

FY03 AFSC/JMC EXECUTIVE SUMMARY

Fiscal Year 2003 has been dynamic for the Army Field Support Command (AFSC) and the Joint Munitions Command (JMC). The headquarters and its missions were realigned in accordance with Army and AMC transformation initiatives. Despite name changes, AFSC's primary mission accomplishment of FY03 were Army Prepositioned Stocks (APS) support provided to the Global War on Terrorism (GWOT) through prepositioning, issuing, and reconstituting stock in theater to support Operation Iraqi Freedom and Operation Enduring Freedom; Logistics Civil Augmentation Program (LOGCAP) contingency contracting support for GWOT; and horizontal integration of AMC logistics support to the warfighters. JMC remained focused on meeting urgent wartime requirements by increasing production and shipping ammunition. AFSC and JMC personnel fell in line with equal dedication. Numerous military and civilian personnel from the commands volunteered for deployment to Kuwait and various areas in Iraq to support AFSC's missions at the Logistic Support Element (LSEs).

Major General Wade H. McManus, Jr. began the FY as CG, US Army Operations Support Command (OSC). In January 2003 OSC was retitled the Army Joint Munitions Command (JMC) with the Army Field Support Command as a subordinate unit. In July 2003 AFSC became a 2-star billet as a Major Subordinate Command of Army Materiel Command (AMC) and JMC became the subordinate. Both commands technically remain 2-star billets and other organizational plans were sent forward to set final structure for the commands. After Brigadier General Vincent Boles departed AFSC, MG McManus assumed command of both organizations as they ramped-up to support combat operations. MG McManus remained in command of both organizations until Brigadier General Robert M. Radin arrived in September 2003 and assumed command of JMC. The ramp-up periods were critical to the success experienced in combat. Most production increases were already in place before our troops were in combat, however the timeliness of this ramp-up is impressive compared to Operation Desert Storm mobilization. During Desert Storm it took the Army almost six months to ship all its combat equipment to the desert from CONUS. During shipment times the deploying soldiers were unable to train on their equipment. This time, AFSC was able to prepare equipment already in Southwest Asia, reposition stocks in theater, and download prepositioned ships. The equipment was in place when the warfighters arrived. Soldiers fell in on the equipment, conducted final training, and then fought with the equipment in Iraq.¹

The command's greatest success in FY03 was support on the ground in SWA of OIF and OEF. AMC LSE SWA led the effort to provide AMC horizontally coordinated logistics support to all forces - Army, joint, and multi-national, in SWA. AFSC's Forward Logistics Support Elements were with every combat unit in SWA. An additional O6 level AMC LSE Iraq was established in LSA Anaconda, Balad, Iraq. AFSC multimedia communications systems provided a digital communications backbone that was the envy of tactical units and, on a few occasions, was hijacked by tactical logistics commanders to ensure they could communicate in support of tactical operations. AFSC commanders in Kuwait coordinated the push of materiel into the

¹ Eaton, George. *Oral History Interview with MG Wade H. McManus, Jr.: U.S. Army Field Support Command and Joint Munitions Command Support To Operation Iraqi Freedom, Phases I-III*. AFSC History Office, December 2003, p.1.

combat areas. When combat conditions changed, AFSC units were instrumental in adding armor to HMMWVs, providing air and ground maintenance facilities and support in Iraq, expediting and managing LOGCAP life support contracts, inventorying and returning to the system abandoned Class IX repair parts, and expediting the turn-in of APS equipment for veteran combat units that could return home. Everything the command accomplished in FY2003 was focused on ensuring that tactical units of all services and from many countries, engaged with the enemy, had sustained combat readiness.²

REORGANIZATION

MG McManus upheld the command's support to GWOT while creating a new headquarters organizational structure and implementing AMC and Army Transformation initiatives at the AFSC level. In FY02 and part of 2003 the command was titled the Operations Support Command with the Field Support Command aligned as a subordinate. In January 2003 OSC's name changed with provisional establishment of the U.S. Army Joint Munitions Command (Prov) (JMC). This emphasized the joint nature of the command's mission in supplying ammunition/munitions to all the U.S. military services – the Army, Navy, Marine Corps, Air Force, and Coast Guard. To meet such diverse needs the command strengthened close contact with key leaders from all services. The JMC carried on the mission to serve as the DoD field operating agency for the Single Manager for Conventional Ammunition (SMCA). The command also continued to execute its missions of conventional ammunition production, storage, issue, and demilitarization. To meet the 21st century warfighter needs, JMC continued developing and modernizing automation systems to provide the theater and field commanders accurate up to date information on status of munitions, effective use of the ammo stockpile, and maximize capabilities and cost effectiveness of munitions production installations.

At a change of command ceremony on 2 July 2003, BG Vincent E. Boles relinquished control of the Field Support Command to MG Wade H. McManus. Simultaneously, the FSC was renamed the Army Field Support Command (AFSC) and transformed into a Major Subordinate Command (MSC) of the Army Materiel Command (AMC). AFSC maintained responsibility for war reserves plus the Logistics Support Elements (LSE), Logistics Assistance Program (LAP), and Logistics Civil Augmentation Program (LOGCAP). Through the LSEs and LAP the AFSC was responsible for coordinating the activities of AMC elements in the theater of operations and synchronizing technical support directly to the warfighters. JMC then became a subordinate of AFSC. MG McManus commanded both organizations until COL (P) Robert Radin assumed command of JMC on 19 September 2003. COL (P) James W. Rafferty, was mobilized to augment AFSC and JMC as the Deputy Commanding General for a majority of FY03 as BG Boles left. BG Boles had been assigned as the CG, AMC SWA and Deputy C4, Combined Force Land Component Command (CFLCC), Camp Arifjan, Kuwait.

