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**DIRECT VENDOR DELIVERY CHALLENGES WITHIN THE DEPARTMENT OF  
DEFENSE: POTENTIAL COST SAVINGS BEYOND \$ MILLIONS!**

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## **ABSTRACT**

The Department of Defense (DOD) on occasion emulated commercial sector's best business practices to be more efficient and to save money. In 1990, Congress tasked the DOD to use commercial sector's best practice for cost-savings. The DOD incorporated Direct Vendor Delivery (DVD) into its supply chain processes. Several audits since 1990 revealed that there was potential for millions of dollars in cost-savings but DVD also cost the DOD millions of dollars and manpower. In addition to cost, the audits disclosed that DOD faced other challenges due to DVD such as marking and labeling, packaging and documentation. Although delays in shipment of cargo due to policies and procedures not being followed seemed to be the problem, initial review of audits suggested additional potential causes of DVD challenges existed.

All DVD audits were one-of-a-kind where each addressed only to a particular profession within the supply chain. Each segment of the challenges was never connected as a whole to be presented to the supply chain community at the Office of the Secretary of Defense level. The purpose of this research paper is to use the case study framework to provide a consolidated report of all DVD challenges contained in the audits by conducting a review. Through critical analysis of each audit, this paper will identify additional challenges, provide potential root causes and present recommended actions.

## SECTION I: INTRODUCTION

The Department of Defense's (DOD) primary responsibility is national security. The largest defense funding in recent history was \$691 billion in Fiscal Year (FY) 2010. Since then, the funding has continued to decrease with current FY 2017 projected funding being \$574 billion.<sup>1</sup> The DOD will most likely continue to face budget cuts as well as personnel cuts. In his *2017 Defense Posture Statement*, Secretary of Defense Ash Carter admitted that the DOD did not get all the money it wanted. He asserted that the DOD had to compromise and sacrifice. He asked the DOD to look for ways to save money so that the DOD could channel funds towards much needed programs such as counterterrorism.<sup>2</sup> There are countless ways to save money for the DOD. One of the ways is through correcting deficiencies identified in audit reports accomplished by the Inspector General of the Department of Defense (IG DOD) or the U.S. Government Accountability Office (GAO). DOD personnel commonly refer the IG DOD as DODIG.<sup>3</sup> For clarity, this paper will use DODIG.

The GAO, commonly referred as the "congressional watchdog," assists the Congress in ensuring prudent management of government/taxpayers' money by assessing federal government policies and programs. The GAO provides factual and unbiased report of its findings to the Congress.<sup>4</sup> DOD Directive 5106.01, *Inspector General of the Department of Defense*, allows the DODIG to serve as an independent office to perform audits and evaluations on programs and operations of the Department of the Defense. The DODIG advocate policies and guidelines for actions designed to encourage efficiency in the military. It also ensures the Services effectively administer programs to avoid fraud, waste and abuse.<sup>5</sup> Among other things, to ensure the DOD realized cost-savings through the Direct Vendor Delivery (DVD) program, the DODIG conducted several audits. The audits revealed multitude of challenges, cost-savings as well as

waste of DOD funds. However, each of the audits only reviewed a segment of the DVD program and none of them provided a clear picture of all the challenges. This research will determine if the DOD could save significant money by identifying and critically analyzing all DVD challenges, and produce a plan to either eliminate or minimize those challenges.

## **DVD DEFINED**

Defense Logistics Management Standard (DLM) 4000.25-1, *Military Standard Requisitioning and Issue Procedures* defined a DVD as an acquisition of product direct from a commercial source (vendor) through a government purchase card (GPC) or a contract. Generally, it is the vendor's responsibility to ship the purchased item from its location to final destination using commercial transportation without the assistance from the DOD.<sup>6</sup>

In accordance with the Inventory Reduction Plan, Office of the Under Secretary of Defense, Acquisition, initiated the DVD program in 1990, as the DOD's cost-savings initiative. The idea was to save expenditures in warehousing of materials by purchasing materials through the DVD program as much as possible to reduce inventory. The intent was to purchase high demand commercial items with the expectation of being more responsive and cost-effective.<sup>7</sup>

## **DESCRIPTION OF PROBLEM**

According to a transportation subject matter expert (SME) from the Air Force Global Logistics Support Center (AFGLSC), the intent of the DVD program was to rely on vendors to ship purchased items to their final destination. However, vendors were not able to provide door-to-door service for many shipments primarily because the final destinations were in unreachable places. For example, commercial carriers do not service U.S. Central Command's forward operating bases (FOB), commonly referred as the frontline. In this case, a DOD Contracting

Officer would codify in the contract to instruct the vendor to ship the purchased items to a DOD transit point for onward movement.<sup>8</sup> The purchaser is supposed to provide the same instructions to vendors when using the GPC instead of a contract. The DOD transit points, also referred to as hubs, are seaports and airports (also known as aerial ports) that provide transportation services for onward movement to destination. In most cases, shipments through these hubs required multiple stops, transfer of cargo to another carrier and/or multiple modes of transportation (multimodal) e.g. air and surface.<sup>9</sup> This is the segment where the DOD faced challenges.

The challenges occur when the delivery vehicle such as a truck delivers a shipment to a hub and the shipment ends up being frustrated instead of moving in the Defense Transportation System (DTS) towards destination. According to the Office of the Deputy Assistant Secretary of Defense for Transportation Policy (DASD/TP), a frustrated cargo is a piece of cargo with discrepancies set aside in transit for resolution before it can move toward its destination.<sup>10</sup> Discrepancies include but are not limited to marking and labeling, packaging and documentation to include data within the transportation automation systems. Frustrated cargo has the potential to delay shipments from days to months and susceptible to be misdirected and in most cases end up lost. The value of each cargo could be a dollar to hundreds of thousands of dollars. In addition, this could affect the arrival of vital supplies and material on Required Delivery Date (RDD) to support personnel assigned to the FOBs.<sup>11</sup>

## **RESEARCH QUESTION**

All of the previous audits revealed numerous challenges but each of the audits only reviewed a portion of the DVD program without duplicating the efforts of other audits or providing a clear picture of all the challenges. This research paper uses the case study framework to connect those audits by analyzing and ascertaining all the challenges the DOD is

dealing with regarding DVD shipments by asking, “What Are the Direct Vendor Delivery cargo shipment challenges for the Department of Defense?”

