

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2020 Office of the Secretary Of Defense **Date:** February 2019

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 6:</i> <i>RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605161D8Z / <i>Nuclear Matters</i>
--	--

COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	27.410	5.031	5.039	8.307	-	8.307	8.869	9.219	9.595	9.936	Continuing	Continuing
161: <i>Nuclear Matters</i>	27.410	5.031	5.039	8.307	-	8.307	8.869	9.219	9.595	9.936	Continuing	Continuing

**Note**

FYDP funding increases are addressing the need for technical experts to assist with standing up the Security Incident Response Council (SIRC) and the Nuclear Deterrent Enterprise Review Group (NDERG).

**A. Mission Description and Budget Item Justification**

The purpose of the Nuclear Matters program is to sustain the U.S. nuclear deterrent posture, counter nuclear threats, and to develop nuclear and conventional physical security equipment. The funds for this program are used to support research, development, test and evaluation efforts as well as studies and analyses for nuclear weapons security; use control; nuclear weapons stockpile safety, survivability and performance; countering nuclear threats and office management. Funds are also used to develop and implement plans for stockpile transformation; infrastructure analyses and assessments; DoD-NNSA Nuclear Weapons Council activities, as mandated by Title 10 USC, section 179; radiological and nuclear emergency response efforts; and management of international programs of nuclear cooperation, particularly with respect to enhancing international nuclear safety and security and office management. Nuclear Matters is also responsible for policy development and implementation for personnel reliability; nuclear weapons, nuclear command and control, and special nuclear materials security; use control; nuclear weapons transportation; physical security equipment; countering nuclear threats; and nuclear and radiological incident response.

Funds address the need for technical experts to assist with standing up the Security Incident Response Council (SIRC) and the Nuclear Deterrent Enterprise Review Group (NDERG). The SIRC is an interagency council established by Presidential Policy Directive-35, "United States Nuclear Weapons Command and Control, Safety, and Security," to provide oversight over nuclear weapons security, incident response capabilities, transportation of U.S. nuclear weapons, and to exercise oversight and coordination with sub-working group. The NDERG is a senior DoD oversight body, chaired by the Deputy Secretary of Defense to oversee and make decisions regarding implementation of recommendations from internal and external DoD nuclear enterprise reviews.

Additionally, OASD(NCB/NM) serves as the focal point for DoD activities and initiatives related to the dual missions of sustaining a safe, secure, and effective nuclear deterrent and countering the threat from nuclear terrorism and nuclear proliferation. Funding will be sent to Sandia National Laboratories to lead a team comprised of Sandia, Los Alamos and Lawrence Livermore National Laboratories to develop a nuclear deterrence model. The modeling and analysis results will support the Nuclear Weapons Council strategic planning to include modernization strategies and stockpile composition assessments and investment tradeoffs.

This Program Element can fund travel to support the requirements of this program.

This appropriation will finance work, including manpower, performed by a government agency or by private individuals or organizations under a contractual or grant arrangement with the government who conduct research (systematic study directed toward fuller scientific knowledge or understanding of the subject studied),

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2020 Office of the Secretary Of Defense **Date:** February 2019

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 6:</i> <i>RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605161D8Z / <i>Nuclear Matters</i>
--	--

development (systematic use of the knowledge and understanding gained from research, for the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes) and test and evaluation efforts.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>
Previous President's Budget	5.232	5.050	8.619	-	8.619
Current President's Budget	5.031	5.039	8.307	-	8.307
Total Adjustments	-0.201	-0.011	-0.312	-	-0.312
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.191	-			
• FFRDC	-0.010	-0.011	-	-	-
• INV-D-032 CDBP Bio-Chem Threats Preparedness Reduction	-	-	-0.312	-	-0.312

**Change Summary Explanation**

Funding was increased in FY20 to address the need for technical experts to assist with standing up the Security Incident Response Council (SIRC) and the Nuclear Deterrent Enterprise Review Group (NDERG). Additional funds are also to support Nuclear Matters Analysis, requiring technical expertise to consolidate disparate threat assessments, capability modeling, engineering analysis and physics-based performance assessment to provide decision analytics for nuclear deterrence planning and modernization.

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Office of the Secretary Of Defense										<b>Date:</b> February 2019		
<b>Appropriation/Budget Activity</b> 0400 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605161D8Z / <i>Nuclear Matters</i>				<b>Project (Number/Name)</b> 161 / <i>Nuclear Matters</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
161: <i>Nuclear Matters</i>	27.410	5.031	5.039	8.307	-	8.307	8.869	9.219	9.595	9.936	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The purpose of the Nuclear Matters program is to sustain the U.S. nuclear deterrent posture, counter nuclear threats, and to develop nuclear and conventional physical security equipment. The funds for this program are used to support developmental and test and evaluation efforts as well as studies and analyses for nuclear weapons security; use control; nuclear weapons stockpile safety, survivability and performance; nuclear threat reduction and office management.

