



November 2018

# DEFENSE NUCLEAR ENTERPRISE

DOD Continues to  
Address Challenges  
but Needs to Better  
Define Roles and  
Responsibilities and  
Approaches to  
Collaboration

# GAO Highlights

Highlights of [GAO-19-29](#), a report to congressional committees

## Why GAO Did This Study

In 2014, the Secretary of Defense directed two reviews of DOD's nuclear enterprise. These reviews identified problems with leadership, organization, investment, morale, policy, and procedures, as well as other shortcomings that adversely affected the nuclear deterrence mission. The reviews also made recommendations to address these problems. In 2015, DOD conducted a review focused on NC3 systems, which resulted in additional recommendations.

The National Defense Authorization Act for Fiscal Year 2017 includes a provision for GAO to review DOD's processes for addressing these recommendations. This report addresses the extent to which DOD and the military services have (1) made progress in the implementation, tracking, and evaluation—including identifying and documenting risk—of the recommendations of the 2014 nuclear enterprise reviews and the 2015 NC3 report and (2) improved oversight of the defense nuclear enterprise and managed roles, responsibilities, and collaboration among various organizations. GAO reviewed relevant documents and interviewed agency officials from DOD and the military services.

## What GAO Recommends

GAO makes four recommendations for DOD to clarify roles, responsibilities, and methods of communication and collaboration for both the NDERG and NC3 oversight bodies. DOD concurred with all four recommendations and provided information about planned actions to implement them.

View [GAO-19-29](#). For more information, contact Joseph W. Kirschbaum at (202) 512-9971 or [kirschbaumj@gao.gov](mailto:kirschbaumj@gao.gov).

November 2018

## DEFENSE NUCLEAR ENTERPRISE

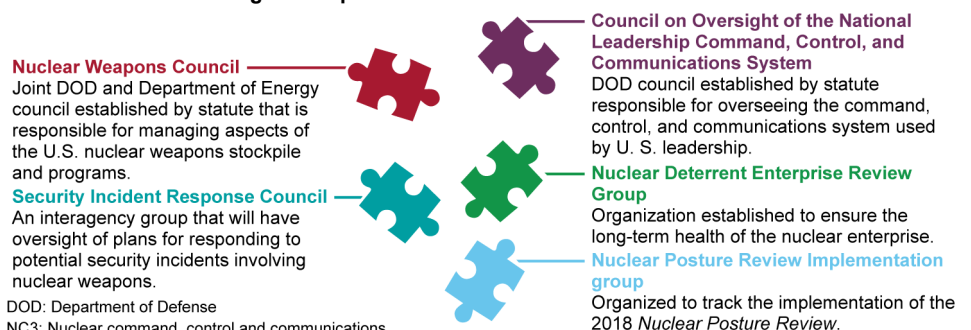
### DOD Continues to Address Challenges but Needs to Better Define Roles and Responsibilities and Approaches to Collaboration

## What GAO Found

The Department of Defense (DOD) has made progress in implementing the recommendations from the 2014 nuclear enterprise reviews and a 2015 nuclear command, control, and communications (NC3) review and has improved its tracking and evaluation of this progress. For example, since GAO last reported—in October 2017—an additional 74 of the 247 sub-recommendations from the 2014 reviews have been closed; 96 remain open. In January 2018, in response to a GAO recommendation, the Office of Cost Assessment and Program Evaluation (CAPE) issued guidance to aid the military services in identifying, assessing, and documenting risks associated with the 2014 recommendations, such as unintended consequences from their implementation. The guidance calls on them to update their risk assessments periodically as new data become available. The Air Force and Navy have begun to provide risk information in CAPE's and their own tracking tools. In July 2018, in response to a GAO recommendation, DOD's Chief Information Officer issued guidance to improve tracking and evaluation of progress in implementing the 2015 recommendations.

DOD and the military services have taken steps to improve oversight of the nuclear enterprise in response to the 2014 reviews but lack clear roles and responsibilities and methods for collaboration. The Secretary of Defense created the Nuclear Deterrent Enterprise Review Group (NDERG) in 2014 to ensure the long-term health of the nuclear enterprise by addressing resourcing, personnel, organizational, and enterprise policy issues. However, DOD guidance has not clearly defined roles and responsibilities for the NDERG or provided methods for the NDERG to communicate and collaborate with other nuclear oversight organizations, including those shown in the figure. Nor has NC3 oversight guidance been updated to reflect changes in roles and responsibilities and to include methods for communication and collaboration among NC3 oversight groups. In the absence of defined roles and responsibilities for the NDERG and NC3 oversight bodies and methods for how the NDERG and NC3 oversight groups are to communicate and collaborate, senior leaders may not be in a position to effectively manage resourcing and risk across the department.

#### Selected Nuclear Oversight Groups



Source: GAO analysis of statutes and DOD information. | GAO-19-29

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## Abbreviations

CAPE	Office of Cost Assessment and Program Evaluation
CIO	Chief Information Officer
DOD	Department of Defense
NC3	nuclear command, control, and communications
NDAA	National Defense Authorization Act
NDERG	Nuclear Deterrent Enterprise Review Group
NLC3S Council	Council on Oversight of the National Leadership Command, Control, and Communications System

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November 1, 2018

Congressional Committees

In 2014, as a response to incidents involving the nation’s nuclear forces and their senior leadership, the Secretary of Defense directed an internal review and an independent review of the Department of Defense (DOD) nuclear enterprise.<sup>1</sup> Together, the two reports and a memorandum from the U.S. Strategic Command Commander with additional areas for improvement (hereafter referred to collectively as the 2014 nuclear enterprise reviews) identified problems with leadership, organization, investment, morale, policy, and procedures, as well as other shortcomings that adversely affected the nuclear deterrence mission.<sup>2</sup> In 2015, DOD conducted a review focused on nuclear command, control, and communications (NC3) systems, which resulted in a report (hereafter referred to as the 2015 NC3 report) with recommendations to address diffused responsibility, accountability, and authority for the NC3 enterprise; ineffective life-cycle management programs; and a lack of institutional training and personnel management programs.<sup>3</sup>

The National Defense Authorization Act (NDAA) for Fiscal Year 2017 includes a provision for us to review—during each of fiscal years 2017 through 2021—DOD’s processes for addressing the recommendations of the nuclear enterprise reviews. We are also to review DOD’s process for implementing recommendations from other assessments of the nuclear enterprise, including the 2015 NC3 report, and to provide a briefing to the

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<sup>1</sup>The DOD nuclear enterprise includes Air Force intercontinental ballistic missiles; Air Force nuclear-capable bombers and tactical fighters; Navy ballistic missile submarines; and the supporting infrastructure and personnel to build, maintain, and control these assets. Prior to the 2014 reviews of the DOD nuclear enterprise, there were a number of incidents including airmen and sailors cheating on qualification testing, the unauthorized transfer of nuclear-armed cruise missiles on a B-52, and the inadvertent shipment of nuclear-related materials to Taiwan.

<sup>2</sup>DOD, *Internal Assessment of the Department of Defense Nuclear Enterprise* (Sept. 2014) (SECRET//NOFORN); DOD, *Independent Review of the Department of Defense Nuclear Enterprise* (June 2, 2014); and U.S. Strategic Command, *USSTRATCOM Observations and Action Plan to Strengthen the Nuclear Enterprise* (2014).

<sup>3</sup>DOD, *National Leadership Command Capability (NLCC) and Nuclear Command, Control and Communications (NC3) Enterprise Review (NER) Report* (May 2015) (SECRET//NOFORN).

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congressional defense committees on the results of our review.<sup>4</sup> In July 2016, we reported that the process DOD had developed for tracking the 2014 review recommendations generally appeared consistent with relevant criteria from *Standards for Internal Control in the Federal Government*—including using and effectively communicating quality information and performing monitoring activities.<sup>5</sup> In October 2017, we recommended that the Office of Cost Assessment and Program Evaluation (CAPE) develop additional guidance on the identification of risks and the documentation of these risks in DOD’s centralized tracking tool for the recommendations of the 2014 nuclear enterprise reviews. We also recommended that the DOD Chief Information Officer (CIO) develop guidance to improve the tracking and evaluation of DOD’s progress in implementing the recommendations of the 2015 NC3 report.<sup>6</sup> DOD concurred with these recommendations, and we discuss its efforts to address them later in this report.

This report addresses the extent to which

1. DOD and the military services have made progress in the implementation, tracking, and evaluation—including identifying and documenting risk—of the recommendations of the 2014 nuclear enterprise reviews and the 2015 NC3 report and
2. DOD and the military services have improved oversight of the defense nuclear enterprise and managed roles, responsibilities, and collaboration among various organizations.

For objective one, we reviewed key documents, including the centralized DOD tracking tool for 2014 recommendations, the military services’ internal tracking tools for the 2014 recommendations, and the DOD CIO’s tracking tool for the 2015 recommendations. We also interviewed officials responsible for implementing the recommendations, to verify that the content captured in the tracking mechanisms reflected progress

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<sup>4</sup>See Pub. L. No. 114-328, § 1670 (2016). The provision repealed a similar requirement from the National Defense Authorization Act for Fiscal Year 2016. See Pub. L. No. 114-92, § 1658 (2015), *repealed by* Pub. L. No. 114-328, § 1670(c).

<sup>5</sup>GAO, *Defense Nuclear Enterprise: DOD Has Established Processes for Implementing and Tracking Recommendations to Improve Leadership, Morale, and Operations*, [GAO-16-597R](#) (Washington, DC: July 14, 2016).