As scheduled to occur, Rock Island Arsenal, Watervliet Arsenal, and Sierra Army Depot transferred to US Army Tank-Automotive and Armaments Command (TACOM) at the

² This history will not restate the efforts of AMC LSE SWA in the war effort. That history is contained in two publications: Talbot, Randy. *The AMC LSE SWA History, OIF Phase I-III*. AFSC History Office, 2003. and Eaton, George, *AFSC Support to OIF Phases I-III*. AFSC History Office, 2003. Both publications will be included in the CD distribution of this annual history. A history of AMC LSE SWA May-Oct 2003 is in production.

beginning of FY03. The concept behind the transfer was to align these commands with those already managed by TACOM into the Ground Support Industrial Enterprise (GSIE). Another important change was the Installation Management Agency (IMA) taking control of all garrison commands base operation functions. IMA will regulate and make all services similar at all installations and be beneficial to supporting soldiers. JMC continues to closely manage BASOPS at its production plants until the funding streams and special funds can be accommodated under the IMA system.

Two of AFSC's Combat Equipment Group-Europe (CEG-E) commands were issued deactivation orders in FY 03. Combat Equipment Battalions - Brunssum and Vrienzveen will cease operations by February 2004. The majority of their remaining stocks were brought up to the fighting standards and pushed into theater to support OIF. AFSC envisions that remaining European CEB locations may change depending on evolving threat locations. The pre-2003 European structure was based on the Cold War and the Army has adjusted as threats shifted to new locations and stocks are placed closer to these areas.

MG McManus commented on the commands changing nature in a oral history interview, "What became apparent to us as we traveled our evolutionary path as it turned out to be, is that whether it's field support or prepositioned support or ammunition, through this command's vital missions we are truly and totally inextricably linked to the warfighter."³

Mission

AFSC and JMC retain four major missions: Army Prepositioned Stocks, ammunition supply management for the joint force, Logistics Civil Augmentation Program (LOGCAP), and horizontal logistics integration.⁴ AFSC consists of three Forward LSEs, two Combat Equipment Groups, and nine Combat Equipment Battalions / Bases located in the United States and in eight overseas nations. During deployments and exercises, AFSC provides direct support to combat units deployed to the front lines, and operates logistics support elements and bases located near forward areas. As the U.S. sustains presence in the Iraq/Kuwait area of operations, the command may see further changes in the organizational structure as stocks will be realigned to support areas closer to future threats and lessons of OIF are assimilated into Army transformation.

JMC maintains operation of the nationwide network of installations and facilities where conventional ammunition is stored and produced. This realignment indicates the growing significance of AMC's direct support to the soldiers in the field and the importance of horizontal integration to modern contingency operations. JMC consists of eleven ammunition plants, three depots and three munitions centers. In addition to the above installations, JMC retains some responsibility for two semi-active ammunition plants. JMC is also responsible for the Defense Ammunition Center (DAC).

³ Eaton, George. *Oral History Interview with MG Wade H. McManus, Jr., U.S. Army Field Support Command and Joint Munitions Command Support To Operation Iraqi Freedom, Phases I-III*. AFSC History Office, December 2003. p. 4.

⁴ Eaton, George. *AFSC Support to OIF Phases I-III*. AFSC History Office, 2003. p. 1.

SUPPORT TO OPERATION IRAQI FREEDOM/GWOT

AFSC and JMC were imperative to logistics support for the warfighter during the Global War on Terrorism (GWOT). Beginning in 2001, 11 hours after the September 11th attacks, the then Operations Support Command began shipping munitions in support of GWOT. The AFSC and JMC have continued their critical support ever since to include work in Afghanistan, the Philippines, Uzbekistan, Kuwait, Iraq, and other Middle Eastern countries. The commands have provided ammunition support, Army Prepositioned Stocks (APS), Logistics Support Elements (LSEs), Logistics Civil Augmentation Program (LOGCAP) contracting, and logistics horizontal integration within AMC and to the warfighters. That support continues to this day.⁵

Army Prepositioned Stocks (APS)

SWA- Movement of Stocks to Theater⁶

From Spring of 2002 until January 2003 JCS, DA, and CENTCOM directed APS-3 stocks begin downloading into Camp Doha. Operation Vigilant Hammer I conducted in July 2002, was the first mission to begin download of APS stock into Kuwait. The download of USNS Watkins was intended to be a clear signal to Saddam Hussein of U.S. seriousness. Retrospectively, increasing the stockpiles was a clear signal of the approaching conflict. Operation Vigilant Hammer II followed shortly afterwards taking up the remaining storage space at Camp Doha. Future downloads of equipment were transported to and stored in Camp Arifjan, a provisionally established location in Kuwait created to compensate for storage areas at Camp Doha being used to full capacity. Camp Arifjan had been under development and construction for some time due to interest by the government of Kuwait to move the US locations further away from Kuwait City. Construction was accelerated to meet the requirements of OIF build up. The download and transfer of stocks was being conducted as one of a series of signals to Iraq's ruling regime. The plan to immediately hand off equipment to the using units was not plausible.