This paper will begin with a literature review. Then, it will provide a brief historical context of the program and provide implication of the challenges DVD faces. Next, it will offer in-depth analysis of the case study. In order to determine the challenges, the research will analyze historical documents as well as results from conversations with transportation SMEs. The SMEs were assigned to higher headquarters (HQ) levels that influenced policies and processes at the enterprise level. Documents include but are not limited to DOD studies, transportation systems, GAO and the DODIG audit reports. This paper will then provide results of the analysis. Finally, it will conclude with recommendations. The following literature review is to provide a brief history of the program, challenges, and to acknowledge and respond to critics.

## **SECTION II: LITERATURE REVIEW**

### **PROBLEM BACKGROUND**

On September 2016, the AFGLSC SME representing HQ Air Force in transportation polices requested support from the United States Transportation Command (USTRANSCOM) to curtail persistent problems of frustrated DVD shipments transiting through Dover Air Force Base (AFB) aerial port.<sup>12</sup> Dover is one of five largest aerial ports in the DOD.<sup>13</sup> According to the SME at Dover Customer Service Branch (CSB), the CSB personnel are responsible for frustrating the DVD cargo once they discover discrepancies and file a Supply Discrepancy Report (SDR) for each DVD with one or multiple discrepancies. Currently, CSB filed two years worth of SDRs. The CSB also ensures responsible party fixes the discrepancies prior to the

cargo being placed back in the DTS.<sup>14</sup> The conversation with the CSB representative on SDRs prompted the research on DVDs and review of DODIG audit reports. A review of the Feb 1995 DODIG audit report, *Controls over Material Procured for Direct Vendor Delivery*, revealed that the DVD challenges appeared to have started since 1995.<sup>15</sup>

The DODIG's office conducted an audit of Defense Logistics Agency (DLA) and the Services in FY 1995.<sup>16</sup> The audit was to learn if DLA and the Services had positive internal control on items purchased using the DVD program. The DODIG examined the efficiency of the program by inspecting records from FY 1990 to FY 1994 and discovered that neither DLA nor the Services had acceptable internal controls. Examples of internal controls include having visibility of the cargo while being transported, proof of delivery, as well as being able to account for all items shipped. The report revealed that none of the agencies could identify the whereabouts of ten percent of 416,668 DVD material valued at \$1.4 billion.<sup>17</sup> This had serious implication to the DLA and Services' oversight of the program to deliver mission essential supplies to hard-to-reach locations. Some critics could consider this program more troublesome than it is worth and suggest cancelling the DVD program. However, according to the 1997 DODIG *Joint Audit Report: Direct Vendor Delivery and Just-In-Time Inventory Management Initiatives*, the program had the potential to save the DOD millions of dollars.<sup>18</sup>

The FY 1997 DODIG Joint Audit report identified the DVD program as being responsive and cost-effective. Therefore, the audit report concluded that the DOD could save millions of dollars annually.<sup>19</sup> The audit report stated that in FY 1996, the Joint Logistics Audit Planning Group (JLAPG) requested that the DODIG audit DLA and the Services on the Just-In-Time Inventory Management initiatives to include DVD. This Just-In-Time project was in response to the Congressional order in 1990 that the DOD use commercial sector's best practice model as a

standard for cost-savings. This model was an inventory reduction initiative to save money and transportation time from procurement to delivery of material. The audit identified considerable savings. DLA's component, the Defense Personnel Support Center (DPSC) estimated annual savings of over \$30 million on medical items. This resulted in DPSC reducing over \$200 million in inventories between FY 1993 to FY 1997.<sup>20</sup>

The U.S. Army Tank-automotive and Armaments Command (TACOM) was able to reduce the annual inventory of tires for its vehicles by 65 percent. This was attributable to the U.S. Army's reliance on the DVD program. The U.S. Air Force did not adopt the DVD program as is but used the techniques identified in the program to tailor its logistics practices into the Lean Logistics Initiatives. Intent of the Lean Logistics Initiatives was to reduce the process touch points in the repair and maintenance cycles, the logistics functions and the transportation time from the order of weapons systems' spare parts to delivery to the user. The Air Force projected cost-savings of \$798 million between FY 1997 and 2001 due to the Lean Logistics Initiatives. Additionally, the Air Force projected reduction of 1,672 personnel due to reduction of cargo transportation times by almost 50 percent.<sup>21</sup> Critics could assert that since the 1995 and 1997 DODIG audits were two decades ago or more, it is possible that the logistics community corrected the DVD problems or at least minimized them. However, subsequent audits and studies, to include DODIG and GAO audits as recent as 2014, confirmed that the DVD challenges continued to occur.

In FY 1999, the DODIG conducted an audit on two of DLA's depots, Defense Supply Centers (DSC), Columbus and Richmond.<sup>22</sup> The audit was to assess the Logistics Response Time (LRT) to see if the DVD process was supporting or hindering the LRT requirements established by the DOD, in accordance with the *Government Performance and Results Act*.<sup>23</sup>

The act was a congressional mandate for the DOD to model the commercial industry's best business practices that will optimize the DOD's logistics processes and save money. The DOD codified the LRT requirements in the DOD Logistics Strategic Plans published in 1998.<sup>24</sup> The aims of the strategic plans were to reduce warehousing of supply inventory items that were not on the high demand list and store items that were on high demand by customers.