Funds are also used to develop and implement plans for stockpile transformation; infrastructure analyses, assessments and models; Nuclear Weapons Council activities, as mandated by Title 10 USC, section 179; radiological and nuclear emergency response efforts; and management of international programs of nuclear cooperation, particularly with respect to enhancing international nuclear safety and security.

Nuclear Matters is also responsible for policy development and implementation for personnel reliability; nuclear weapons, nuclear command and control, and special nuclear materials security; use control; nuclear weapons transportation; physical security equipment; countering nuclear threats; and nuclear and radiological incident response.

This appropriation will finance work, including manpower, performed by a government agency or by private individuals or organizations under a contractual or grant arrangement with the government who conduct research (systematic study directed toward fuller scientific knowledge or understanding of the subject studied), development (systematic use of the knowledge and understanding gained from research, for the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes) and test and evaluation efforts.

This Program Element can fund travel to support the requirements of this program.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Nuclear Weapons Council (NWC)	0.600	0.559	0.475
<b>Description:</b> The Nuclear Weapons Council (NWC) is a joint Department of Defense (DoD) and Department of Energy (DOE)/ National Nuclear Security Administration (NNSA) organization established by Congress to facilitate cooperation and coordination between the two Departments as they fulfill their dual agency responsibilities for U.S. nuclear weapons stockpile management.			
<b>FY 2019 Plans:</b>			

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Office of the Secretary Of Defense		<b>Date:</b> February 2019		
<b>Appropriation/Budget Activity</b> 0400 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605161D8Z / <i>Nuclear Matters</i>	<b>Project (Number/Name)</b> 161 / <i>Nuclear Matters</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<p>- Oversee the activities on the Congressionally mandated Joint DoD-DOE Nuclear Weapons Council and its support committees to include the Nuclear Weapons Council Standing and Safety Committee, the Compartmented Advisory Committee and the Action Officer group</p> <p><b>FY 2020 Plans:</b></p> <p>- Oversee the activities on the Congressionally mandated Joint DoD-DOE Nuclear Weapons Council and its support committees to include the Nuclear Weapons Council Standing and Safety Committee, the Compartmented Advisory Committee and the Action Officer group</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b></p> <p>Funding fluctuates based on funding availability</p>				
<p><b>Title:</b> International Programs</p> <p><b>Description:</b> The United States also participates in several international programs of cooperation regarding nuclear weapons with foreign governments and regional defense organizations that involve unclassified and classified information exchanges. In general, these agreements are designed to promote safety and security, advance stockpile stewardship and collaborate in counter-proliferation efforts.</p> <p><b>FY 2019 Plans:</b></p> <p>- Execute confidence building programs of cooperation with international partners.</p> <p>- Sponsor international partners at national-level nuclear weapons accident/incident exercises.</p> <p><b>FY 2020 Plans:</b></p> <p>- Execute confidence building programs of cooperation with international partners.</p> <p>- Sponsor international partners at national-level nuclear weapons accident/incident exercises.</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b></p> <p>Funding fluctuates based on funding availability</p>		0.197	0.191	0.200
<p><b>Title:</b> Nuclear Surety</p> <p><b>Description:</b> Because of their political and military importance, destructive power, and the potential consequences of an accident or unauthorized act, nuclear weapons and nuclear weapon systems require special consideration and must be protected against risks and threats inherent in their peacetime and wartime environments. Oversight of the DoD nuclear surety program is provided by Deputy Assistant Secretary of Defense for Nuclear Matters (DASD(NM)).</p> <p><b>FY 2019 Plans:</b></p> <p>- Conduct OSD oversight and provide direction for actions taken under DoDD 4540.5, "Transportation of Nuclear Weapons"; DoDD S-5210.81, "United States Nuclear Weapons Command and Control, Safety, and Security"; DoDD S-3150.7, "Controlling</p>		0.822	0.745	0.745

