a report
15 containing the following:

16 (1) An explanation of the rationale of the Di-
17 rector for considering to export the command and
18 control, battle management, and communications
19 program (or any variants thereof) in light of the
20 critical role of the program in the strategic national
21 defense of the United States and the allies of the
22 United States against ballistic missile attack.

23 (2) The findings of the market research and
24 analysis conducted by the Director regarding export-
25 able command and control solutions for ballistic mis-

- 1 sile defense, including such solutions that are inter-
- 2 nationally available.

1 **Subtitle F—Other Matters**

2 **SEC. 1681.[Log 69803] MODIFICATION TO REPORTS ON CER-**
3 **TAIN SOLID ROCKET MOTORS.**

4 Section 1696(b) of the John S. McCain National De-
5 fense Authorization Act for Fiscal Year 2019 (Public Law
6 115–232; 132 Stat. 2171) is amended—

7 (1) by striking “rockets or missiles” and insert-
8 ing “rockets, missiles, or space launch services” each
9 place it appears; and

10 (2) in paragraph (2)(C), by striking “rocket or
11 missile” and inserting “rocket, missile, or space
12 launch service”.

1 **SEC. 1683.[Log 69294] CONVENTIONAL PROMPT GLOBAL**
2 **STRIKE WEAPON SYSTEM.**

3 (a) SENSE OF CONGRESS.—It is the sense of Con-
4 gress that—

5 (1) the Under Secretary of Defense for Policy
6 has not adequately responded to Congress regarding
7 the miscalculation and ambiguity risks posed by
8 hypersonic weapons, specifically from submarine-
9 launched platforms, including pursuant to the report
10 required by section 1698 of the John S. McCain Na-
11 tional Defense Authorization Act for Fiscal Year
12 2019 (Public Law 115-232; 132 Stat. 2172); and

13 (2) the Secretary of Defense should coordinate
14 technology maturation efforts to develop common
15 technologies for hypersonics, and should leverage de-
16 fense laboratories and university partners to lead
17 foundational hypersonic research in areas the Sec-
18 retary determines appropriate for the Department of
19 Defense.

20 (b) PROHIBITION.—None of the funds authorized to
21 be appropriated by this Act or otherwise made available
22 for fiscal year 2020 for the conventional prompt global
23 strike weapon system may be used for a submarine-
24 launched conventional prompt global strike capability, in-
25 cluding with respect to developing or testing such a capa-
26 bility, unless such capability—

1 (1) is transferrable to a surface-launched plat-
2 form; and

3 (2) is not exclusive to submarines.

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

1 **Subtitle B—Program Authoriza-**
2 **tions, Restrictions, Limitations,**
3 **and Other Matters**

4 **SEC. 3111.[Log 69453] PERSONNEL LEVELS OF THE OFFICE**
5 **OF THE ADMINISTRATOR FOR NUCLEAR SE-**
6 **CURITY.**

7 (a) PERSONNEL LEVELS.—

8 (1) INCREASE.—Subsection (a) of section
9 3241A of the National Nuclear Security Administra-
10 tion Act (50 U.S.C. 2441a) is amended by striking
11 “1,690” both places it appears and inserting
12 “1,890”.

13 (2) TECHNICAL AMENDMENTS.—Such sub-
14 section is further amended—

15 (A) in paragraph (1), by striking “By Oc-
16 tober 1, 2015, the” and inserting “The”; and

17 (B) in paragraph (2), by striking “2016”
18 and inserting “2020”.

19 (b) REPORTS ON SERVICE SUPPORT CONTRACTS.—

20 Subsection (f) of such section is amended—

21 (1) in the matter preceding paragraph (1), by
22 striking “as of the date of the report” and inserting

23 “for the most recent fiscal year for which data is
24 available”; and

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

3 “(5) With respect to each contract identified
4 under paragraph (2)—

5 “(A) identification of each appropriations
6 account that supports the contract; and

7 “(B) the amount obligated under the con-
8 tract during the fiscal year, listed by each such
9 account.