<sup>6</sup>GAO, *Defense Nuclear Enterprise: Processes to Monitor Progress on Implementing Recommendations and Managing Risks Could Be Improved*, [GAO-18-144](#) (Washington, DC: Oct. 5, 2017). Additional related GAO reports are listed at the end of this report.

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accurately. We determined that the information in the tracking tools was reliable for our purposes by reviewing the contents of the tracking tools and comparing this information with source documents—including the internal and independent nuclear enterprise reviews, U.S. Strategic Command’s action plan, and the 2015 NC3 report—and documentation of actions taken by the military services and other organizations to implement the recommendations. We also reviewed applicable guidance, such as the Secretary of Defense’s 2014 memorandum (*Nuclear Enterprise Review Corrective Action Implementation*), the 2016 Deputy Secretary of Defense memorandum (*Transition of Nuclear Enterprise Review Tracking Responsibilities*, which includes CAPE’s Nuclear Enterprise Review Tracking Analytic Guidance Overview), and CAPE’s January 2018 updated guidance on risk (*Additional Guidance for Nuclear Enterprise Review Recommendation Tracking*).

For objective two, we reviewed key documents—including the independent and internal nuclear enterprise reviews—and guidance such as the Secretary of Defense’s memorandum (*Nuclear Enterprise Review Corrective Action Implementation*). We also reviewed the statutes establishing roles and responsibilities for the Nuclear Weapons Council<sup>7</sup> and the Council on Oversight of the National Leadership Command, Control, and Communications System (NLC3S Council).<sup>8</sup> We obtained and analyzed lists of attendees at meetings of the Nuclear Deterrent Enterprise Review Group (NDERG), the Nuclear Weapons Council, and the NLC3S Council that were held from January 2014 through March 2018 to identify offices and senior DOD leaders that participated in more than one of these organizations. Finally, we interviewed cognizant DOD officials about their participation in defense nuclear enterprise oversight organizations. We compared the roles and responsibilities of these oversight organizations with relevant criteria from *Standards for Internal*

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<sup>7</sup>10 U.S.C. § 179.

<sup>8</sup>10 U.S.C. § 171a.

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*Control in the Federal Government*<sup>9</sup> and with our selected leading practices for collaboration.<sup>10</sup>

To conduct our work on both objectives, we interviewed officials from the following offices to discuss progress in implementing the recommendations to improve the nuclear enterprise:

- CAPE
- DOD CIO
- Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs (Nuclear Matters)
- Office of the Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy
- Joint Staff
- U.S. Strategic Command
- Defense Threat Reduction Agency
- Secretary of the Air Force, Office of the Inspector General
- Air Force Headquarters: Strategic Deterrence and Nuclear Integration (A10)
- Air Force Global Strike Command
- 8th Air Force
- 20th Air Force
- 2nd Bomb Wing
- 90th Missile Wing
- Chief of Naval Operations: Nuclear Policy (N514) and Undersea Warfare (N97)

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<sup>9</sup>GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 2014). These standards went into effect in October 2015, and we have used them to assess DOD's activities since that time.

<sup>10</sup>GAO, *Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies*, [GAO-06-15](#) (Washington, D.C.: Oct. 21, 2005) presents relevant leading practices for collaboration among agencies which are also relevant to collaboration across the defense nuclear enterprise. GAO, *Managing for Results: Key Considerations for Implementing Interagency Collaborative Mechanisms*, [GAO-12-1022](#) (Washington, D.C.: Sept. 27, 2012) identifies mechanisms that the federal government uses to lead and implement interagency collaboration.



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- U.S. Army Nuclear and Countering-Weapons of Mass Destruction Agency

We conducted this performance audit from October 2017 to November 2018 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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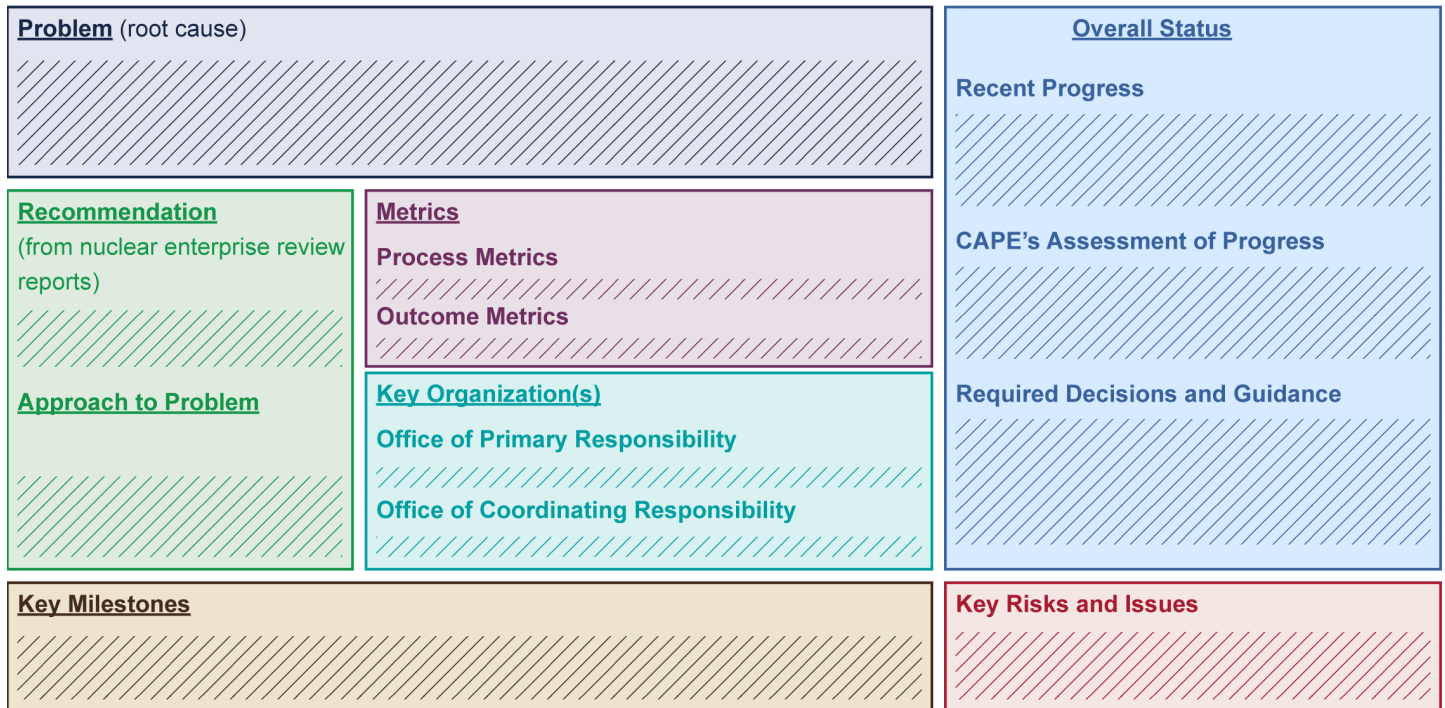
## Background

### Oversight of 2014 Nuclear Enterprise Reviews' Recommendations

In November 2014, the Secretary of Defense directed DOD to address the recommendations from the 2014 nuclear enterprise reviews and directed CAPE to track and assess these implementation efforts. The Joint Staff, the Navy, the Air Force, offices within the Office of the Secretary of Defense, and U.S. Strategic Command have supported CAPE's efforts. CAPE compiled the recommendations from the 2014 nuclear enterprise reviews. In total, CAPE identified 175 distinct recommendations from the three documents. CAPE then identified 247 sub-recommendations within those recommendations, which were directed to multiple military services or other DOD components. For example, if a recommendation was directed to the Air Force and the Navy, then one sub-recommendation was made to the Air Force and one to the Navy.

CAPE then worked with the military services to identify offices of primary responsibility for implementing actions to address the recommendations, any offices with coordinating responsibility, and any resources necessary to implement each recommendation. CAPE has developed a centralized tracking tool to collect information on progress in meeting milestones and metrics. As shown in figure 1, the tracking tool includes fields for the underlying problem statement, or root cause, for the recommendation; time frames with milestones for implementing the recommendation; and performance measures (referred to as metrics in the tracking tool) to assess the effectiveness of the actions taken.

**Figure 1: Sample Layout of the 2014 Nuclear Enterprise Review Tracking Tool**



Source: GAO analysis of Department of Defense information. | GAO-19-29

The tracking tool currently contains hundreds of unique milestones and metrics and, according to CAPE officials, additional milestones and metrics are added as they are identified. The Air Force and the Navy also have developed their own methods of tracking their service-specific recommendations. In December 2016, the Deputy Secretary of Defense issued a memorandum that directed the transition of the tracking and analysis responsibilities related to implementing the recommendations of the 2014 nuclear enterprise reviews from CAPE to the military departments and other DOD components.<sup>11</sup> However, CAPE remains responsible for providing guidance to inform the analyses conducted by other DOD entities, overseeing these analyses, and assessing recommendations for closure. The aim of these changes was to enhance ownership and embed the principles of robust analysis, continuous monitoring, and responsibility throughout the department.

<sup>11</sup>Deputy Secretary of Defense Memorandum, *Transition of Nuclear Enterprise Review Tracking Responsibilities* (Dec. 16, 2016).

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## NC3 Systems

NC3 is a large and complex system comprised of numerous land-, air-, and space-based components used to ensure connectivity between the President and nuclear forces. NC3 is managed by the military departments, nuclear force commanders, and the defense agencies; it provides the President with the means to authorize the use of nuclear weapons in a crisis.