A variety of contract actions were initiated, worked, and coordinated by the AFSC staff in FY 03. Preparing and finalizing the Option Year 3 Performance Work Statement for the ITT maintenance contract in Qatar was a major effort. In addition, a significant number of contract modifications were instituted in support of OIF/OEF requirements. The APS Qatar contractual actions worked or coordinated included, but were not limited to: Rewarehousing, Bahrain Field Hospital movement, 24/7 Arms Room, Special Operating Forces Operational Project, Tire Mounting, and Patriot ADA Storage. For the APS mission at Camp Arifjan, Kuwait, contractual actions worked or coordinated included, but were not limited to: TMDE Deployment, Repair of 4th ID Equipment, and APS Equipment Return.

⁵ Eaton, George. *Oral History Interview with MG Wade H. McManus, Jr., U.S. Army Field Support Command and Joint Munitions Command Support To Operation Iraqi Freedom, Phases I-III*. AFSC History Office, December 2003. p. 1. For more detailed information on support to OIF see: Eaton, George, *AFSC Support to OIF Phases I-III*. AFSC History Office, 2003 and Talbot, Randy. *We will Not Falter, We Will not Fail, AMC LSE SWA, OIF Phases I-III*, AFSC History Office, Sept 2003.

⁶ AFSC G-4 AHS FY03, p. 87-89.

In late FY 03, the APS team was heavily involved in working actions relative to performing APS Reset/Reconstitution. A Market Survey was developed and conducted to identify maintenance contractor capabilities existing in the SWA AOR. Based on the results of that survey, it was recommended that ITT Industries be awarded a sole source contract to conduct Reset and support to ongoing operations at Camp Arifjan, Kuwait.

CEG-E's Contributions to OIF⁷

Combat Equipment Group-Europe stored a large proportion of the prepositioned stocks. Initially this was due to the threats imposed by the Cold War. After the fall of the Berlin Wall, threats shifted to the Middle East. In 1991-1992 a large amount of equipment used during Operation Desert Storm was shipped back to Europe for storage. During the 1990's CEG-E had refurbished much of this equipment and had supplied the vast majority of the equipment used in the Balkans. CEG-E also filled out its own APS sets, but was unable to perform periodic maintenance because of other redistribution demands. By 2002 and 2001, the good equipment was gone or in the CEG-E APS and what was left was generally more fit for a property disposal office. In FY03, Europe sent the majority of its remaining stock to APS-5 in support of OIF/OEF. The surge mission was the most complex, time-sensitive, and important redistribution effort ever undertaken by the command and over \$50M of funding was allocated to support the mission. In FY01 CEG-E's operating budget was around \$55M. That doubled in FY02 to \$97M and then rose to \$98M in FY03.⁸

In FY 03, AFSC tasked CEG-E to repair and ship over 13,374 pieces of equipment (1,121 Rolling Stock items) to fill critical shortages in the SWA APS 2x2 Brigade, Sustainment, Division Base Aviation Brigade, Afloat APS 2x2 Brigade, Combat Support Group, Corp Theater 1 (CT1), Corp Theater 2 (CT2), 1x1 Brigade (formerly 8th Brigade), and the Asia APS-4 2x2 Brigade and Hospitals. Over 3,624 pieces were accelerated for repair in the 1st quarter alone to support this mission. This support enabled successful prepositioning of equipment in SWA, which was key to combat success in Iraq.

The sudden influx of work required the employment of 520 contractors on top of the established workforce of 1300 personnel. Much of the equipment used to support SWA was in deployable condition. The best items had been used in the sustained redistribution effort since 1995. FSC and DA allowed CEG-E to spend what was required to get equipment back to fightable condition. Only the very worst items were passed over and sent to the disposal yards.

When the 173rd Airborne Brigade moved into Northern Iraq, CEG-E also issued the Immediate Ready Company (IRC) as a brigade reinforcement.⁹ The 173rd Airborne Brigade is a light airborne infantry brigade with no heavy weapons. USAREUR requested issue of the IRC to support the 173rd with tanks, Bradleys, and artillery. The plan worked as smoothly as exercised with all equipment issued and ready to go long before transportation was available. What was

⁷ CEG-E, FY03 AHS, p. 153, 155; and Eaton, George, *AFSC Support to OIF Phases I-III*. AFSC History Office, 2003. p. 8, 10-13.

⁸ Eaton, George. *Oral history Interview with Colonel Robert D. Cox on CEG-E Contributions to OIF Phase I-III*. AFSC History Office, 7 January 2004, p. 5.

⁹ AMC Pamphlet on APS.

not planned for was the continuing support to the IRC after it arrived in Iraq. The 173rd did not have mechanics or repair parts to support the equipment. Repair parts and technical assistance requests flowed into CEB-ROB via email, fax and cell phone. They shipped parts and advised. Many CEG-E employees actually deployed to Iraq to support the force.¹⁰

CEG-E was not just engaged in “wholesale” logistics. In addition to supporting the 173rd Airborne Brigade with the IRC, CEG-E was instrumental in getting the rest of the brigades vehicles prepped for deployment and loaded on ships. Several years ago the 173rd Airborne Brigade had received authorization for increases in trucks and other rolling stock. However, they had never received authorizations for more mechanics to support the equipment. When they received their predeployment alert, Brigade leaders noted that much of the equipment was not combat ready. CEB-Livorno was asked to do the required maintenance to get the equipment combat ready. CEB-Livorno, staffed almost exclusively with an Italian workforce sprang into action working around the clock. At the time there were many protests in Italy against the war in Iraq. Some people were concerned if the CEB-Livorno workforce would remain loyal. Their questions were answered when the 173rd Airborne’s vehicles were convoyed to the port. CEB-Livorno’s Italian employees drove to the port through protests. When they arrived and found that dock hands were also on strike, our employees bucked national sentiment and the dock unions and actually loaded the vessels. There were no more worries as to loyalty.¹¹

