

This declaration, in the wake of the 1995 Tokyo Subway attack sent a clear message that the world had changed and the WMD threat was now a much more “wicked” problem. While the end of the Cold War between the superpowers reduced the scale of potential attacks significantly, the probability of an attack continued to grow. The United States Army could no longer afford to focus solely on protecting its forces on the battlefield, now it also had to be able to prevent adversary use of WMD and respond to, and recover from, an attack against the US homeland and other American interests.

Doing More: The Evolving Missions of the Army Chemical Corps

Based on the perceived increased threat posed by WMD, policy makers have applied increased emphasis in the nation’s ability to protect against, respond to, and recover from a WMD attack. The 2002 *National Strategy to Combat WMD* outlined three pillars that served to shape US Government efforts: Counterproliferation to Combat WMD Use, Strengthened Nonproliferation to Combat, and Consequence Management to Respond to WMD Use.²⁷ To support these efforts, the DOD identified eight mission areas in which military capabilities could support national strategic objectives: offensive operations, elimination operations, interdiction operations, active defense, passive defense, WMD consequence management, security cooperation & partnership activities, and threat reduction cooperation.²⁸ Three of these mission areas: passive defense, elimination operations, and WMD consequence management, would shape the future force.

²⁷ *National Strategy to Combat WMD* (Washington, DC: Government Printing Office, 2002), 2.

²⁸ *National Military Strategy to Combat WMD* (Washington, DC: Government Printing Office, 2006), 7.

Passive defense is the Chemical Corps' traditional mission. Protecting the force from CBRNE hazards has been a core component of the Corps' mission since its creation in the wake of World War I. "Chemical, biological, radiological, and nuclear (CBRN) passive defense includes measures taken to minimize or negate the vulnerability to, and effects of, CBRN attacks. This mission area focuses on maintaining the ability to continue military operations in a CBRN environment."²⁹ While the Chemical Corps has transformed to meet the mission requirements for WMD elimination and CBRN consequence management, the vast majority of Chemical Corps force structure remains focused on passive defense requirements, including reconnaissance, surveillance, and decontamination.

In 2003, the ad-hoc organizations tasked to eliminate Iraqi WMD, consisted of personnel "drawn from across DOD and other government agencies, which included intelligence specialists, microbiologists, physicists, chemists, and other scientific experts and uniformed personnel experienced in handling hazardous materials."³⁰ Following the failed search for Iraqi WMD, the DOD took steps to institutionalize the WMD elimination capability. "WMD elimination operations are actions to systematically locate, characterize, secure, disable, or destroy WMD programs and related capabilities."³¹ The capabilities required to execute the WMD elimination mission extend beyond the Chemical Corps but the corps provides technical capabilities that enable the Army to locate, characterize, exploit, and ultimately destroy WMD. These capabilities

²⁹ Field Manual (FM) 3-11. *Multi-Service Doctrine for Chemical, Biological, Radiological, and Nuclear Operations* (Washington, DC: Government Printing Office, 2011), 2-10.

³⁰ Rebecca K.C, Hersman and Todd M. Koca, "Eliminating Adversary WMD: Lessons for Future Conflicts," *Strategic Forum* no. 211 (October 2004): 2, accessed November 1, 2015, <http://wmdcenter.dodlive.mil/files/2012/02/Eliminating-Adversary-WMD-LforFC.pdf>.

³¹ Army Techniques Publication (ATP) 3-11.23. *Multi-Service Tactics, Techniques, and Procedures for Weapons of Mass Destruction Elimination Operations* (Washington, DC: Government Printing Office, 2013), 1-1.

require specific, unique technical skills that cause resource competition relative to the passive defense and CBRN consequence management missions.

Historically, the DOD does not build capabilities specifically for defense support to civil authorities; rather the department viewed defense support of civil authorities (DSCA) as a secondary mission and leveraged existing capabilities in support of requests for assistance from interagency partners. Over the last decade, that has changed. The *2001 Quadrennial Defense Review* (QDR) emphasized that DOD “maintains many unique capabilities for mitigating and managing the consequences of terrorist attacks on American soil” and that “the Department must be prepared to provide support to state and local authorities, if requested by the lead federal agency.”³² In 2009, the DOD operationalized this guidance and established the CCMRF to respond to terrorist WMD attacks against the homeland. CBRN Consequence Management consists of “actions taken to plan, prepare, respond to, and recover from chemical, biological, radiological, and nuclear incidents.”³³ The 2010 QDR institutionalized the CBRN consequence management mission and expanded force requirements, reorganizing the existing CCMRFs as part of the establishment of the USNORTHCOM CRE. The CRE provides expanded, responsive lifesaving capabilities. It establishes the DCRF, two C2CRE, ten HRF, and seventeen CERF-P.

With More: The Contemporary Chemical Force

The Army personnel end strength is the troop level authorized by Congress annually. It is divided to meet resource requirements for the joint force commitments (JTD), operating force

³² *Quadrennial Defense Review* (Washington, DC: Government Printing Office, 2001), 42, accessed November 1, 2015, <http://archive.defense.gov/pubs/pdfs/qdr2001.pdf>.

³³ Army Techniques Publication (ATP) 3-11.41. *Multi-Service Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Consequence Management Operations* (Washington, DC: Government Printing Office, 2015), 1-2.

(TOE/MTOE), generating force (TDA); and Trainees, Transients, Holdees, and Student (TTHS) accounts.³⁴ Within the operating force, the Army Chemical Corps is comprised of Standard Requirements Code (SRC) 03, “Chemical Force,” units and personnel assigned to a variety of positions outside SRC 03, including BCT reconnaissance platoons and battalion and higher staffs. This paper focuses entirely on the capabilities and capacity of SRC 03 organizations to support the previously described Army operational mission requirements. The Army has been in a constant state of change since the end of the Cold War as it seeks to posture the force to meet the challenges of the current and future operational environments. To understand the unique conditions facing the Chemical Force as it continues seeks to optimize resources to meet evolving requirements, it is necessary to understand how it looks today and how it has evolved relative to the rest of the Army.

Since 2001, the Army has been in a state of perpetual conflict conducting operations not only in Iraq and Afghanistan, but around the globe to support the nation’s interests. To meet worldwide requirements, the Army grew from a 2002 peacetime total force of 1,035,002 soldiers across all components, approved prior to the invasion of Afghanistan, to a peak 1,132,600 as it executed operations across two theaters and supported emerging contingencies. As figure 1 illustrates, relative to its 2002 peacetime strength, the RA enjoyed the preponderance of growth. That growth however, was not proportional across all SRCs, as the Army shaped the RA to meet the persistent rotational requirements for the Iraq and Afghanistan theaters of operations.

³⁴ The DOD and Army use multiple types of documents to establish authorizations for organizations. Joint Tables of Distribution (JTD) identify service manning requirements for joint headquarters, including Joint Task Forces and Standing Joint Force Headquarters. Table of Organization and Equipment (TOE) establish standard personnel and equipment requirements based on Training and Doctrine Command organizational design, while Modified Table of Organization and Equipment (MTOE) establishes authorizations based on available resources and unit missions.