NC3 systems support five important functions:

- **Force management:** assignment, training, deployment, maintenance, and logistics support of nuclear forces before, during, and after any crisis.
- **Planning:** development and modification of plans for the employment of nuclear weapons and other options.
- **Situation monitoring:** collection, maintenance, assessment, and dissemination of information on friendly forces, adversary forces and possible targets, emerging nuclear powers, and worldwide events of interest.
- **Decision making:** assessment, review, and consultation that occur when the employment or movement of nuclear weapons is considered.
- **Force direction:** implementation of decisions regarding the execution, termination, destruction, and disablement of nuclear weapons.

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## Oversight of the 2015 NC3 Report Recommendations

As recommended in the 2015 NC3 report, the NLC3S Council has taken a lead role in providing oversight and making the final determination on the implementation status of that report's 13 recommendations.<sup>12</sup> The NLC3S Council is co-chaired by the Under Secretary of Defense for Acquisition and Sustainment and the Vice Chairman of the Joint Chiefs of

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<sup>12</sup>Established by the National Defense Authorization Act for Fiscal Year 2014, the Council on Oversight of the National Leadership Command, Control, and Communications System (NLC3S Council) serves as the department's oversight body for all of the National Leadership Command Capability, including DOD's NC3 systems. See National Defense Authorization Act for Fiscal Year 2014, Pub. L. No. 113-66, § 1052(a)(1) (2013) (codified as amended at 10 U.S.C. § 171a).

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Staff.<sup>13</sup> Members of the council include the Under Secretary of Defense for Policy; the Commander, U.S. Strategic Command; the Commander, North American Aerospace Defense Command/U.S. Northern Command; the Director, National Security Agency; and the DOD CIO. The DOD CIO also serves as the Secretariat for the NLC3S Council and tracks the implementation of recommendations from the 2015 NC3 report, among other activities. Additional organizations, such as the Office of the Under Secretary of Defense for Intelligence, may participate in the NLC3S Council's meetings to provide subject matter expertise. Regular participants in the NLC3S Council include the Office of the Under Secretary of Defense (Comptroller); senior leaders from the Army, the Navy, and the Air Force; the Defense Information Systems Agency; the White House Military Office; and CAPE.

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## Key Nuclear Oversight Organizations

DOD has established or participated in a number of oversight organizations that aid in the management of the defense nuclear enterprise. These organizations include the following:

- **NDERG:** Established in 2014 by the Secretary of Defense to ensure the long-term health of the nuclear enterprise by addressing resourcing, personnel, organizational, and enterprise policy issues identified in the 2014 nuclear enterprise reviews. The NDERG consists of a group of senior officials chaired by the Deputy Secretary of Defense, including the Vice Chairman of the Joint Chiefs of Staff. The NDERG is supported by a Nuclear Deterrent Working Group, which meets biweekly and reviews the status of the recommendations of the nuclear enterprise reviews, and a Nuclear Deterrent Senior Oversight Group, which meets quarterly and reviews any recommendations that the Working Group believes are ready for the NDERG to close. The Nuclear Deterrent Senior Oversight Group also receives annual briefings on component assessments, reviews organizational changes, and discusses other cross-service issues. The Deputy Secretary of Defense updates the Secretary of Defense on the NDERG's progress as requested.

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<sup>13</sup>The National Defense Authorization Act for Fiscal Year 2017 eliminated the position of the Under Secretary of Defense for Acquisition, Technology and Logistics effective February 1, 2018, dividing the position into the Under Secretary of Defense for Research and Engineering and the Under Secretary of Defense for Acquisition and Sustainment. See Pub. L. No. 114-328, § 901(a), (b) (2016) (codified at 10 U.S.C. §§ 133a, 133b).

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- **NLC3S Council:** A DOD council established by statute that is responsible for the oversight of the command, control, and communications system for the national leadership of the United States.<sup>14</sup> Additionally, as recommended in the 2015 NC3 report, the NLC3S Council reviews the recommendations from the report and assesses them for closure. The NLC3S Council is supported by the National Leadership Command Capabilities Executive Management Board, which comprises a Senior Steering Group and four working groups—Stakeholders, Resources, Assessments, and Nuclear Command and Control Issues. The Executive Management Board ensures that the Council is informed of and presents issues that need principal-level decisions.
  - **Nuclear Weapons Council:** A joint DOD and Department of Energy council established by statute that is responsible for managing aspects of the U.S. nuclear weapons stockpile and programs.<sup>15</sup> The Under Secretary of Defense for Acquisition and Sustainment is designated as the chair of the Nuclear Weapons Council, and the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs serves as the staff director of the Council.<sup>16</sup> The Nuclear Weapons Council is supported by a senior executive-level Standing and Safety Committee and a subordinate, working-level Action Officers Group. The Action Officers Group performs detailed analyses of issues and provides those analyses to the Standing and Safety Committee, which reviews them and formulates decision packages for final Council review and decision.

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<sup>14</sup>10 U.S.C. § 171a.

<sup>15</sup>10 U.S.C. § 179.

<sup>16</sup>Meetings of the Council are to be chaired by the Under Secretary for Nuclear Security of the Department of Energy whenever the matter under consideration is within the primary responsibility or concern of the Department of Energy, as determined by majority vote of the Council. § 179(b)(2). Until recently, the Nuclear Weapons Council was comprised of five voting members: (1) the Under Secretary of Defense for Acquisition, Technology and Logistics, (2) The Vice Chairman of the Joint Chiefs of Staff, (3) the Under Secretary for Nuclear Security of the Department of Energy, (4) the Under Secretary of Defense for Policy, and (5) the Commander of U.S. Strategic Command. In August 2018, section 1661 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 amended section 179 to replace the Under Secretary of Defense for Acquisition, Technology and Logistics with the Under Secretary of Defense for Acquisition and Sustainment and to add as a member the Under Secretary of Defense for Research and Engineering. Pub. L. No. 115-232, § 1661 (2018) (amending 10 U.S.C. § 179(a)).

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- **Nuclear Matters:** An office under the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs; it is headed by the Deputy Assistant Secretary of Defense for Nuclear Matters and serves as a focal point for DOD activities and initiatives to sustain a safe, secure, and effective nuclear deterrent and counter the threat from nuclear terrorism and nuclear proliferation.<sup>17</sup>
  - **Nuclear and Missile Defense Policy:** An office supporting the Under Secretary of Defense for Policy and the Assistant Secretary of Defense for Strategy, Plans, and Capabilities. Nuclear and Missile Defense Policy participates in the development of strategies, creation of policies, and conduct of oversight of national nuclear policy, treaty negotiations, and missile defense policy.
  - **U.S. Strategic Command:** DOD functional combatant command responsible for planning for and employment of U.S. nuclear weapons and for certain matters related to NC3.

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<sup>17</sup>The Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs was previously under the Under Secretary of Defense for Acquisition, Technology and Logistics, but after that office was eliminated it was placed under the Under Secretary of Defense for Acquisition and Sustainment.

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## DOD Has Made Progress in Implementing and Tracking Recommendations, Including Evaluating and Documenting Key Risks

DOD continues to make progress in implementing the recommendations from the 2014 nuclear enterprise reviews and has made improvements in tracking and evaluating this progress.<sup>18</sup> Specifically, the military services and other DOD components have begun identifying and documenting risks associated with implementing recommendations from the 2014 reviews, based on guidance that was issued by CAPE in January 2018.<sup>19</sup> DOD has also made progress in implementing the recommendations from the 2015 NC3 report. For example, the DOD CIO issued guidance in July 2018 to improve the tracking and evaluation of DOD's progress in implementing the recommendations of the NC3 report.<sup>20</sup>

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## DOD Has Made Progress Implementing Recommendations from the 2014 Nuclear Enterprise Reviews

DOD continues to make progress in implementing the recommendations of the 2014 nuclear enterprise reviews. As of our last report, in October 2017, DOD had closed 77 sub-recommendations. Based on our review of CAPE's centralized tracking tool, the NDERG has closed 74 additional sub-recommendations since then. As a result, according to the CAPE tracking tool, the NDERG has closed 151 of the 247 sub-recommendations as of September 2018 (see fig. 2).

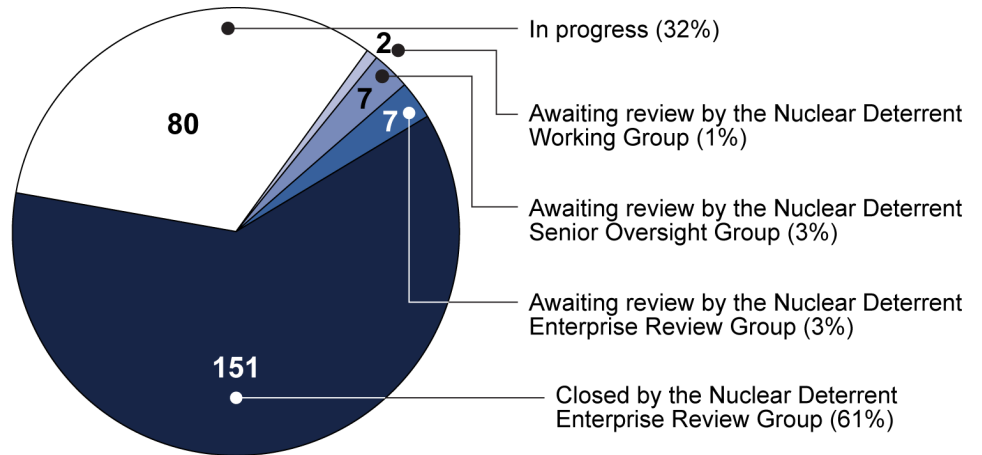
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<sup>18</sup>The 2014 nuclear enterprise reviews included an internal review, an independent review of the DOD nuclear enterprise, and a memorandum from the Commander, U.S. Strategic Command, with additional areas for improvement.

