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August 2021

DEFENSE NUCLEAR ENTERPRISE

DOD Can Improve Processes for Monitoring Long-Standing Issues

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GAO-21-486

GAO Highlights

Highlights of GAO-21-486, a report to congressional committees

August 2021

DEFENSE NUCLEAR ENTERPRISE

DOD Can Improve Processes for Monitoring Long-Standing Issues

Why GAO Did This Study

In 2014, the Secretary of Defense directed two reviews of DOD's nuclear enterprise. The reviews made recommendations to address long-standing issues with leadership, investment, morale, policy, and procedures, as well as other shortcomings adversely affecting the nuclear deterrence mission. In 2015, DOD conducted a review focused on nuclear command, control, and communications systems, resulting in additional recommendations.

The National Defense Authorization Act for Fiscal Year 2017 included a provision for GAO to review DOD's processes for addressing these recommendations. GAO assessed the extent to which DOD has (1) made progress implementing the recommendations; (2) evaluated the metrics and milestones for implementing the 2014 nuclear enterprise review recommendations related to nuclear security forces; and (3) implemented oversight mechanisms, including developing an approach for monitoring long-standing issues. GAO reviewed documents and interviewed DOD officials on the recommendations' status and DOD's oversight.

What GAO Recommends

GAO is making four recommendations for DOD to provide guidance to require its components to assess implementation metrics and milestones; and document roles, responsibilities, and communication methods for the new oversight group, as well as a means to monitor long-standing nuclear enterprise issues. DOD concurred with all of the recommendations.

View GAO-21-486. For more information, contact Joseph W. Kirschbaum at (202) 512-9971 or kirshbaumj@gao.gov.

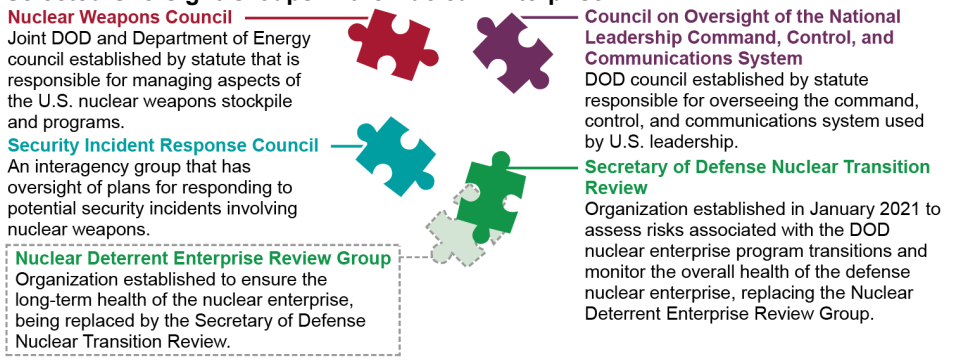
What GAO Found

The Department of Defense (DOD) continues to make progress implementing the recommendations from the 2014 nuclear enterprise reviews and the 2015 nuclear command, control, and communications enterprise review. From the 2014 reviews, DOD identified 175 recommendations. From these 175, DOD identified 247 actions it referred to as sub-recommendations, meaning that a recommendation made to multiple DOD components would be counted as one sub-recommendation for each of those components. Since GAO's March 2020 report, DOD has closed an additional nine of these sub-recommendations, and recommended 11 sub-recommendations for final closure. DOD has also closed one additional recommendation from the 13 made in its 2015 review, with four of the remaining five recommended for final closure.

Regarding the 2014 recommendations related to nuclear security forces, DOD identified initial metrics and milestones for tracking the progress addressing the identified challenges, but GAO found that a key measure for many of the recommendations contained unreliable data. Additionally, more recent reviews of security forces have identified additional metrics and milestones that could help DOD in assessing the progress of recommendation implementation. However, DOD has not reassessed these measures to determine if they are appropriate. As a result, DOD is not in a position to effectively measure progress or assess whether the actions taken have addressed the underlying issues.

In November 2018, GAO found that DOD had taken steps to improve nuclear enterprise oversight in response to the 2014 reviews. However, GAO found a key organization lacked clear roles, responsibilities, and methods to collaborate with other nuclear oversight organizations. Subsequently, in January 2021, DOD created a new entity, the Secretary of Defense Nuclear Transition Review, to take over responsibility for oversight of the defense nuclear enterprise (see figure). However, DOD has not defined specific roles and responsibilities for this organization or how it will communicate internally and with other organizations.

Selected Oversight Groups in the Nuclear Enterprise



Source: GAO analysis of statutes and Department of Defense (DOD) information. | GAO-21-486

Text of Selected Oversight Groups in the Nuclear Enterprise

- **Nuclear Weapons Council:** 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.
- **Security Incident Response Council:** An interagency group that will have oversight of plans for responding to potential security incidents involving nuclear weapons.
- **Nuclear Deterrent Enterprise Review Group:** Organization established to ensure the long-term health of the nuclear enterprise, being replaced by the Secretary of Defense Nuclear Transition Review Group.
- **Council on Oversight of the National Leadership Command, Control, and Communications System:** DOD council established by statute responsible for overseeing the command, control, and communications system used by U.S. leadership.
- **Secretary of Defense Nuclear Transition Review:** Organization established in January 2021 to assess risks associated with the DOD nuclear enterprise program transitions and monitor the overall health of the defense nuclear enterprise, replacing the Nuclear Deterrent Enterprise Review Group.

Source: GAO analysis of statutes and Department of Defense (DOD) information. | GAO-21-486

In addition, DOD and the military services have made some progress in identifying areas for monitoring the health of the nuclear enterprise, but DOD has not identified the means by which it will monitor long-standing issues related to the long-term health of the enterprise.

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Abbreviations

CAPE	Cost Assessment and Program Evaluation
DOD	Department of Defense
NC3	Command, control, and communications
NDERG	Nuclear Deterrent Enterprise Review Group
NLC3S Council	Council on Oversight of the National Leadership Command, Control, and Communications System
SNTR	Secretary of Defense Nuclear Transition Review

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Congressional Committees

In 2014, as a response to incidents involving the nation's nuclear forces and their senior leadership, the Secretary of Defense directed both an internal Department of Defense (DOD) review and an independent review of the DOD nuclear enterprise. 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. Nuclear security force personnel prevent unauthorized access, damage, loss, theft, sabotage, or compromise of nuclear weapons and infrastructure.

The two 2014 reviews examined DOD's nuclear deterrent mission and the two resulting reports identified long-standing issues with leadership, organization, investment, morale, policy, and procedures, as well as other shortcomings that were adversely affecting the mission and long-term health of the enterprise.[1] The Commander of U.S. Strategic Command—the DOD combatant command responsible for planning for and the employment of U.S. nuclear weapons—also identified additional areas for improvement in a 2014 memorandum.[2] Together, the two 2014 reports and the memorandum (hereafter referred to collectively as the 2014 nuclear enterprise reviews) had 175 recommendations to address DOD's management of nuclear personnel, security requirements for nuclear weapons, and the availability of key equipment and support parts, among other issues.[3]

[1]Department of Defense (DOD), (U) *Internal Assessment of the Department of Defense Nuclear Enterprise* (September 2014) (SECRET//NOFORN) and DOD, *Independent Review of the Department of Defense Nuclear Enterprise* (June 2, 2014).

[2]U.S. Strategic Command, (U) *USSTRATCOM Observations and Action Plan to Strengthen the Nuclear Enterprise* (2014) (SECRET).

[3]DOD identified 175 distinct recommendations from the three documents. DOD officials 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.

In 2015, DOD conducted a review focused on nuclear command, control, and communications (NC3) systems, which resulted in another report containing 13 additional recommendations (hereafter referred to as the 2015 NC3 report).[4] The 2015 NC3 report made recommendations to address diffused responsibility, accountability, and authority for the NC3 enterprise; ineffective management of the acquisition and sustainment of some NC3 systems; and a lack of institutional training and personnel management programs.

The National Defense Authorization Act 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 2014 nuclear enterprise reviews and the 2015 NC3 report, and to provide a briefing to the congressional defense committees on the results of our review.[5] For fiscal years 2016–2020, we reported on DOD's overall progress implementing, tracking, and evaluating the recommendations from the 2014 reviews and the 2015 report. We also reported on different issue areas related to the 2014 and 2015 recommendations. For example, we reported on the program used to ensure the reliability of personnel with access to nuclear weapons and materials, governance and oversight organizations, and the sustainment and maintenance of major programs.[6]

In November 2018, for example, we recommended that DOD clarify roles, responsibilities, and methods of communication and collaboration for key defense nuclear enterprise oversight bodies, including the Nuclear

[4]DOD, (U) *National Leadership Command Capability (NLCC) and Nuclear Command, Control and Communications (NC3) Enterprise Review (NER) Report* (May 2015) (SECRET//NOFORN).

[5]*See* Pub. L. No. 114-328, § 1670 (2016).

[6]GAO, *Defense Nuclear Enterprise: Systems Face Sustainment Challenges, and Actions Are Needed to Effectively Monitor Efforts to Improve the Enterprise*, GAO-20-296 (Washington, D.C.: Mar. 26, 2020); *Defense Nuclear Enterprise: DOD Continues to Address Challenges but Needs to Better Define Roles and Responsibilities and Approaches to Collaboration,* GAO-19-29 (Washington, D.C.: Nov. 1, 2018); *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); and *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).

Deterrent Enterprise Review Group (NDERG).[7] In March 2020, we recommended, among other things, that the Director of Cost Assessment and Program Evaluation (CAPE) coordinate with other stakeholders to update the guidance for the methods of tracking and evaluating the implementation of the 2014 nuclear enterprise review recommendations and require DOD components to keep information current. We also recommended that the Under Secretary of Defense for Acquisition and Sustainment update applicable guidance for the methods of tracking and evaluating the implementation of the 2015 NC3 report recommendations and require DOD components to keep information complete and current. DOD concurred with our recommendations, and we report on their implementation status in this report. Information on the status of our prior recommendations to DOD regarding the 2014 nuclear enterprise reviews and 2015 NC3 report is presented in appendix I.

In this report we assess the extent to which DOD has (1) made progress implementing the recommendations in the 2014 nuclear enterprise reviews and the 2015 NC3 report; (2) evaluated the metrics and milestones for implementing the 2014 nuclear enterprise review recommendations related to nuclear security force issues; and (3) implemented oversight mechanisms, including identifying roles, responsibilities, and communication methods for the oversight of the defense nuclear enterprise, and developing an approach for monitoring long-standing issues.

For objective one, we reviewed the centralized DOD tracking tool for the 2014 nuclear enterprise review recommendations, and the tracking tool for the 2015 NC3 report recommendations used by the Office of the Under Secretary of Defense for Acquisition and Sustainment. We also reviewed the recommendations from the 2014 nuclear enterprise reviews and the 2015 NC3 report, and applicable implementation and tracking

[7]The NDERG was established in 2014 by the Secretary of Defense to ensure the long-term health of the nuclear enterprise by addressing issues identified in the 2014 nuclear enterprise reviews.

guidance.[8] We interviewed officials from the Air Force, the Navy, and other DOD components regarding the status of the recommendations and the use of the tracking tools. We evaluated the reliability of the data found in DOD's tracking tools for the 2014 and 2015 recommendations by comparing the contents from the tools with the original recommendations as written in the 2014 reviews and 2015 report as well as information obtained from other agency documentation and interviews with agency officials. We concluded that the data were reliable for tracking whether recommendations were in progress, awaiting review for possible closure, or closed.

To address our second objective, we focused on DOD's efforts to address the numerous recommendations related to improving the nuclear security forces because we had not previously reported on many of these efforts. We defined "nuclear security forces" as Department of the Air Force and Department of the Navy (including the Marine Corps) personnel that safeguard nuclear assets and facilities associated with operational units in the U.S.[9] We identified and reviewed recommendations and sub-recommendations from the 2014 nuclear enterprise reviews that related either directly to the Air Force, Navy, or Marine Corps nuclear security forces or that included these forces as part of a larger population included within the recommendations' scope (e.g., recommendations concerning readiness or career development issues). We identified 42 recommendations, comprising 56 sub-recommendations, that were directed to or affected the nuclear security forces.

[8]*E.g.*, Secretary of Defense Memorandum, *Nuclear Enterprise Review Corrective Action Implementation* (Nov. 17, 2014); Deputy Secretary of Defense Memorandum, *Transition of Nuclear Enterprise Review Tracking Responsibilities* (Dec. 16, 2016), which includes the Office of Cost Assessment and Program Evaluation's (CAPE) *Nuclear Enterprise Review Tracking Analytic Guidance Overview*; Director, Cost Assessment and Program Evaluation Memorandum, *Additional Guidance for Nuclear Enterprise Review Recommendation Tracking* (Jan. 3, 2018); DOD Chief Information Officer Memorandum, *2015 National Leadership Command Capability and Nuclear Command, Control, and Communications Enterprise Review Report Guidance* (July 5, 2018); and Deputy Assistant Secretary of Defense for Nuclear Matters Memorandum, *Nuclear Enterprise Review Recommendation Implementation Guidance* (Apr. 20, 2020).

[9]Air Force security forces in the nuclear enterprise include those who patrol the three missile fields that stage the Air Force's nuclear missile force and those who guard the Air Force's Weapons Storage Areas. The Navy nuclear enterprise security forces include both Navy Masters-at-Arms and Marine Corps security force personnel, operating jointly in two Marine Corps security force battalions, one at each of the Navy's two installations that host Strategic Weapons Facilities.