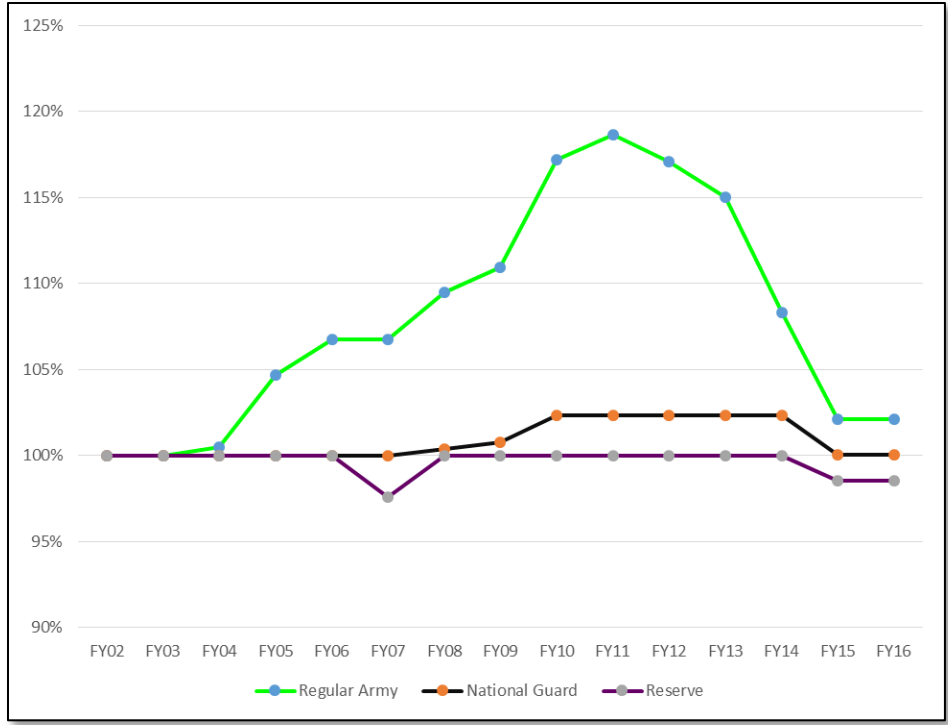


Figure 1. Total Army End Strength FY02-FY16

Source: Data from United States Army Force Management Support Agency (USAFMSA), accessed December 2, 2015, <https://fmsweb.army.mil>.

As figure 2 illustrates, despite the increase in overall end strength across the Army, the number of personnel assigned to Army force has remained relatively stable. In contrast, since 2002, the Chemical Force grew by twenty-three percent and, while most of the Army operating force end strength has dropped below pre-war strength, the Chemical Force is still eight percent larger than 2002 levels. The biggest difference though, is where growth occurred.

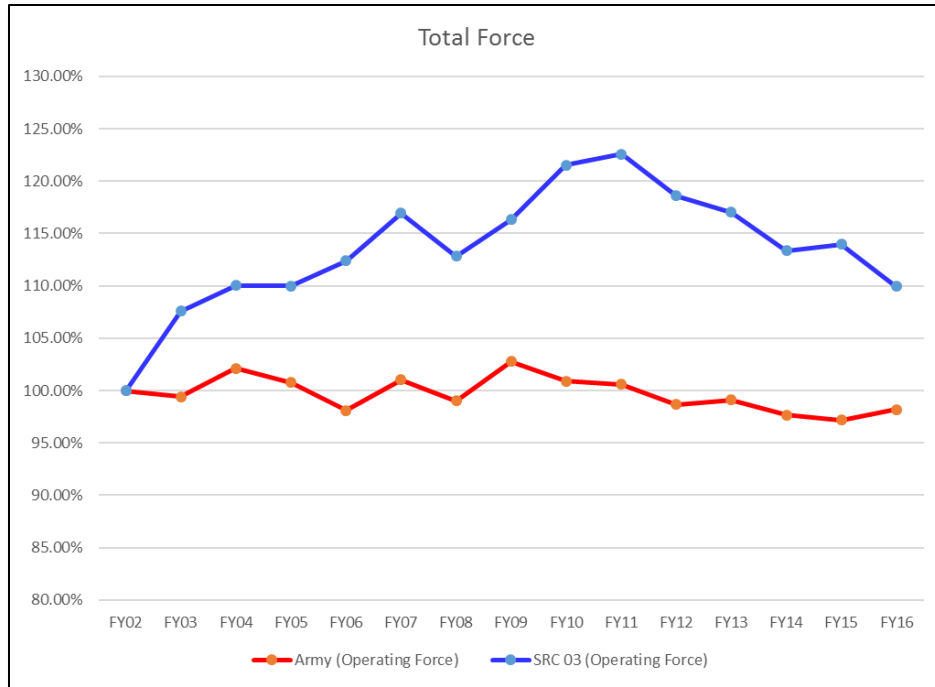


Figure 2. Operating Force End Strength, Total Army vs SRC 03, FY02-FY16

Source: Data from United States Army Force Management Support Agency (USAFMSA), accessed December 2, 2015, <https://fmsweb.army.mil>.

Figure 3 illustrates the SRC 03 growth relative to the RA operating force. Through 2009, the Chemical Force grew at roughly the same rate as the RA operating force. After 2009 however, SRC 03 declined at a significantly higher rate. While the RA operating force overall returned to 2002 levels, 2016 Chemical Force authorizations are only seventy-eight percent of previous peacetime levels. This translates into a significant shift in both the capabilities and capacity of the contemporary Chemical Force. In 2002, the RA chemical force consisted of three battalions and twenty-four chemical companies. The Soldier Biological Chemical Command, a major command in the Army Generating Force, also provided capabilities from US Army Technical Escort Unit (USATEU). This provided a total of four battalions and twenty-seven companies supporting operational requirements. All of these formations, with exception of the USATEU, provided passive defense capabilities. Much of the growth that occurred between 2002 and 2010 can be

attributed to the transition of USATEU capabilities from the generating to the operating force. Since 2010 however, the RA Chemical Force has been reduced by thirty-four percent, dropping it to seventy-seven percent of its pre-war end strength. Compounding this reduction is the fact that many capabilities have been entirely transitioned to the reserve component, reducing their availability for unforeseen contingency operations.

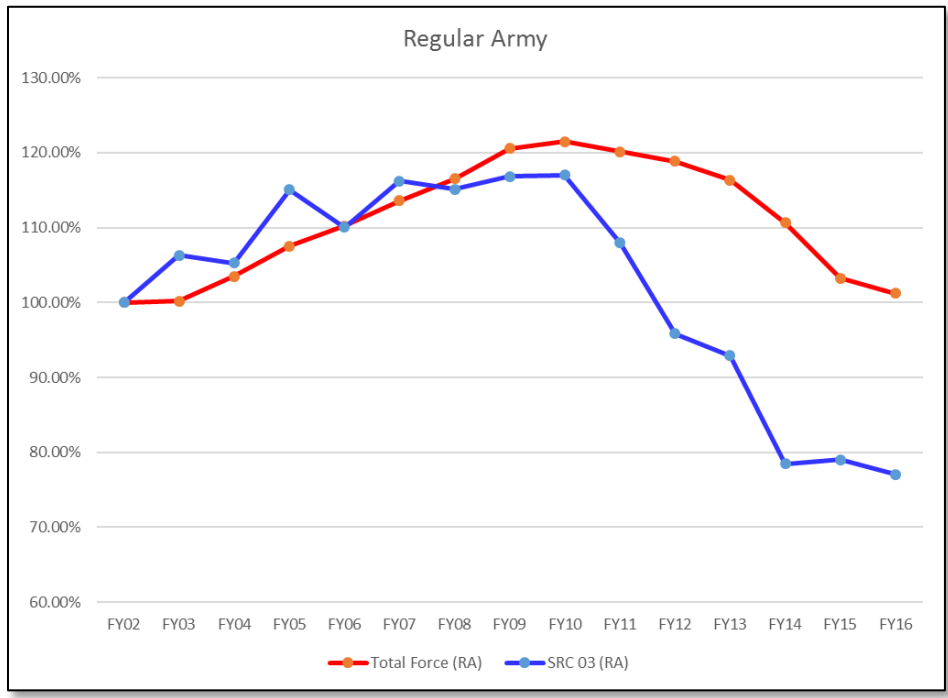


Figure 3. RA End Strength, Operating Force vs SRC 03, FY02-FY16

Source: Data from United States Army Force Management Support Agency (USAFMSA), accessed December 2, 2015, <https://fmsweb.army.mil>.