<sup>19</sup>Director, Cost Assessment and Program Evaluation Memorandum, *Additional Guidance for Nuclear Enterprise Review Recommendation Tracking* (Jan. 3, 2018).

<sup>20</sup>DOD CIO Memorandum, *2015 National Leadership Command Capability and Nuclear Command, Control, and Communications Enterprise Review Report Guidance* (July 5, 2018).

**Figure 2: DOD Progress in Implementing 2014 Nuclear Enterprise Reviews' Sub-Recommendations<sup>a</sup>**



Source: GAO analysis of Department of Defense information. | GAO-19-29

<sup>a</sup>Once the military service or other DOD component with primary responsibility for a recommendation determines that it is complete, the Nuclear Deterrent Working Group reviews the actions taken, using performance metrics, to assess whether the underlying problem has been addressed. The recommendation then goes for review by the Nuclear Deterrent Senior Oversight Group and finally to the Nuclear Deterrent Enterprise Review Group before it is closed.

Since October 2017, DOD has closed sub-recommendations related to a number of issues identified in the 2014 nuclear enterprise reviews. For example, in January 2018, the NDERG closed a sub-recommendation originating from the *Internal Assessment of the Department of Defense Nuclear Enterprise* that the Air Force should ensure its nuclear inspection teams are properly sized and that inspection efforts are coordinated. In response to the recommendation, the Air Force worked to reduce the footprint of inspectors, to the extent possible, and improve consolidation of inspections to avoid redundancy. Meanwhile, in January 2018, the NDERG also closed a sub-recommendation that originated from the *Independent Review of the Department of Defense Nuclear Enterprise* that the Navy improve its readiness reporting system to provide better information about manning and personnel costs. In response to the recommendation, the Navy has made improvements in its readiness reporting by having ballistic missile submarine fleet commanders report additional readiness information about manning and personnel costs through the Navy's readiness reporting.

The Air Force, the Navy, and CAPE have described some of the remaining open recommendations as enduring issues for the enterprise,



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and tracking progress toward these recommendations will aid in monitoring the overall health of the defense nuclear enterprise. These recommendations include ongoing sustainment and maintenance efforts and improving the morale of the nuclear forces. As we have previously reported, CAPE officials stated that it would take years to implement the great majority of these recommendations and measure whether they have had their intended effect.<sup>21</sup> For example, CAPE and military service officials have noted that it would take years for some of the recommended cultural changes to manifest.

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### Military Services Have Begun to Track and Evaluate the Risks Associated with Open 2014 Recommendations

The military departments and other DOD components are responsible for tracking and evaluating the implementation status of the 2014 nuclear enterprise reviews' recommendations; CAPE is providing guidance to aid these efforts. As we previously reported, CAPE had been responsible for tracking this progress until, in December 2016, the Deputy Secretary of Defense issued a memorandum that transitioned this responsibility from CAPE to the military departments and other DOD components. However, CAPE remains responsible for providing guidance to inform the analyses conducted by other DOD entities, overseeing the analyses, and assessing recommendations for closure. In January 2018, in response to our 2017 recommendation, CAPE issued additional guidance to improve the identification, assessment, and documentation of risks related to implementing the 2014 nuclear enterprise reviews' recommendations.

CAPE's January 2018 guidance includes specific instructions that military departments and other DOD components should follow when identifying, assessing, and documenting risks. Specifically, the guidance instructs the responsible components to identify any key risks associated with the open recommendations and to document those key risks.<sup>22</sup> The January 2018 guidance defines key risks as those that require mitigation by the leadership of the DOD component (e.g., a risk that requires mitigation by senior Air Force or Navy leadership) or those that cannot be mitigated within a component's existing authorities and resources (e.g., a risk that cannot be mitigated within the Air Force or Navy that must be raised to a higher authority). Additionally, the guidance indicates that risks that do not rise to the level of being key risks should also be tracked according to the

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<sup>21</sup>[GAO-16-597R](#).

<sup>22</sup>The risk guidance also instructs the military departments and other DOD components to document risks for closed recommendations with continuing reporting requirements.

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component's own assessment methodology and, if a component's approach to a recommendation does not carry any key risks, this should be documented.

The guidance identifies some risk assessment tools for components to use, as appropriate, but specifically states that components should consider the following questions:

- What are the risks if the recommendation is not implemented?
- What are the risks in the approach to implementing the recommendation?
- What flexibility does the approach have to respond to unintended consequences?
- What are the controls and actions needed to mitigate risk to an acceptable level?

The guidance also notes that components should update risk assessments periodically as progress is made and new data become available.

According to the CAPE tracking tool, as of September 2018, key risks—or the absence of key risks—are documented for 85 of the 96 open sub-recommendations in the centralized tracking tool. Of the 85 sub-recommendations for which risk information is identified in the centralized tracking tool's "Key Risks and Issues" field, key risks are identified for 50. For the remaining 35, no risks are identified as rising to the level of being a key risk. Based on information in the tracking tool, the Air Force and the Navy have lead responsibility for the 85 sub-recommendations for which risk information is identified in the tracking tool. U.S. Strategic Command, Joint Staff, and the Office of the Secretary of Defense have not yet included any risk information for the remaining 11 open sub-recommendations for which they have lead responsibility.

In addition to updated risk information in CAPE's central tracking tool, the Air Force has updated its internal tracking tool. According to Air Force officials, the Air Force tracking tool includes both key risks—risks that require Air Force leadership to mitigate them—and low-level risks—risks that do not rise to the level where Air Force leadership should mitigate them—for each of the 60 remaining sub-recommendations for which it has the lead. For example, for the recommendation concerning Air Force nuclear personnel shortages, the Air Force's internal tracker notes the

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risk that over-prioritizing the nuclear enterprise could affect the Air Force's ability to conduct conventional operations. Additionally, the Air Force has identified areas where there is no key risk. For example, for the recommendation concerning intercontinental ballistic missile sustainment, the Air Force's internal tracker noted that there was no key risk but that there was a low-level risk that using limited resources to support legacy systems could lead to underfunding modernization efforts.

The Navy, in addition to documenting risk information in CAPE's centralized tracking tool, has documented risks for many of its open sub-recommendations in an internal document called the *Navy Nuclear Deterrent Review Plan of Actions and Milestones*, which tracks the Navy recommendations by categories that the Navy created. For example, when discussing risks for maintaining Navy NC3 systems, the *Navy Nuclear Deterrent Review Plan of Actions and Milestones* states that the Navy monitors availability across several levels, including sustainment and modernization efforts. Additionally, controls are in place at various levels to manage risks to the availability of NC3 assets. The *Navy Nuclear Deterrent Review Plan of Actions and Milestones* acknowledges that if the Navy does not continue to use these controls, the risk to the NC3 mission may be unacceptable. According to Navy officials, risk is also examined during the Navy's internal process for closing recommendations through a review by the Navy Nuclear Deterrent Mission Oversight Council. For example, the Council was briefed on actions to mitigate the risk that insufficient personnel strength at some maintenance facilities poses to the operational availability of Ohio-class submarines.

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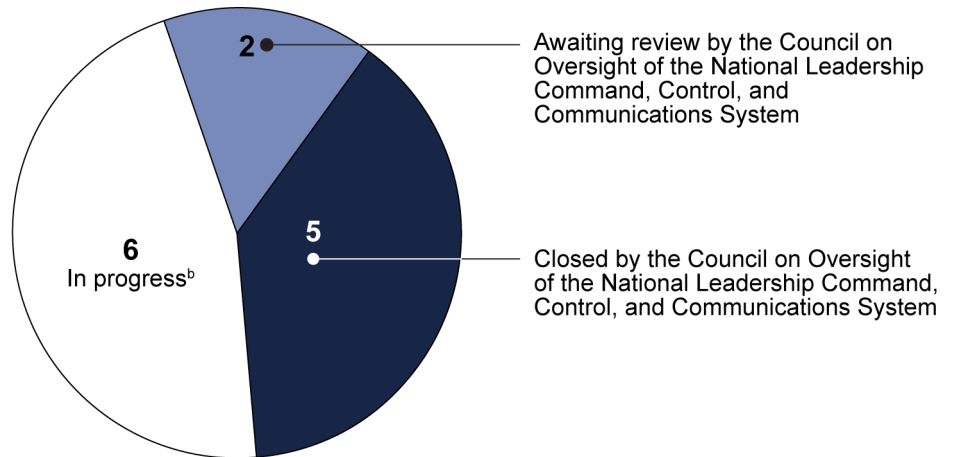
## DOD Has Made Progress in Implementing Recommendations from the 2015 NC3 Report

DOD continues to make progress in implementing the recommendations of the 2015 NC3 report. Since we last reported, in October 2017, DOD has closed 3 additional recommendations. In total, as of August 2018, the NLC3S Council has closed 5 of the 13 recommendations from the NC3 report (see fig. 3).<sup>23</sup>

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<sup>23</sup>Once the military service or other DOD component with primary responsibility for a recommendation considers it to be complete, the DOD CIO provides the component's proposal for closure by the National Leadership Command Capability Executive Management Board governance structure to determine if the recommendation is complete. The recommendation is then reviewed by the NLC3S Council, which closes the recommendation if it concurs.