No challenge or threat was too great for the more than 1,000 men and women of CEG-E. They delivered urgently needed equipment on time and ready for immediate issue to combat forces. It is especially important to note that 90% of the CEG-E workforce is comprised of host-nation workers from the Netherlands, Luxembourg, Italy and other nations. Much of the work was completed even as the workforce knew their installations would be closed. Even when their governments and fellow citizens were lukewarm toward America’s course of action, the workers never faltered, remaining faithful to their mission.

APS-3 CEG-Afloat¹²

While CEG-Europe was preparing and moving land-based stocks from Europe to SWA, similar work was being done to push the Army’s sea-based APS to SWA. Combat Equipment Group-Afloat (CEG-A) managed ongoing ship maintenance cycles while also offloading the APS ships in SWA. Major issues worked during FY 03 involved CEG-A’s ability to meet the challenges of ship maintenance cycles, uploads and downloads, and equipment handoff in support of OIF/OEF. The year began with CEG-A being split between the maintenance cycle ongoing in Charleston, South Carolina and handoff preparation in Kuwait. The USNS Red Cloud maintenance cycle was completed in October and November, and sailed directly to Kuwait in support of the build up of forces for operations in Iraq. At the same time CEG-A’s APS-3 support team was called forward to Kuwait. They were critical as part of the AMC LSE in

¹⁰ Eaton, George. *FY02 Operations Support Command Annual History*, OSC History Office, p. 176. See also oral history interviews between George Eaton and CPT Ted West and Mr. Dennis Monzingo, CEB-ROB, 10 September 2003, not yet transcribed but located in the AFSC History Office.

¹¹ Oral History Interviews, Sept 2003, George Eaton and LTC Sandy Pogue and George Eaton and Alberto Chidini; see also Eaton, George. *Army Logistician* July-Aug 2003, p. 29.

¹² G-4 AFSC FY03 AHS, p. 89.

standing up maintenance and supply operations at Camp Arifjan in preparation for receipt of the APS stocks and supporting units.

Watercraft Restructuring Program ¹³

Under the Army Watercraft Restructuring Program, AFSC directed the establishment of Watercraft Equipment Base – Yokohama North Dock (WEB-YND), Yokohama, Japan. Prepositioned in the PACOM theater at WEB-YND are 27 watercraft and a Modular Causeway System. A contractor was in place at the beginning of FY03 to begin conducting maintenance on the forward stored watercraft and associated equipment. The following watercraft will constitute the current, end state configuration for Watercraft Equipment Base – Yokohama North Dock, Yokohama, Japan:

10 Landing Craft Utility	1 Gas Barge
9 Landing Craft Mechanized	1 Floating Causeway
2 Large Tugs	1 Roll On Roll Off Discharge Facility
4 Small Tugs	1 Causeway Ferry
1 Derrick Barge	

APS-3, CEB-Hythe also identified Kuwait Naval Base as a site for establishing Watercraft Equipment Base-Kuwait Naval Base (WEB-KNB) to be completed in FY04. Final planning continued throughout FY03 in preparation for prepositioning an identical watercraft package in the CENTCOM theater at Kuwait Naval Base (KNB) in FY04.

Authorized Stockage Lists/Prescribed Load Lists (ASL/PLL) ¹⁴

While APS sets have, for several years, been fairly full in terms of major items of equipment, many of the sets were extremely short Class IX repair parts. For example, the APS-5 2x1 ASL/PLL Class IX was filled only to 13 and 19 percent at the start of OIF. APS-3 combat units ranged anywhere from 0 to 65% full. A shortage of \$60.9 million was needed to fill out the Class IX ASL/PLL. The funding for the shortages came from DA in Phase I and ARCENT in Phase II. In some instances in SWA, the Government of Kuwait funded the shortages. ¹⁵ In support of OIF, AFSC Materiel Management Directorate Readiness team planned and coordinated an HQDA-mandated buyout of ASL/PLL for key combat support and combat service support units in APS-3. Shipments of repair parts from Europe and CONUS depots were consolidated at Defense Distribution Depot Susquehanna, PA. All fill rates for the units' ASL/PLL improved to 85%-95% and were critical in sustaining Army forces in SWA.

¹³ G-4 AFSC FY03 AHS, p. 88. CEG-A FY03 AHS, p. 140, 149-150.

¹⁴ G-4 AFSC FY03 AHS, p. 90; Talbot, Randy. *We will Not Falter, We Will not Fail, AMC LSE SWA, OIF Phases I-III*. AFSC History Office, Sept 2003, p. 48-49.

¹⁵ ASL/PLL Brief OIF Improvement Chronology, 17 May 2003, p. 4.