In contrast to the RA Chemical Force, significant growth has occurred in the RCs. In particular, while the overall ANG operating force end strength has fallen by 16 percent since 2002, as figure 4 illustrates, the ANG Chemical Force has grown by thirty-five percent. Likewise, as figure 5 illustrates, while the Army Reserve has not grown over the last fourteen years, the Chemical Force within USAR has grown by ten percent. In addition to the relative growth of the

Chemical Force within each of the RCs, many capabilities have been completely transitioned to the ANG and USAR, including all of the Army’s generated smoke, heavy decontamination, and biological detection units. This places a greater reliance on the RCs for unique, low density capabilities.

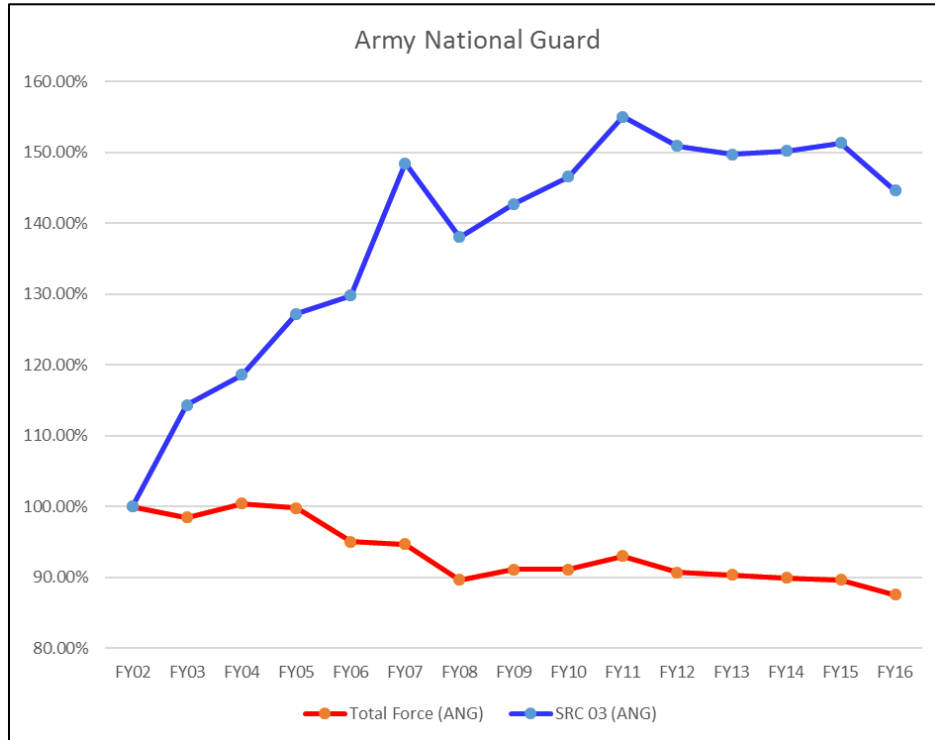


Figure 4. ANG End Strength, Operating Force vs SRC 03, FY02-FY16

Source: Data from United States Army Force Management Support Agency (USAFMSA), accessed December 2, 2015, <https://fmsweb.army.mil>.

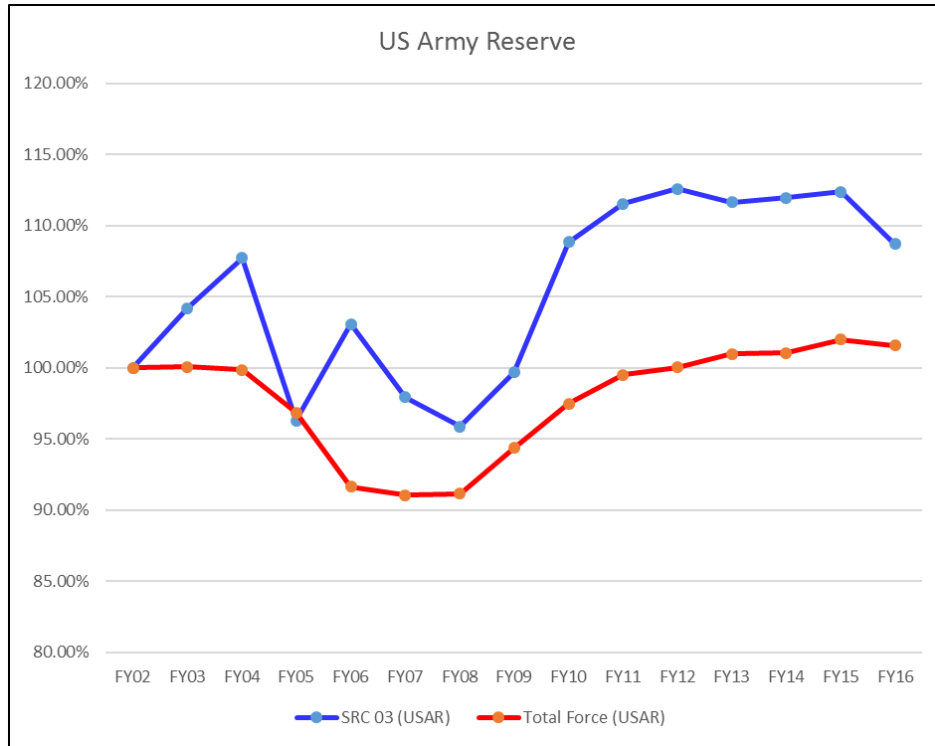


Figure 5. Army Reserve End Strength, Operating Force vs SRC 03, FY02-FY16

Source: Data from United States Army Force Management Support Agency (USAFMSA), accessed December 2, 2015, <https://fmsweb.army.mil>.

Over the last two decades, the forces of change have had a significant impact on the size and shape of the Army Chemical Force. At the same time that threat and mission requirements were expanding, fiscal pressures were eroding resource availability. For much of the Army, this has meant doing more with less. But that is not true for the Army Chemical Force, rather it is necessary to develop strategies for better integrating the total force to provide the right mix of capabilities, at the right time, with sufficient capacity, to support Army mission requirements.