For each of those sub-recommendations, we compared the metrics and milestones that were in DOD's centralized tracking tool with applicable guidance, such as a 2016 Deputy Secretary of Defense memorandum, *Transition of Nuclear Enterprise Review Tracking Responsibilities*, which assigned tracking responsibilities; the CAPE analytic guidance attached to that memorandum; and the NDERG charter. We determined that internal control components on the use of quality information and monitoring activities were significant to this engagement.[10] We collected and reviewed additional documentation, such as documentation used by the military services, to validate the personnel requirements for the security posts for each Air Force installation with operational nuclear forces in the U.S. We also reviewed Air Force assessments of the security forces conducted since 2014, such as the Interagency Security Forces Review. We interviewed officials from the Air Force's and Navy's headquarters offices and security force units at each of the nuclear enterprise installations hosting missile, bomber, or submarine platforms about security force challenges and efforts to mitigate the underlying challenges associated with the sub-recommendations we identified. We held separate interviews with unit leadership and a selection of non-leadership personnel from security force units.[11] These personnel conduct the day-to-day security mission at Navy and Air Force facilities with operational nuclear forces in the U.S. Our interview questions were based on the original sub-recommendations and reported actions taken to determine what steps DOD and the military services have taken to mitigate the underlying challenges of those recommendations, and their effects.

We also obtained data from command climate surveys conducted with these units from 2014 through 2019 and assessed the reliability of these data and the appropriateness of their use as a metric for DOD to assess progress implementing the 2014 nuclear enterprise review recommendations. We identified a number of issues that limit the

[10]*Standards for Internal Control in the Federal Government* states that management should use quality information to achieve an entity's objectives and should internally communicate the necessary information. In addition, management should establish and operate activities to monitor the internal control system and evaluate the results. Moreover, management should identify information in an iterative and ongoing process to ensure information is timely. GAO, *Standards for Internal Control in the Federal Government*, GAO-14-704G (Washington, D.C.: September 2014).

[11]For our interviews with non-leadership personnel, we asked for units to identify at least five persons not serving in leadership positions. In some cases, more than five persons participated in these interviews.

effectiveness of using these data as a metric for assessing DOD's progress implementing the 2014 recommendations—including data entry errors, missing data, and low response rates. Therefore, we concluded data from the command climate surveys was unreliable for assessing progress implementing the 2014 recommendations.

For our third objective, we assessed governance and oversight issues for the defense nuclear enterprise given the changing conditions in DOD's relevant structures since we last reported on these issues in 2018.[12] We defined "long-standing issues" as the issues that DOD has identified to aid in monitoring the long-term health of the nuclear enterprise. They are not directly tied to the 2014 nuclear enterprise review recommendations, but generally stem from them. We reviewed documents associated with DOD's nuclear enterprise governance structure and interviewed DOD and service officials about the status of the NDERG and Secretary of Defense Nuclear Transition Review (SNTR).[13] We also reviewed applicable guidance, such as the *Charter of the Nuclear Deterrent Enterprise Review Group*; the 2016 Deputy Secretary of Defense memorandum; CAPE's January 2018 updated guidance on risk; and a January 2021 Acting Secretary of Defense memorandum.[14] We determined that selected leading practices for enhancing collaboration—in particular, agreeing on roles and responsibilities and developing mechanisms to monitor, evaluate, and report on results—were relevant for assessing DOD's

[12]GAO-19-29.

[13]According to officials, the SNTR was created to formalize quarterly, nuclear-focused briefings to the Secretary of Defense on acquisition challenges associated with the transition from legacy nuclear weapon systems that the services plan to retire and the replacement systems. The scope of the SNTR was broadened to include personnel and sustainment issues in addition to acquisition issues.

[14]Acting Secretary of Defense Memorandum, (U) *Institutionalization of the Quarterly Secretary of Defense Nuclear Transition Review* (Jan. 14, 2021) (SECRET//NOFORN).

structures and practices for nuclear enterprise governance.[15] We also determined that the internal control components on the use of quality information and monitoring activities were significant to this engagement.[16] We assessed the documentation of DOD's nuclear enterprise governance structures against this principle, in particular the importance of identifying methods for the use and communication of quality information with stakeholders.[17]

Appendix II provides a complete list of offices we met with or obtained information from during our review.

We conducted this performance audit from January 2020 to August 2021 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.

[15]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 leading practices for collaboration among agencies that 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 and key considerations for implementing them. We determined that additional leading practices from the GAO-06-15 report—such as establishing mutually reinforcing or joint strategies and identifying and addressing needs by leveraging resources—were not directly relevant to the scope of our review.

[16]*Standards for Internal Control in the Federal Government* states that management should use quality information to achieve an entity's objectives and should internally communicate the necessary information. In addition, management should establish and operate activities to monitor the internal control system and evaluate the results. Moreover, management should identify information in an iterative and ongoing process to ensure information is timely. GAO-14-704G.

[17]According to federal internal control standards, management should use quality information to achieve an entity's objectives and internally and externally communicate the necessary quality information to achieve the objectives. The 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. GAO-14-704G.

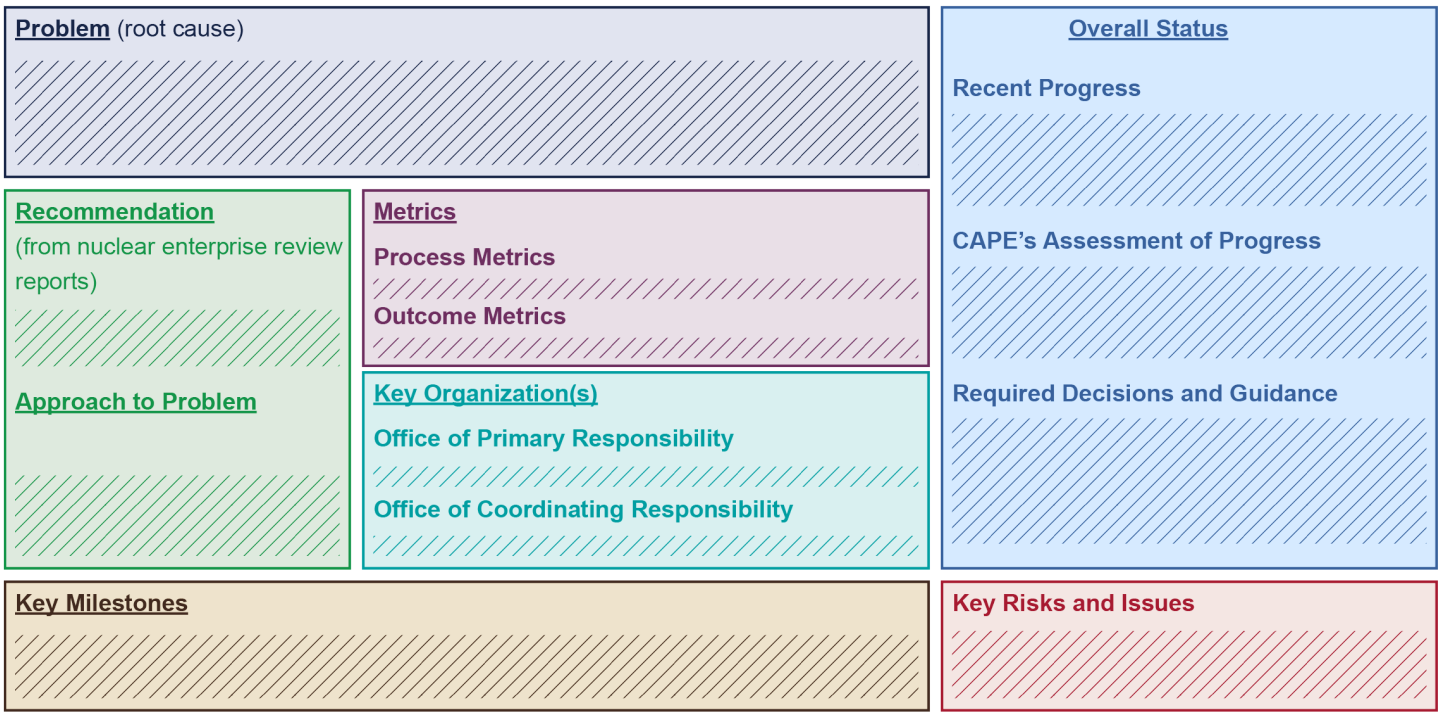
Background

Oversight of the 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 implementation efforts. The Joint Staff, Navy, Air Force, offices within the Office of the Secretary of Defense, and the U.S. Strategic Command supported CAPE's efforts. CAPE compiled the recommendations from the 2014 nuclear enterprise reviews. In total, it identified 175 distinct recommendations from the three documents associated with the reviews. It 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 both 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 developed a centralized tracking tool to collect information on progress in meeting metrics and milestones. As shown in figure 1, the tracking tool includes fields for the underlying problem statement, or root cause, and for the recommendation and time frames with milestones for implementing the recommendation. The tracking tool also includes the approach to the problem, offices with responsibility, recent progress, required decisions, and key risks related to the recommendation. The tracking tool also includes performance measures (referred to as metrics) to assess both the progress (through process metrics) and the effectiveness of the implementation actions (through outcome metrics). The outcome metrics are to aid DOD in determining whether implemented recommendations have addressed the underlying problem that was the impetus for the original recommendation.

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



Source: GAO presentation of Department of Defense information. | GAO-21-486

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

- Problem (root cause)
- Recommendation (from nuclear enterprise review reports)
- Approach to problem
- Metrics
  - Process Metrics
  - Outcome Metrics
- Key Organizations
  - Office of Primary Responsibility
  - Office of Coordinating Responsibility
- Key Milestones
- Overall Status
  - Recent Progress

    - CAPE's Assessment of Progress
    - Required Decisions and Guidance
- Key Risks and Issues

Source: GAO presentation of Dept. of Defense Information. | GAO-21-486

This centralized tracking tool contains hundreds of unique metrics and milestones, and additional metrics and milestones may be added as they are identified. 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.[18] The Office of the Deputy Assistant Secretary of Defense for Nuclear Matters (hereafter referred to as Nuclear Matters) took over CAPE's role of maintaining DOD's centralized tracking tool in 2019, but the military departments and other DOD components remain responsible for the tracking and analysis related to implementing these recommendations.

The NDERG was established in 2014 by the Secretary of Defense to ensure the long-term health of the nuclear enterprise by addressing issues identified in the 2014 nuclear enterprise reviews. DOD established two organizations to support the NDERG: the Nuclear Deterrent Senior Oversight Group and the Nuclear Deterrent Working Group. Specifically:

- The Nuclear Deterrent Senior Oversight Group is co-chaired by the Deputy Assistant Secretary of Defense for Nuclear Matters, the Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy, the Joint Staff Deputy Director for Strategic Stability, and a senior-level representative of the Director of CAPE. The Nuclear Deterrent Senior Oversight Group receives annual briefings on DOD components' assessments of their progress, reviews organizational changes, and discusses other issues related to the management, operations, and health of the nuclear enterprise—including human resources and culture, availability of weapon systems for operational use, sustainment, modernization, and

[18]Deputy Secretary of Defense Memorandum, *Transition of Nuclear Enterprise Review Tracking Responsibilities* (Dec. 16, 2016). The memorandum noted that CAPE remained responsible for providing guidance to inform the analyses conducted by the military departments and other DOD components, overseeing these analyses, and assessing recommendations for closure.

acquisition of replacement system issues not directly addressed in other forums.

- The Nuclear Deterrent Working Group consists of civilian and uniformed officials from across DOD, including officials from CAPE, the services, U.S. Strategic Command, and the Joint Staff. This working group meets biweekly to review the status of the open 2014 nuclear enterprise review recommendations and prepare briefing materials to support efforts to identify, track, and address issues and opportunities across the nuclear enterprise.

In January 2021, the Acting Secretary of Defense created the SNTR. According to officials, the SNTR is to assume the responsibilities of the NDERG. However, according to DOD officials, both the Nuclear Deterrent Senior Oversight Group and Nuclear Deterrent Working Group remained active as of May 2021. According to DOD officials, the SNTR evolved out of the briefings on nuclear issues that occurred on a quarterly basis as part of the Secretary's Weekly Priority Review, a forum established in 2019. Officials said that the quarterly nuclear-focused meetings provided opportunities for more regular discussion with high-level department leadership than was occurring with the NDERG. A SNTR charter was issued on January 14, 2021. The charter establishes a Steering Committee that is co-led by the Under Secretary of Defense for Acquisition and Sustainment; the Vice Chairman of the Joint Chiefs of Staff; and the Commander, U.S. Strategic Command. According to DOD officials, the Office of Nuclear Matters and the Office of Strategic, Space, and Intelligence Portfolio Management, both within the Office of the Under Secretary of Defense for Acquisition and Sustainment, will take the lead in further identifying SNTR roles and responsibilities.[19]

Oversight of the 2015 NC3 Report's Recommendations

The Council on Oversight of the National Leadership Command, Control, and Communications System (NLC3S Council) was established by statute and is responsible for oversight of the command, control, and

[19]The Office of Strategic, Space, and Intelligence Portfolio Management was formerly known as the Office of Integration and Information Portfolio Management.

communications system for the national leadership of the U.S.[20] 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 co-chaired by the Under Secretary of Defense for Acquisition and Sustainment and the Vice Chairman of the Joint Chiefs of Staff. Members of the council include the Under Secretary of Defense for Policy; the Under Secretary of Defense for Research and Engineering; the Under Secretary of Defense for Intelligence; 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 Chief Information Office.