**Figure 3: Status of the 13 Recommendations from the 2015 Nuclear Command, Control, and Communications Systems Enterprise Review<sup>a</sup>**



Source: GAO analysis of Department of Defense information. | GAO-19-29

<sup>a</sup>Once the military service or other Department of Defense component with primary responsibility for a recommendation determines that it is complete, the Department of Defense Office of the Chief Information Officer provides the component's proposal for closure by the National Leadership Command Capability Executive Management Board governance structure to determine whether the recommendation is complete. The recommendation is then reviewed by the Council on Oversight of the National Leadership Command, Control, and Communications System for closure.

<sup>b</sup>The Navy has completed its actions to close two additional recommendations; however, until the Air Force also completes its portion of these recommendations, each of the recommendations will remain "in progress."

According to tracking information from the DOD CIO, the Navy has completed its portion of two of the open recommendations, but the Air Force still has tasks it needs to complete before each recommendation can be reviewed and closed by the NLC3S Council. As a result, these two recommendations will remain "in progress" until the Air Force also completes its portion of the implementation. In addition, a DOD component has recommended that an additional 2 of the 13 recommendations be closed; however, these have not yet been reviewed by the NLC3S Council.

In July 2018, in response to our October 2017 recommendation, the DOD CIO issued guidance to improve the tracking and evaluation of DOD's progress in implementing the recommendations of the 2015 NC3 report.<sup>24</sup>

<sup>24</sup>DOD CIO, *2015 National Leadership Command Capability and Nuclear Command, Control, and Communications Enterprise Review Report Guidance*.

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This guidance provides instructions to the military departments and DOD components with responsibility for implementation of the 2015 NC3 report recommendations to identify and provide key milestones, metrics utilized to track progress, and information about recent progress—including an assessment of progress, required decisions and guidance, and key risks and other issues.

Information on the status of the 2015 NC3 report's recommendations is collected in a layout similar to that developed by CAPE for the 2014 recommendations. The responsible organizations are in the process of updating the information they have provided to the DOD CIO to respond to the new guidance. The guidance directs the responsible organizations to provide quarterly updates on the remaining, open recommendations beginning in August 2018. According to a DOD CIO official, these regular updates will continue until the recommendations are closed.

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## DOD Has Taken Steps to Improve Oversight of the Nuclear Enterprise, but Key Oversight Groups Lack Clearly Defined Roles and Responsibilities and Methods for Communication and Collaboration

DOD and the military services have taken steps to improve oversight of the defense nuclear enterprise, in part in response to recommendations from the 2014 nuclear enterprise reviews. DOD plans to use the NDERG to oversee long-term and enduring issues affecting the nuclear enterprise. However, the NDERG does not have formally defined roles and responsibilities, and DOD has not established methods for how the NDERG will communicate and collaborate with the other nuclear enterprise oversight organizations. Further, DOD NC3 oversight guidance has not been updated to reflect evolving NC3 oversight roles and responsibilities and to include methods for communicating and collaborating with other nuclear enterprise oversight groups.

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## Military Services Have Taken Steps to Improve Oversight of the Nuclear Enterprise

The military services have taken steps to improve oversight of the nuclear enterprise in response to the concerns raised by the 2014 nuclear enterprise reviews. The reviews noted a lack of comprehensive oversight of the defense nuclear enterprise and a need for increased visibility for senior leaders. Specifically,

- **Since 2014, the Air Force has realigned responsibilities, authorities, and accountability for its nuclear forces to**

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**improve oversight of the nuclear enterprise.** For example, the Air Force implemented two recommendations from the *Internal Assessment of the Department of Defense Nuclear Enterprise* to elevate senior Air Force leadership positions in the nuclear enterprise. Air Force Global Strike Command was upgraded from a three-star to a four-star major command. According to officials from Air Force Global Strike Command, the elevation of the command to a four-star major command has helped ensure support from the Air Force for funding and management of the nuclear enterprise. In 2016, Air Force Global Strike Command created the Air Force NC3 Center to manage portions of the Air Force NC3 weapon system that are owned by the command and—according to Air Force NC3 Center officials—to provide oversight of the organize, train, and equip function for all of the Air Force’s NC3 missions. The Air Force also upgraded the position of Deputy Chief of Staff for Strategic Deterrence and Nuclear Integration, Headquarters Air Force, from a two-star to a three-star position. The elevation of both the Air Force Global Strike Command and A10 leadership was authorized by the Secretary of Defense to ensure that their rank is commensurate with the importance of the nuclear mission.

- **The Navy oversees its leg of the nuclear triad using the Navy Nuclear Deterrent Mission Oversight Council.** The Council is a senior Department of the Navy forum that is responsible for coordinating the Navy’s nuclear weapon activities (safety, security, reliability, and nuclear weapons incident response), operations, personnel, policy, material support, and oversight functions. According to Navy officials, the Navy Nuclear Deterrent Mission Oversight Council addresses long-term issues affecting the Navy’s nuclear enterprise and identifies and monitors risks associated with those issues, including the actions taken in response to the 2014 nuclear enterprise reviews.

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## The NDERG Lacks Clearly Defined Roles and Responsibilities and Approaches for Communicating and Collaborating with Other Nuclear Oversight Groups

While the Deputy Secretary of Defense was designated as chairman of the NDERG, DOD guidance does not define the membership, roles, and responsibilities of the NDERG or identify methods for how the NDERG and its working and oversight groups should communicate and collaborate with other nuclear enterprise oversight groups. In July 2018, the Deputy Secretary of Defense issued a memorandum directing a series of changes intended to make the NDERG an enduring, principal-level forum to track risks, issues, and opportunities associated with the health of the defense nuclear enterprise.<sup>25</sup> The memorandum directed the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs to serve as the NDERG secretariat and, with the Director of CAPE, co-chair the Nuclear Deterrent Senior Oversight Group. In addition, within 60 days of the issuance of the memorandum, the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs is to provide a draft NDERG charter for coordination. The charter will serve as an interim step while the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs prepares a DOD directive; it will also specify the NDERG's functions, organization, and responsibilities. The new role as secretariat of the NDERG and co-chair of the Nuclear Deterrent Senior Oversight Group will expand the current responsibilities of the Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs with regard to nuclear enterprise oversight.

However, it is not clear whether the charter under consideration will adequately incorporate the roles and responsibilities of the entities on the NDERG, particularly given the new long-term role of the NDERG. According to DOD officials, they have not determined to what extent NDERG roles and responsibilities will be articulated in the charter. Further, prior to issuance of the July 2018 memorandum, officials stated that they had not created a charter for the NDERG because senior leaders within the department were still deciding what ongoing role the NDERG should take in monitoring the health of the nuclear enterprise. The July memorandum helps to clarify this role, but it does not make clear all of the associated roles and responsibilities of the NDERG and its participants. For example, DOD has not determined whether the charter will identify the NDERG's responsibilities for issues that are not directly

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<sup>25</sup>Deputy Secretary of Defense Memorandum, *Chartering the Nuclear Deterrent Enterprise Review Group* (July 26, 2018).

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related to the 2014 nuclear enterprise reviews or what the NDERG's long-term role will be once most or all of the recommendations from the 2014 nuclear enterprise reviews are implemented. The July memorandum does indicate that the charter will include a plan to confirm that NDERG-approved actions have the expected effects and do not result in unintended consequences or recurrence of the initial issue. However, the memorandum does not specify how or when the NDERG should address new issues and does not indicate that the charter or DOD directive will do so either.

*Standards for Internal Control in the Federal Government* states that management should establish an organizational structure, assign responsibility, and delegate authority to achieve an entity's objectives. Specifically, the standards call for management to develop an organizational structure with an understanding of the organization's overall responsibilities and assign these responsibilities to enable the organization to operate in an efficient and effective manner, comply with applicable laws and regulations, and reliably report quality information.<sup>26</sup> In the 2014 nuclear enterprise reviews, DOD identified a lack of comprehensive oversight of the defense nuclear enterprise. To ensure greater awareness among senior DOD leaders, the internal review recommended that DOD create a single, senior-level position to oversee the nuclear enterprise, provide the Secretary of Defense with additional routine visibility into the nuclear enterprise, and marshal the authority of the Secretary to resolve identified issues. DOD did not implement the internal review team's recommendation to establish a senior oversight position for the nuclear enterprise because, according to CAPE officials, the Secretary of Defense considered the NDERG to be sufficient to address the recommendation. However, four years after it was established, the roles and responsibilities of the NDERG have not been clearly articulated. DOD now plans to develop a charter and subsequent DOD directive for the NDERG, but it remains unclear whether these documents will provide clear roles and responsibilities for the NDERG to effectively function as the comprehensive oversight body for the enterprise—in part because, according to officials, they are in the early stages of development.