Three Teams, One Fight: Institutional Barriers to Total Force Integration

In 1970, Secretary of Defense Melvin R. Laird announced the establishment of the Total Force Policy. The purpose of the Total Force Policy was to cut defense spending by reducing the overall strengths and capabilities of the Active Forces, and increasing reliance on the combat and combat support units of the ANG and USAR. Based on the lower peacetime sustainment costs of the RCs, the Total Force Policy enabled the United States to meet national security requirements by maintaining a larger total force at a reduced total cost.³⁵ While the DOD has sought to improve upon Total Force Policy, since the policy's initial issue, the institutionalization of the separation of the Army's components has served to significantly undermine RA / RCs integration.

The total force consists of RA forces, the ANG, and the USAR. Historically, the RA provides the capabilities to meet emerging contingencies and support steady state national security objectives, while the RCs provide strategic depth. Over the last century, as the three components have evolved, the relationships between the components have changed significantly setting the conditions for the current challenges facing the total force and RA/RCs integration.

The National Guard

The ANG traces its lineage back to the first colonial militia established in the Massachusetts Bay Colony in 1636.³⁶ From the founding of the republic until the beginning of the 20th century, state militias were established, trained, manned, and equipped, though not always resourced, by states for the expressed purpose of repelling invasion, enforcing the laws of the Union, and suppressing insurrections.³⁷ Following the Spanish-American War however, Secretary

³⁵ *Cong. Rec.*, 101st Cong., 2d sess., 1990, 136, pt. 67: H2949.

³⁶ "National Guard Birth Date," *National Guard*, accessed January 2, 2016, <http://www.nationalguard.mil/AbouttheGuard/Howwebegan.aspx>.

³⁷ *US Constitution*, art. 1, sec. 8.; *Militia Act of 1792*.

of War Elihu Root recognized that the militia system required reforms if it was to serve as a modern ready reserve. The Militia Act of 1903 began the formation of the modern NG, providing federal funding and standardizing the organized militia's force structure with its RA counterpart. In 1908, the Act was further amended to remove federal service limitations and empower the president to mobilize the NG for overseas deployment. The 1916 National Defense Authorization Act enhanced federal oversight and institutionalized the dual state-federal status of the militia, providing the federal executive authority to direct the number and types of militia units formed and creating the Militia Bureau, the predecessor to the modern NGB.³⁸ While the NG remained a state asset when not mobilized for federal service, the reforms of the early 20th century cemented federal control of the NG as a national reserve. While states challenged these changes, in 1990 the Supreme Court issued a ruling in *Perpich v. the United States Department of Defense* that the Congress could authorize the President to order the NG into federal peacetime service, even without gubernatorial approval.³⁹ The *Perpich* decision completed the codification of the relationship between the NG, the states, and the federal government. By institutionalizing the primacy of federal authority, the Supreme Court changed the traditional view of the NG as a state force called into federal service, to a view of the Guard as a federal force under the day-to-day control of the states. Despite changes in the relationship between the ANG and the Army that should have increased integration, historic cultural differences and organizational changes have served to undermine the relationship between the two Army components.

³⁸ William M. Donnelly, "The Root Reforms and the National Guard," US Army Center of Military History, May 31, 2001, accessed December 28, 2015, www.history.army.mil/documents/1901/Root-NG.htm.

³⁹ Joshua E. Kastenberg, *Shaping US Military Law: Governing a Constitutional Military*, (Surrey, England: Ashgate, 2014), 204-5, accessed December 28, 2015, <http://site.ebrary.com.lumen.cgscarl.com/lib/carl/reader.action?docID=10872467&ppg=156>.

Since the inception of the RA, RA leaders have held a low opinion of militia forces. During World War I, members of the state militia were drafted into federal service in the Army of the United States in support of the American Expeditionary Force.⁴⁰ RA leaders distributed these draftees across units generally led by RA Officers. Despite efforts made in the pre-war years to integrate the RA and militia, the cultural divide could not be overcome. In the years following the war the divide only grew. In 1920, Congress directed the appointment of a NG major general as the Chief of the Militia Bureau. The Chief of the Militia Bureau served as the principle advisor to the Secretary of War and the Chief of Staff of the Army on all matters related to the administration and oversight of the state militias. In 1933, along with the establishment of the NG of the United States, the Militia Bureau was renamed the NGB. After World War II, with the creation of the Air Force and Air National Guard, the NGB became a joint activity with the Chief of the NGB responsible for providing advice to the Secretary of Defense and the Secretaries and Chiefs of Staff of the Army and Air Force on all matters related to the NG. This began the process of convoluting responsibilities for the administration of NG Forces between the states, the DOD, the service departments, and the NGB. In 2012, responsibilities and authorities became even more challenging as the Chief of the NGB was elevated to a four-star general officer and made a member of the Joint Chiefs of Staff. This change made the Chief of the NGB an equal to the service chiefs that the bureau supports. DOD Directive (DODD) 5100.01 states that:

The Chief, NGB is a principal advisor to the Secretary of Defense, through the Chairman of the Joint Chiefs of Staff, on matters involving non-federalized National Guard forces, and other matters as determined by the Secretary of Defense. For NGB matters pertaining to the responsibilities of the Departments of the Army and Air Force in law or DOD policy, the Secretary of Defense normally exercises authority, direction, and control over the NGB through the Secretaries of the Army and the Air Force. The NGB is the focal point at the strategic level for National Guard matters that are not under the authority, direction, and control of the Secretaries of the Army or Air Force.

⁴⁰ John K. Mahon, *History of the Militia and the National Guard*, The Macmillan Wars of the United States (New York: Macmillan, 1983), 156.

Ultimately, the convoluted relationship between the Office of the Secretary of Defense, the service departments, and the NGB creates a situation where the NGB sometimes advocates and acts in a manner that is inconsistent with the services' interests and contrary to Service Department guidance. Significant friction is created between NGB and the Department of the Army, as the bureau acts contrary to the perceived interests of the service. This friction is increased by the fact that the ANG maintains all of the reserve component combat arms forces, with the USAR organized to primarily provide combat support and service support capabilities. This division makes integration of both the ANG and USAR critical to providing an operational reserve and strategic depth for sustained land conflict.

The Army Reserve

Like the transformation of the state militias into a federal reserve, the United States Army Reserve was borne from the need for a readily available force pool to support increasing expeditionary operations at the beginning of 20th century. The creation of the Army Reserve however, was emblematic of the culture of mistrust that existed between RA leaders and the militias. In 1915, during the lead-up to the United States' entry into World War I, the frictional relationship between the RA and the state militias prompted Secretary of War Lindley M. Garrison to request the expansion of the RA and the creation of a 400,000-man federal reserve. The 1916 National Defense Authorization Act approved the creation of a federal commissioned and enlisted reserve but, based on lobbying from states and the National Guard Association, chose to emphasize the role of the ANG as the Army's primary wartime reserve.⁴¹ The 1920

⁴¹ Richard W. Stewart, *American Military History: The United States Army and the Forging of a Nation, 1775-1917* (Washington, DC: Center of Military History, US Army., 2005), 381-82, accessed January 1, 2016, <http://www.history.army.mil/books/AMH-V1/ch16.htm#g>.

National Defense Authorization Act further integrated the active and RCs, establishing the Army of the United States, consisting of the RA, the ANG while in the service of the United States, and the organized Reserves.⁴² For more than fifty years after the establishment of the Organized Reserve, it was an integral part of the federal force. During the period between World War I and World War II, nine Army corps were established in the continental United States, with six divisions each. Three divisions from each of the Corps were drawn from the Organized Reserve.⁴³ During World War II, the Organized Reserve deployed both individuals and units. In the 1940s and 1950s, The Organized Reserve was transformed into the Army Reserve and was focused primarily on providing combat support and service support units.⁴⁴ In addition, Congress created the Chief of the Army Reserve, to advise the Secretary and Chief of Staff of the Army on issues affecting Reserve readiness. Until the late 1980s, the Army Reserve was integrated at all echelons, providing for a single, expansible federal fighting force.