The NLC3S Council is supported by the National Leadership Command Capabilities Executive Management Board, which comprises a Senior Steering Group and other entities. The Executive Management Board ensures that the council is informed of and presents issues that require senior leadership-level decisions. In 2018, the Secretary of Defense approved the designation of the Commander of U.S. Strategic Command as the NC3 enterprise lead with increased responsibilities for the operation and requirements of NC3 systems. At that time, the Secretary of Defense also approved the designation of the Under Secretary of Defense for Acquisition and Sustainment as the NC3 enterprise capability portfolio manager with increased responsibilities for advocating for resources and overseeing efforts for acquiring new NC3 systems.

The DOD Chief Information Officer serves as the Secretariat for the NLC3S Council and initially tracked the implementation of recommendations from the 2015 NC3 report using a centralized tracking tool with similar fields to the one used for the 2014 nuclear enterprise reviews. The National Defense Authorization Act for Fiscal Year 2020 transferred NC3 principal staff assistant responsibilities from the Chief Information Officer to the Under Secretary of Defense for Acquisition and Sustainment.[21] According to DOD officials, the Under Secretary of Defense for Acquisition and Sustainment will now track progress on the 2015 NC3 report recommendations. Additional organizations may participate in the NLC3S Council's meetings to provide subject-matter

[20]Established by the National Defense Authorization Act for Fiscal Year 2014, the NLC3S Council serves as DOD'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).

[21]*See* Pub. L. No. 116-92, § 1662 (2019).

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 Director, Defense Information Systems Agency; the Director, White House Military Office; and the Director, CAPE.

Nuclear Enterprise Security Forces

The Air Force's nuclear enterprise security forces include those personnel who patrol the three missile fields that contain the Air Force's nuclear missile force and those who guard the Air Force's Weapons Storage Areas and nuclear-capable bombers. Four operational installations in the contiguous U.S., F.E. Warren, Minot, Malmstrom, and Whiteman Air Force Bases, host a missile field, an Air Force Wing with nuclear capable bombers, or both. For fiscal year 2021, according to Air Force documentation, there are 4,636 funded personnel positions in the Air Force's nuclear enterprise security forces and an additional 527 unfilled personnel positions across those four locations, for both missile and bomber security. The Air Force maintains a larger nuclear security force across a greater number of facilities than the Navy and, as noted in the independent nuclear enterprise review conducted in 2014, the Air Force has experienced some challenges that the Navy has not. As a result, the Air Force had most of the nuclear security force-related sub-recommendations.

The Navy nuclear enterprise security forces include both Navy Masters-at-Arms and Marine Corps security force personnel, operating jointly in two Marine Corps security force battalions, one at each of the Navy's two facilities that host Strategic Weapons Facilities for nuclear-capable submarines, Kings Bay Naval Base and Bangor Naval Base. According to Navy and Marine Corps officials, security responsibilities are typically split, with Masters-at-Arms operating static security posts and Marine Corps personnel serving on response and recovery teams. According to Navy and Marine Corps documentation, there are 2,269 funded nuclear enterprise security force personnel positions in the Department of the Navy, split between 1,123 Navy Masters-at-Arms, and 1,146 Marines positions, with an additional 108 unfilled personnel positions in the Marine Corps. According to an official from the Office of the Chief of Naval Operations, the nuclear enterprise security forces also include a smaller number of Navy Masters-at-Arms, 133 as of March 2021, who provide

security for Take Charge and Move Out platforms intended to enable senior leadership access to nuclear platforms even during crises.[22]

DOD Continues to Make Progress in Implementing Recommendations from the 2014 Nuclear Enterprise Reviews and the 2015 NC3 Report

DOD Has Implemented 165 of the 247 Sub-Recommendations from the 2014 Nuclear Enterprise Reviews

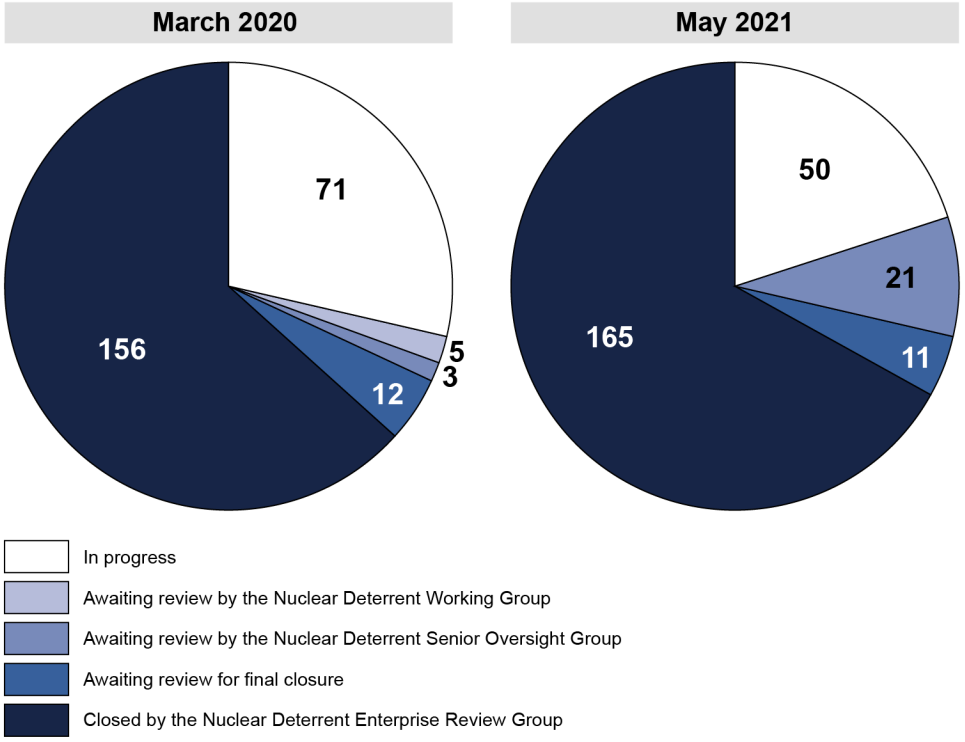
DOD has closed nine additional 2014 nuclear enterprise review sub-recommendations since we reported on the implementation status in March 2020.[23] As of May 2021, DOD had closed 165 of the 247 sub-recommendations as implemented, with an additional 11 sub-recommendations awaiting review for final closure. Figure 2 presents the status of the 247 sub-recommendations in March 2020 and in May 2021. According to DOD officials, more recommendations might have been closed, but NDERG and Nuclear Deterrent Senior Oversight Group meetings were less frequent as a result of the COVID-19 pandemic; however, DOD components have continued to address these recommendations.[24]

[22]A Take Charge and Move Out platform is a nuclear command and control aircraft that enables airborne command and control of nuclear forces between the President, senior advisors, and Joint Forces.

[23]GAO-20-296.

[24]As we have previously reported, CAPE officials stated that it would take years to implement many of the 2014 recommendations and measure whether they have had their intended effect. See GAO-19-29.

Figure 2: Implementation Status of 247 Sub-Recommendations from the 2014 Nuclear Enterprise Reviews, in March 2020 and May 2021



Source: GAO analysis of Department of Defense information. | GAO-21-486

Data table for Figure 2: Implementation Status of 247 Sub-Recommendations from the 2014 Nuclear Enterprise Reviews, in March 2020 and May 2021

	March 2020	May 2021
In progress	71	50
Awaiting review by the Nuclear Deterrent Working Group	5	0
Awaiting review by the Nuclear Deterrent Senior Oversight Group	3	21
Awaiting review for final closure	12	11
Closed by the Nuclear Deterrent Enterprise Review Group	156	165

Note: Once the military service or other Department of Defense 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. Until January 2021, recommendations that the Nuclear Deterrent Senior Oversight Group determined should be closed were reviewed for final closure by the Nuclear Deterrent Enterprise Review Group. According to officials, since January 2021, the Secretary of Defense Nuclear Transition Review assumed the responsibilities of the Nuclear Deterrent Enterprise Review Group.

Source: GAO analysis of Dept of Defense information. | GAO-21-486

In October 2019, we recommended that DOD keep the information in its recommendation tracking tools current and complete, including time frames.[25] In response to our recommendation, the Acting Deputy Assistant Secretary of Defense for Nuclear Matters issued a memorandum in April 2020 requesting all DOD components with open recommendations from the 2014 reviews to provide updated information by June 1, 2020. According to DOD officials, in response to this memorandum, DOD components have updated the expected completion dates for many metrics and milestones identified in DOD's centralized tracking tool. This memorandum partially implements the recommendation we made in 2019, but it does not provide guidance to the DOD components to continue to keep this information current, a recommendation that can still benefit DOD's efforts if fully implemented.

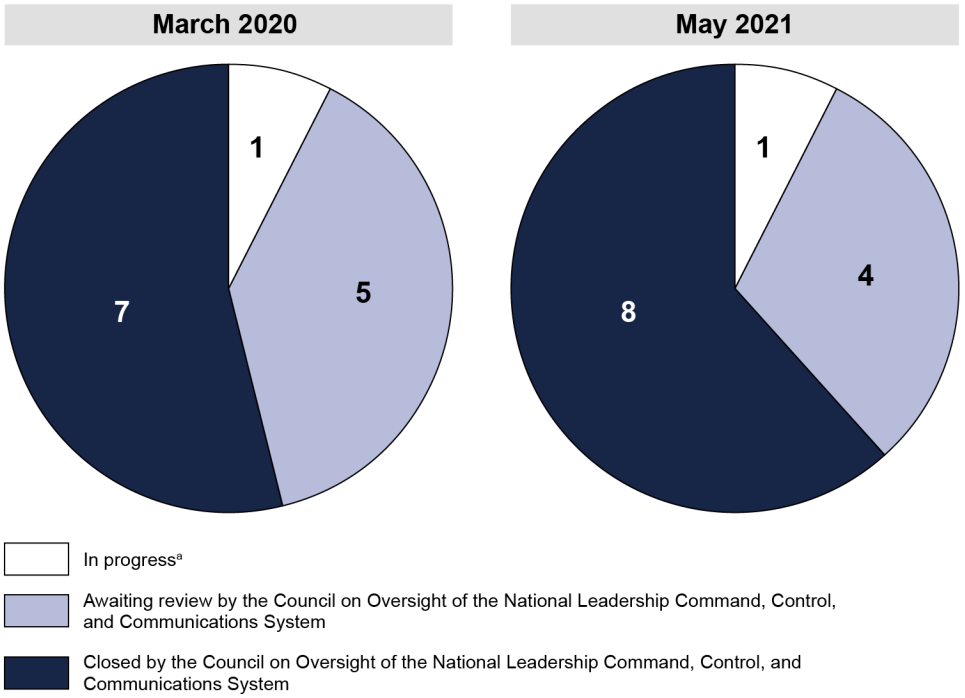
DOD Has Implemented Eight of the 13 2015 NC3 Report Recommendations

Since we reported in March 2020 on the implementation status of the 2015 NC3 report, as of May 2021 DOD had closed one additional recommendation, for a total of eight of the 13 recommendations (see fig. 3). According to DOD officials from the Office of the Under Secretary of Defense for Acquisition and Sustainment, DOD and service officials have taken action to implement four of the remaining recommendations, which are awaiting closure by the NLC3S Council. According to DOD officials, Acquisition and Sustainment officials recommended closure to the Council because efforts were established within DOD's processes to continue to work on the issues identified in the recommendations, not because all of the problems identified in the 2015 NC3 report have been resolved. One recommendation that was directed to both the Navy and the Air Force remains in progress; the Air Force has not completed its actions to implement its portion of the recommendation, but the Navy has

[25]GAO, *Defense Nuclear Enterprise: Systems Face Sustainment Challenges, and Actions Are Needed to Effectively Monitor Efforts to Improve the Enterprise*, GAO-20-296 (Washington, D.C.: Mar. 26, 2020), which is a public version of a report originally issued as GAO-20-9C in October 2019.

completed its actions. As a result, the recommendation has not been recommended for closure by the NLC3S Council.

Figure 3: Implementation Status of the 13 Recommendations from the 2015 Nuclear Command, Control, and Communications Systems Enterprise Review Report, in March 2020 and May 2021



Source: GAO analysis of Department of Defense information. | GAO-21-486

Text of Figure 3: Implementation Status of the 13 Recommendations from the 2015 Nuclear Command, Control, and Communications Systems Enterprise Review Report, in March 2020 and May 2021

	March 2020	May 2021
In progress[a]	1	1
Awaiting review by the Council on Oversight of the National Leadership Command, Control, and Communications System	5	4
Closed by the Council on Oversight of the National Leadership Command, Control, and Communications System	7	8

Note: Once the military service or other Department of Defense component with primary responsibility for a recommendation determines that it is complete, the Council on Oversight of the National

Leadership Command, Control, and Communications System reviews the actions taken and determines whether the recommendation can be closed.

[a]The Navy has completed its actions to close its portion of the remaining in progress recommendation; however, until the Air Force also completes its portion of this recommendation and these actions have been reviewed by the Council, the recommendation will remain open.