According to the FY 1999 audit of DSC Columbus (DSCC), the DOD Logistics Strategic Plans tasked the DSCs to maintain the right amount of high demand items in stock to meet the customer's on-time delivery needs. The DSCs were to ensure the same level of response to customers for items that were not in stock by using the DVD program, which was the industry's best practice. The strategic plans directed the DLA to improve its logistics processes. The audits targeted the DSCs because of the important role of the DSCs in supplying the DOD. The DSCs purchase, warehouse and supply 97 percent of the consumable hardware required by the DOD. That equates to 3.9 million supply items valued at \$2.6 billion. DSC's logistics processes were a major factor in the LRT. The DOD's goal by the year 2000 was to reduce the LRT to 18 days, decreasing response time by 50 percent. The 1999 audit used the baseline of 36 days response time established by the 1998 DOD Logistics Strategic Plans to assess the LRT for the DVDs processed by the DSCs.<sup>25</sup>

The response time for DLA to fill orders in FY 1996 with an item that was in stock took an average of 25 days. Records showed that the average DVD response time in the same FY for both DSCC and DSC Richmond (DSCR) to fill customers' orders was 54 days, which exceeded the baseline of 36 days.<sup>26</sup> An audit of DSCC also revealed DVD challenges.<sup>27</sup> The FY 1997 records examination of DSCC revealed that DVD did not contribute to the optimization of the LRT and instead extended the response time. Out of the 39 DVD purchase requests sampled by

the auditor, 24 requests extended the LRT by an average of 20.3 days and 15 purchase requests extended the response time by an average of 84 days.<sup>28</sup>

The second part of this audit in FY 1999 was an audit of DSCR to assess the DVD's contribution to the LRT.<sup>29</sup> After concluding the audit of DSCR, the DODIG arrived at the same conclusion as it did on the audit of DSCC. Again, DVD did not contribute to the optimization of the LRT. The auditor analyzed records of 25 DVD items in FY 1997 and found that five purchase request items extended the LRT by four to six days. All 20 of the remaining items sampled extended the response time between six to 182 days, resulting in an average extension of 64 days.<sup>30</sup> The DODIG concluded that there was no assurance that the DVD was value added to DLA's logistics process in meeting the DOD's LRT goal. In addition, the DODIG asserted that DLA did not consider customers' RDD needs prior to incorporating the DVD method. Furthermore, the DODIG recommended that DLA should measure DSCs' performance not on a segment of the process but measured based on the total cost to the logistics process.<sup>31</sup>

In 2008, DASD/TP conducted a study of frustrated cargo.<sup>32</sup> It was to address the continued problems with DOD cargo being frustrated while transiting through the DOD-managed or owned ports. The goal of the study was to determine root causes of the problems and to propose possible solutions. This study was similar to the 1999 DODIG audits of DSCC and DSCR. It was frustrated cargo causing delays that negatively affect meeting the customers' RDDs. Cargo being frustrated also has significant impact on not meeting the LRT prescribed in the DOD Logistics Strategic Plans.<sup>33</sup> The 2008 study reviewed records and processes at Dover AFB aerial port and New Cumberland Container Consolidation Point (NCCCCP) at Defense Depot Susquehanna, Pennsylvania.<sup>34</sup>

According to a Senior Transportation Analyst at USTRANSCOM's Logistics Sustainment Division, the study focused on Dover AFB aerial port due to its role as one of the largest aerial transit hubs in the DOD for cargo destined to outside Continental United States (OCONUS) locations. In addition, DVD shipments enter the DTS through large aerial ports such as Dover AFB aerial port. Dover AFB is thus more susceptible to problems with frustrated cargo than any other aerial ports.<sup>35</sup> Along with Dover, the study focused on NCCCP as another primary hub for OCONUS shipments. CCPs receives all cargo destined to OCONUS locations, consolidates items headed for the same destinations with the same Transportation Priority and containerizes those items. Once containerized, CCPs ship the containers to the air or seaports of embarkation (POE) for onward movement to their destinations. This study focused on the shipments from NCCCP to Dover aerial POE (APOE).<sup>36</sup>

Dover APOE faced two challenges, frustrated cargo and No-Hits.<sup>37</sup> Since this paper already defined frustrated cargo, it will provide a definition for No-Hits. No-Hits occurs when a person in-checks cargo into Global Air Transportation Execution System (GATES) and finds no Advanced Transportation Control and Movement Document (ATCMD) data.<sup>38</sup> According to AMCI 24-101V4, *Military Airlift/Air Transportation Systems Management*, GATES is Air Mobility Command's (AMC) automated system that captures and provides information on air transportation transactions for cargo or personnel. GATES supports operations for the aerial ports and provides In-Transit Visibility (ITV).<sup>39</sup> According to the Defense Transportation Regulation (DTR) Part II, *Cargo Movement*, ATCMD is a document with basic shipping data to manage the movement of cargo within the DTS. ATCMD is required for all cargo to receive air transportation clearance to enter the DTS through the APOE.<sup>40</sup> Therefore, a cargo in No-Hit status had not received clearance for air shipment.

The DASD/TP study reviewed two months worth of records and discovered that Dover APOE received and processed 26,764 shipments. Out of those shipments, 2,307 were in No-Hit status and 1,094 were frustrated. Of the frustrated shipments, six percent were DVD.<sup>41</sup> However, the report suggested much more of the frustrated cargo were DVDs but the auditors could not locate evidence. The primary source of frustrated cargo arrived from DLA's depots such as CCPs and DSCs.<sup>42</sup> Although the audit did not categorize cargo from those locations as DVDs, it is possible that several of the shipments were consolidated DVD shipments from CCPs. All audit reports mentioned the impacts of DVD challenges and frustrated cargo. However, DASD/TP study was the only report that quantified those challenges.<sup>43</sup>

According to the auditors, it took an average of 13 minutes to correct No-Hits problems. It took 495 hours to correct 2,307 No-Hits within the two-month timeframe.<sup>44</sup> An average delay for the frustrated cargo was 11 days and it took an average of two hours to process frustrated cargo. For 864 frustrated cargos within the two-month timeframe, it took approximately 1,728 hours.<sup>45</sup> All audit reports reviewed so far were studies on the impacts of DVDs with the exception of the next and most recent audit.