In 1988, Representative Bill Chappell, Chairman of the House Appropriations Defense Appropriation subcommittee, directed the Army to, “look into the practicality of having the Chief of the Army Reserve also function as the Reserve component commander and of establishing a single reporting chain by consolidating the administrative units similar to the other RCs.” Despite a US Army Forces Command study that recommended that no changes be made to the command

⁴² Marvin A. Kreidberg and Merton G. Henry, *History of Military Mobilization in the United States Army, 1775-1945*, Reprint ed. (Washington, DC: University Press of the Pacific, 2005), 378, accessed January 1, 2016, http://www.history.army.mil/html/books/104/104-10/CMH_Pub_104-10.pdf.

⁴³ Richard W. Stewart, *American Military History: The United States Army in a Global Era, 1917-2003*, (Washington, DC: Center of Military History, US Army., 2005), 60, accessed January 10, 2016, <http://www.history.army.mil/books/AMH-V1/ch16.htm#g>.

⁴⁴ Mike Burbach, “History of the Army Reserve,” *The Officer* 74, no. 2 (March 1998): 11-13, accessed January 10, 2016, <http://search.proquest.com.lumen.cgscarl.com/docview/214104691?pq-origsite=summon>.

and control of US Army Reserve forces, the 1990 Defense Appropriation directed the Army to, “increase the role of the Chief of the Army Reserve, consistent with the command, planning and management responsibilities of the Chief of Air Force Reserve and Chief of the NGB.” In 1992, the USARC was activated as a major subordinate command to FORSCOM, with the Chief of the Army Reserve executing command and control over all non-mobilized reserve forces.⁴⁵ This change was the final action necessary to institutionalize the divisions between the active and RCs, and like the establishment of the NGB, set into law the separation of the components, and potentially constrained future RA/RCs integration efforts.

Operational Capabilities and Strategic Depth: The Challenges of Total Force Generation

While “Total Force Policy” has only been explicitly articulated in DOD policy since 1970, it has been a tacit aspect of Army plans and policy since the establishment of the Army of the United States in the 1920 National Defense Authorization Act. Over the last century however, cultural, political, and institutional barriers have emerged that have made the establishment of policy necessary to unify the three components of the Army into a single effective fighting force. In 1973, Army Chief of Staff, General Creighton W. Abrams, Jr., set up a study group that envisioned a future complex, multipolar world. With the Army drawing down at the end of the Vietnam War, the study group asked “Could such a small Army fulfill all its obligations and still retain an adequate contingency force?”⁴⁶ This is the same challenge facing the force today, as sequestration significantly strains DOD resources while global commitments rise. To meet both contemporary and future challenges, the DOD has to develop solutions that better integrate the

⁴⁵ Federal Research Division Library of Congress, *Historical Attempts to Reorganize the Reserve Components* (Washington, DC: Government Printing Office, 2007), 17.

⁴⁶ Richard W. Stewart *CMH Pub*, 2nd ed., vol. 30-21, 30-22, *American Military History* (Washington, DC: Center of Military History, United States Army: 2009-2010), 375-376.

total force. The Army must overcome cultural and institutional divides to field and maintain a total force capable of responding to future contingencies in an increasingly complex world.

The need for operational capabilities and strategic depth is especially true for the Army Chemical Corps, with more than eighty percent of the current SRC 03 force structure residing in the RCs. Based on force structure decisions, the Army has resourced countering WMD as an economy of force mission, while simultaneously expanding and institutionalizing the Army's role in countering WMD as a component of the joint force and interagency efforts. This decision will place a significant burden on a limited number of RA units to support initial contingency requirements, and increase the requirement for reserve component forces to be readily available to support sustained land operations. This is the crux of the total force dilemma, establishing policy to ensure the availability of trained and ready forces to meet unknown future contingency requirements.

Since the beginning of the Global War on Terror, the United States Army has been forced to rely more heavily on the RCs to generate sufficient forces to meet global commitments. From 2001 to 2006, the RCs operational tempo increased nearly 500 percent.⁴⁷ At the same time, force structure tradeoffs have increased the interdependence of the active and RCs. Recognizing the increased reliance on the RCs, in 2008, Secretary of Defense Robert Gates approved DOD Directive (DODD) 1200.17, *Managing the Reserve Components as an Operational Force*.⁴⁸ Despite Secretary Gates' and his successor's efforts to update the total force policy, statutory restrictions and inconsistencies in DOD and Army policies have undermined RA/RCs integration. To develop a true Total Force Policy, the Army has to seek solutions that break down the

⁴⁷ Commission on the National Guard and Reserves, *Commission On the National Guard and Reserves: Transforming the National Guard and Reserves into a 21st-Century Operational Force* (Washington, DC: Government Printing Office, 2008), 1.

⁴⁸ Department of Defense Directive (DODD) 1200.17, *Managing the Reserve Components as an Operational Force* (Washington, DC: Government Printing Office, 2008), 6.

institutionalized barriers between the components and reestablish unity of command and unity of effort across the total force.

Changing the Army's Culture: Moving Toward a Single Force Policy

Inconsistencies in policy instituted over the last half century regarding the administration of the RA, ANG, and USAR, have made it necessary for DOD and Department of the Army leaders to revise or replace the existing Total Force Policy. The Abrams Doctrine, an evolution of Secretary Laird's Total Force Policy, intended not only to provide a more cost effective force but also to ensure that Army would never fight another war without the RCs, has heavily influenced the shape of the current force.⁴⁹ Over the last two decades, the Army institutionalized the interdependence of the RA and RCs through a reshuffling of reserve component missions following the 1993 Army Off-Site Agreement.⁵⁰ Despite the institutional barriers to RA/RCs integration, force structure changes resulting a myopic focus on contemporary theaters of operations and policies resulting from the Abrams Doctrine and the Off-Site Agreement have made the execution of assigned missions without both RA and RCs capabilities nearly impossible for the Chemical Corps. To ensure the readiness of the future force, the Army must adopt new policies that allow for the seamless integration of RA and RC forces. To maintain an effective Chemical force, the Army must provide a single force, organized, trained, and equipped for prompt and sustained combat incident to operations on land.

While the Army purports to maintain a "total force" policy, the reality is that the three components have become de facto services, operating as independent entities. Over the last decade, the Army has adopted several initiatives intended to increase the level of integration. These initiatives include the "One Army School System" and the integration of the RA and

⁴⁹ Gary Khalil and Carl Rehberg, "W(h)ither the Abrams Doctrine: Good or Bad Policy?," *The Officer*, December 2003, 21, accessed February 4, 2016, <http://search.proquest.com.lumen.cgscarl.com/docview/214106323/fulltext/B464DEB2ACD142A9PQ/1?accountid=28992>.

⁵⁰ L. Martin Kaplan, *Department of the Army Historical Summary Fiscal Year 1994* (Washington, DC: 2000), 71.