Source: GAO analysis of Dept. of Defense information. | GAO-21-486

In October 2019, we also recommended that DOD keep the information in its recommendation tracking tools current and complete for the 2015 NC3 report recommendations.[26] The Under Secretary of Defense for Acquisition and Sustainment has not issued additional guidance for components responsible for implementing the five recommendations in progress from the 2015 NC3 report to keep the information in its tracking tool current and complete. We continue to believe that this guidance would aid the department in providing a complete and accurate picture of when tasks are expected to be completed, determining whether progress is still being made to address the issues identified, determining whether any efforts have stalled, and identifying and addressing any additional challenges.

DOD Has Not Reassessed the Metrics and Milestones for Implementing the 2014 Nuclear Enterprise Review Recommendations Related to Nuclear Security Force Issues

The Air Force, the Navy, and other DOD components initially identified key metrics and milestones for tracking the progress of nuclear security force-related recommendations from the 2014 nuclear enterprise reviews, including the use of command climate surveys. However, we found that a key metric used for many of the recommendations contained unreliable data. The Nuclear Deterrent Working Group members have not reassessed this or other metrics and milestones for implementing the 2014 recommendations, including those related to the nuclear security forces, to determine if they remain appropriate.

The Air Force, Navy, and Other DOD Components Identified Initial Metrics and Milestones for Tracking

[26]GAO-20-296.

Implementation of Nuclear Security Force Recommendations

Of the 42 recommendations, comprising the 56 sub-recommendations we identified that were directed to or affected nuclear security forces, most were included in the DOD-identified categories of readiness, personnel, career development, policy/accountability, and Personnel Reliability Program.[27] The sub-recommendations were directed to the Air Force, the Navy, and DOD components such as U.S. Strategic Command and the Office of the Under Secretary of Defense for Policy. The sub-recommendations that directly addressed issues related to the nuclear security forces, such as equipment or personnel of these units, were directed to the Air Force and the Navy.

Sub-recommendations that addressed or included the nuclear security forces included the following:

- Conduct a full review of position requirements across the nuclear enterprise, directed to the Air Force;
- Update personnel requirement models used for positions, directed to the Air Force and Navy;
- Introduce controlled tours at intercontinental ballistic missile bases, directed to the Air Force;[28]
- Require all Air Force security force personnel (nuclear and non-nuclear) to have a single security forces qualification, directed to the

[27]DOD and the military services set standards to ensure that personnel who work with nuclear weapons and nuclear weapon systems, NC3 systems and equipment, and special nuclear material are reliable, trustworthy, and capable of performing their assigned nuclear weapon-related mission. Nuclear surety generally refers to DOD's efforts to ensure that nuclear weapons and materials are safe, secure, reliable, and controlled. DOD and the military services use personnel reliability assurance programs—the Personnel Reliability Program and the Air Force's Arming and Use of Force program for Air Force security forces—to implement these nuclear surety requirements for personnel.

[28]A controlled tour is used by the Air Force as a tool to ensure effective utilization of trained airmen, under which they are assigned for a minimum specified period of time in the career field in which they received training.

Air Force.[29]

Other recommendations and sub-recommendations relevant to the nuclear security forces addressed equipping and security procedures as well as general morale and quality-of-life issues specific to the nuclear security forces and as part of the broader nuclear personnel group. (Appendix III contains additional information and examples of identified issue areas and recommendations related to the nuclear enterprise security forces.) An Air Force official told us that while work has been done to address security force issues, oversight and advocacy remain necessary to provide resources to make lasting improvements across the security of the nuclear enterprise.

As with all of the recommendations stemming from the 2014 nuclear enterprise reviews, the responsible components, with analytical assistance from CAPE, established process and outcome metrics and milestones for measuring progress implementing the recommendations. Common examples of process metrics included conducting analyses of issues related to a particular recommendation such as reviewing required personnel documents or assessing plans created to respond to a recommendation. Common outcome metrics included monitoring data relevant to the expected effects of the implementation of a recommendation, such as tracking retention rates of personnel for recommendations intended to improve morale. One outcome metric identified for many recommendations, including many of those we identified as affecting the nuclear enterprise security forces, was the monitoring of trends in climate survey responses. In addition to the metrics, milestones were also identified for each recommendation. These milestones are steps DOD has identified as important to meeting a recommendation, as identified by the responsible department, such as completing a review or study, or submitting a budgetary request.

The Nuclear Deterrent Working Group Has Not Reassessed the Metrics and Milestones for Implementing

[29]In response to a provision in DOD's updated Personnel Reliability Program guidance that authorizes the military departments to develop reliability guidance specific to their security force personnel guarding nuclear weapons, the Air Force has made changes to its Arming and Use of Force program. Air Force Arming and Use of Force standards include qualification requirements under which all Air Force security forces, whether assigned to a nuclear facility or a non-nuclear facility, are authorized to carry a weapon as part of their official duties. In addition, Air Force nuclear security forces no longer require separate Personnel Reliability Program certification.

Recommendations, Including Those Related to Security Forces

DOD's centralized recommendation tracker identifies command climate survey results as a key metric for many of the 2014 nuclear enterprise recommendations and sub-recommendations directed at or affecting the Air Force and Navy nuclear security forces, among other nuclear enterprise personnel. Additionally, the CAPE guidance attached to the 2016 Deputy Secretary of Defense memorandum directing the transition of tracking responsibilities for the nuclear enterprise review recommendations identifies trends in climate survey questions as one of a subset of metrics that should be utilized to assess the overall health of the nuclear enterprise in addition to being used for the individual recommendations to which they were applied.[30]

We found that the command climate survey contained unreliable data and was therefore ill-suited as a metric. Appendix IV summarizes the issues we identified with the command climate survey as a process and outcome metric for these recommendations and sub-recommendations, and discusses recent improvements to the survey that could address some of those issues.[31] However, even if these issues are addressed, the command climate surveys may still not be a suitable metric for measuring the implementation of the 2014 recommendations. According to DOD officials, the use of command climate surveys was not reviewed by the offices of primary responsibility for the sub-recommendations or by the Nuclear Deterrent Working Group to determine if the surveys were appropriate for tracking the progress or outcomes of the 2014 nuclear enterprise review recommendations and sub-recommendations. As a result, DOD continues to identify information from command climate surveys as a metric for many of the sub-recommendations in DOD's centralized tracking tool despite the issues we identified that indicate it is ill-suited to serve such a purpose.

Additionally, more recent reviews conducted by the Air Force have identified potential metrics and milestones that could help inform DOD's

[30]Deputy Secretary of Defense Memorandum, *Transition of Nuclear Enterprise Review Tracking Responsibilities* (Dec. 16, 2016).

[31]According to officials, within the last few months, the Office of People Analytics has made several improvements to the survey that may correct those prior issues, but officials involved with the tracking of the 2014 recommendations have not reviewed what effect, if any, these changes have on the appropriateness of using data from the new surveys as a metric.

tracking of the 2014 nuclear enterprise review recommendations and sub-recommendations related to nuclear security force issues. For example:

- An Air Force Global Strike Command-led review of the command's security forces conducted in 2017 and 2018 by a joint team comprising Air Force, Navy, Marine Corps, Army, intelligence community and Department of Energy representatives reported findings and recommendations that were consistent with the 2014 nuclear enterprise reviews. For example, a recommendation to standardize equipment across security force units that mirrored a problem identified in the 2014 nuclear enterprise reviews of aging support equipment and lack of centralized equipment sustainment plans. The findings and recommendations from the more recent Air Force Global Strike Command-led review include the need to conduct an additional review of personnel requirements of the security forces; funding additional officer positions; fully equipping units with modern tools, test equipment, and vehicles; and updating processes for tracking readiness of security force personnel. The actions the Air Force takes to address these subsequent findings may provide additional useful metrics or milestones to assess progress implementing the 2014 recommendations.
- An Air Force Global Strike Command plan, called Striker Culture, includes efforts to assess the culture within the command—including the nuclear security forces—using metrics such as retention rates. The goal of the Striker Culture plan is also to address issues including improving unit readiness, increasing resiliency and morale among personnel and families, and creating more consistent messaging from leadership. These metrics and issues are similar to those DOD identified in its tracking tool to monitor the implementation of the 2014 nuclear enterprise review recommendations. Air Force Global Strike Command officials stated that they will be conducting regular evaluations of the efforts and the plan involves the establishment of short-term and long-term milestones. These milestones, when established, could potentially be incorporated into the tracking of the remaining relevant recommendations in the 2014 nuclear enterprise review recommendation centralized tracking tool. According to officials, Air Force Global Strike Command is in the initial stages of implementing Striker Culture and, although the milestones have not yet been identified, the metrics may include trends on sexual assault and suicides, retention rates, and information technology complaints.

However, the Nuclear Deterrent Working Group has not utilized these internal reviews to inform any reassessment of the process and outcome

metrics and milestones in the centralized tracking tool for the 2014 nuclear enterprise recommendations and sub-recommendations directed at or affecting the Air Force and Navy nuclear security forces. According to officials, the Working Group has not included these reviews and assessments in any discussions related to changes in metrics and milestones. Instead, the Working Group continued to rely on the metrics and milestones established in the initial response to the 2014 reviews, despite opportunities to reassess in light of new information, such as the subsequent Air Force reviews of its security forces.

As previously discussed, in April 2020, in response to our prior recommendation, the Acting Deputy Assistant Secretary of Defense for Nuclear Matters issued a memorandum requesting that all components with open recommendations from the 2014 nuclear enterprise reviews update their corrective action implementation plans, including updating the dates identified for the completion of specific metrics and milestones.[32] According to officials from Nuclear Matters, the Air Force and Navy responded to this memorandum by updating expected completion dates for existing metrics and milestones associated with recommendations that were still open, but neither they nor other entities updated or revised the process and outcome metrics or milestones for those open recommendations. For example, the Nuclear Deterrent Working Group did not add new metrics or milestones that could aid in tracking progress, or remove existing metrics and milestones that may no longer be appropriate.

DOD is using the information in the centralized tracking tool, including the process and outcome metrics and milestones, to aid in its monitoring of the recommendations and sub-recommendations from the 2014 nuclear enterprise reviews. However, not all of the metrics and milestones that were previously identified remain appropriate to measuring DOD's progress implementing these recommendations. The DOD guidance and internal processes established for addressing the 2014 nuclear enterprise review recommendations and maintaining the centralized tracking tool identify responsibilities for maintaining certain information in the tool, including metrics and milestones. However, the processes do not explicitly direct DOD or the military services to periodically assess existing process or outcome metrics or milestones in the centralized tracking tool to determine if they are still the most appropriate for evaluating progress

[32]See GAO-20-296 and Deputy Assistant Secretary of Defense for Nuclear Matters Memorandum, *Nuclear Enterprise Review Recommendation Implementation Guidance* (Apr. 20, 2020).

implementing the recommendations and whether the actions taken address the underlying problem. For example:

- Guidance from the Deputy Secretary of Defense provides that the Air Force, Navy, and other DOD components are responsible for tracking and analyzing the implementation of recommendations, as well as for providing CAPE with data necessary for assessing the closure of recommendations addressed to them in the 2014 nuclear enterprise reviews.[33]
- The Deputy Secretary of Defense provided that CAPE remains responsible for providing analytic guidance, overseeing the analysis, and assessing the recommendations.[34] CAPE provided additional guidance along with the 2016 memorandum that stated that military departments and other DOD components should use existing data or a compilation of existing data sources where possible, while noting that approaches can be revised to address recommendations more effectively. CAPE's guidance also states that changes to metrics and milestones will be coordinated among the members of the Nuclear Deterrent Working Group.
- The NDERG charter stated that the NDERG will identify, track, coordinate, and address issues, risks, and opportunities across the nuclear enterprise to ensure that outcomes of the 2014 nuclear enterprise reviews are pursued to completion.[35]

That is, while the CAPE guidance states that changes to metrics and milestones would be coordinated among the members of the Nuclear Deterrence Working Group and that approaches to recommendations can be revised for effectiveness, it does not require the members to do so or direct the process for how it will be done.[36] Similarly, according to DOD

[33]*See* Deputy Secretary of Defense Memorandum, *Transition of Nuclear Enterprise Review Tracking Responsibilities* (Dec. 16, 2016).

[34]*Id*.

[35]According to DOD officials, the NDERG was disbanded in January 2021, and the activities for which the NDERG was responsible will be conducted by the SNTR.

[36]Supplemental guidance from CAPE on tracking risks indicates that risk assessments should be updated periodically as progress is made and new data become available. Director, Cost Assessment and Program Evaluation Memorandum, *Additional Guidance for Nuclear Enterprise Review Recommendation Tracking* (Jan. 3, 2018). However, the general guidance from CAPE for tracking the implementation of recommendations does not include a similar specific requirement for periodic updates with respect to metrics and milestones.

officials, the NDERG—in its capacity as the organization responsible for oversight of the 2014 recommendations—has not directed reviews or updates of the metrics and milestones of open recommendations since they were first identified in the initial response to the 2014 nuclear enterprise reviews. Although the Acting Deputy Assistant Secretary of Defense for Nuclear Matters requested an update of corrective action implementation plans for open recommendations from the 2014 reviews, the guidance did not provide for a periodic update process. The guidance also did not result in updates to the tracking tool beyond changes in the expected completion dates for existing metrics and milestones. *Standards for Internal Control in the Federal Government* identifies the importance of using quality information, communication of necessary information, and operation of monitoring activities to evaluate results and states that quality information must be appropriate, current, and complete. Moreover, management should identify information in an iterative and ongoing process to ensure information is timely.[37]

Without periodic assessment of the process and outcome metrics and milestones for the remaining 2014 nuclear enterprise review recommendations to determine whether they are the most appropriate for evaluating the implementation progress, DOD is not in a position to effectively measure this progress or assess before closing the recommendations whether the actions, once implemented, have addressed the underlying problems that gave rise to the recommendations.