According to the FY 2014 GAO audit report, *Defense Transportation: DOD Needs to Take Actions to Improve the Transportation of Hazardous Material Shipments*, the FY 2013 National Defense Authorization Act directed the GAO to audit the DOD.<sup>46</sup> It was an assessment of the DOD's regulatory guidance and established procedures on hazardous material (HAZMAT) shipments. The Congressional Committees with oversight of the DOD wanted to ensure the HAZMAT shipments were safe, delivered on time and cost-effective to the DOD. This included reviewing DOD's policies and procedures on labeling, packaging and handling of HAZMAT shipments.<sup>47</sup> For the audit, the GAO selected DSCR, Dover APOE and Norfolk APOE. The size

and scope of the three locations would provide information needed for all modes of transportation as well as various types of HAZMAT. The audit reviewed records from FY 2009 to FY 2013.<sup>48</sup>

The FY 2014 GAO report identified a few areas of improvement. For example, the report identified documentation errors and packaging discrepancies that led to delay of shipments from a few hours to a number of weeks. In a few of those cases, those errors had the possibilities of having negative impacts on national security or public safety. The audit revealed that there were 246,747 HAZMAT shipments through the five major Continental United States (CONUS) APOEs. Out of those shipments, 27 percent were frustrated, which resulted in delays.<sup>49</sup> This GAO report declared that the DOD did not follow-up to ensure corrective actions on the problems identified in the 2008 DASD/TP study.<sup>50</sup> Meaning, the DOD could have averted some of the current challenges had the DOD followed-up on the 2008 report. Furthermore, the FY 2014 GAO report surmised that the DOD had not carried out a comprehensive study to establish the source of HAZMAT packaging and documentation problems that were contributing to the shipment delays. Without being able to identify the source of its problems, the DOD will continue to expend resource unnecessarily and noncompliant with the DTR.<sup>51</sup> The report acknowledged the possibilities of DVD shipments being part of the 246,747 HAZMAT shipments. The DVDs could be from DSCR or direct from the vendors to the APOEs.<sup>52</sup>

In response to FY 2014 GAO audit, the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (USD (AT&L)) took the lead to implement the recommended actions.<sup>53</sup> One of the actions was to uncover root causes of documentation and packaging discrepancies of HAZMAT cargo frustrated within the DTS. In addition, recommended actions included identifying milestones for corrective actions.<sup>54</sup> DASD/TP, a

subordinate directorate of USD (AT&L) formed a working group (WG) to identify root causes of the HAZMAT problems. The WG tasked AMC and DLA to provide HAZMAT cargo reports from 1 October 2013 to 9 March 2017. AMC's GATES report identified that five major APOEs processed 62,703 HAZMAT shipments within that timeframe and 34,040 shipments were frustrated for a myriad of reasons. According to the reports, an average of 28 percent of the shipment delays were due to documentation discrepancies, but the reports did not identify packaging discrepancies.<sup>55</sup>

The report identified less than one percent of the frustrated HAZMATs were damaged shipments although it is possible that a portion of the damaged shipments were due to packaging discrepancies. The report also indicated that AMC could not locate 612 shipments. DLA provided frustrated HAZMAT cargo report received through DOD Web Supply Discrepancy Reporting (WEBSDR) system.<sup>56</sup> WEBSDR is a web-based Supply Discrepancy Report (SDR) automated tool for the logistics community to use for reporting supply discrepancies.<sup>57</sup> According to the DTR, a transportation personnel accomplishes the SDR for "...packaging, and documentation discrepancies, attributable to the responsibility of the shipper or consignor."<sup>58</sup> DLA's WEBSDR report for the calendar year 2016 found that 294 shipments were frustrated due to documentation discrepancies but GATES showed 1009 shipments frustrated due to documentation errors. WEBSDR also identified 1023 frustrated shipments versus GATES' report of 246 shipments due to packaging discrepancies. Although DASD/TP verified through the AMC and DLA reports the DOD has challenges with frustrated HAZMAT cargo in DTS, it is unclear why the reports contradicted each other.<sup>59</sup>

According to the DASD/TP HAZMAT WG coordinator, GATES' frustrated cargo report provided to the GAO for audit in FY 2014 revealed 10 percent of frustrated cargos were due to

documentation errors. The WG coordinator stated that the WG recognized a good portion of the frustrations were due to DVD shipments. One of the many reasons for frustrated DVD was lack of air cargo shipment preparations instructions to the vendor in the contract. The WG has since implemented numerous policies and procedures to limit frustrated cargo to include ensuring cargo preparations instructions included in the contract for DVD shipments through the DTS. According to GATES report, documentation discrepancies increased dramatically to over 28 percent, which is almost triple the GAO findings.<sup>60</sup> Discovering the challenges of DVD cargo shipment remains to be seen.