Logistics Civil Augmentation Program (LOGCAP) ¹⁶

FY 2003 began and ended with LOGCAP being utilized for the first time on a truly global basis. It was used in numerous countries throughout the Middle East but primarily in Kuwait, Iraq, and Jordan; in addition to Djibouti, the Country of Georgia, Eastern Europe, the Continental US, and in several locations around the Pacific Rim. The magnitude of use of LOGCAP stated in dollars terms for OEF/OIF, exceeded \$5 billion dollars and was rapidly increasing by the end of FY03. Dollar projections for all LOGCAP customers in the aggregate worldwide exceeded \$10B. The overall rapid increase in dollar expenditures through LOGCAP was not due to rising costs or rates; instead, it was due to dramatically increasing requirements. For example as the CFLCC rotated support units back to CONUS to reset, they were replaced with contract capabilities. ¹⁷

In addition LOGCAP provided world-wide Direct Support (DS), General Support (GS), Combat Support (CS), and Combat Service Support (CSS) to the following Combatant Commands: the Central Command (CENTCOM), the Pacific Command (PACOM), and the European Command (EUCOM). LOGCAP also supported the following U.S. Governmental Agencies: the United States Department of State Coalition Provisional Authority in Iraq with the development of the New Iraqi Army and the Federal Deployment Center; the Department of Defense Multinational Division in Iraq; and the Defense Intelligence Agency Iraq Survey Group with base camp operations including power generation, dining facilitate operations, billeting, waste management, laundry and bath operations, transportation, morale, welfare and recreation, water and sewer operations, fuel support and maintenance of all supported systems provided in the areas it supports. Overall, LOGCAP operational manpower grew to over 17,000 military, civilian, and contractor personnel worldwide. ¹⁸

DEPLOYMENTS

Military and civilian personnel deployed to Kuwait and Iraq to fill positions within AMC LSE-SWA. Most employees arrived to air conditioned tents with partitioned rooms, hot meals provided three times daily, and decent working facilities. Through an oral history project conducted in the AFSC/JMC History Office, personnel were interviewed on their duties and experiences in theater. Generally, experiences captured by the interviews reveal living conditions were satisfactory and many had gained invaluable perspectives of how the work they complete at home affects the soldiers in the field. This is the largest ever civilian force used in a theater of operations, especially when combined with the number of civilian contractors placed in theater by KBR-Halliburton. ¹⁹

¹⁶ AFSC G-3 FY03 AHS, p 84; AMC CONUS FY03 AHS, p 254; Talbot, Randy. *We will Not Falter, We Will not Fail, AMC LSE SWA, OIF Phases I-III*. AFSC History Office, Sept 2003, p. 145-159.

¹⁷ See Eaton, George. *AFSC Support to OIF, Phase I-III*. AFSC History Office, 2003; for more on LOGCAP.

¹⁸ Contracting and Parc Directorate FY03 AHS, p. 133.

¹⁹ G1 Human Resource Management Directorate FY03 AHS, p. 67; Interviews located in AFSC History Archives.

AMMO AND EQUIPMENT ACCOUNTABILITY

Radio Frequency ID Tags²⁰

In order to improve shipment tracking AMC directed that all equipment and containers of supplies moving into the theater be marked with a Radio Frequency ID (RFID) tag. Savi Technologies was awarded the contract to develop automated information technology/systems solutions for implementation at the various APS storage and maintenance facilities. RFID read/write capability was provided to CEG-E, CEG-A, and to SWA. Advance work ensured the required number of tags for shipments to SWA were available in time and that each site had the ability to write and read the tags. One-hundred percent of shipments with SWA destination were RFID-tagged. In order to RFID-tag the armored equipment, an in-house metal plate was developed, enabling tagging of this equipment without drilling holes in armor. The practice of applying RF tags is becoming routine for all APS equipment being moved with the goal of providing accurate in-transit visibility. All rolling stock and containers uploaded to the USNS Watson (Interim TF1) had RF tags applied.

Munitions Readiness Reporting System

Two days after the 9/11 attacks, MG McManus was called to Washington, DC to report to the Chief of Staff of the Army on the state of the ammunition stockpile. His report was not good and centered on longstanding issues in the funding and reporting of the stockpile. In the past DA tracked the stockpile based primarily on the number of tons. However, this metric was based on funding and gross tonnage, not ammunition readiness and combat requirements.

MG McManus returned from that meeting with the idea of creating a munitions reporting system that focused on readiness and the warfighter, not the POM and budget. Within six months ammunition managers at the Operations Support Command were able to develop the Munitions Readiness Report that presented ammunition readiness in terms all Army decision makers understand.²¹ The Army is now measuring munitions readiness using the standard methodology for measuring unit readiness. Unit Status Reporting focuses on four areas— Personnel, Training, Equipment On-Hand, and Equipment Serviceability. These resource areas have been modified to fit munitions readiness reporting. The MRR uses On-Hand, Serviceability, Quality, and Production Base to quantify the status of the stockpile and the ammunition base. Readiness ratings are assigned based on the worst readiness rating among these four areas after using standardized computations.

The MRR measures Army worldwide capability in specific munitions categories, such as Small Arms, Mortars, Tank Main Gun, or Cannon Artillery. In each category each specific ammunition item is tracked. For example, in the Small Arms category the MRR tracks 5.56mm, 7.52mm, .50 cal, etc. in every configuration. Finally, the MRR ratings are projected out to predict the ratings in six, twelve, eighteen, and twenty-four months. The data in the Munitions

²⁰ CEG-E FY03 AHS, p. 158-59; G-4 AFSC FY03 AHS, p. 88.

²¹ Eaton, George. *Oral History Interview with MG Wade H. McManus, Jr., U.S. Army Field Support Command and Joint Munitions Command Support To Operation Iraqi Freedom, Phases I-III*. AFSC History Office, December 2003, p. 13.