USAR Human Resources Command. While these initiatives are steps in the right direction, the Army must work to institute a “Single Force Policy” that integrates RA and RC forces at all echelons, across all of the capability development domains, both operationally and administratively. The challenges facing the Chemical Corps are a microcosm of the challenges the Army will face in the future and provides the Army with the opportunity to conduct a limited proof of concept for all policy initiatives as the Department of the Army works to maintain an operational reserve. These initiatives should focus on changing the way the Army organizes, mans, trains, and equips the force.

Back to the Future: Building Multi-Component Units

In the wake of the public conflict between RA and NG leaders, the 2015 National Defense Authorization Act directed the establishment of a commission to conduct a comprehensive study of the Army structure to assess the size and force structure of the active and RCs of the Army. Congress also directed the commission to make possible recommendations for force structure modification related to current and anticipated mission requirements at acceptable risk levels within current and future available resources. The commission recommended that the Army, “continue creating and sustaining multicomponent units,” however, with the exception of recommendations for a test program for multicomponent aviation units, the commission did not provide substantive recommendations for the establishment of multi-component units.⁵¹ Building on the commission’s recommendation, and using the Army Chemical Corps as a proof of concept, the Army should increase the development of multicomponent headquarters and assign forces

⁵¹ The National Commission on the Future of the Army, *Report to the President and the Congress of the United States* (Washington, DC: Government Printing Office, 2016), 67, accessed February 11, 2016, http://www.ncfa.ncr.gov/sites/default/files/NCFA_Full%20Final%20Report_0.pdf.

from across the components based on force allocation in support of Combatant Command requirements.

Multi-component units are not a new option for Army force development. Based on perceived readiness problems among ANG combat brigades, in 1992 Congress Passed the Army National Guard Combat Readiness Reform Act (ANGCRRA). The ANGCRRA led to the establishment of two multi-component Divisions in 1999. The multi-component divisions were RA division headquarters that exercised training and readiness oversight of ANG Brigade Combat Teams.⁵² In 2006, in an effort to streamline RCs training and mobilization systems, the Army inactivated the multi-component divisions and replaced them with divisions of the First Army. Despite the inactivation of the multi-component divisions, the Army has not given up on the multi-component concept. In 2015, the 101st Airborne Division became the first multi-component division with an integrated headquarters, with personnel from all three Army components permanently assigned to the divisions headquarters.⁵³ As the Army faces significant resource constraints, the development of integrated multi-component headquarters provides a potential solution to maintaining wartime readiness at reduced peacetime costs.

Since 2010, the Army reduced the RA Chemical Force by nearly a third. As one of the smallest operational branches in the Army, trade-offs have required the Army to reduce company,

⁵² Christopher Behan, "The Integrated Active and Reserve Division: Background, Legal Foundation, and the Role of Judge Advocates," *The Army Lawyer*, March 2003, 2, accessed February 4, 2016, <http://search.proquest.com.lumen.cgscarl.com/docview/227899763?pq-origsite=summon>.

⁵³ Terrance Rhodes, "101st Makes History, Creates Multicomponent Unit Division," *Fort Knox Gold Standard*, June 25, 2015, accessed February 9, 2016, <http://www.fkgoldstandard.com/content/101st-makes-history-creates-multicomponent-unit-division>. "HHBN, 101st Airborne Division," Force Management System Website (FMSWeb), accessed February 22, 2016. <https://fmsweb.army.mil>. To reduce the end-strength requirements for 2-star and above HQ, the Department of the Army sourced some personnel requirements for division HQ with RC personnel. RC personnel fill Fifteen percent of authorized positions in the division HHBN.

battalion, and brigade staffs to maintain reconnaissance platoons, decontamination platoons, and CBRNE Response Teams. Chemical brigade headquarters were already minimally resourced as force providers, negatively impacting their ability to deploy and execute mission command of task organized battalions. To enhance the capabilities of battalion and brigade headquarters, and provide flexibility for increased investment in CBRN/CBRNE companies, the Army should build all RA CBRN battalions and brigades as integrated multi-component headquarters. These headquarters should be staffed with sufficient RA and Active Guard and Reserve personnel to execute Training and Readiness Authority (TRA) or Training and Readiness Oversight (TRO) of assigned subordinates and execute the first ninety days of contingency operations. To enable sustained operations beyond the first ninety days of any contingency, the Army should fully resource wartime capabilities utilizing additional ready reserve personnel. The development of integrated multi-component headquarters would reduce the cost of maintaining robust headquarters by allowing formations to be minimally resourced during steady state operations, while fully resourcing organizations for contingency operations. Additionally, permanently assigning members of the selected reserve during drill periods will help overcome institutional barriers to RA/RCs integration. Lastly, due to the unique capabilities of the RA and RCs within the Chemical Force, the integrated headquarters would also enhance RA staff capabilities to execute mission command of RC forces by providing expertise in organizations unique to the RCs.

As figure illustrates, eighty percent of the Army Chemical Force resides in the RCs. All of the Army's Obscuration, Area Support, and Biological Detection Companies are in the RCs. To maximize the integration of corps and divisions with the Chemical Force for training and operations, the Army should establish habitual relationships between the three Chemical brigades and twenty-two Chemical battalions, and the three Army corps and nineteen Army divisions. Additionally, each battalion would be task organized based upon the capabilities required to

execute assigned prepared to deploy orders (PTDO), regionally aligned force require requirement, or other FORSCOM directed contingency force package requirements. While existing laws and policy, require that FORSCOM, USARC, and state adjutants general execute Administrative Control and TRA of assigned forces, the divisions and corps would execute TRO on behalf of the Combatant Commands to which each organization is allocated. This responsibility to execute TRO would increase interaction between maneuver formations and their echelon above brigade/division enablers and decrease integration requirements during deployment. Lastly, from a doctrinal perspective, the familiarity and trust developed between commanders based on integration at home station would facilitate the application of the Army mission command philosophy during contingency operations and mitigate the cultural barriers that have plagued RA / RCs integration during past wartime mobilizations.

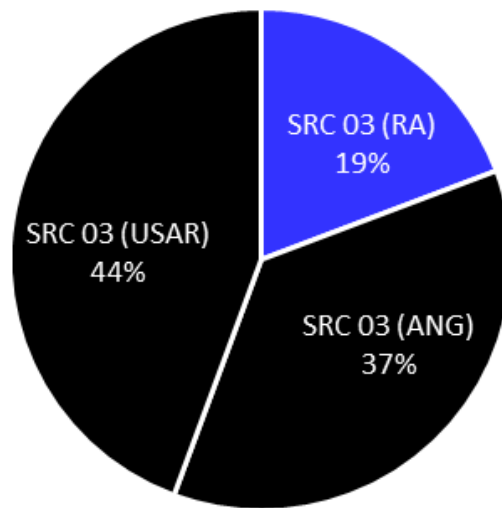


Figure 6. FY17 Chemical Force Distribution

Source: Data from United States Army Force Management Support Agency (USAFMSA), accessed December 2, 2015, <https://fmsweb.army.mil>.