## **ASSUMPTIONS**

The DOD may have continued to face challenges due to the failures of the DODIG and GAO. Every audit mentioned in this paper was one-of-a-kind, and none duplicated the other on depth and scope of the analysis. FY 1995 DODIG audit studied the Services and DLA's management of the DVD program by reviewing internal control processes.<sup>61</sup> FY 1997, DODIG analysis requested by the JLAPG reviewed cost-savings realized from management of the just-in-time inventory and DVD. The audit was at a much smaller scope within the DOD.<sup>62</sup> The FY 1999 DODIG audits took place only in DSCC and DSCR to assess the LRT and DVD's contributions.<sup>63</sup> The 2008 DASD/TP study only reviewed records and processes for frustrated cargo at Dover APOE and NCCCP.<sup>64</sup> FY 2014 GAO audit only analyzed frustrated HAZMAT in DTS through five major CONUS APOEs and DSCR. The extent of the challenges is unclear, but appears widespread.<sup>65</sup>

With the exception of the DODIG audit of just-in-time inventory and DVD in FY 1997,<sup>66</sup> all other audits provided recommended actions. It is unclear if the Services and DLA took actions to correct deficiencies since there were no apparent follow-up actions or audits by the

DODIG and GAO. It was the same for 2008 DASD/TP's study. Gaps between the DOD and its civilian counterparts could add to the challenges. Cargo shipments within the civilian transportation system have their own Federal regulatory guidelines and statutes. The DOD has its own regulatory guidelines and procedures to ship cargo within the DTS. The vendors, DOD contracting officers, and military customers using the GPCs to purchase items were unaware of DOD's regulatory guidelines and shipping DVDs through the DTS could place the DVDs in frustrated status.<sup>67</sup>

### **SECTION III: IN-DEPTH ANALYSIS OF THE CASE STUDY**

A myriad reasons for frustrated cargo to include but not limited to marking, labeling, packaging and documentation. This includes data within the automated transportation systems such as GATES.<sup>68</sup> Among other requirements, DTR Part II, *Cargo Movement*, mandates that all cargo entering and exiting the United States must comply with governing DOD and Federal regulatory requirements for packaging, marking, labeling and documentation of cargo.<sup>69</sup> Although the DTR has basic requirements for marking and labeling in the *Packaging and Handling* chapter, depending on the commodity, mode and method of shipment, the shipper must abide by numerous DOD, Federal, Services and international regulatory requirements on marking, labeling, packaging and documentation.<sup>70</sup> According to the DTR, "Mode refers to the general category of movement (e.g., air or surface) while method refers to the specific means of transportation, (e.g., motor, rail, air freight, parcel post)."<sup>71</sup> For a vendor shipping a DVD cargo through an APOE, things could become complicated and may contribute to frustrated DVDs at DOD-managed or owned ports.<sup>72</sup> This research will analyze all available DVD related audits and reports to validate and consolidate challenges.

***Controls Over Material Procured For Direct Vendor Delivery, DODIG Audit Report No. 95-107 (FY 1995)***

According to the FY 1995 DODIG audit report, the audit was to learn if DLA and the Services had positive internal control on items purchased by the DOD's wholesale management institutes using the DVD program.<sup>73</sup> In addition to the DODIG examining records of the Services and DLA from FY 1990 to FY 1994, the DODIG reviewed the processes of "...300 customer organizations, 15 wholesale supply organizations...4 payment organizations...29 contractors and 15 contract administration offices..."<sup>74</sup> Analysis revealed that the DOD did not have acceptable internal controls of its DVD processes. The auditors found significant control deficiencies that contributed to unaccountability of 39,191 DVD transactions valued at \$104.1 million. For detailed analysis to determine the challenges of the record for unaccountable DVDs, the auditors selected 124 transactions with a combined value of \$7.4 million of unconfirmed receipt of shipment by the customer.<sup>75</sup>

Through the Defense Finance and Accounting Service (DFAS) and DLA records, the auditors verified the shipment of the items for 124 transactions. Out of the 124, customers did not document receipt of 71 transactions worth \$4.4 million. In addition, 23 transactions with a value of \$2.6 million shown as complete and records filed without receiving the shipments. The remaining 30 transactions were either partially received or not at all. Customers, however, did not identify this using the discrepancy reports. According to the audit report, 17 of the items were worth \$234,000. The analysis also discovered that in 13 of the 30 transactions, the receiver never received advance notification of incoming shipment. The proper protocol was for the depot to send advance warning to the receiver of the incoming shipment along with the bill. Once the customer received the shipment, the customer documents receipt and/or report non-receipt of shipment through discrepancy reporting. Failure to follow procedures by the receivers

resulted in DFAS payment for 98 transactions that were not confirmed receipt, valued at \$4.7 million. Because of poor records keeping, the auditors could not establish the status or verify payment for the remainder of the 76 transactions out of 124 worth \$6.8 million.<sup>76</sup>

The DODIG provided three recommended actions. The DOD must institute and maintain proper controls to alert the receiver of incoming DVD shipments and for the receiver to maintain required documentation for receipt of shipment. Ensure customers/receivers appropriately document and report non-receipt of shipments in part or in its entirety. Receiving personnel properly follow procedures for timely acknowledgement of receipt of DVD shipment in accordance with DODD 4000.25-2-M, *Military Standard Transaction Reporting and Accounting Procedures* (MILSTRAP).<sup>77</sup> According to this audit report, DODIG identified exact problems mentioned in this report during previous audits from FY 1984 to FY 1988. Although the audits in FY 1984 to FY 1988 were not on DVDs, they analyzed the same internal control. The problems identified in those reports were that DLA and the Services paid for items not received, and did not have adequate controls to ensure receipt of material. Receiving customers did not report shipments that were non-receipt and shippers did not properly notify receivers of pending inbound cargo. DLA and the Services developed plans for corrective actions.<sup>78</sup> It had been over seven years since the last audit, yet neither DLA nor the Services took any actions to correct the deficiencies.