Readiness Report includes both Missiles and Conventional Ammunition. Newer items of munitions, not yet transitioned to National Inventory Control Point (NICP) management, are included as well. The data included is the result of a collaboration involving input from many agencies. All of the MRR data resides in a secure database that uses calculations patterned after those found in AR 220-1. The on-line database provides the ability to “drill down” to individual munitions categories to explore the key issues driving readiness.²²

While the immediate impact of the MRR on OIF/OEF may not be readily apparent, the system is helping highlight and prioritize funding for specific ammunition pacing items and other shortages. The ability to project ratings into the future has already assisted the AFSC/JMC in funding maintenance programs to get more on-hand stocks into issuable condition codes. In addition, visibility from the MRR allows decisions on shifting of stock from one theater to another. The impact of the MRR is far greater than deployment and decisive operations in OIF/OEF. However, it took the pressures of the predeployment phase to force a major and significant improvement in munitions readiness reporting.

Centralized Ammunition Management (CAM)²³

During FY03 the CAM mission became a reality with the agreement between JMC and FORSCOM. The requirement to push ammunition to users is a new concept and the process to streamline this effort is ongoing daily. With the implementation of CAM, ammunition requisitions are developed by JMC and pushed to the FORSCOM units to meet their training and basic load requirements. After growth with FORSCOM the process is now being readied for use with TRADOC and National Guard Bureau requirements. The responsibility for document control resides with the JMC G3 and includes coordination and tracking while ensuring proper conformance to regulatory requirements.

To assure the efficiency of the CAM process, a test was conducted between Ft. Hood, McAlester Army Ammunition Plant, and the 1st Cavalry Division in September/October 2003. A simulated outloading of ammunition onto Container Roll-On Roll-Off Platforms (CROPs) was conducted. The test was a great success and some lessons-learned were captured for future initiatives. CAM has also been heavily involved in support Mobilization Training for OIF/OEF for the 1st and 5th Armies. Mobilization and Training packages are being pushed to the units on a weekly basis. The CAM process enhances strategic mobility/deployability and reduces cost of logistics while maintaining warfighting capability and readiness. Future efforts will include adding the OCONUS and Joint Services within the next couple years.

JMC PRODUCTION ACCOMPLISHMENTS

Meeting Urgent Requirements

In order to meet requirements for OIF/OEF the ammo plants and depots worked overtime to ship and produce the required items. For example, ammunition production workload

²² Eaton, George. *FY02 Operations Support Command Annual History*, OSC History Office. p. 4, 262. See also Jamieson, Edward, OSC briefing, “Army Munitions Readiness,” 9 August 2002.

²³ JMC G3/G7 FY03 AHS, p. 273.

increased by more than \$20M rising from \$31,657,561 in FY02 to \$52,417,749 in FY 03 at McAlester AAP.²⁴ Each plant responded in some way to support the war effort:

Crane AAA shipped out over 54,000 short tons, shutdown production and moved all workforce to depot operations to accomplish this, and was the only supplier of Navy flares to support the OIF/OEF efforts. Timely shipments were key and JMC installations worked overtime to make it happen.²⁵

Milan AAP supported Operation Iraqi Freedom in FY03 with production of artillery shells, 40mm tactical and training ammunition, demolition charges, and mine-clearing charges. Expedited shipments of these materials were made for OCONUS to include support for consolidation efforts by the AFSC along with direct shipments to Southwest Asia (SWA).²⁶

Blue Grass Army Depot supported Operation Enduring Freedom through the Chemical Defense Equipment Go-To-War program and provided munitions support to coalition forces and the 101st Airborne Division. For Operation Iraqi Freedom, BGAD provided munitions and Chemical Defense Equipment to units deploying and already deployed to Southwest Asia.²⁷

McAlester AAP responded to significantly increased demands for bombs and began producing items to support the war. On short notice McAlester AAP was tasked to load and fill 15 GBU-43/B, H-6, Munitions Ordnance Air Blast (MOAB) bombs each weighing a total of 21,700 pounds. They successfully completed these urgent delivery requests in support of Air Force and Navy bomb requirements, including general purpose (GP) and penetrator bombs.²⁸

Small Caliber Ammunition²⁹

There was also increased demand for small caliber ammunition required to support deploying soldiers. Lake City Army Ammunition Plant (LCAAP) shipped over 58 million cartridges in direct support of Operation Iraqi Freedom, in the early weeks and months of the conflict. Production deliveries for 5.56mm, 7.62mm, and .50 Cal family items increased to over approximately 701M cartridges from ATK/ LCAAP. LCAAP produced over 600 million total cartridges (5.56mm/7.62mm/Cal. 50/20mm/Cal.30 blank) in FY 03, a figure not reached in several years at LCAAP. Compared to FY02 deliveries, production deliveries increased by more than approximately 200M cartridges or 29%. The increase was primarily attributed to increased demands to support the war against terrorism both in training and forecasted/un-forecasted mobilization requirements. Production delivery increases initiated in FY03 is part of a capacity increase initiative to approach 1.2B rounds at LCAAP.

²⁴ McAlester AAP FY03 AHS, p. 439.

²⁵ Crane AAA FY03 AHS, p. 424.

²⁶ Milan AAP FY03 AHS, p. 392.

²⁷ Blue Grass AD FY03 AHS, p. 420.

²⁸ McAlester AAP FY03 AHS, p. 439, 442.

²⁹ Lake City AAP FY03 AHS, p. 375-76.