Lastly, the 20th CBRNE Command should execute TRO of all CONUS-based CBRN Brigades, battalions and companies. Based on the increasing technical nature of CBRN missions, both FORSCOM and the USARC have consolidated CBRN units into functional organizations. For RA forces, the 48th Chemical Brigade executes TRA of all FORSCOM assigned functional CBRN Battalions and CBRNE/CBRNE Companies.⁵⁴ In USARC, the 415th Chemical Brigade and 206th Regional Support Group execute TRA of most US Army Reserve Chemical units. While FORSCOM and USARC organize all functional formations under functional headquarters, the distribution of ANG's chemical formations across multiple states prevents consolidation of CBRN units under functional CBRN headquarters. Only the Alabama ANG Chemical battalions have a command relationship with the ANG's only Chemical Brigade. To ensure units are trained and ready to support emerging contingency requirements, the Army should designate the 20th CBRNE Command as the Army senior mission commander for TRO of echelon above division CBRN units. The establishment of a FORSCOM CBRN senior mission command also creates efficiencies in the reserve mobilization process since FORSCOM assumes TRA of RCs units following mobilization.

To enable the 20th CBRNE Command to execute this mission, the Army should redesign the organization to be a standing multi-component headquarters. Based on the increased span of control from three to six subordinate brigades/groups, the 20th CBRNE Command should be elevated to a 2-star headquarters with a Deputy Commanding General (ANG) and a Deputy Commanding General (USAR). This change would provide a senior officer to advocate for operational CBRN capabilities in support of the Joint Force Commander, and concurrently provide senior leaders from the RCs to represent unique RCs interests.

⁵⁴ Army Regulation (AR) 525-29, *Army Force Generation* (Washington, DC: Government Printing Office, 2011), 21.

Among the DOTMLPF-P capability development domains, organizational solutions are optimal for achieving a single force policy because they integrate all components in a single structure and erode the institutional barriers that have developed between the components. However, policy makers in the DOD and lawmakers must address legal constraints to make organizational solutions practical. The constraints center on the availability of individuals and organizations to enable multi-component organizations to become effective teams.

Increasing Access to the RCs

Since the initiation of Operations Enduring Freedom and Iraqi Freedom, the Army has relied heavily on the RCs to meet force generations requirements beyond RA capabilities and capacity. From 2005-2009, the Army mobilized nearly 90,000 RCs personnel annually.⁵⁵ Based on the increased operational tempo of the RCs to meet emergent requirements, the 2005 Ronald W. Reagan National Defense Authorization Act (NDAA) expanded the Secretary of Defense's and Service Secretaries' authority to mobilize RCs personnel and units for up to 365 days and included additional end-strength authorizations in the annual NDAA.⁵⁶ Based on the 2005 NDAA, the Assistant Secretary of the Army for Manpower and Reserve Affairs expanded the existing Active Duty for Operational Support (ADOS) program. The expanded ADOS program authorized and resourced the voluntary mobilization of RCs personnel to support administration, training, and mobilization of RCs units, and the involuntary mobilization of RCs units and

⁵⁵ Gail Braymen, "Guard, Reserve Mobilizations as Critical as Ever, Experts Say," *Army*, February 8, 2016, accessed February 14, 2016, http://www.army.mil/article/162049/Guard__Reserve_mobilizations_as_critical_as_ever__experts_say/.

⁵⁶ Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, Public Law 108, § 375, *US Statutes at Large* 118 (2004): 1811.

personnel to meet RA (ADOS-AD) and overseas contingency operational requirements (CO-ADOS). In 2012, the Secretary of Defense's authority was further expanded to allow for the mobilization of up to 60,000 RCs personnel annually for missions funded through the base appropriation.⁵⁷ This authority could also be expanded under Overseas Contingency Operations (OCO) appropriations. While the Commission on the National Guard and Reserves recommended eliminating ADOS funding and expanding authorizations for permanent active guard and reserve (AGR) and civilian personnel to support RCs missions, roles, and responsibilities, the existing system provided the opportunity to influence the size and the shape of the total force for emergent requirements.⁵⁸

If managed appropriately, the ADOS funding authorities provide a significant opportunity to increase the Army's ability to rapidly adapt the Army force structure to counter threats in a dynamic geopolitical environment. In multi-component organizations, the Army should fill personnel requirements using ADOS-AD. While these personnel would meet RA manning requirements, they would represent RCs interests at all levels from battalion to the Department of the Army. In Chemical organizations, these personnel should be assigned to operations and logistics functions to support enhance planning for training, mobilization, and employment of RC forces. Similarly, ADOS-RCs spaces, funded in the NDAA specifically to meet RCs administration and training requirements, should be increased in RCs battalions and brigades to enable chemical headquarters to integrate with, and plan support for, supported maneuver divisions. Lastly, ADOS-OC should be moved from OCO funding to the base budget

⁵⁷ Lawrence Kapp and Barbara Salazar Torreon, *Reserve Component Personnel Issues: Questions and Answers* (Washington, DC: Congressional Research Service, 2014), 21.

⁵⁸ Commission on the National Guard and Reserves, *Transforming the National Guard and Reserves into a 21st-Century Operational Force* (Washington, DC: Government Printing Office, 2008), 25, accessed February 16, 2016, http://www.loc.gov/rr/frd/pdf-files/CNGR_final-report.pdf.

and captured in the Army Program Objective Memorandum to support force generation requirements in support of combatant command Theater Campaign Plans and emergent requirements. These spaces should be reallocated on an annual basis through the GFM process to resource organizations with PTDO requirements of less than ninety days. The reallocation of ADOS-OC spaces as a component of the GFM process would increase access to RCs organizations and provide additional personnel to support training, operational planning, and pre-mobilization/pre-deployment activities for units sourced in support of operational war plans. Combined with increased access to RC forces for unit level training and operational deployment, increasing the use of ADOS to create multi-component organizations and set the conditions for increased RA and RCs collaboration would serve to further erode the barriers between the components.

Operationalizing the RCs

In 2008, Secretary of Defense Gates issued guidance for the services to “manage their respective RCs as an operational force such that the RCs provide operational capabilities while maintaining strategic depth to meet US military requirements across the full spectrum of conflict.” Based on the Secretary’s guidance and the Service’s increased reliance on the RCs, Secretary of the Army John McHugh issued Army Directive 2012-08, *Army Total Force Policy*, to provide guidance for the continued employment of the RCs as an operational force. Secretary McHugh further directed that, “As appropriate, the Army will integrate RA and RC forces and capabilities at the tactical level. This will include some predeployment collective training of tactical-level organization. Including those organizations that will routinely deploy as

multicomponent forces.” To accomplish this, the Secretary ordered the use of 12304b funding to increase access to the RCs.⁵⁹

Under 10 USC 12304b, the Secretary of the Army may mobilize US Army Reserve and ANG units for preplanned missions accounted for in the defense budget in support of the Combatant Commands. The authority to mobilize up to 60,000 members of the Select Reserve, without a Presidential partial mobilization greatly enhanced the Secretary of Defense’s and Service Secretaries’ ability to respond to steady state force generation requirements.⁶⁰ When used to project requirements as a component of the GFM process, 12304b funding provides access to RCs capabilities for a wide variety of missions.

Access to the RCs is especially important today, as the force faces RA endstrength reductions while continuing to support overseas contingency operations, remain globally engaged, and respond to emerging crisis. Through the GFM process, the Army has the ability to use 12304b funding authorities to support regionally aligned force missions, joint exercises, and Combat Training Center rotations. Critical capabilities, such as biological detection, obscuration, and heavy decontamination organizations are found exclusively in the RCs. As these capabilities are sourced against Combatant Command requirements, 12304b funding gives Army Commanders access to these organizations so that they can be integrated into collective training events across all echelons to enable the Army to train and fight as a single force.