The FY 1995 DODIG audit report depicted a clear picture of DVD challenges. However, it would be a mistake to conclude that the evidence provided was undisputable. The auditors acknowledged they did not verify the validity of the reports derived from the transportation computer systems due to the involvement of several different types of systems to obtain required reports.<sup>79</sup> Computer systems are not 100 percent reliable and by not verifying the accuracy of

the reports, the auditors' assessments could appear less. The auditors only sampled 1,934 out of 416, 668 DVD transactions in accordance with the DODIG sampling plan. The unaccountable 39,191 DVD transactions were not analyzed thoroughly through reviewing of records and processes. Therefore, unlike the 124 unaccountable transactions analyzed in detail by the auditors, the DODIG could not report if the DOD paid the 39,191 transactions nor could the DODIG identify if the majority of the failures were due to receivers not documenting receipt of shipments or shippers not providing advance notification of incoming shipments.<sup>80</sup>

Even though it may not have been possible to conduct detailed analysis of all 39,191 transactions, the auditors should have analyzed more than 124 transactions. This shortsightedness to forgo analysis of 39,191 transactions and not verified the validity of the reports from the computer systems, may have caused the U.S. Army to state that it had acceptable policies and procedures in place. It may also be the reasons for DLA to non-concur with the DODIG's recommendations and provide its own courses of action to police its processes.<sup>81</sup> The Services and DLA's lack of cooperation with the DODIG in formulating corrective actions for this audit, not acknowledging failures on their parts, and not being proactive in corrective actions with the previous audits in FY 1984 to FY 1988 added to the DVD challenges.

***Direct Vendor Delivery and Just-In-Time Inventory Management Initiatives, DODIG Joint Audit Report No. 97-220 (FY 1997)***

The DODIG audit conducted in FY 1997 was to identify if the DVD program was cost-effective and responsive to the customers' needs.<sup>82</sup> This audit coordinated efforts between the DODIG, Army and Air Force Audit Agencies and the Naval Audit Service in order to evaluate the Services and DLA on the Just-In-Time Inventory Management initiatives including DVD.

The auditors "...visited the Offices of the Under Secretary Defense (Comptroller) and the Deputy Under Secretary Defense for Logistics...DLA and its component, the Defense Personnel Support Center...five inventory control points responsible for managing storage of equipment and material."<sup>83</sup> To ensure the Services and DLA's cost-savings initiatives complied with DOD Regulation 4140.1-R, *DoD Materiel Management Regulation*, the auditors reviewed appropriate guidelines, processes and documentation from FY 1993 to FY 1997. In addition, the auditors reviewed the Services and DLA's processes on estimating cost-savings. The auditors, however, did not assess any obstacles to the DVD program or its benefits due to their belief that ample documented evidence existed.<sup>84</sup>

Total cost of inventory of supplies entailed cost in purchasing, storage, interests, transportation and personnel. The DPSC estimated inventory savings on pharmaceutical and medical items by embracing commercial sector's prime vendor method. This method allowed the DOD to contract a distributor to take the responsibilities of storing and shipping medical supplies directly to the customers when requested. This resulted in DPSC reducing over \$200 million in inventories between FY 1993 to FY 1997 with an annual estimated cost-savings of over \$30 million.<sup>85</sup> The DPSC used a computer program developed by DLA to estimate cost-savings and verify viability of DVD. This computer-based model included factors such as, "...acquisition lead time changes, holding cost, transportation and offsetting price increases."<sup>86</sup>

The DPSC also estimated cost-savings on inventory of subsistence items at the wholesale level by using the prime vendor methods. The potential savings were due to "...reductions in commercial cold storage warehouse costs...reductions in the DLA depot system surcharge...based on...cost for staffing and managing warehouses; and reductions in inventory holding costs."<sup>87</sup> Through its internal review organization, the DPSC was assessing retail level

cost-savings instead of wholesale level. It appeared the DPSC was not able to quantify its estimated savings on subsistence items.<sup>88</sup>

Prior to adopting the DVD program, the U.S. Army TACOM purchased tires in bulk to store within several depots as inventory to supply the Army. Since implementation of the DVD program, TACOM was able to reduce the annual inventory of tires for its vehicles by 65 percent. In collaboration with the Army Materiel Command, TACOM developed a computer program to determine cost-savings. This computer-based model included factors such as "...difference in cost between the depot stock method of managing inventory and DVD. The factors included inventory holding cost, lead time reductions, transportation and offsetting cost."<sup>89</sup> Although TACOM was able to identify annual inventory reduction, it seems unable to quantify its estimated savings. The success of its tire program resulted in TACOM supplying the entire Army with retreaded tires through the DVD program. By October 1998, the Army hoped to enhance supply ordering by employing an Internet program to purchase supplies through one of its depots. The Internet program was supposed to identify the least costly part obtainable through either the government or commercial suppliers and arrange a delivery through DVD program to the user.<sup>90</sup>

The Navy incorporated DVD into its logistics process for consumable items. It contracted the responsibilities of depot repair and managing its depot inventory at inventory control points. It initiated DVD of computer parts and items for communications to the customers and established prime vendor contracts to maintain its facilities in its installations. The Navy and Marine Corps supply leadership felt tracking DVD cost-savings was not added-valued to the overall logistics program since they considered savings due to DVD was savings to the overall logistics budget. Therefore, the Navy did not develop any mechanisms to track

savings. The supply leadership provided item managers the autonomy to decide the type of commercial best practices to incorporate based on anticipated improvements such as reduction in inventory, decrease in handling cost and decrease in cost due to enhanced processing times. In addition, the Navy had a contract with an accounting agency to conduct a feasibility study of using DVD for its repairable items.<sup>91</sup>

Instead of having a separate DVD program, the Air Force used the DVD techniques to tailor its logistics practices into Lean Logistics Initiatives. Intent of the initiatives was to reduce the time required to deliver weapons systems' spare parts ordered by the user. The Air Force mentioned it would add to the cost-savings by developing Depot Repair Enhancement and Contract Repair Enhancement Programs. The Depot Repair Enhancement Program will prioritize customers' requirements and expedite spare parts delivery. The Contract Repair Enhancement Program "...will implement commercial pricing and packaging and reduce Government oversight."<sup>92</sup> To realize additional cost-savings in inventory, the Air Force was working with DLA to bring "...DVD capability consumable spare parts."<sup>93</sup>