105mm Illum M314A3 (C449)

JMC placed an order for 22,254 rounds with SNC Technologies/Le Gardeur, the systems contractor for the M314A3. SNC initiated Phase 1 and Phase 2 of pre-production engineering tests to determine viability of proposed configuration changes/enhancements. The next phase (Phase 3) will include environmental testing and prove out the acceptability of the recommended configuration. JMC received \$20M from 2003 Iraqi Freedom Fund to buy additional rounds. This \$20M supplemental buy will provide the assets to greatly improve our war reserve and training readiness posture for 105mm illum, which is a CALS item. This \$20M supplemental will be awarded under SNC's existing contract.³⁰

Production Challenges

While JMC had many successes in supporting OIF, the command continued to face challenges in some areas. Many of these issues linger from last FY and the command continues to work towards solutions.

TNT³¹

In FY03 significant demand for TNT, used primarily in support of USAF general purpose (GP) bomb requirements, depleted existing inventories of TNT at a higher than anticipated rate, thereby necessitating development of an acquisition strategy for this critical item. The Radford/Holston Division had been filling TNT requirements from the SMCA stockpile for a number of years. As the TNT stockpile depleted, the user community became increasingly concerned about the ability to meet future requirements, especially after September 11 when demand significantly increased.

Extensive market research conducted in FY02 identified the lack of a viable and cost-effective domestic production capability for the material. Working with representatives from OSD, PEO Ammunition, PM Arms, EDCA, AMC, the Air Force, Ogden Air Logistics Center and TACOM-ARDEC, PM, Demil, and DAC, a three-tiered acquisition approach was structured to facilitate the expeditious, yet politically acceptable, supply of TNT. Subsequent to release of a draft solicitation, a best value request for proposal (RFP), incorporating formal source selection criteria and evaluation of multi-year versus multiple year pricing, was issued in Feb 03. The RFP's evaluation criteria mirrored what the Government had previously identified as being the primary focus of this effort: the establishment and operation of a flexible bulk explosive manufacturing capability within the National Technical and Industrial Base (NTIB) that would become the Government's exclusive source of supply for TNT within 36 months after contract award.

ATK was awarded a multi-year contract to produce TNT. The contract includes buying OCONUS TNT and reclaimed TNT for the first two years. ACO-QA has issued Letters of

³⁰ JMC G3/G7 FY03 AHS, p. 266.

³¹ AFSC FY03 AHSs: Contracting and Parc Directorate, p. 133-33; Office of Counsel, p. 21; McAlester AAP, p. 442; JMC G3/G7, p. 267-68; Radford AAP, p. 405.

Delegation to the OCONUS and reclaimed suppliers Defense Contract Management Agency (DCMA) Quality Action Reports (QARs). In 2005, ATK will begin producing TNT at Radford, requiring a thorough process proofing and QA system analysis. During the interim period after award, TNT derived from reclamation activities originating from excess inventory/material would be desired, with supply from OCONUS sources (a significant number of which were identified during the previous market research effort) being the final and least attractive alternative. During the first two years of the contract AAPC will reclaim TNT from 750 lb bombs and purchase TNT from Poland. The first shipment TNT from Poland has arrived and is being used in USAF bombs.

The acquisition reestablishes a domestic industrial base capability and source for TNT stockpiles unexpectedly depleted by OIF and the Global War on Terrorism. Continued operational support for Operation Iraqi Freedom, and the Global War on Terrorism, as well as other TNT requirements of all the Services will be met through the resulting contract. In addition to the requirement for the establishment of a modern flexible facility for production of TNT, the acquisition also provides for the reclamation and resource recovery of TNT from unusable munitions stockpiles. The acquisition was nominated for the Packard Award for Contracting.

M67 Frag Grenades

There have been many issues revolving around production of the M67 grenade since a shortfall of this item was identified in 2000. In FY03 262,770 each M67 Fragmentation Grenades were produced. Production was started at Lone Star in March 2003 but was shutdown in July due to issues related to non-inspection of critical defects at the fuze producers Martin Electronics Incorporated (MEI) facility. After all corrective actions had been appropriately addressed the fuze producer was authorized to restart fuze production and subsequently the PM and JMC authorized Lone Star to restart LAP of M67 grenades. Successful audits at component producers and Lone Star have verified that a quality product is being delivered to our troops. Suspect grenades produced with fuzes prior to the July shutdown are currently being held until completion of a Safety Systems Risk Assessment.³²

5.56 M855 Lead-free Ball Cartridges³³

In June 2003, production of the 5.56mm M855 Lead-free Ball Cartridge was suspended indefinitely due to erratic flight bullets reported from the field in 2nd and 3rd QTR, FY03. Field reports indicated that during training exercises, target paper revealed “key holing” signatures at the 25m-range. A failure investigation team determined that the lead-free bullet is susceptible to excessive yaw (greater than 15 degrees) when fired from worn barrels of the M16A2 Rifle. All produced/delivered were built IAW the technical data package. Preliminary findings determined that the lead-free core (Tungsten/Nylon) behaves differently under ballistic dynamics when compared to its lead counterpart. In 4th QTR, FY 03, a new “Green” team was formed to re-evaluate the design of the lead-free (Tungsten/Nylon) bullet and identify additional alternatives that are more easily producible and more economical.

³² AFSC FY03 AHSs: JMC G3/G7, p. 270; Lone Star AAP, p. 385-86.