In addition, DOD has not clearly defined how the NDERG will communicate and collaborate with the other oversight groups. DOD uses

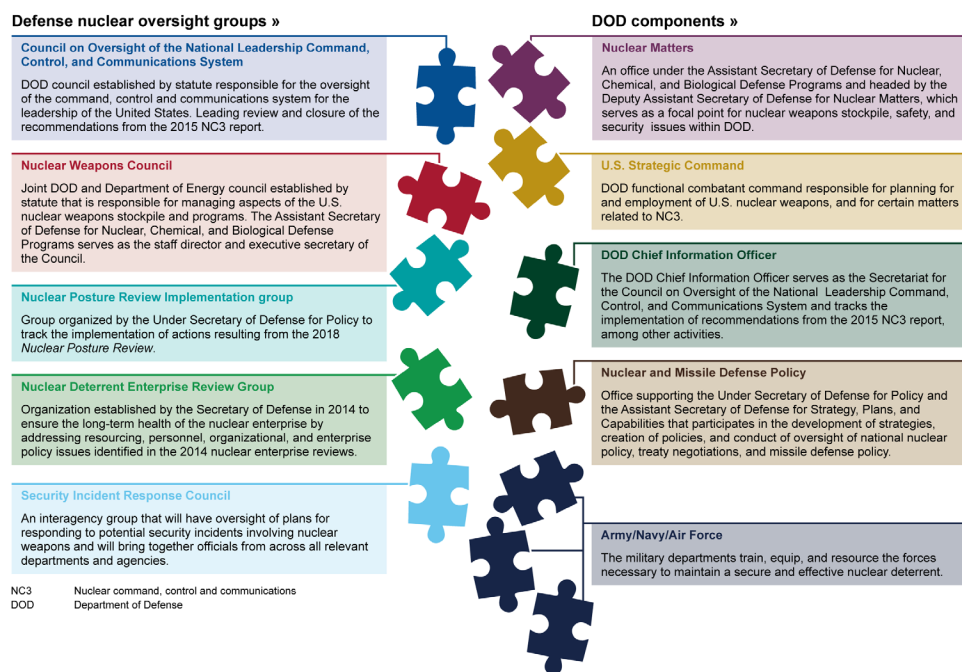
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<sup>26</sup>[GAO-14-704G](#).



other groups, such as the Nuclear Weapons Council and the NLC3S Council, to oversee portions of the nuclear enterprise and coordinate among various DOD entities and with the Department of Energy. Many of the same individuals and organizations are represented in two or all three of the oversight organizations. For example, four DOD senior leaders—the Vice Chairman of the Joint Chiefs of Staff; the Under Secretary of Defense for Acquisition and Sustainment; the Under Secretary of Defense for Policy; and the Commander, U.S. Strategic Command—participate in both the Nuclear Weapons Council and the NLC3S Council, which are statutorily responsible for oversight of aspects of the defense nuclear enterprise. Figure 4 shows the roles and responsibilities of some of the nuclear enterprise oversight groups and DOD components.

**Figure 4: Selected Nuclear Oversight Groups and DOD Components**



Source: GAO analysis of statutes and DOD information. | GAO-19-29

The NDERG, the Nuclear Weapons Council, and the NLC3S Council have lower-level management and working groups that include participants from many of the same organizations. For example, the Air Force’s Office of Strategic Deterrence and Nuclear Integration is represented in the NDERG’s Nuclear Deterrent Senior Oversight Group and on the Nuclear Weapons Council’s Standing and Safety Committee. The Army, Navy, and Air Force also participate in all three oversight

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groups' working groups. Unlike the NDERG—which will have no formally defined roles and responsibilities until its charter and the eventual directive are finalized—the Nuclear Weapons Council and the NLC3S Council are statutorily responsible for overseeing specific aspects of the nuclear enterprise.

According to officials from the Office of the Deputy Assistant Secretary of Defense for Nuclear Matters, in response to updated presidential guidance, a charter is being drafted for a new nuclear enterprise oversight group—the Security Incident Response Council. According to these officials, the council will be an interagency group that will have oversight of plans for responding to potential security incidents involving nuclear weapons and will bring together officials from across all relevant departments and agencies.

The Deputy Secretary of Defense's July 2018 memorandum, previously discussed, does not address how the NDERG should collaborate with other nuclear enterprise oversight groups with overlapping responsibilities. According to the memorandum, issues falling under the purview of other existing nuclear enterprise oversight groups will be addressed by those groups, but the memorandum acknowledges that the groups may interact. Specifically, the memorandum states that the Nuclear Weapons Council, the NLC3S Council, the Nuclear Posture Review Implementation group, and the Security Incident Response Council may recommend issues for the NDERG. However, the memorandum does not describe how the NDERG should communicate the necessary quality information with other oversight groups, including criteria for determining which issues should be recommended or otherwise communicated to the NDERG or when those groups should go about recommending issues for consideration to the NDERG. Further, the other oversight groups will not fall under the authority of the NDERG charter, so stating that the groups may recommend issues for the NDERG does not ensure that they will do so. As previously stated, it is not clear whether these issues will be addressed in either the NDERG's charter or the subsequent DOD directive.

As we have previously reported, leading practices for enhancing interagency collaboration include agreeing on roles and responsibilities and having written guidance and agreements.<sup>27</sup> Specifically, collaborating

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<sup>27</sup> [GAO-06-15](#) and [GAO-12-1022](#).

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agencies should work together to define and agree on their respective roles and responsibilities. In doing so, agencies can clarify who will do what, organize their joint and individual efforts, and facilitate decision making. Additionally, *Standards for Internal Control in the Federal Government* states that management should use quality information to achieve an entity's objectives and internally and externally communicate the necessary quality information to achieve the objectives. These standards call for management to communicate quality information with appropriate methods of communication and consider a variety of factors in selecting an appropriate method of communication, such as the audience and the nature of the information.<sup>28</sup>

The 2014 independent nuclear enterprise review found that the difficulty of defining the defense nuclear enterprise complicates senior DOD leaders' ability to take ownership of the enterprise.<sup>29</sup> Specifically, the independent review noted that senior leaders within the Office of the Secretary of Defense and the military services referred to the "nuclear enterprise" as if there were a coherent, integrated structure and set of activities supporting the nuclear forces. However, the review team did not find a coherent, integrated structure and synchronized set of activities that could be characterized as a DOD "nuclear enterprise." Further, the independent review team found that there was a loose federation of separate nuclear activities scattered across multiple organizations with no clearly defined responsibility or accountability.

In response to the challenges the independent review identified in 2014, the review recommended that the loosely federated nuclear activities within OSD and the Air Force be brought together into a coherent and synchronized structure that focuses on direction and support for the nuclear forces. In addition, the internal review noted as one of its most important findings that the problems of the nuclear enterprise did not exist in isolation and would require a coordinated, holistic approach to resolve. In particular, the internal review team concluded that, because the issues they identified in each of the military services were interdependent, the ultimate solutions in many instances would have to be cultural, structural, and sustained over the long term. Identifying oversight groups' roles and responsibilities and identifying and establishing methods for

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<sup>28</sup>[GAO-14-704G](#).

<sup>29</sup>DOD, *Independent Review of the Department of Defense Nuclear Enterprise*.

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communicating and collaborating among groups could help mitigate the problems identified in the 2014 reviews.

In the absence of defined roles and responsibilities or methods for how the NDERG is to communicate and collaborate with other existing oversight organizations, the NDERG may be unable to effectively oversee the defense nuclear enterprise in a coordinated, holistic manner that would address problems identified by the 2014 nuclear enterprise reviews or other issues it may need to address in the future. Additionally, clear roles and responsibilities and methods for communication and collaboration could better position senior leaders to effectively manage resourcing and risk across the department. Officials from CAPE; the Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs; and the military services agreed that clarifying roles and responsibilities and identifying methods for communication would be helpful in addressing long-standing issues and guiding the NDERG in the future.

Additionally, with increased funding and prioritization of the nuclear enterprise, as called for in the 2018 *Nuclear Posture Review*, there is an increased need for the kind of coordinated, holistic oversight of the nuclear enterprise that was recommended in the 2014 *Internal Assessment of the Department of Defense Nuclear Enterprise*. For example, the *Nuclear Posture Review's* goal of replacing legacy nuclear systems beginning in the mid-2020s will require senior leaders from across the defense nuclear enterprise to make decisions regarding resource allocation and prioritization—for both the new systems and the existing systems that are not being replaced. Collaboration among the various nuclear enterprise oversight groups can help to make this resource allocation and prioritization effective.

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DOD Guidance Does Not Reflect Evolving NC3 Oversight Roles and Responsibilities and Methods for Communicating and Collaborating with Other Nuclear Oversight Groups

As a result of the 2018 *Nuclear Posture Review*, NC3 roles, responsibilities, and authorities are evolving as DOD is in the process of making changes to the NC3 governance construct. The *Nuclear Posture Review* directed the Chairman of the Joint Chiefs of Staff to develop a plan to reform NC3 governance to ensure its effective functioning and modernization.<sup>30</sup> The following key documents outline the proposed changes to NC3 roles, responsibilities, and authorities:

- **2018 *Nuclear Posture Review*, February 2018:** To improve NC3 governance, the *Nuclear Posture Review* directed the Chairman of the Joint Chiefs of Staff, in consultation with key DOD stakeholders, to deliver to the Secretary of Defense, no later than May 1, 2018, a plan to reform NC3 governance to ensure its effective functioning and modernization.
- **NC3 Governance Reform Initiative, February – May 2018:** In response to the *Nuclear Posture Review*, the Joint Staff conducted a review of NC3 governance identifying problems with the current NC3 enterprise governance construct and suggested changes to address these problems.
- **Chairman of the Joint Chiefs of Staff memorandum, May 2018:** Following the NC3 Governance Reform Initiative review, the Chairman of the Joint Chiefs of Staff provided the Secretary of Defense a memorandum recommending a new NC3 governance construct that would make the Commander of U.S. Strategic Command the operational commander of the NC3 enterprise.<sup>31</sup> Under this new construct, specifically, the Commander of Strategic Command would be designated as the NC3 enterprise lead and would have increased responsibilities for operations, requirements, and systems engineering and integration. In addition, to support the new role of the Commander of U.S. Strategic Command, the Office of the Under Secretary of Defense for Acquisition and Sustainment would be designated as the NC3 enterprise capability portfolio manager and given increased responsibilities for resources and acquisition. The memorandum also proposes that the Chairman and the Deputy Secretary of

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<sup>30</sup>Office of the Secretary of Defense, *Nuclear Posture Review* (Feb. 2018).