DOD Has Not Defined Roles, Responsibilities, or Communication Methods for the SNTR or Developed an Approach to Monitor Long-Standing Issues

In January 2021, DOD provided for the newly created SNTR to take over the mission of the NDERG, but DOD has not defined the specific roles and responsibilities of the SNTR or how it will communicate with other nuclear enterprise oversight organizations. In addition, DOD and the military services have made some progress in identifying areas for

[37]GAO-14-704G.

monitoring the health of the defense nuclear enterprise, but DOD has not identified the means by which it will monitor these long-standing issues.

DOD Created the SNTR to Oversee the Nuclear Enterprise but Has Not Defined Roles, Responsibilities, or Communication Methods

DOD identified the lack of nuclear enterprise oversight as a problem in its 2014 nuclear enterprise reviews, and since that time we have reported on ongoing issues related to oversight. The reviews found that senior DOD and military department leadership were not aware of issues affecting the nuclear enterprise and emphasized the importance of communication across the 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 the Office of the Secretary of Defense be brought together into a coherent and synchronized structure that focuses on direction and support for the nuclear forces. In addition, the internal review reported that the problems of the nuclear enterprise did not exist in isolation and would require a coordinated, holistic approach to resolve.

In 2014, to address issues identified in the 2014 nuclear enterprise reviews, including improving oversight of the enterprise, the Secretary of Defense established the NDERG. The NDERG charter identified the body as the principal integrated civilian-military governance body for the DOD nuclear enterprise. DOD also uses other groups—some of which predate the establishment of the NDERG—to oversee and coordinate on specific portions of the nuclear enterprise. For example, the Nuclear Weapons Council serves as the focal point of DOD and the National Nuclear Security Administration interagency activities to maintain the U.S. nuclear weapons stockpile, while the NLC3S Council is responsible for overseeing the command, control, and communications system used by senior U.S. leadership.

In 2018, we reported that identifying nuclear enterprise oversight organizations'—including the NDERG's—roles and responsibilities and identifying and establishing methods for communicating and collaborating

among organizations could help mitigate the problems identified in the 2014 reviews.[38] Our prior work has shown that agreeing on roles and responsibilities can improve collaboration within and among organizations.[39] However, we found that, in the absence of defined roles and responsibilities for nuclear enterprise oversight bodies and methods for how the oversight organizations are to communicate and collaborate, senior leaders may not be in a position to effectively manage resourcing and risk across the department. We recommended that DOD clarify roles, responsibilities, and methods of communication and collaboration between the NDERG and other nuclear oversight bodies.[40] DOD concurred with our recommendations and, in a subsequent NDERG charter, clarified the body's roles and responsibilities. While the charter did not fully clarify methods of communication and collaboration between the NDERG and other organizations, it did specify that other existing functional oversight committees and councils related to the nuclear enterprise would continue to address issues under their purview, that those bodies could raise issues to the NDERG, as appropriate, and that it would use information from such bodies to inform its activities.

In January 2021, the Acting Secretary of Defense created a new nuclear enterprise oversight organization, the SNTR.[41] According to DOD officials, the NDERG was disbanded in January 2021, and the activities for which the NDERG was responsible will be conducted by the SNTR, including the identification and monitoring of long-standing issues to monitor the long-term health of the nuclear enterprise.[42] Officials from the Nuclear Matters and CAPE offices said that the briefings on nuclear issues that occurred on a quarterly basis as part of the Secretary's Weekly Priority Review—which the SNTR evolved from—was a better forum than the NDERG for obtaining regular, high-level department leadership attention on issues affecting the nuclear enterprise.

[38]GAO-19-29.

[39]GAO has identified a set of practices that can help the federal, state, local, and private sectors collaborate effectively—including agreeing on roles and responsibilities. *See* GAO-12-1022 and GAO-06-15.

[40]GAO-19-29.

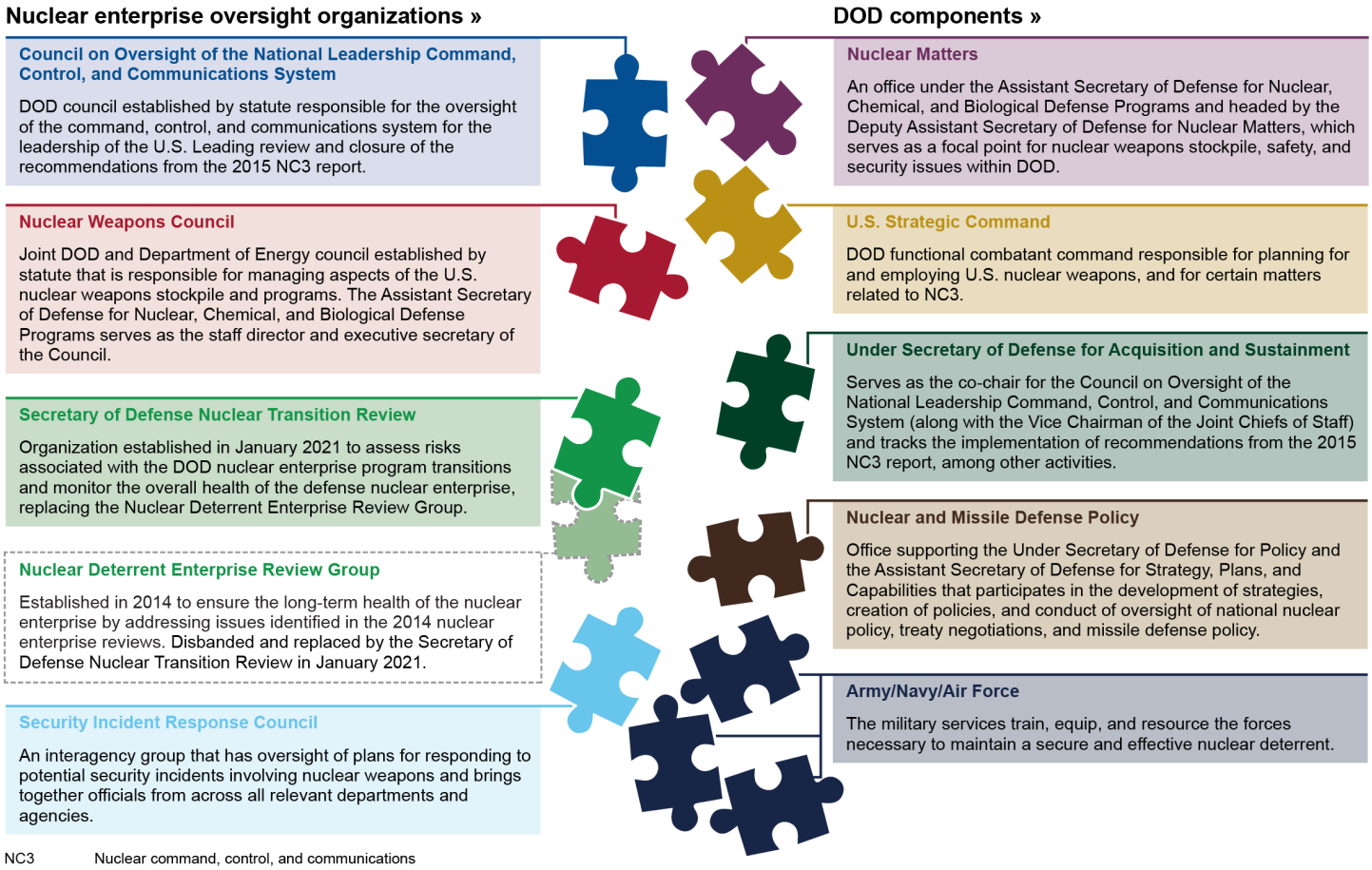
[41]Acting Secretary of Defense Memorandum, (U) *Institutionalization of the Quarterly Secretary of Defense Nuclear Transition Review* (Jan. 14, 2021) (SECRET//NOFORN).

[42]DOD officials refer to these long-standing issues as "enduring issues."

According to officials, these nuclear-focused Secretary's Weekly Priority Reviews were focused solely on the transition from legacy nuclear weapon systems to replacement systems and the associated acquisition challenges. However, the scope of the SNTR was broadened to include a more holistic view of the nuclear enterprise. In particular, according to DOD officials, the draft SNTR charter was explicitly broadened to ensure that the charter was not just focused on acquisition efforts and, as a result, the final charter included responsibility for other defense nuclear enterprise efforts related to personnel and sustainment.

Now, about 3 years after our prior recommendation to improve the oversight of the nuclear enterprise, DOD in creating the SNTR, has not documented in its charter or otherwise identified a time frame for developing its roles and responsibilities and an approach for how it should communicate with stakeholders and other nuclear enterprise organizations. That is, although, according to DOD officials the SNTR is expected to take on all the roles and responsibilities of the NDERG, the SNTR charter does not fully explain the extent to which it will do so or how it will fulfill those responsibilities. The roles and responsibilities of the SNTR and selected other DOD nuclear oversight groups and DOD components are shown in figure 4.

Figure 4: Selected Nuclear Enterprise Oversight Organizations and Department of Defense (DOD) Components



NC3 Nuclear command, control, and communications
DOD Department of Defense

Source: GAO analysis of statutes and DOD information. | GAO-21-486

Text of Figure 4: Selected Nuclear Enterprise Oversight Organizations and Department of Defense (DOD) Components

Nuclear Enterprise Oversight Organizations

- **Council on Oversight of the National Leadership Command, Control, and Communications System:** DOD council established by statute responsible for the oversight of the command, control, and communications system for the leadership of the U.S. Leading review and closure of the recommendations from the 2015 NC3 report.
- **Nuclear Weapons Council:** 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. The Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs serves as the staff director and executive secretary of the Council.

- **Secretary of Defense Nuclear Transition Review:** Organization established in January 2021 to assess risks associated with the DOD nuclear enterprise program transitions and monitor the overall health of the defense nuclear enterprise, replacing the Nuclear Deterrent Enterprise Review Group.
- **Nuclear Deterrent Enterprise Review Group:** Established in 2014 to ensure the long-term health of the nuclear enterprise by addressing issues identified in the 2014 nuclear enterprise reviews. Disbanded and replaced by the Secretary of Defense's Nuclear Transition Review in January 2021.
- **Security Incident Response Council:** An interagency group that has oversight of plans for responding to potential security incidents involving nuclear weapons and brings together officials from across all relevant departments and agencies.

DOD Components

- **Nuclear Matters:** An office under the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs and headed by the Deputy Assistant Secretary of Defense for Nuclear Matters, which serves as a focal point for nuclear weapons stockpile, safety, and security issues within DOD.
- **U.S. Strategic Command:** DOD functional combatant command responsible for planning for and employing U.S. nuclear weapons, and for certain matters related to NC3.
- **Under Secretary of Defense for Acquisition and Sustainment:** Serves as the co-chair for the Council on Oversight of the National Leadership Command, Control, and Communications System (along with the Vice Chairman of the Joint Chiefs of Staff) and tracks the implementation of recommendations from the 2015 NC3 report, among other activities.
- **Nuclear and Missile Defense Policy:** Office supporting the Under Secretary of Defense for Policy and the Assistant Secretary of Defense for Strategy, Plans, and Capabilities that participates in the development of strategies, creation of policies, and conduct of oversight of national nuclear policy, treaty negotiations, and missile defense policy.

- **Army/Navy/Air Force:** The military services train, equip, and resource the forces necessary to maintain a secure and effective nuclear deterrent.

Source: GAO analysis of statutes and DOD information. | GAO-21-486

At present, the SNTR charter identifies the members of the overall SNTR and its Steering Committee, with the Under Secretary of Defense for Acquisition and Sustainment, the Vice Chairman of the Joint Chiefs of Staff, and the Commander of U.S. Strategic Command identified as co-chairs of SNTR's Nuclear Transition Steering Committee. According to DOD officials, Acquisition and Sustainment's Office of Strategic, Space, and Intelligence Portfolio Management will take the lead in further identifying SNTR roles and responsibilities.

Officials said there has been no additional communication with stakeholders about the roles and responsibilities of SNTR members at the action officer level, or explanation for how the SNTR will communicate with other nuclear enterprise oversight organizations, such as the Nuclear Weapons Council and NLC3S Council. According to DOD officials, as of August 2021, the SNTR charter had been reviewed by new department leadership; however, no SNTR meetings had yet been held due in part to scheduling conflicts.

Notwithstanding the initial efforts to establish some oversight functions for the SNTR, we identified two areas where DOD can improve its approach. First, DOD has not documented the roles and responsibilities of the organization. According to DOD officials, the co-chairs of the SNTR's Nuclear Transition Steering Committee have not had the opportunity to document details about the roles and responsibilities that various organizations will have supporting the new body. Officials said that stakeholders had an opportunity to comment on the SNTR charter before it was finalized, but the current charter remains at a very high level and does not provide details about how it will actually operate and about the specific roles and responsibilities that individual subordinate organizations and stakeholders will perform. Officials said that the initial charter established only broad roles and responsibilities for the entity.

As we reported in 2018, leading practices for enhancing interagency collaboration include agreeing on roles and responsibilities and having

written guidance and agreements.[43] Specifically, collaborating 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. Without clearly documenting the SNTR's roles and responsibilities for monitoring the long-term health of the nuclear enterprise, DOD may not have oversight of key issues affecting the enterprise that were previously monitored by the NDERG.