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Office of the Secretary Of Defense		<b>Date:</b> February 2019		
<b>Appropriation/Budget Activity</b> 0400 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605161D8Z / <i>Nuclear Matters</i>	<b>Project (Number/Name)</b> 161 / <i>Nuclear Matters</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<p>the Use of Nuclear Weapons"; DoDD 5210.42 and 5210.42-R, "The DoD Personnel Reliability Program"; and DoDD 5210.41 and S-5210.41-M, "Physical Security of Nuclear Weapons."</p> <p>- Support activities that support nuclear surety policy and provide OSD oversight of the Nuclear Surety program.</p> <p><b>FY 2020 Plans:</b></p> <p>- Conduct OSD oversight and provide direction for actions taken under DoDD 4540.5, "Transportation of Nuclear Weapons"; DoDD S-5210.81, "United States Nuclear Weapons Command and Control, Safety, and Security"; DoDD S-3150.7, "Controlling the Use of Nuclear Weapons"; DoDD 5210.42 and 5210.42-R, "The DoD Personnel Reliability Program"; and DoDD 5210.41 and S-5210.41-M, "Physical Security of Nuclear Weapons."</p> <p>- Support activities that support nuclear surety policy and provide OSD oversight of the Nuclear Surety program.</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> Funding fluctuates based on funding availability</p>				
<p><b>Title:</b> Stockpile Transformation</p> <p><b>Description:</b> To meet its security needs and those of its allies, the U.S. will need a safe, secure, and reliable nuclear deterrent for the foreseeable future. There's increased risk, absent nuclear testing, in assuring long-term safety and reliability of today's aging stockpile—the legacy warheads left over from the Cold War. Today's nuclear weapons complex is not sufficiently "responsive" to technical problems in the stockpile, or to potential emerging threats. The task is to ensure the U.S. nuclear weapons stockpile and supporting infrastructure, meets long-term national security needs.</p> <p><b>FY 2019 Plans:</b></p> <p>- Conduct life cycle activities in support of the nuclear weapons stockpile under DoDD 3150.1, "Nuclear Weapons Life Cycle" and DoDI 5030.55, "DoD Procedures for Joint DoD-DOE Nuclear Weapons Life Cycle Activities."</p> <p>- Manage DoD RDT&amp;E activities for nuclear warheads to include B61, W76, W78, W80(0,1), B83, W87, W88 Weapons.</p> <p>- Support studies for warhead replacement.</p> <p><b>FY 2020 Plans:</b></p> <p>- Conduct life cycle activities in support of the nuclear weapons stockpile under DoDD 3150.1, "Nuclear Weapons Life Cycle" and DoDI 5030.55, "DoD Procedures for Joint DoD-DOE Nuclear Weapons Life Cycle Activities."</p> <p>- Manage DoD RDT&amp;E activities for nuclear warheads to include B61, W76, W78, W80(0,1), B83, W87, W88 Weapons.</p> <p>- Support studies for warhead replacement.</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> Funding fluctuates based on funding availability</p>		0.832	1.223	3.126
<p><b>Title:</b> Survivability and Weapons of Mass Destruction (WMD)</p>		0.724	0.711	0.711

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Office of the Secretary Of Defense	<b>Date:</b> February 2019
--	----------------------------

<b>Appropriation/Budget Activity</b> 0400 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605161D8Z / <i>Nuclear Matters</i>	<b>Project (Number/Name)</b> 161 / <i>Nuclear Matters</i>
--	--	--

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
---	----------------	----------------	----------------

<p><b>Description:</b> In the 2010 Quadrennial Defense Review (QDR), the SECDEF directed the Department to rebalance its policy, doctrine, and capabilities to better support six key missions. The fifth on the list of key missions is to prevent proliferation and counter weapons of mass destruction. This project directly supports the nation's defense strategy.</p> <p><b>FY 2019 Plans:</b> Continue to:</p> <ul style="list-style-type: none"> <li>- Oversee the Nuclear Defense Portfolio.</li> <li>- Plan and coordinate the activities of the National Nuclear Forensics Steering Committee and Working Group.</li> <li>- Develop OSD-wide approach to overseeing Global Nuclear Defense missions within DoD.</li> </ul> <p><b>FY 2020 Plans:</b> Continue to:</p> <ul style="list-style-type: none"> <li>- Oversee the Nuclear Defense Portfolio.</li> <li>- Plan and coordinate the activities of the National Nuclear Forensics Steering Committee and Working Group.</li> <li>- Develop OSD-wide approach to overseeing Global Nuclear Defense missions within DoD.</li> </ul> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> Funding fluctuates based on funding availability</p>			
---	--	--	--

<p><b>Title:</b> Nuclear Matters Support Program</p> <p><b>Description:</b> The Nuclear Matters support program conducts studies / analyses; DoD-NNSA Nuclear Weapons Council activities; and provides funding for analytical support functions.</p> <p><b>FY 2019 Plans:</b></p> <ul style="list-style-type: none"> <li>- Submit annual reports to the President and the Congress.</li> <li>- Continue to oversee DoD/DOE relationship regarding the survivability and surety of the national nuclear stockpile.</li> <li>- Continue as DoD Sigma 15 Approval Authority (Interface with DOE/NNSA).</li> <li>- Continue to address Freedom of Information Act and Mandatory Declassification Requests.</li> </ul> <p><b>FY 2020 Plans:</b></p> <ul style="list-style-type: none"> <li>- Submit annual reports to the President and the Congress.</li> <li>- Continue to oversee DoD/DOE relationship regarding the survivability and surety of the national nuclear stockpile.</li> <li>- Continue as DoD Sigma 15 Approval Authority (Interface with DOE/NNSA).</li> <li>- Continue to address Freedom of Information Act and Mandatory Declassification Requests.</li> </ul> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b></p>	0.709	0.723	0.675
--	-------	-------	-------