10 “(6) With respect to each appropriations ac-
11 count identified under paragraph (5)(A), the total
12 amount obligated for contracts identified under
13 paragraph (2).”.

1 **SEC. 3112.[Log 69458] OFFICE OF COST ESTIMATING AND**
2 **PROGRAM EVALUATION.**

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

8 (b) REPORTING.—Section 3221(b)(1) of the National
9 Nuclear Security Administration Act (50 U.S.C.
10 2411(b)(1)) is amended by adding at the end the following
11 new sentence: “The Director shall report directly to the
12 Administrator.”.

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

1 **SEC. 3114.[69752] MODIFICATION TO PLUTONIUM PIT PRO-**
2 **DUCTION CAPACITY.**

3 (a) FINDING AND SENSE OF CONGRESS.—

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

9 (2) SENSE OF CONGRESS.—It is the sense of
10 Congress that the National Nuclear Security Admin-
11 istration should prioritize achieving production of 30
12 pits per year at Los Alamos National Laboratory
13 and ensure that efforts to design and construct a
14 second site do not divert resources, including per-
15 sonnel and funding, from Los Alamos National Lab-
16 oratory.

17 (b) 2027 REQUIREMENT.—Section 4219 of the
18 Atomic Energy Defense Act (50 U.S.C. 2538a) is amend-
19 ed—

20 (1) in subsection (a)—

21 (A) in paragraph (3), by inserting “and”
22 after the semicolon;

23 (B) in paragraph (4), by striking “; and”
24 and inserting a period; and

25 (C) by striking paragraph (5);

26 (2) by striking subsection (b); and

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

3 (c) CONFORMING AMENDMENT.—Subsection (b) of
4 such section, as redesignated by subsection (b), is amend-
5 ed by striking “(or, if the authority under subsection (b)
6 is exercised, 2029)”.

1 **SEC. 3115.[Log 69729] ANNUAL CERTIFICATION OF SHIP-**
2 **MENTS TO WASTE ISOLATION PILOT PLANT.**

3 Section 3115(a) of the National Defense Authoriza-
4 tion Act for Fiscal Year 2017 (Public Law 114–328; 130
5 Stat. 2759), as amended by section 3137 of the John S.
6 McCain National Defense Authorization Act for Fiscal
7 Year 2019 (Public Law 115–232; 132 Stat. 2303), is fur-
8 ther amended, in the matter preceding paragraph (1), by
9 striking “three-year period” and inserting “10-year pe-
10 riod”.

1 **SEC. 3116.**[Log 69733] **REPEAL OF LIMITATION ON AVAIL-**
2 **ABILITY OF FUNDS FOR ACCELERATION OF**
3 **NUCLEAR WEAPONS DISMANTLEMENT.**

4 Section 3125 of the National Defense Authorization
5 Act for Fiscal Year 2017 (Public Law 114–328; 130 Stat.
6 2766) is repealed.

1 **SEC. 3117.[Log 69455] ELIMINATION OF LIMITATION ON**
2 **AVAILABILITY OF FUNDS RELATING TO SUB-**
3 **MISSION OF ANNUAL REPORTS ON UN-**
4 **FUNDED PRIORITIES.**

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

7 (1) by striking subsection (c); and

8 (2) by redesignating subsection (d) as sub-
9 section (c).

1 **SEC. 3201.[Log 70208] AUTHORIZATION.**

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

1 **SEC. 3202.[Log 69454] IMPROVEMENTS TO DEFENSE NU-**
2 **CLEAR FACILITIES SAFETY BOARD.**

3 (a) STAFF.—

4 (1) SENSE OF CONGRESS.—It is the sense of
5 Congress that the Defense Nuclear Facilities Safety
6 Board is not adequately staffed, particularly given
7 the ongoing increase in defense nuclear activities
8 during the decade following the date of the enact-
9 ment of this Act.