Like the Navy, the Air Force also did not develop any mechanisms to track savings due to DVD initiatives. However, it contracted an analyst to project cost-savings. Due to Lean Logistics Initiatives, the contractor projected cost-savings of \$798 million between 1997 and 2001. Although the contractor credited decrease "...in cycle and shipping times..."<sup>94</sup> to DVD methods, the contractor could not isolate savings to particular Lean Logistics initiatives. Additionally, over the span of several years, the Air Force projected reduction of 1,672 personnel due to reduction in cargo transportation, repair and maintenance processing times from approximately "...66 days to 36 days."<sup>95</sup>

According to this FY 1997 audit report, the DOD maintained approximately three percent of \$68.5 billion annual inventory with DVD and other commercial sector's inventory management best practices. The report, however, tracked savings on DVD and just-in-time inventory without comparing with cost of inventory. Therefore, the audit results stating that DLA and the Services computed savings appeared subjective.<sup>96</sup>

Audit reports from FY 1984 to FY 1988 and FY 1995 DODIG provided evidence that there were obstacles to the DVD program. This FY 1997 audit report lacked critical analysis due to auditors not assessing any obstacles to the DVD program or its benefits because they believed ample documented evidence existed. The report provided no evidence. Their inactions dismissed other viewpoints that readers may have and made this report less credible.

The audit report provided some strong support on savings due to DVD but still lacked evidence in a few of the cases that claimed to be cost-effective. Some examples were, the DPSC assessed cost-savings at the retail level instead of wholesale level for its subsistence items and was not able to quantify its estimated savings. TACOM was only able to identify annual inventory reduction but was not able to quantify its estimated cost-savings. The Navy and Marine Corps supply leadership saw value in DVD but felt tracking DVD cost-savings was not added-valued to their overall logistics program and did not develop any mechanisms to track savings. The Navy supply leadership provided item managers the autonomy to decide the type of commercial best practices to incorporate based on anticipated improvements. However, without metrics or cost-savings tracking, it would be difficult to identify improvements. Since DVD was part of Lean Logistics Initiatives, the Air Force did not develop any mechanisms to track savings on DVD. Therefore, there was no telling if out of the \$798 million and 1,672 personnel positions savings were due to DVD.<sup>97</sup>

Although the audit coordinated efforts between the DODIG and the Services' audit agencies, it does not appear that the auditors were in complete control of the audit process. Instead of the auditors calculating or verifying savings estimates, the auditors used DLA and the Services' savings estimates in the report. The auditors checked the DoD Regulation 4140 .1-R to ensure the Services and DLA complied with the cost-savings instructions. The DODIG stated, "The regulation...does not formalize the specific methodology to be used...Quantitative Methods Division...Inspector General, DoD, helped us assess the reasonableness of computer-processed savings methodologies..." and found all methods to be reasonable.<sup>98</sup>

There were no apparent follow-up audits since this report did not provide any findings or recommendations. Therefore, there was no telling if all future cost-savings from DVD came to fruition, such as the DPSC's inventory of subsistence items at the wholesale level by using the prime vendor methods. In addition, TACOM's future DVD programs to supply the entire Army with retreaded tires or its enhanced Internet supply ordering program to purchase supplies through one of its depots.<sup>99</sup>

***Logistics Response Time for the Direct Vendor Delivery Process, DSCC, DODIG Audit Report No. 99-101 and DSCR, DODIG Audit Report No. 99-108 (FY 1999)***

Out of the three DSCs, the DODIG selected DSCC and DSCR in a two-part audit during FY 1999 to assess DVD in support of LRT in reducing warehousing of supply inventory items while meeting the customer's needs.<sup>100</sup> LRT played an important role in DSCs meeting customers' needs since the DSCs supplied 97 percent of the consumable hardware to the DOD valued at \$2.6 billion in FY 1996. To meet the goal of reducing LRT by 50 percent, the DSCs used the Logistics Metric Analysis Reporting System to track the progress. The audits focused on customers' order processing times and management control methods.<sup>101</sup> To meet the

customers' needs, DSCs could not use the DVD program to fill all requisitions but for only 17 percent of the procurements. There were "...three types of DVD processes..."<sup>102</sup> that DLA used in support of LRT. They were planned, unplanned, and non-stocked items DVD processes.<sup>103</sup>

DSCs used planned process for requirements for large quantities of items that DSCs had advanced knowledge of, which required use of contracts, especially long-term contracts. The average processing time in FY 1997 was 8.3 days. The DSCs used unplanned process for cases where DSCs ran out of items required by customers. To support the customers, DSCs used non-negotiated purchase agreements where DSCs "...must issue an order, receive and evaluate vendors' offers, and award a purchase order."<sup>104</sup> The average time for this type of process was 94.3 days. The reason for the longer processing time than planned process was due to majority of items being on backorder and not processed in an expedient manner. DSCs used non-stocked items process for orders of items that DSCs "...do not receive enough requests to justify stocking..."<sup>105</sup> The average time for this process in FY 1997 were 67.9 days. The reason for longer processing time for non-stocked items process than planned process was due to a lengthy process. To fill those types of orders, DSCs publish solicitations and once DSCs received vendors' proposals, they evaluate and award the selected vendor with a contract.<sup>106</sup>

The DODIG determined that although DVD may have been effective in reducing consumable hardware inventory, it did not contribute to the optimization of the LRT and instead extended the response time. Records showed that the average DVD response time in FY 1997 for both DSCs to fill customers' orders using all three types of DVD processes was 54 days, which exceeded the LRT baseline of 36 days. That was more than triple the targeted 18 days of LRT. The auditors asserted that DSCs must be efficient in processing DVDs if they were to compete with the response time for filling orders using DSCs' stock items. DSCC's average

processing time for stock items was 2.2 days, planned 8.1 days, unplanned 98.9 days and non-stocked 75.5 days. DSCR's average processing time for stock items was 2.4 days, planned 6.6 days, unplanned 87.5 days and non-stocked 62.7 days.<sup>107</sup>