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Office of the Secretary Of Defense		<b>Date:</b> February 2019		
<b>Appropriation/Budget Activity</b> 0400 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605161D8Z / <i>Nuclear Matters</i>	<b>Project (Number/Name)</b> 161 / <i>Nuclear Matters</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
Funding fluctuates based on funding availability				
<p><b>Title:</b> Physical Security and PPBE Support</p> <p><b>Description:</b> Provides contract support services that support the Physical Security Enterprise &amp; Analysis Group, the Security Policy Verification Committee and all Planning, Programming, Budgeting and Execution needs for the Office of the Assistant Secretary of Defense for Nuclear, Chemical and Biological Defense Programs / Nuclear Matters.</p> <p><b>FY 2019 Plans:</b></p> <ul style="list-style-type: none"> <li>- Support the Physical Security Enterprise &amp; Analysis Group</li> <li>- Support the Security Policy Verification Committee</li> <li>- Provide all Planning, Programming, budgeting and Execution support for the Nuclear Matters' portfolio</li> </ul> <p><b>FY 2020 Plans:</b></p> <ul style="list-style-type: none"> <li>- Support the Physical Security Enterprise &amp; Analysis Group</li> <li>- Support the Security Policy Verification Committee</li> <li>- Provide all Planning, Programming, budgeting and Execution support for the Nuclear Matters' portfolio</li> </ul> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b></p> <p>Funding fluctuates based on funding availability</p>		1.147	0.887	0.875
<p><b>Title:</b> Nuclear Deterrent Enterprise Review Group (NDERG)</p> <p><b>Description:</b> The NDERG is a senior Department of Defense oversight body, chaired by the Deputy Secretary of Defense and including the Vice Chairman of the Joint Chiefs of Staff and other senior leaders across the Department of Defense nuclear enterprise, created to oversee and make decisions regarding implementation of recommendations from both the internal and external DoD nuclear enterprise reviews. The NDERG meets on a biennial basis and provides a forum for senior Defense leaders to assure accountability in following and tracking the long-term effectiveness of actions taken to improve the health of the nuclear enterprise.</p> <p><b>FY 2020 Plans:</b></p> <p>The NDERG will oversee and synchronize all actions across the nuclear enterprise, including those from the Nuclear Posture Review and any future reviews and/or assessments of any portion of the nuclear enterprise and is supported in its responsibilities by a next level down committee which meets on a quarterly basis and the action officer's group, which meets monthly.</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b></p> <p>The NDERG mission was transferred from OSD CAPE to Nuclear Matters.</p>		0.000	-	0.750
<p><b>Title:</b> Security and Incident Response Council (SIRC)</p>		0.000	-	0.750

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Office of the Secretary Of Defense	<b>Date:</b> February 2019
--	----------------------------

<b>Appropriation/Budget Activity</b> 0400 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605161D8Z / <i>Nuclear Matters</i>	<b>Project (Number/Name)</b> 161 / <i>Nuclear Matters</i>
--	--	--

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2018	FY 2019	FY 2020
<p><b>Description:</b> The SIRC is an interagency council established, as prescribed by Presidential Policy Directive-35 (PPD-35), "United States Nuclear Weapons Command and Control, Safety, and Security," to provide oversight over nuclear weapon security (excluding weapon designs), incident response capabilities, transportation of U.S. nuclear weapons, and to exercise oversight and coordination of the Nuclear Weapons Accident and Incident Response Subcommittee, the Security Policy Verification Committee, and the Nuclear Transportation Working Group and other activities as may from time to time arise that are directly related to Annex B of PPD-35. The SIRC membership includes senior officials from the Department of Defense, the Department of Justice/ Federal Bureau of Investigation, the Departments of Homeland Security, State and Energy and the Office of the Director of National Intelligence.</p> <p><b>FY 2020 Plans:</b> Assist in coordinating the functions of the SIRC and its supporting subordinate groups; conducting research and analysis to determine compliance and/or deficiency of remediation; provide studies and analyses in the conduct of SIRC support activities; assist with various requirements to develop materials and facilitate liaisons and information exchange with the Services, combatant commands and other agencies.</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> The SIRC was established as prescribed by Presidential Policy Directive-35 (PPD-35).</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	5.031	5.039	8.307

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

Success in this area is measured by compliance with various statutes and DoD directives that govern the conduct of the affairs within the Office of DASD(Nuclear Matters). Success is also measured by the currency of information and usability of the website, timeliness and responsiveness of reports due to Congress, performance in various response exercises, and feedback from a number of senior-level government organizations that DASD(Nuclear Matters) supports.