Second, DOD has not documented how the SNTR is to communicate with other stakeholders. According to DOD officials, they envision the charter as a working document that will grow as officials from the Office of Strategic, Space, and Intelligence Portfolio Management determine how their office will work with other organizations to fulfill the SNTR's mission. *Standards for Internal Control in the Federal Government* states that management should use and communicate quality information. These standards call for management to identify appropriate methods of communication with stakeholders, considering a variety of factors such as the audience and the nature of the information.[44]

DOD has had a history of insufficient oversight of the nuclear enterprise that was present prior to the creation of the SNTR. In the absence of documentation of the methods for how the organization is to communicate with other existing nuclear enterprise oversight organizations, DOD 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 that would address other issues it may encounter in the future.

DOD Has Established Four Long-Standing Issue Areas to Assess the Long-Term Health of the Nuclear Enterprise but Has Not Developed an Approach for Monitoring Their Status

According to Office of the Deputy Assistant Secretary of Defense for Nuclear Matters officials, since we last reported in March 2020, the

[43]GAO-19-29. For more information on leading practices for enhancing interagency collaboration, see GAO-06-15.

[44]GAO-14-704G.

NDERG determined that DOD components would monitor four long-standing issue areas: human resources and culture, operational availability, maintenance and sustainment, and modernization and recapitalization.[45] These issue areas are not directly tied to remaining open recommendations from the 2014 nuclear enterprise reviews, but officials told us that they were in large part informed by those open recommendations. For example, many of the 2014 nuclear enterprise review recommendations that remain open are focused on long-term sustainment and acquisition programs for the enterprise or are designed to be closed only after progress in addressing the issues can be meaningfully evaluated.

DOD had previously begun efforts to develop an approach for monitoring the status of long-standing issues; however, this effort was not completed. We previously reported in October 2019 that the NDERG had been working to develop a dashboard to monitor enduring issues and associated metrics affecting the long-term health of the nuclear enterprise.[46] At that time, according to officials from CAPE, the Nuclear Deterrent Working Group was pursuing using an existing Office of the Under Secretary of Defense (Comptroller) analysis tool as the dashboard by populating it with additional data relevant to the nuclear enterprise. According to officials, the enduring issues DOD was planning to identify and eventually monitor were expected to largely be derived from remaining open recommendations from the 2014 nuclear enterprise reviews that were expected to take years or even decades to fully implement. However, in February 2021, Nuclear Matters officials told us that DOD was no longer pursing the development of a dashboard. Officials from CAPE said that a decision was made that it was too costly to populate the Comptroller tool with the necessary additional data. An alternative method for monitoring long-term issues and associated metrics has not been developed.

To support their internal oversight, the Air Force and Navy have developed internal processes for monitoring their respective elements of the nuclear enterprise, including tracking the portions of the long-standing issues affecting the nuclear enterprise for which they are responsible. The Air Force Nuclear Oversight Board provides senior-level executive oversight and is the primary forum for Air Force nuclear mission issues related to policy, national strategy implementation, organization,

[45]Our March 2020 report was GAO-20-296.

[46]GAO-20-9C.

assessment, and strategic communication. The Air Force uses its Nuclear Mission Assessment to brief senior Air Force leadership on issues affecting the Air Force nuclear enterprise. The Nuclear Mission Assessment is a collection of independent analyses of various data sources used to identify challenges within the Air Force nuclear enterprise. The Air Force periodically prepares a report based on the information identified by the Nuclear Mission Assessment.[47]

The Navy oversees its portion of the enterprise using the Navy Nuclear Deterrent Mission Oversight Council. Among other responsibilities, the Council directs the scope and conduct of a biennial review of Navy nuclear weapons, systems, and system safety, security, and reliability. 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 weapon incident response), operations, personnel, policy, material support, and oversight functions. According to Navy officials, the Navy Nuclear Deterrent Mission Oversight Council addresses long-standing issues affecting the Navy's nuclear enterprise and identifies and monitors risks associated with those issues. According to officials, the Council also maintains a dashboard to continuously monitor the health of the enterprise.

DOD has directed the development of means to monitor long-standing nuclear enterprise issues. A July 2018 memorandum from the Deputy Secretary of Defense related to chartering the NDERG stated that stakeholders will develop metrics to capture long-term risks and identify opportunities for regular reporting to the NDERG.[48] The NDERG charter, issued in June 2019, implemented the July 2018 memorandum and provided direction to the Nuclear Deterrent Senior Oversight Group and its Nuclear Deterrent Working Group, including that members were to develop metrics, data, tools, and briefing materials to support the NDERG efforts to identify, track, and address issues, risks, and opportunities across the nuclear enterprise. The NDERG charter further directed the

[47]The National Defense Authorization Act for Fiscal Year 2016 required the Chief of Staff of the Air Force to designate a Deputy Chief of Staff to, among other things, conduct periodic comprehensive assessments of all aspects of the nuclear deterrence mission of the Air Force and provide such assessments to the Secretary of the Air Force and the Chief of Staff of the Air Force. Pub. L. No. 114-92, § 1652(a)(1) (2015) (adding 10 U.S.C. § 8040(b)(3), subsequently renumbered as 10 U.S.C. § 9040(b)(3)).

[48]Deputy Secretary of Defense Memorandum, *Chartering the Nuclear Deterrent Enterprise Review Group* (July 26, 2018).

Senior Oversight Group and Working Group members to recommend the disposition of the long-term recommendations from the 2014 nuclear enterprise reviews and of the long-term efforts to achieve management, operations, and health outcomes directed by the *2018 Nuclear Posture Review*.[49] Although the 2018 memorandum and NDERG charter do not address the SNTR that was created in 2021, officials told us that the SNTR will assume all of the NDERG's roles and responsibilities, to include the development of a means to monitor the long-term health of the nuclear enterprise.[50]

Since 2018, DOD has not established the means by which it will monitor the long-standing issues the NDERG was charged with monitoring. Specifically, DOD has not developed guidance for the department and the relevant DOD components to use for monitoring these issues, including which metrics and information sources the military services and DOD components will provide to assist in this monitoring. As discussed above, DOD began pursuing efforts to develop an approach for monitoring the status of long-standing issues; however, DOD chose not to continue this effort because officials decided that it was too costly, and an alternative method has not been developed.

Without developing guidance that identifies the means DOD will use for monitoring long-standing issues, associated metrics, and information sources, DOD is not well positioned to collect and review information necessary to monitor the long-term health of the enterprise or identify any long-term risks. Further, in the absence of a means to monitor long-term issues, including challenges identified in the 2014 nuclear enterprise reviews, DOD is limited in its ability to ensure that it is proactively identifying and addressing those challenges.

Conclusions

In 2014 and 2015, DOD identified hundreds of recommendations to address issues across the defense nuclear enterprise. The processes and tools established by the department to aid in tracking both the progress in implementing these recommendations as well as the ultimate

[49]DOD, *Charter of the Nuclear Deterrent Enterprise Review Group (NDERG)* (June 6, 2019).

[50]*Standards for Internal Control in the Federal Government* and leading practices for collaboration both identify the importance of developing mechanisms to monitor and evaluate activities. *See* GAO-14-704G and GAO-06-15.

effectiveness of those efforts to address underlying problems can continue to serve DOD well. However, DOD has not updated these tools to include appropriate metrics and milestones to aid in the department's assessment, including identifying metrics in the tools that are ill-suited for this purpose and no longer relying on those metrics to measure progress. Until the department updates these tools, it is not positioned to effectively measure what progress has been made or assess whether the actions taken have addressed the underlying issues that gave rise to the original recommendations before closing these recommendations.

Additionally, while DOD has stated that the SNTR will continue the mission of the NDERG to provide senior-level oversight of the defense nuclear enterprise, DOD has not clearly documented the specific roles and responsibilities of the SNTR and its supporting organizations. Without clearly documenting the SNTR's roles and responsibilities for monitoring the long-term health of the nuclear enterprise, DOD may not have oversight of key issues affecting the enterprise that were previously monitored by the NDERG.

Further, DOD has also not documented the methods the SNTR should use for communicating with other defense nuclear enterprise oversight organizations. In the absence of methods for how the SNTR is to communicate with other existing nuclear enterprise oversight organizations, it will 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.

Finally, DOD has not established the means by which it will monitor long-standing issues that affect the defense nuclear enterprise. Many of the 2014 nuclear enterprise review recommendations that remain open are focused on long-term challenges. These recommendations are reflected in the enduring issues identified by DOD, but it is important that the department provide guidance on how these long-standing issues will be monitored in order to proactively identify and address challenges that may arise.

Recommendations for Executive Action

We are making the following four recommendations to DOD:

- The Secretary of Defense should ensure that the Director of CAPE—as the office responsible for providing analytic guidance and overseeing the analysis of the recommendations—in coordination with the Deputy Assistant Secretary of Defense for Nuclear Matters, the Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy, and the Joint Staff Deputy Director for Strategic Stability, as other co-chairs of the Nuclear Deterrent Senior Oversight Group, provide guidance that the Nuclear Deterrent Working Group members periodically assess the process and outcome metrics and milestones for the remaining 2014 nuclear enterprise review recommendations to determine whether they are the most appropriate for evaluating implementation progress and whether the actions, once implemented, address the underlying problems. (Recommendation 1)
- The Secretary of Defense, in coordination with the Chairman of the Joint Chiefs of Staff, should ensure that the Under Secretary of Defense for Acquisition and Sustainment, the Vice Chairman of the Joint Chiefs of Staff, and the Commander of U.S. Strategic Command, as co-chairs of SNTR's Nuclear Transition Steering Committee, document
  - the roles and responsibilities of the SNTR and its supporting organizations, (Recommendation 2)
  - how the SNTR will communicate with other organizations that have oversight responsibilities for portions of the nuclear enterprise, (Recommendation 3) and
  - guidance that identifies the means for monitoring long-standing issues including the associated metrics and information sources. (Recommendation 4)

Agency Comments and Our Evaluation

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

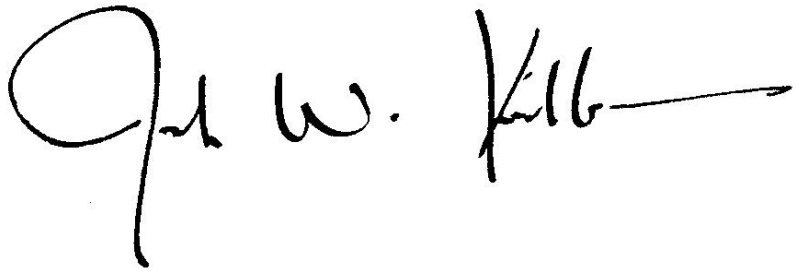
In concurring with our first recommendation, DOD stated that the Deputy Assistant Secretary of Defense for Nuclear Matters will draft updated guidance for the Nuclear Deterrent Working Group members to periodically assess the process and outcome metrics and milestones for the remaining open 2014 nuclear enterprise review recommendations.

In concurring with our second, third, and fourth recommendations, DOD stated that it is working to define and document roles and responsibilities for the SNTR membership, determine how the SNTR and its Nuclear Transition Steering Committee will monitor and receive data on metrics related to the enduring recommendations for the nuclear enterprise and formalize the lines of communication between the SNTR, its Steering Committee, and other existing nuclear oversight bodies.

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 and to coordinate responsibilities and communication within and between nuclear oversight bodies.

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 Under Secretary of Defense for Policy; the Chairman of the Joint Chiefs of Staff; the Secretaries of the Navy and of the Air Force; the Commander, U.S. Strategic Command; and the Director, CAPE. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-9971 or 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 VI.



Joseph W. Kirschbaum
Director, Defense Capabilities and Management

List of Committees

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

The Honorable Jon Tester
Chairman
The Honorable Richard Shelby
Ranking Member
Subcommittee on Defense
Committee on Appropriations
United States Senate

The Honorable Adam Smith
Chairman
The Honorable Mike Rogers
Ranking Member
Committee on Armed Services
House of Representatives

The Honorable Betty McCollum
Chair
The Honorable Ken Calvert
Ranking Member
Subcommittee on Defense
Committee on Appropriations
House of Representatives

Appendix I: Summary of Our Related Prior Recommendations

We have made a number of recommendations to the Department of Defense related to the 2014 nuclear enterprise reviews and the 2015 nuclear command, control, and communications (NC3) enterprise report. The status of these recommendations is summarized in table 1 below.