No Silver Bullet: A Comprehensive Approach to a Better Force

Over the last 100 years, the RA, ANG, and USAR have evolved as institutions. In that time, bureaucratic and cultural barriers have emerged to erode the Army’s ability to operate as a

⁵⁹ John McHugh, Army Directive 2012-08, *Army Total Force Policy*, 2012.

⁶⁰ 10 USC 12304b

single, effective fighting force. Today in an era of fiscal constraint and an uncertain security environment the Army can ill-afford to have a fragmented force. The challenges facing the Chemical Corps are emblematic of those facing the Army. Sharp reductions in the RA Chemical Force over the last decade, a lack of focus on CBRN missions, and the potential for increased threats from WMD armed adversaries have put at risk the Army's ability to provide the right capabilities to the warfighter at the time and place where they are most critical. To counter the divide between the RA and RCs, the Army must adopt a Single Force Policy that employs multiple, interdependent solutions and changes how the Army training and employs the force.

The Single Force Policy must concurrently make changes to how Army organizes, employ new personnel management solutions that increase the RCs ability to integrate with RA formations in peacetime, and increase access to RCs capabilities for training. By building multicomponent organizations with integrated headquarters, expanding and increasing the flexibility of the ADOS program, and increasing RA and RCs training opportunities through the use of 12304b funding, the Army can ensure it provides a trained and ready force to meet future mission requirements. The Army can overcome a century of policies that undermine its effectiveness.

During the buildup of forces in preparation for the 1991 Persian Gulf War, former V Corps Commander, Lieutenant General John W. Woodmansee, Jr., referred to ANG round-out brigades as "relatively untrained troops" as a justification for the Army's decision to deploy RA brigades to Saudi Arabia, contrary to existing force generation plans.⁶¹ Whether his assessment was accurate or reflected an RA bias, it clearly illustrated a divide between the RA and RCs that impacted the Army's ability to fight and win as a total force. The wars in Iraq and Afghanistan

⁶¹ Frank N. Schubert and Theresa L. Kraus, eds., *The Whirlwind War (Paperback): The United States Army in Operations Desert Shield and Desert Storm (Center of Military History Publication)* (Washington, DC: Department of the Army, 1995), 71, accessed January 1, 2016. <http://www.history.army.mil/books/www/WWINDEX.HTM>.

have forced RA/RCs integration to meet force generation requirements and have also reshaped the force to make institutionalized integration necessary. This necessity is especially true for the Army Chemical Corps which has seen its RA resources strained while RCs capacity has increased. To succeed the Chemical Corps must leverage the full suite of tools available to provide a trained and ready total force capable of rapidly responding to contingencies both at home and abroad.

Conclusion

The proliferation of WMD is making the world an increasingly dangerous place for US forces operating around the globe. Since the NPT entered into force in 1970, five nations have joined the original five nuclear weapons states as nuclear powers, and several others have initiated illicit nuclear development programs. In recent years, advances in the life sciences have increased the potential for biological weapons development. In a 2009 statement, Natalya Kaverina, an analyst for the Russian Academy of Sciences' Institute of Global Economy and International Relations, stated that more than thirty nations possess the capacity to rapidly develop biological weapons capabilities.⁶² And finally, chemical weapons remain an option for nearly any industrialized state. Since 2000, the United States has conducted three operations to eliminate the chemical stockpiles of adversary states: Iraq, Lybia, and Syria. Like other asymmetric capabilities, nations seek WMD as a hedge against American military superiority. As technological advances have increased the threat of WMD proliferation, the mission of the Army Chemical Corps has expanded from CBRN passive defense to countering the full range of WMD threats and hazards. The increasing threat and expanding missions make it necessary for the Army to maintain a chemical force capable of rapidly responding to joint force requirements.

At the same time that the threats and missions are growing, fiscal constraints are driving reductions in the size of the Army, forcing the service to make trade-offs to maximize resources. These trade-offs have included significant changes to the size, shape, and distribution of the chemical force. Since 2003, while the RA has grown to meet the need for

⁶² Cheryl Vos, "Over 30 Nations Can Deploy Biological Weapons," *Biosecurity* (blog), *Federation of American Scientists*, March 4, 2009, accessed March 24, 2016, <https://fas.org/blogs/security/2009/03/over-30-nations-can-deploy-biological-weapons/>.

- PBS Frontline. "Hunting Bin Laden: Osama bin Laden v. the US: Edicts and Statements." September, 2001. Accessed December 1, 2015. <http://www.pbs.org/wgbh/pages/frontline/shows/binladen/who/>.
- Quadrennial Defense Review*. Washington, DC: Government Printing Office, 2001. Accessed November 1, 2015, <http://archive.defense.gov/pubs/pdfs/qdr2001.pdf>.
- Schubert, Frank N., and Theresa L. Kraus, eds. *The Whirlwind War (Paperback): the United States Army in Operations Desert Shield and Desert Storm (Center of Military History Publication)*. Washington, DC: Department of the Army, 1995. Accessed January 1, 2016. <http://www.history.army.mil/books/www/WWINDEX.HTM>.
- Stewart, Richard W. *American Military History: The United States Army and the Forging of a Nation, 1775-1917*. Washington, DC: Center of Military History, US Army., 2005. Accessed January 1, 2016. <http://www.history.army.mil/books/AMH-V1/ch16.htm#g>.
- Stewart, Richard W. *American Military History: The United States in a Global Era, 1917-2003*. Washington, DC: Center of Military History, US Army., 2005. Accessed January 10, 2016. <http://history.army.mil/books/AMH-V2/AMH%20V2/index.htm>
- Tucker, Jonathan. *Toxic Terror: Assessing Terrorist Use of Chemical and Biological Weapons*, BCSIA Studies in International Security. Cambridge, MA.: MIT Press, 2000.
- Tucker, Jonathan. *War of Nerves: Chemical Warfare from World War I to Al-Qaeda*. New York: Anchor, 2007.
- United Nations Office of Disarmament Affairs. "Chemical Weapons." Accessed October 26, 2015. <http://www.un.org/disarmament/WMD/Chemical/>.
- US Congress. *Congressional Record*. 101st Cong., 2d sess., 1990. Vol. 136, pt. 67.
- Van Camp, Brett. "Chemical, Biological, Radiological, & Nuclear Response Enterprise: A Way Ahead." Research Project, United States Army War College, 2012. Accessed September 1, 2015. <http://handle.dtic.mil/100.2/ADA562130&rct=j&frm=1&q=&esrc=s&sa=U&ved=0CBQQFjAAahUKEwj1oq2-p5DIAhXIEpIKHX7wBbU&usg=AFQjCNFwcevyXIH-ir6Xv3IfXOzqbfiCqg>.
- Vos, Cheryl. "Over 30 Nations Can Deploy Biological Weapons." Biosecurity (blog). Federation of American Scientists, March 4, 2009. Accessed March 24, 2016. <https://fas.org/blogs/security/2009/03/over-30-nations-can-deploy-biological-weapons/>.
- Walk, Robert, "A Modest Proposal: Shatter the Retorts, Defuse the Bomb, and Stabilize the Atom," *The Army Chemical Review*, PB 3-15-1 (Summer 2015): 9-13. Accessed September 20, 2015. <http://www.wood.army.mil/chmdsd/Jan-June06toc.htm>.