10 (2) EXECUTIVE DIRECTOR OF OPERATIONS.—

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

15 “(3)(A) The Board shall have an Executive Director
16 of Operations who shall be appointed under section
17 311(e)(7).

18 “(B) The Executive Director of Operations shall re-
19 port to the Chairman.

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

22 “(i) general administration and technical mat-
23 ters;

24 “(ii) ensuring that the members of the Board
25 are fully and currently informed with respect to mat-
26 ters for which the members are responsible; and

1 “(iii) the functions delegated by the Chairman
2 pursuant to section 311(c)(3)(B).”.

3 (B) DELEGATION OF FUNCTIONS.—Para-
4 graph (3) of section 311(c) of such Act (42
5 U.S.C. 2286(c)) is amended—

6 (i) by striking “The Chairman” and
7 inserting “(A) The Chairman”; and

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

10 “(B) In carrying out subparagraph (A), the Chair-
11 man shall delegate to the Executive Director of Operations
12 established under section 313(b)(3) the following func-
13 tions:

14 “(i) Administrative functions of the Board.

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

17 “(iii) Distribution of business among the em-
18 ployees and administrative units and offices of the
19 Board.

20 “(iv) Preparation of—

21 “(I) proposals for the reorganization of the
22 administrative units or offices of the Board;

23 “(II) the budget estimate for the Board;
24 and

1 “(III) the proposed distribution of funds
2 according to purposes approved by the Board.”.

3 (3) APPOINTMENT AND REMOVAL POWERS.—

4 Paragraph (7) of such section 311(c) is amended to
5 read as follows:

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

10 “(B) The Chairman, subject to the approval of the
11 Board, may remove a senior employee described in sub-
12 paragraph (C). Any member of the Board may propose
13 to the Chairman an individual to be so removed.

14 “(C) The senior employees described in this subpara-
15 graph are the following senior employees of the Board:

16 “(i) The Executive Director of Operations es-
17 tablished under section 313(b)(3).

18 “(ii) The general counsel.”.

19 (4) FULL-TIME EQUIVALENT PERSONNEL LEV-
20 ELS.—Section 313(b)(1)(A) of such Act (42 U.S.C.
21 2286b(b)(1)(A)) is amended by striking “but not”
22 and all that follows through the semicolon and in-
23 serting “but not fewer than the equivalent of 110
24 full-time employees and not more than the equiva-
25 lent of 130 full-time employees;”.

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

6 (c) ACCESS TO FACILITIES, PERSONNEL, AND INFOR-
7 MATION.—Section 314 of such Act (42 U.S.C. 2286c) is
8 amended—

9 (1) in subsection (a)—

10 (A) by striking “The Secretary of Energy”
11 and inserting “Except as specifically provided
12 by this section, the Secretary of Energy”;

13 (B) by striking “ready access” both places
14 it appears and inserting “prompt and unfet-
15 tered access”; and

16 (C) by adding at the end the following new
17 sentence: “The access provided to facilities, per-
18 sonnel, and information under this subsection
19 shall be provided without regard to the hazard
20 or risk category assigned to a facility by the
21 Secretary.”; and

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

1 “(b) AUTHORITY OF SECRETARY DENY INFORMA-
2 TION.—The Secretary may only deny access to informa-
3 tion pursuant to subsection (a)—

4 “(1) to any person who—

5 “(A) has not been granted an appropriate
6 security clearance or access authorization by
7 the Secretary; or

8 “(B) does not need such access in connec-
9 tion with the duties of such person; or

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

13 “(c) APPLICATION OF NONDISCLOSURE PROTEC-
14 TIONS BY BOARD.—The Board may not publicly disclose
15 information provided under this section if such informa-
16 tion is otherwise protected from disclosure by law, includ-
17 ing deliberative process information.”.

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DIVISION A—DEPARTMENT OF DEFENSE AUTHORIZATIONS

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

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.

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.

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.