<sup>31</sup>Chairman of the Joint Chiefs of Staff Memorandum, *Nuclear Posture Review Task to Reform Nuclear Command, Control, and Communications Governance* (May 14, 2018).

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Defense would provide leadership and oversight, which would include providing enterprise-level guidance to the department.

- **U.S. Strategic Command Commander's Estimate, May 2018:** At the direction of the Chairman of the Joint Chiefs of Staff, U.S. Strategic Command developed the *NC3 Governance Reform – Commander's Estimate* (Commander's Estimate) with a recommended course of action to implement the new NC3 governance roles, responsibilities, and authorities.<sup>32</sup> This Commander's Estimate was provided to the Secretary of Defense along with the Chairman's May memorandum. Concurrently, U.S. Strategic Command is developing an implementation plan.
- **U.S. Strategic Command NC3 implementation plan, expected fall 2018:** According to a Strategic Command official, an NC3 implementation plan is currently being drafted to implement the proposed changes to NC3 governance. Initial operating capability for the new roles, responsibilities, and authorities is expected to occur within six months of the approval of U.S. Strategic Command's implementation plan.

If the changes to NC3 governance are approved, as proposed in the Commander's Estimate, the Commander of U.S. Strategic Command would have the operational lead for NC3 and would be delegated the authorities and assigned the resources necessary to perform the following functions:

- operating the NC3 enterprise
- assessing and managing NC3 enterprise operational performance and risk
- identifying NC3 enterprise gaps
- defining NC3 enterprise requirements and prioritization
- conducting systems engineering and analysis to integrate current and future NC3 enterprise architectures
- approving NC3 enterprise developmental tests and operations
- overseeing NC3 enterprise acquisition and service/national programs

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<sup>32</sup>U.S. Strategic Command, *NC3 Governance Reform—Commander's Estimate* (May 1, 2018).

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- leading NC3 enterprise advocacy across DOD's processes and governance forums, such as the NLC3S

Changes to NC3 roles, responsibilities, and authorities would necessitate changing existing NC3-related guidance documents. The current NC3 oversight structure is documented in statutes and presidential and departmental guidance. For example, the NLC3S Council's roles and responsibilities are defined in statute and in charters for the Council and its National Leadership Command Capability Executive Management Board. DOD issuances also establish policy and assign responsibilities for matters related to the NC3 system to organizations throughout DOD, including U.S. Strategic Command.<sup>33</sup> The changes proposed in the Commander's Estimate, if implemented, would result in DOD having to update its own guidance and determine whether there is a need to request a change in the statutory language or presidential guidance. According to a U.S. Strategic Command official, work still needs to be done to help align authorities within the NC3 enterprise. The Commander's Estimate states that any changes to NC3 oversight authorities that may result from implementing the suggested changes in the Commander's Estimate will be annotated in existing applicable policy and guidance documents.

As we have previously reported and as we have noted in this report, leading practices for enhancing interagency collaboration include agreeing on roles and responsibilities and having written guidance and agreements.<sup>34</sup> Additionally, *Standards for Internal Control in the Federal Government* calls for management to develop an organizational structure with an understanding of the organization's overall responsibilities, and assign these responsibilities to enable the organization to operate in an efficient and effective manner, comply with applicable laws and regulations, and reliably report quality information.<sup>35</sup> To achieve this, management should assign responsibility and delegate authority to key roles throughout the organization. Further, federal internal control standards call for identifying appropriate methods for communicating both

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<sup>33</sup>For example, DOD Instruction S-3730.01, *Nuclear Command, Control, and Communications (NC3) System* (Nov. 6, 2015) (SECRET) and DOD Directive S-5210.81, *U.S. Nuclear Weapons Command and Control, Safety, and Security* (Apr. 24, 2017) (SECRET).

<sup>34</sup>[GAO-06-15](#) and [GAO-12-1022](#).

<sup>35</sup>[GAO-14-704G](#).

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internally and externally. However, DOD has not clearly defined roles and responsibilities. Additionally, DOD has not developed written guidance and agreements that establish how the NLC3S Council, U.S. Strategic Command, and other organizations responsible for NC3 governance will collaborate with each other, or identified methods of communication. Further, DOD has not determined how these entities will collaborate with other oversight groups that need to have visibility over any problems or resourcing decisions related to the NC3 enterprise, such as the NDERG and other entities with responsibility for the nuclear enterprise as a whole.

The 2015 NC3 report made recommendations to address diffused responsibility in the NC3 enterprise; however, based on our interviews with officials, these issues still persist. According to DOD officials, 3 years later there continues to be a problem with the management of the NC3 enterprise that resulted in the Secretary of Defense including the need to reform NC3 governance in the 2018 *Nuclear Posture Review*. Specifically, the 2018 *Nuclear Posture Review* recognized the broad diffusion of NC3 system governance authority and responsibility within DOD as an area of particular concern. To address these concerns, the department is increasing the oversight roles of a number of organizations. However, these changes may further complicate long-standing issues associated with the governance of the NC3 enterprise unless the department clearly articulates how all of the NC3 oversight bodies are to collaborate.

As DOD identifies changes that must be made to guidance for implementing the new NC3 governance construct, it has an opportunity to make improvements to enhance collaboration and communication among NC3 oversight groups and other nuclear enterprise groups. Updating its guidance to clarify changes to the roles and responsibilities of the many entities involved in the oversight and governance of NC3—and establishing methods for how those entities should communicate and collaborate—would better position senior leaders to effectively manage resourcing and risk across the NC3 enterprise. The NC3 enterprise is a large and complex system, and without clearly identified roles and responsibilities for an effective oversight structure, problems similar to those identified in 2014 as negatively affecting the management of the entirety of the defense nuclear enterprise may continue to limit effective management of the NC3 enterprise.

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## Conclusions

DOD has continued to take steps to improve the defense nuclear enterprise in response to the 2014 nuclear enterprise reviews and the



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2015 NC3 report. By including risk identification, assessment, and documentation, CAPE has strengthened its framework for monitoring the department's efforts to address the many issues identified in 2014—including those enduring issues that must be watched for years to come. The DOD CIO's adoption of a similar framework to monitor the implementation of recommendations from the 2015 NC3 report has also set up a structure to track and evaluate progress. The responsible military services and DOD components' use of these structures should aid them in assessing their efforts, including providing means to reassess and re-evaluate individual efforts and their relationship to the health of the defense nuclear enterprise as a whole. The efforts the department has taken and has under way should improve senior leaders' visibility into these issues and better position them to ensure that progress continues to be made, underlying problems are addressed, and risks mitigated or accepted after considering the predictable and desirable results. However, for these changes to be effective, the department must clearly articulate the roles and responsibilities for a comprehensive oversight structure. Unless DOD is able to align the roles and responsibilities of the many entities now charged with oversight functions, the department's leadership may not be in a position to be informed of issues affecting the nuclear enterprise or the NC3 enterprise and may be unable to make effective resourcing decisions. The creation of both a charter and DOD directive for the NDERG as well as DOD's efforts to reform NC3 governance provide DOD with opportunities to create comprehensive oversight structures—with defined roles and responsibilities and methods for communication among oversight groups—for the defense enterprise to address enduring leadership problems and help the department to move forward in its governance of the nuclear enterprise. Further, by establishing methods for communication and collaboration among these organizations, the department could better avoid unnecessary overlap and duplication of effort, important issues falling through the seams between organizations, or enterprise-wide risks not being identified or addressed through a holistic approach.

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## Recommendations for Executive Action

We are making four recommendations to the Secretary of Defense:

The Secretary of Defense should ensure that the Deputy Secretary of Defense—in coordination with the military departments; U.S. Strategic Command; the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs; CAPE; and other relevant components of DOD—identify in the planned charter and DOD directive clear roles and responsibilities for the members of the NDERG. (Recommendation 1)

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The Secretary of Defense should ensure that the Deputy Secretary of Defense—in coordination with the military departments; U.S. Strategic Command; the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs; CAPE; and other relevant components of DOD—establish in the planned charter and DOD directive methods for the NDERG to communicate and collaborate with other organizations that have oversight responsibilities for portions of the nuclear enterprise. (Recommendation 2)

The Secretary of Defense should ensure that the Deputy Secretary of Defense and Chairman of the Joint Chiefs of Staff—in coordination with the Vice Chairman of the Joint Chiefs of Staff, the Under Secretary of Defense for Acquisition and Sustainment (as NLC3S Council co-chairs), and U.S. Strategic Command—update the applicable DOD guidance (such as the NLC3S Council’s and Executive Management Board’s charters) and identify whether there is a need to request changes to statutory or presidential guidance in order to clarify changes to roles and responsibilities for NC3 oversight. (Recommendation 3)

The Secretary of Defense should ensure that the Deputy Secretary of Defense and Chairman of the Joint Chiefs of Staff—in coordination with the Vice Chairman of the Joint Chiefs of Staff, the Under Secretary of Defense for Acquisition and Sustainment (as NLC3S Council co-chairs), and U.S. Strategic Command—update the applicable guidance to establish methods for communication and collaboration among organizations that have oversight responsibilities for portions of the nuclear enterprise as changes are considered for charters, guidance, and laws to reflect the changes to NC3 oversight. (Recommendation 4)

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## Agency Comments and Our Evaluation

We provided a draft of this report to DOD for comment. In its comments, reproduced in appendix I, DOD concurred with all four of our recommendations. DOD also provided technical comments, which we incorporated as appropriate.