³³ AFSC FY03 JMC G3/G7 AHS, p. 272.

81 MM Smoke and Illum Rounds

There were many challenges during FY03 as Milan AAP continued to conduct testing to identify the cause of mortar fin separations on 81mm smoke and illuminating rounds. The cause has yet to be identified and production of these rounds will remain suspended pending resolution. Milan AAP also continued to experience variation in bulk C-4 material used in extrusion. Some batches are moist and firm, producing excellent charges, while others are dry and fluffy and very difficult to extrude. There is hope that the execution of a test plan to evaluate new process oil from Holston AAP will provide answers to the variability problem.³⁴

M54A1 Busters

There were production problems associated with the component part, M54A1 busters, made it necessary to mutually agree to dissolve the current contract award with AO/Milan. ARDEC has taken the lead in developing a process that meets the spec requirements for chemical analysis and x-ray of M54A1 busters. JMC continues to lead IPT and work closely with ARDEC and USMC customer to monitor program progress. Acquisition strategy will be developed for new M54A1 contract award by end of next FY to capture current and out-year requirements.³⁵

RP135 Propellant

Radford AAP and ATK experienced several quality issues. One lot of RP1315 propellant, used in GAU-8 ammunition, was manufactured without the presence of flash suppressant resulting in muzzle flash. Engineering, quality and process controls were added to ensure that flash suppressant is added to each batch of propellant. MK90/Hydra 70 had issues with internal defects (stealth & unbond) and end inhibitors.³⁶

Foreign Military Sales (FMS)³⁷

Major initiatives surrounding FMS for FY 03 included Strategic Product Plan Support. The plan was designed to give foreign customers better awareness of processes/systems that were available to them to satisfy their ammunition requirements in a timely and economical manner. The Security Assistance Management Directorate (SAMD) continued to sustain Operation Enduring Freedom in support of Slovenia's participation in the United Nations International Security Assistance Force (ISAF) in Afghanistan. Included in SAMD's Operation Iraqi Freedom efforts was support of Poland in their peacekeeping efforts and the Republic of Georgia Train and Equip Program. SAMD delivered ammunition for Counter Terrorist Training in the Philippines, provided weapons and ammunition to Canada and New Zealand, provided ammunition to Australia, and provided emergency ammunition supply and logistic support to

³⁴ Milan AAP FY03 AHS, p. 396.

³⁵ JMC G3/G7 Directorate FY03 AHS, p. 266.

³⁶ Radford AAP FY03 AHS, p. 404.

³⁷ Safety Assistance Management Directorate (SAMD) FY03 AHS, p. 318.

allies and friendly foreign customers through Presidential Drawdowns, in support of the Global War on Terrorism (GWOT).

Demilitarization ³⁸

At Crane AAA 16"/50 Bag Charges had reached a deteriorated condition and it became unsafe to break these items down within the production facility, these units were sent directly to DEMO for detonation of complete up-round. Blue Grass Army Depot/Anniston Munitions Center dedicated the first of its kind missile recycling center with ribbon cutting ceremonies in November 2002. This unique facility will take missiles that would otherwise be destroyed through open detonation and seek out future use for the parts. Abroad, the United States and South Korea finalized an agreement to build facilities for Resource Recovery and Recycling (R3) of excess ammunition.

A new demilitarization technology was developed at Tooele Army Depot by working with General Atomics, USAF, Defense Ammunition Center, and JMC to hydrolyze CADs and PADs. TEAD coordinated with General Atomics to set up test equipment. In addition to this, the pilot project to destroy 11 families of CADs equating to 350 stoves of CADs stored at TEAD was successfully completed costing approximately \$100K. ³⁹

DAC engineers continued developing the DAC Demil Technology Demonstration Facility. This facility provides the capability to demonstrate a variety of new ammunition and explosives demilitarization technologies. Two demonstration technologies were extensively tested.⁴⁰ They are a Molten Salt Oxidation (MSO) system, designed by Lawrence Livermore National Laboratory and a Supercritical Water Oxidation (SCWO) System, designed by General Atomics Corporation.⁴⁰

National Guard Units Return Home

Over 750 National Guard Soldiers were released from active duty at twelve JMC installations, while two remaining installations (Tooele and Blue Grass) rotated 322 National Guard Soldiers to continue force protection in support of Operation Noble Eagle. The National Guard played integral roles in the defense of the Army Ammunition Plants under elevated terrorist threats.

MOVING INTO FY04

AFSC and JMC will move into FY04 provisionally established. The commands will continue to support GWOT/OIF and any additional missions while remaining adaptable for future changes. The following reports will present the major challenges and accomplishments of its offices, directorates, and commands. FY03 proved to be distinctive as all the capabilities AFSC/JMC has been gaining through the recent transformations were put to use through support

³⁸ JMC G3/GY FY03 AHS, p. 277-280.

³⁹ Tooele AD FY03 AHS, p. 470.

⁴⁰ Defense Ammunition Center FY03 AHS, p. 337.

of Operation Enduring and Iraqi Freedom. The command's support of OIF and the GWOT have proved out the vision of streamlining support structures on the ground in theater. Moves made in 2000 to add missions to the old Army War Reserve Support Command and subsequent refinements of mission and organization were sometimes questioned. FY2003 was the test and AFSC succeeded due to the foresight and vision of a succession of commanders, planners, and the entire workforce. FY2004 will see further refinements as the command uses support of GWOT as a laboratory to further evolve modern logistics support to the warfighter.