Table 1: Summary of Prior GAO Recommendations Related to the 2014 Nuclear Enterprise Reviews and the 2015 Nuclear Command, Control, and Communications (NC3) Report

Prior GAO recommendation (date)	Department of Defense (DOD) efforts to address the recommendation	Status
The Office of Cost Assessment and Program Evaluation (CAPE), in coordination with the military departments and other Department of Defense (DOD) entities serving as offices of primary responsibility for implementing the recommendations, develop additional guidance for these offices to identify associated risks and document information about these risks in the centralized tracking tool. (October 2017)	DOD concurred with the recommendation. In January 2018, in response to a GAO recommendation, CAPE issued guidance to aid the military departments and other DOD components 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 progress is made and new data become available.	Closed - Implemented
DOD Chief Information Officer (CIO)—in coordination with CAPE, the military departments, Joint Staff, and U.S. Strategic Command—as the draft template and any other additional tools to aid in their approach are finalized, identify and communicate to nuclear command, control, and communications (NC3) stakeholders performance measures and milestones to assist in tracking the progress of implementation of the recommendations from the 2015 NC3 report and evaluating the outcomes of implementation actions, and risks associated with the implementation of the recommendations from the 2015 NC3 report. (October 2017)	DOD concurred with the recommendation. In July 2018, DOD CIO issued additional guidance instructing military departments and DOD components with responsibility for the 2015 NC3 report recommendations to identify and provide milestones, metrics, and information about recent progress in implementing the recommendations.	Closed - Implemented

Prior GAO recommendation (date)	Department of Defense (DOD) efforts to address the recommendation	Status
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 Nuclear Deterrent Enterprise Review Group (NDERG). (November 2018)	DOD concurred with the recommendation. In June 2019, the Deputy Secretary of Defense issued a charter for the NDERG that included information about the roles and responsibilities for the members of the NDERG. That charter has been superseded by the charter of the Secretary of Defense Nuclear Transition Review (SNTR) issued in January 2021.	Closed - Implemented
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. (November 2018)	DOD concurred with the recommendation. In June 2019, the Deputy Secretary of Defense issued a charter for the NDERG that included some information regarding the NDERG's communication and collaboration with other organizations, but it did not fully clarify these methods. That charter has been superseded by the charter of the SNTR issued in January 2021.	Closed - Not Implemented
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 Council on Oversight of the National Leadership Command, Control, and Communications System (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. (November 2018)	DOD concurred with the recommendation. As of June 2021, according to DOD officials, DOD is working to update the applicable guidance.	Open

Prior GAO recommendation (date)	Department of Defense (DOD) efforts to address the recommendation	Status
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. (November 2018)	DOD concurred with the recommendation. As of June 2021, according to DOD officials, DOD is working to update the applicable guidance.	Open
The Secretary of Defense should ensure that the Director of CAPE, in coordination with the Deputy Assistant Secretary of Defense for Nuclear Matters, the Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy, and the Joint Staff Deputy Director for Strategic Stability, as co-chairs of the Nuclear Deterrent Senior Oversight Group, update the applicable guidance for methods of tracking and evaluating progress on implementation of the recommendations from the 2014 nuclear enterprise reviews, requiring DOD components to keep information—including any revised time frames—current. (March 2020)	DOD concurred with the recommendation. In April 2020, the Acting Deputy Assistant Secretary of Defense for Nuclear Matters issued a memorandum requesting updates to certain information by June 1, 2020; however, no additional guidance requiring continuing updates beyond June 1, 2020, has been issued as of May 2021.	Open
The Secretary of Defense should ensure that the Under Secretary of Defense for Acquisition and Sustainment updates the applicable guidance for methods of tracking and evaluating progress on implementation of the recommendations of the 2015 NC3 report, requiring DOD components to keep information—including metrics for measuring progress and outcomes as well as any revised time frames that may extend out more than 1 year—complete and current. (March 2020)	DOD concurred with the recommendation and stated that the DOD CIO and, as appropriate, the Under Secretary of Defense for Acquisition and Sustainment, will update applicable guidance. As of June 2021, the guidance had not been updated.	Open

Source: GAO and DOD information. | GAO-21-486

Appendix II: Offices That We Contacted

During our review, we met with or obtained information from officials from the following organizations within the Department of Defense (DOD):

- Office of the Under Secretary of Defense for Acquisition and Sustainment
  - Office of the Deputy Assistant Secretary of Defense for Nuclear Matters
  - Office of the Deputy Assistant Secretary of Defense for Strategic, Space, and Intelligence Portfolio Management
- Office of the Under Secretary of Defense (Policy)
  - Office of the Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy
- Office of Cost Assessment and Program Evaluation
- DOD Chief Information Officer
- DOD Chief Management Officer
- Joint Staff
- U.S. Strategic Command
- Air Staff
  - Manpower, Personnel, and Services (A1)
  - Logistics, Engineering, and Force Protection (A4)
  - Strategic Deterrence and Nuclear Integration (A10)
- Office of the Inspector General, Department of the Air Force
- Air Force Inspection Agency
- Air Force Global Strike Command
- 20th Air Force
- 5th Bomb Wing
- 90th Missile Wing
- 91st Missile Wing

- 341st Missile Wing
- 509th Bomb Wing
- 582nd Helicopter Group
- Air Force Materiel Command
- Air Force Nuclear Weapons Center
- Air Force Personnel Center
- Air Force Security Forces Center
- Air Force Nuclear Command, Control, and Communications Center
- Air Force Air Education and Training Command
- Chief of Naval Operations: Nuclear Policy (N514) and Undersea Warfare (N97)
- Navy Strategic Systems Programs
- U.S. Fleet Forces Command
- U.S. Pacific Fleet
- Naval Education and Training Command
  - Navy Center for Security Forces
  - Naval Technical Training Center Lackland
- Marine Corps Headquarters
- Marine Forces Command
- Marine Corps Security Forces Regiment
  - Marine Corps Security Forces Battalion, Bangor
  - Marine Corps Security Forces Battalion, Kings Bay
- U.S. Army Nuclear and Countering Weapons of Mass Destruction Agency
- Defense Threat Reduction Agency
- Defense Equal Opportunity Management Institute
- Office of People Analytics

Appendix III: Examples of Nuclear Security Force Challenges Identified in the 2014 Reviews

The Department of Defense (DOD) and the military services are experiencing continuing challenges related to the security forces of the nuclear enterprise—including challenges identified in recommendations from DOD's 2014 nuclear enterprise reviews—and have ongoing and planned efforts intended to mitigate these challenges. The military services face challenges related to aging equipment and infrastructure, training, personnel, and morale of the security forces. DOD and the services are mitigating challenges through initiatives to acquire new equipment and upgrade infrastructure, and to monitor and maintain morale and unit identity.

Table 2 provides selected DOD nuclear security force-related recommendations from the 2014 reviews—divided into readiness, personnel, career development, policy/accountability, and Personnel Reliability Program categories, which are categories identified by DOD in its centralized tracking tool—steps the military services have taken to address the sub-recommendations, and related views on the challenges obtained from security force personnel assigned to the selected operational units we interviewed. Multiple items in the second column identified as steps taken may apply to one or more recommendations, and views of personnel from operational units—presented in the third column—may correspond to more than one recommendation or step taken.

Table 2: Selected 2014 Nuclear Enterprise Review Recommendations, Steps Taken to Address Them, and Related Challenges Interviewed Personnel Identified

	Selected security force-related recommendation (as Identified by GAO)[a]	Example from the Department of Defense's (DOD) tracking tool of step taken to address the recommendation	Selected view of Interviewed personnel in operational units[b]
Readiness	Readiness reporting system should provide accurate portrayal of the relationship between personnel requirements and the total cost of maintaining the required readiness of the nuclear forces.	Air Force Global Strike Command now participates in an additional U.S. Strategic Command quarterly readiness review. Improved unit readiness information in the readiness reporting system. Conducted training on how to report readiness and implemented revised reporting mechanism.	At one Air Force location, personnel stated that the system for tracking readiness does not track personnel qualifications well for their position. Air Force security forces at multiple locations are currently keeping paper records of training because they are transitioning to a different tracking database. Additional security needs that may arise at one location are not included in Navy and Marine Corps readiness requirements and there are three different systems to track training requirements.

	Selected security force-related recommendation (as Identified by GAO)[a]	Example from the Department of Defense's (DOD) tracking tool of step taken to address the recommendation	Selected view of Interviewed personnel in operational units[b]
Personnel **Career development**	Restore Air Force quality-of-life funding to Morale, Welfare, and Recreation Programs (e.g., child development centers and fitness centers) to recognize irregular work hours. Conduct end-to-end review of Air Force billet requirements (funded/unfunded) and of personnel assigned across the nuclear enterprise. Initiate controlled tours at some bases.[c] Reduce Air Force homesteading (extended periods of time at one installation). Update critical personnel requirement models, including assumptions of Personnel Reliability Program availability. Direct that personnel assessments address the disconnect between available personnel qualified to perform mission tasks and the total workload imposed by the mission. Add billets to Air Force security forces. Improve morale of Air Force security forces.	The Air Force Global Strike Command implemented a program for free daycare for spouses when personnel are in the field and salary increases for personnel in the field and civilians at Minot Air Force Base. The Air Force continues to monitor critical career fields for sufficiency of assigned personnel. The Air Force adopted a unique assignment policy for the continental United States for security force personnel that uses a variety of assignment types of different lengths for skill development and duty location changes. The Air Force and Navy conducted reviews of their personnel requirement models. The Air Force realigned billet grades to increase the numbers of mid- and senior-level leaders. More than 860 additional Air Force security forces billets have been funded since 2014. The Air Force implemented special duty assignment pay for nuclear security forces personnel.[d] The Air Force funded specialized equipment and improved cold weather equipment.	Limited assignment lengths may result in a loss of Air Force personnel experienced in the nuclear mission and reliance on personnel who lack nuclear experience. Across various locations and military services, personnel have perceived struggles with the number of available personnel. Personnel necessary to execute the nuclear security mission may be available, but security forces often work long hours and do not always have the flexibility to adjust to contingencies or to personnel being temporarily unavailable. The number of security force personnel has increased since 2014, but there are still concerns with the number of unfunded positions. Special duty pay has had a positive impact on the morale of security force personnel who patrol the missile fields. Some security force personnel expressed satisfaction with the performance of cold weather equipment. Others felt that it was not sufficient and described buying additional equipment with the general unit budget, or out of their own pockets.
	Provide incentives, career management to develop broad nuclear field.	The Air Force implemented an incentive pay structure for nuclear service.	Incentive pay for those in the missile fields has been positive for morale.

	Selected security force-related recommendation (as Identified by GAO)[a]	Example from the Department of Defense's (DOD) tracking tool of step taken to address the recommendation	Selected view of Interviewed personnel in operational units[b]
	Clarify chain of command for Navy and Marine Corps security forces. Provide the support (to include investment) needed for the men and women in the force to meet the professional demand of the daily work consistent with the declared priority of the mission. Establish and institutionalize across Headquarters Air Force and Air Force Material Command that responding to Air Force Global Strike Command needs is their highest priority with near-term demonstrations of support that are immediately visible to the nuclear forces.	The Navy conducted a review of its security force battalions to identify any deficiencies in processes and structure. Senior leadership documents, including the Air Force Strategy, Strategic Planning Guidance and Program Objective Memoranda (future budget projections) reflect a stated prioritization of the nuclear mission of Air Force Global Strike Command. Realigned part of the Air Force Nuclear Weapons Center under Air Force Global Strike Command.	Funding may not always reflect the idea that the nuclear enterprise is a top priority, particularly with regard to funding equipment and vehicles.
Personnel Reliability Program[e]	Invoke commander's right to arm authority as the standard to determine the reliability of nuclear security forces and eliminate the application of the Personnel Reliability Program for nuclear security forces. Require that all Air Force security force personnel (nuclear and non-nuclear) have a single security forces qualification.	The Air Force updated the Arming and Use of Force standards for Air Force Security Forces such that all Air Force Security Forces personnel are qualified for nuclear enterprise security.	Changes to the Arming and Use of Force standards are familiar to Air Force personnel and viewed positively, but concerns remain that they may have some negative effects on the number of personnel available for duty as a result of the application of the standards, and accompanying administrative burden.

Source: GAO analysis of DOD information. | GAO-21-486

[a]We identified and reviewed recommendations from the 2014 nuclear enterprise reviews that related either directly to the Air Force, Navy, or Marine Corps nuclear security forces or that included these forces as part of a larger population included within the recommendations' scope (e.g., recommendations concerning readiness or career development issues).

[b]We held separate interviews with unit leadership and a selection of non-leadership personnel from security force units. These personnel conduct the day-to-day security mission at Navy and Air Force facilities with operational nuclear forces in the U.S. For our interviews with non-leadership personnel, we asked for units to identify at least five persons not serving in leadership positions. In some cases, more than five persons participated in these interviews. Views provided by personnel are cross-cutting and may reflect issues associated with multiple identified recommendations or steps taken to address the recommendations.

[c]A controlled tour is used by the Air Force as a tool to ensure effective utilization of trained airmen. That is, the airmen are assigned for a minimum specified period of time in the career field in which they received training.

[d]Special Duty Assignment Pay is a monthly special pay that is used to induce enlisted members of the Army, Navy, Air Force, Marine Corps, or Coast Guard to qualify for and serve in designated assignments or specialties where the duties are extremely difficult or involve an unusual degree of responsibility.

[e]DOD and the military services set standards to ensure that personnel who work with nuclear weapons and nuclear weapon systems; nuclear command, control, and communications systems and equipment; and special nuclear material are reliable, trustworthy, and capable of performing their assigned nuclear weapon-related mission. DOD and the military services use personnel reliability assurance programs—the Personnel Reliability Program and the Air Force's Arming and Use of Force program for Air Force security forces—to implement nuclear surety requirements for personnel.

Appendix IV: Issues Limiting the Effectiveness of the Command Climate Surveys for Assessing Morale

The Department of Defense (DOD) has identified the Defense Organizational Climate Survey as a metric in the 2014 recommendation tracking tool, including to aid in measuring outcomes from the implementation of many personnel and morale recommendations directed to the Air Force, Navy, and Marine Corps. The climate surveys had been administered and analyzed by the Defense Equal Opportunity Management Institute until this responsibility was moved in 2018 to the Office of People Analytics.