In concurring with our first and second recommendations, DOD stated that it will clearly identify roles and responsibilities in the NDERG charter and stated that the charter will also direct NDERG stakeholders to coordinate on the prioritization of issues that involve other organizations that have oversight responsibilities for portions of the nuclear enterprise.

In concurring with our third and fourth recommendations, DOD stated that U.S. Strategic Command, in coordination with other DOD components,

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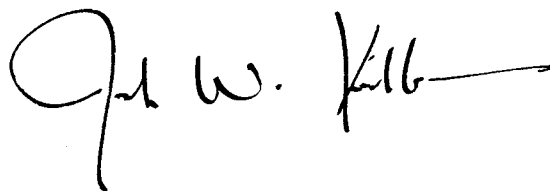
has developed an NC3 Governance Improvement Implementation Plan that outlines the required updates and revisions that need to be requested for statutory guidance as well as implemented for NC3 governance body charters, DOD issuances, and Chairman of the Joint Chiefs of Staff issuances to clarify the new roles and responsibilities for NC3 oversight. Further, DOD noted that these updates and revisions will establish methods and provide direction for communication and collaboration among organizations that have nuclear enterprise oversight roles and responsibilities.

We are encouraged that DOD is planning to take these actions to address all four of our recommendations. We believe that, once DOD implements our recommendations, the department's leadership will be better positioned to be informed of issues affecting the nuclear enterprise or the NC3 enterprise and better organized to make effective resourcing decisions.

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We are providing copies of this report to the appropriate congressional committees, and to the Secretary of Defense; the Under Secretary of Defense for Acquisition and Sustainment; the Chairman of the Joint Chiefs of Staff; the Secretaries of the Army, of the Navy, and of the Air Force; the Commandant of the Marine Corps; the Commander, U.S. Strategic Command; the Department of Defense Chief Information Officer; and the Director of the Office of Cost Assessment and Program Evaluation.

If you or your staff have any questions about this report, please contact me at (202) 512-9971 or [KirschbaumJ@gao.gov](mailto:KirschbaumJ@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix II.



Joseph W. Kirschbaum  
Director, Defense Capabilities and Management

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*List of Committees*

The Honorable James M. Inhofe  
Chairman  
The Honorable Jack Reed  
Ranking Member  
Committee on Armed Services  
United States Senate

The Honorable Richard Shelby  
Chairman  
The Honorable Dick Durbin  
Ranking Member  
Subcommittee on Defense  
Committee on Appropriations  
United States Senate

The Honorable Mac Thornberry  
Chairman  
The Honorable Adam Smith  
Ranking Member  
Committee on Armed Services  
House of Representatives

The Honorable Kay Granger  
Chairwoman  
The Honorable Pete Visclosky  
Ranking Member  
Subcommittee on Defense  
Committee on Appropriations  
House of Representatives

# Appendix I: Comments from the Department of Defense



COST ASSESSMENT AND  
PROGRAM EVALUATION

OFFICE OF THE SECRETARY OF DEFENSE  
1800 DEFENSE PENTAGON  
WASHINGTON, D.C. 20301-1800

OCT 22 2018

Dr. Joseph Kirschbaum  
Director  
Defense Capabilities and Management  
United States Government Accountability Office  
441 G St, N.W.  
Washington, DC 20548

Dear Dr. Kirschbaum:

This is the Department of Defense response to the Government Accountability Office Draft report, GAO-19-29, "DEFENSE NUCLEAR ENTERPRISE: DOD Continues to Address Challenges, but Needs to Better Define Roles and Responsibilities and Approaches to Collaboration," dated September 13, 2018 (GAO Code 102382). We agree that the DOD must maintain a coherent approach to managing the long-term health of the defense nuclear enterprise. We concur with your recommendations and will incorporate them as we update the guidance and oversight mechanisms across the nuclear enterprise, including for nuclear command, control, and communications.

The DOD's comments on the draft report recommendations are enclosed.

Sincerely,

A handwritten signature in blue ink, appearing to read "Bob Daigle".

Bob Daigle

Attachment: Department of Defense Comments on the GAO Recommendations

**GAO DRAFT REPORT DATED SEPTEMBER 13, 2018  
GAO-19-29 (GAO CODE 102382)**

**“DEFENSE NUCLEAR ENTERPRISE: DOD CONTINUES TO ADDRESS CHALLENGES, BUT NEEDS TO BETTER DEFINE ROLES AND RESPONSIBILITIES AND APPROACHES TO COLLABORATION”**

**DEPARTMENT OF DEFENSE COMMENTS  
TO THE GAO RECOMMENDATION**

**RECOMMENDATION 1:** The GAO recommends that the Secretary of Defense should ensure that the Deputy Secretary of Defense—in coordination with the military departments; U.S. Strategic Command; the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs; CAPE; and other relevant components of DOD—identifies in the planned charter and DOD directive clear roles and responsibilities for the members of the Nuclear Deterrent Enterprise Review Group (NDERG).

**DoD RESPONSE:** Concur. The Department of Defense will clearly identify roles and responsibilities in the NDERG charter, and will provide the completed charter to the GAO.

**RECOMMENDATION 2:** The GAO recommends that the Secretary of Defense should ensure that the Deputy Secretary of Defense—in coordination with the military departments; U.S. Strategic Command; the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs; CAPE; and other relevant components of DOD—establishes in the planned charter and DOD directive methods for the NDERG to communicate and collaborate with other organizations that have oversight responsibilities for portions of the nuclear enterprise.

**DoD RESPONSE:** Concur. The NDERG charter will direct NDERG stakeholders to coordinate on prioritization of issues that involve other organizations that have oversight responsibilities for portions of the nuclear enterprise.

**RECOMMENDATION 3:** The GAO recommends that the Secretary of Defense should ensure that the Deputy Secretary of Defense and Chairman of the Joint Chiefs of Staff—in coordination with the Vice Chairman of the Joint Chiefs of Staff, the Under Secretary of Defense for Acquisition and Sustainment (as NLC3S Council co-chairs), and U.S. Strategic Command—update the applicable DOD guidance (such as the NLC3S Council’s and Executive Management Board’s charters), and identify whether there is a need to request changes to statutory or presidential guidance in order to clarify changes to roles and responsibilities for Nuclear Command, Control, and Communications (NC3) oversight.

**DoD RESPONSE:** Concur. U.S. Strategic Command, in coordination with the Office of the Under Secretary of Defense for Acquisition and Sustainment, the Joint Staff, and the Department of Defense Chief Information Officer, has developed an NC3 Governance Improvement Implementation Plan (I-Plan). The I-Plan outlines the required updates and revisions that need to be requested for statutory guidance as well as implemented for NC3 governance body charters,

DoD Issuances, and Chairman of the Joint Chiefs of Staff (CJCS) Issuances to clarify the new roles and responsibilities for NC3 oversight.

**RECOMMENDATION 4:** The GAO recommends that the Secretary of Defense should ensure that the Deputy Secretary of Defense and Chairman of the Joint Chiefs of Staff—in coordination with the Vice Chairman of the Joint Chiefs of Staff, the Under Secretary of Defense for Acquisition and Sustainment (as NLC3S Council co-chairs), and U.S. Strategic Command—update the applicable guidance to establish and methods for communication and collaboration among organizations that have oversight responsibilities for portions of the nuclear enterprise as changes are considered for charters, guidance, and laws to reflect the changes to NC3 oversight.

**DoD RESPONSE:** Concur. The U.S. Strategic Command I-Plan outlines the required updates and revisions that need to be requested for statutory guidance as well as implemented for NC3 governance body charters, DoD Issuances, and CJCS Issuances to clarify the new roles and responsibilities for NC3 oversight. These updates and revisions will establish methods and provide direction for communication and collaboration among organizations that have nuclear enterprise oversight roles and responsibilities.

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# Appendix II: GAO Contact and Staff Acknowledgments

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## GAO Contact

Joseph W. Kirschbaum, (202) 512-9971 or [KirschbaumJ@gao.gov](mailto:KirschbaumJ@gao.gov)

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## Staff Acknowledgments

In addition to the contact named above, key contributors to this report were Penney Harwell Caramia, Assistant Director; R. Scott Fletcher; Jonathan Gill; Susannah Hawthorne; Brent Helt; Joanne Landesman; Amie Lesser; K. Ryan Lester; Ned Malone; and Michael Shaughnessy.



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*Defense Nuclear Enterprise: Processes to Monitor Progress on Implementing Recommendations and Managing Risks Could Be Improved.* [GAO-18-144](#). Washington, D.C.: Oct. 5, 2017.

*Nuclear Weapons Sustainment: Budget Estimates Report Contains More Information than in Prior Fiscal Years, but Transparency Can Be Improved.* [GAO-17-557](#). Washington, D.C.: July 20, 2017.

*Nuclear Weapons: DOD Assessed the Need for Each Leg of the Strategic Triad and Considered Other Reductions to Nuclear Force.* [GAO-16-740](#). Washington, D.C.: Sept. 22, 2016.

*Defense Nuclear Enterprise: DOD Has Established Processes for Implementing and Tracking Recommendations to Improve Leadership, Morale, and Operations.* [GAO-16-597R](#). Washington, D.C.: July 14, 2016.

*Nuclear Weapons Council: Enhancing Interagency Collaboration Could Help with Implementation of Expanded Responsibilities.* [GAO-15-446](#). Washington, D.C.: May 21, 2015.

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