A 2013 Under Secretary of Defense for Personnel and Readiness memorandum, titled *Command Climate Assessments*, directed the secretaries of the military departments to establish procedures to ensure that commanders of each military command and commanders of subordinate units of 50 or more persons conduct a climate assessment within 120 days of taking command and annually thereafter while they remain in command, consistent with responsibilities of the military departments established in DOD Directive 1350.2, *Department of Defense Military Equal Opportunity (MEO) Program*.[1] That memorandum additionally stated that the Defense Equal Opportunity Management Institute would provide commanders the capability to share their Defense Organizational Climate Survey results electronically and simultaneously with the commanders in the next level of the chain of command.[2] A 2015 memorandum from the Under Secretary of Defense for Personnel and Readiness, *Defense Equal Opportunity Management Institute Organizational Climate Survey Usage and Data Sharing*, designated the Defense Equal Opportunity Management Institute Organizational Climate Survey as the survey tool to support the command climate assessment program according to requirements set by the

[1]Under Secretary of Defense for Personnel and Readiness Memorandum, *Command Climate Assessments* (July 25, 2013); Department of Defense Directive 1350.2, *Department of Defense Military Equal Opportunity (MEO) Program*, para. 6.2.2 (Aug. 18, 1995) (incorporating change 2, June 8, 2015).

[2]The Defense Organizational Climate Survey is now administered by the Office of People Analytics within the Defense Human Resources Activity.

National Defense Authorization Acts for Fiscal Years 2013 and 2014 and the 2013 memorandum.[3]

According to Defense Equal Opportunity Management Institute officials, the purpose of the climate surveys is to aid commanders in addressing challenges in real-time while performing their command role, rather than to drive policy. Specifically, these point-in-time climate surveys are not designed to aid in the assessment of unit morale over time. Additionally, prior to 2020, the surveys did not include a question category specifically labelled "morale," so morale within units could not be directly measured by the survey.

In reviewing the climate surveys and the methodology for conducting them, we identified a number of issues that limit their effectiveness for use as measures of unit morale. For example, we identified

- manual entry errors resulting in the miscoding of unit identifiers, causing some unit data to be attributed to the wrong units;[4]
- missing data for some units for some years due to commanders not conducting a survey in a given calendar year, as required;
- challenges in ensuring the proper individual completed the survey and that there were not multiple survey submissions from the same person;
- low response rates–averaging about 40 percent across the services;[5] and
- significant and repeated changes in the survey questions and response options, which limited the ability to compare data from surveys administered in different

[3]Under Secretary of Defense for Personnel and Readiness Memorandum, *Defense Equal Opportunity Management Institute Organizational Climate Survey Usage and Data Sharing* (Nov. 20, 2015). The memorandum referenced section 572 of the National Defense Authorization Act for Fiscal Year 2013, Pub. L. No. 112-239 (2013), as amended by section 1721 of the National Defense Authorization Act for Fiscal Year 2014, Pub. L. No. 113-66 (2013).

[4]Uncorrected manual input errors may indicate quality control issues. We received data over multiple years from 26 units, and in at least one sample miscoded unit identifiers resulted in us receiving data for the wrong unit.

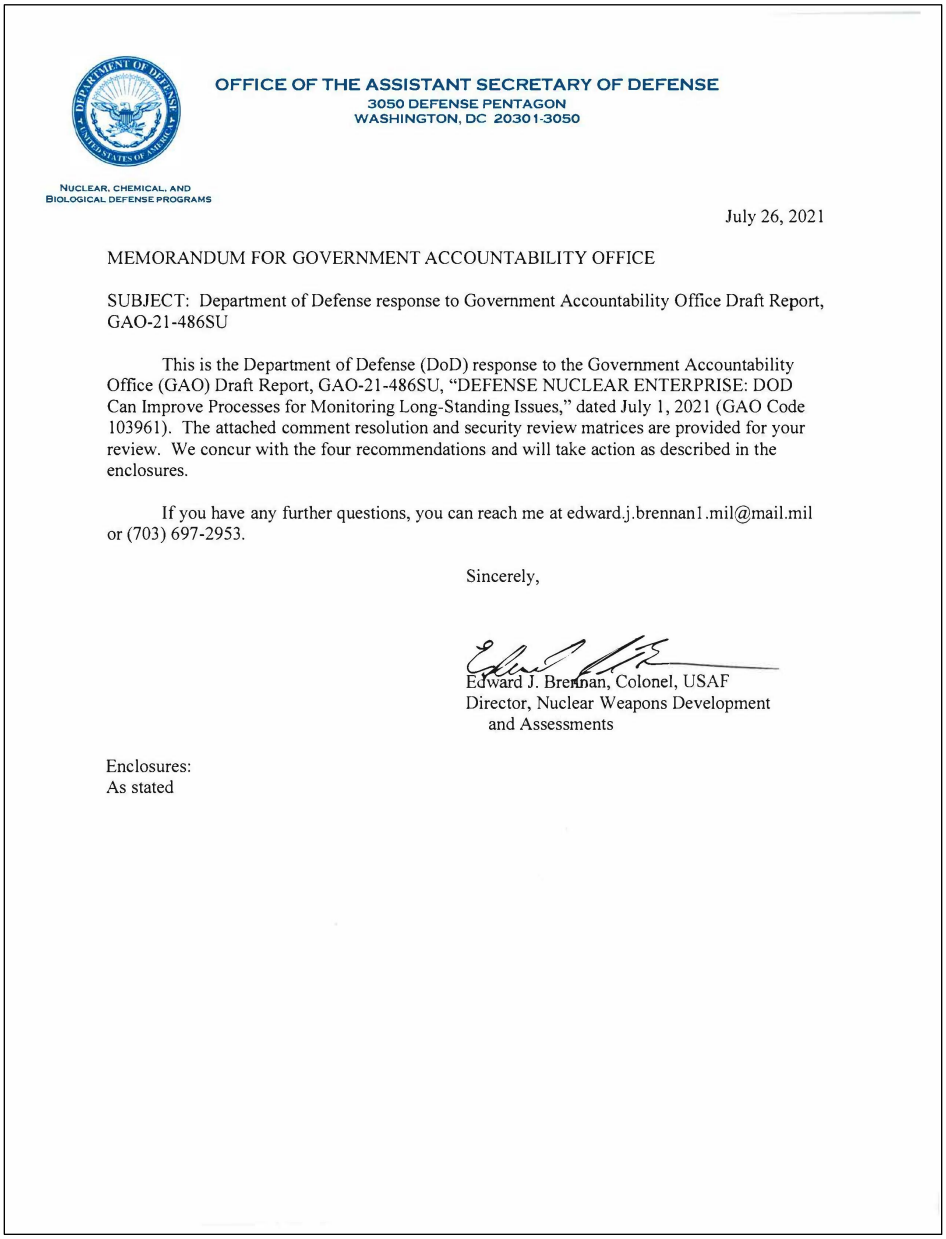
[5]The Navy, Marine Corps, and Air Force response rates averaged 43 percent, 50 percent, and 37 percent, respectively, for 2014–2019. According to Defense Equal Opportunity Management Institute officials, the command climate survey has the highest response rates of all DOD surveys. However, Office of Management and Budget guidelines recommend a non-response bias analysis for surveys with less than an 80-percent response rate. Office of Management and Budget, *Standards and Guidelines for Statistical Surveys* (Sept. 2006).

years.[6]

After taking over responsibility for the climate surveys, DOD's Office of People Analytics has made changes that may reduce several of these issues, such as limiting the amount of change between versions, adding a category that specifically measures morale, and improving mobile-friendly access to the survey.

[6]According to DOD officials, the changes in the survey questions were required by policy changes.

Appendix V: Comments from the Department of Defense



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WASHINGTON, DC 20301-3050

NUCLEAR, CHEMICAL, AND BIOLOGICAL DEFENSE PROGRAMS

July 26, 2021

MEMORANDUM FOR GOVERNMENT ACCOUNTABILITY OFFICE

SUBJECT: Department of Defense response to Government Accountability Office Draft Report, GAO-21-486SU

This is the Department of Defense (DoD) response to the Government Accountability Office (GAO) Draft Report, GAO-21-486SU, "DEFENSE NUCLEAR ENTERPRISE: DOD Can Improve Processes for Monitoring Long-Standing Issues," dated July 1, 2021 (GAO Code 103961). The attached comment resolution and security review matrices are provided for your review. We concur with the four recommendations and will take action as described in the enclosures.

If you have any further questions, you can reach me at edward.j.brennan1.mil@mail.mil or (703) 697-2953.

Sincerely,

Edward J. Brennan, Colonel, USAF
Director, Nuclear Weapons Development
and Assessments

Enclosures:
As stated

GAO DRAFT REPORT DATED 1 JULY, 2021

GAO-21-486SU (GAO CODE 103961)

DEFENSE NUCLEAR ENTERPRISE: DOD Can Improve Processes for Monitoring Long-Standing Issues

DEPARTMENT OF DEFENSE COMMENTS

TO THE GAO RECOMMENDATIONS

Recommendation 1: The Secretary of Defense should ensure that the Director of CAPE, in coordination with the Deputy Assistant Secretary of Defense for Nuclear Matters, the Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy, and the Joint Staff Deputy Director for Strategic Stability, as co-chairs of the Nuclear Deterrent Senior Oversight Group. Provide guidance that the Nuclear Deterrent Working Group members periodically assess the process and outcome metrics and milestones for the remaining 2014 nuclear enterprise review recommendations to determine whether they are the most appropriate for evaluating implementation progress and whether the actions, once implemented, address the underlying problems.

Department of Defense Response: Concur.

The Deputy Assistant Secretary of Defense for Nuclear Matters will draft updated guidance to the Nuclear Deterrent Working Group members to periodically assess the process and outcome metrics and milestones for the remaining open 2014 nuclear enterprise review recommendations. Estimated transmission of guidance to Nuclear Deterrent Working Group members is 1 October 2021 and due date of assessment completion 30 December 2021.

The Secretary of Defense, in coordination with the Chairman of the Joint Chiefs of Staff, should ensure that the Under Secretary of Defense for Acquisition and Sustainment, the Vice Chairman of the Joint Chiefs of Staff, and the Commander of U.S. Strategic Command, as co-chairs of SNTR's Nuclear Transition Steering Committee, should document:

Recommendation 2: The roles and responsibilities of the SNTR and its supporting organizations.

Department of Defense Response: Concur.

Recommendation 3: How the SNTR will communicate with other organizations that have oversight responsibilities for portions of the nuclear enterprise.

Department of Defense Response: Concur.

Recommendation 4: Guidance that identifies the means for monitoring long-standing issues including the associated metrics and information sources.

Department of Defense Response: Concur.

The Department is working to define and document the roles and responsibilities of the SNTR membership, determine how the SNTR and NTSC will monitor and receive data on metrics related to the enduring recommendations for the nuclear enterprise, and formalize the lines of communication between the SNTR, NTSC, and other existing nuclear oversight bodies.

Text of Appendix V: Comments from the Department of Defense

MEMORANDUM FOR GOVERNMENT ACCOUNTABILITY OFFICE

July 26, 2021

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Sincerely,

Edward J. Brennan, Colonel, USAF

Director, Nuclear Weapons Development and Assessments

GAO DRAFT REPORT DATED 1 JULY, 2021 GAO-21-486SU (GAO CODE 103961) DEFENSE NUCLEAR ENTERPRISE: DOD Can Improve Processes for Monitoring Long-Standing Issues

DEPARTMENT OF DEFENSE COMMENTS TO THE GAO RECOMMENDATIONS

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Recommendation 2: The roles and responsibilities of the SNTR and its supporting organizations.

Department of Defense Response: Concur.

Recommendation 3: How the SNTR will communicate with other organizations that have oversight responsibilities for portions of the nuclear enterprise.

Department of Defense Response: Concur.

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and formalize the lines of communication between the SNTR, NTSC, and other existing nuclear oversight bodies.

Appendix VI: GAO Contacts and Staff Acknowledgments

GAO Contact:

Joseph W. Kirschbaum, (202) 512-9971 or kirschbaumj@gao.gov

Staff Acknowledgments:

In addition to the contact named above, key contributors to this report were Penney Harwell Caramia, Assistant Director; Pamela Davidson; R. Scott Fletcher; Susannah Hawthorne; Brent Helt; Mae Jones; Amie Lesser; Andrew Olson; Sean Sannwaldt; and Michael Shaughnessy.

Related GAO Products

Nuclear Triad: DOD and DOE Face Challenges Mitigating Risks to U.S. Deterrence Efforts. GAO-21-210. Washington, D.C.: May 6, 2021.

Defense Nuclear Enterprise: Systems Face Sustainment Challenges, and Actions Are Needed to Effectively Monitor Efforts to Improve the Enterprise. GAO-20-296. Washington, D.C.: March 26, 2020.

Nuclear Weapons Sustainment: Fiscal Year 2018 Nuclear Forces Budget Estimates. GAO-19-127R. Washington, D.C.: November 2, 2018.

Defense Nuclear Enterprise: DOD Continues to Address Challenges but Needs to Better Define Roles and Responsibilities and Approaches to Collaboration. GAO-19-29. Washington, D.C.: November 1, 2018.

Defense Nuclear Enterprise: Processes to Monitor Progress on Implementing Recommendations and Managing Risks Could Be Improved. GAO-18-144. Washington, D.C.: October 5, 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.: September 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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