The following findings were some reasons for DVD's failure in supporting the optimization of LRT. The auditors found two areas in the acquisition process to attain reduction of processing times. The first area was in purchase price analyses process for automated small purchases. Out of the 30 purchase requests reviewed, the lengthy process extended the LRT for 24 purchase requests by average of 20.3 days. The auditors determined that the extended LRT was due to procedures for small purchase price analysis that were too cumbersome and unnecessary. The process required the purchase requests go through the automated system first. If the requests do not meet all parameters such as price variances and automatic ordering thresholds, the system referred the orders to purchasing official for review. In most cases, the officials process the orders manually. The manual process required the ordering officials to go through the bidding competition by the vendors. In most cases, this procedure prolonged the purchase requests as well as increased the cost of procurement.<sup>108</sup>

The second area was in process for hard-to-fill items purchase requests.<sup>109</sup> For 15 hard-to-fill purchase requests reviewed, the auditors found that the DSCs did not monitor backlogged requests adequately or consolidated purchase requests properly, resulting in extending the LRT on an average by 84 days. The extended LRT was due to failures of both ordering and technical officials. Ordering officials referred all hard-to-fill items to personnel in technical operations. Among many reasons, referral to technical officials allowed for evaluation in search of alternatives such as excess or substitute items offered by vendors, ensuring availability of vendors and ensuring items were not obsolete. In numerous cases, purchase requests were stuck

in referral status with the technical officials while the officials processed and contracted succeeding requests for exact items. Neither ordering nor technical officials followed at least four prescribed guidance and procedures on procurement consolidation or minimizing backlogs. Out of the aging 20 orders that auditors reviewed, neither ordering nor technical officials could provide accountability for 12 purchase requests.<sup>110</sup>

The DODIG provided recommendations to address the DSCs' practices to meet LRT goals. These included changes in policies and procedures on pricing and consolidation, following prescribed guidance by personnel, system changes and the use of systems to manage referred items workload. DLA either concurred or fixed items recommended by the DODIG. In addition, major obstacles to LRT were DLA and DSCs not having goals and milestones to meet the DOD's LRT goals. DLA concurred and provided one month for DSCs to comply with DLA's guidance.<sup>111</sup>

With the exception of slightly differing numbers in records reviewed and LRT, DSCR's audit, recommendations, DLA's responses and actions were either along the same line or identical to DSCC's audit.<sup>112</sup> The DODIG conducted the audits exceptionally well. The auditors reviewed all pertinent rules, regulations, procedures, automation systems and records. They also visited all appropriate work centers. The auditors did not rely on the computer-generated reports to be accurate but verified manually to ensure its accuracy. The only deficiency was the volume of records reviewed by the auditors. In FY 1997, DSCC processed 234,942 consumable hardware requisitions through DVD and DSCR processed 259,407 requisitions. However, the DODIG analyzed (further reviewed) less than 200 purchase requests combined. The DODIG could have posed a stronger argument had the auditors analyzed much more records.<sup>113</sup>

***OSD Transportation Policy Frustrated Cargo Analysis Final Project Report, DASD/TP Study (2008)***

Prior to the DASD/TP study in 2008, the DOD had no known studies of frustrated cargo.<sup>114</sup> This inquiry was to address the continued problems with DOD cargo being frustrated while transiting through the DOD-managed or owned ports and to determine root causes of the problems as well as propose possible solutions. Similar to the FY 1999 DODIG audits of DSCC and DSCR, the DASD/TP study was concerned with meeting LRT and RDDs. This included looking into impacts of DVD. Since the examination focused on shipments from NCCCP to Dover APOE, the study group, from this point forward referred as auditors, reviewed records, reports, processes and transportation systems associated with Dover APOE and NCCCP.<sup>115</sup>

NCCCP processed approximately 67,500 line items on a monthly basis using the Distribution Standard System (DSS).<sup>116</sup> A line item is an item being inventoried or shipped within the DTS.<sup>117</sup> The DSS is DLA's automated transportation system used to in-check and ship cargo, inventory and provide ITV.<sup>118</sup> A NCCCP work leader normally review all frustrated cargo identified by DSS and route the cargo to a frustrated bay for analysis and corrective actions. Most common reasons for frustrated cargo were, inaccurate or missing Transportation Control Number (TCN), incorrect destination, partial missing shipment, documentation errors and damaged cargo.<sup>119</sup> A TCN is an alphanumeric 17 digit code assigned to a shipment to control the shipment and provide ITV.<sup>120</sup> In addition to reviewing the processes, the auditors reviewed 21 days worth of reports from DSS. The reason for reviewing only 21 days of report was due to DSS lacking the ability to archive data beyond 21 days.<sup>121</sup>

The auditors analyzed data for five out of the 21-day report and discovered 219 frustrated line items. Out of the 219 items, 79 percent of the frustration was accredited to inaccurate or missing TCNs, 52 line items for wrong destination or location, eight items for partial missing

shipment and six items frustrated for damages. Delays averaged between two to over 78 days for the frustrated cargo and took an average of a few minutes to 19 hours to correct and process frustrated items. Misdirected shipments were most problematic for NCCCP. An average delay in shipment was 78 days and took an average of 19 hours to correct a misrouted shipment. Some misrouted reasons include but are not limited to destination not serviced by NCCCP, destined to another CCP or APOE and partial receipt of multi-piece shipment. According to the report, 61 percent of all shipment received at NCCCP were destined to APOEs.<sup>122</sup>

Out of the 11 origins identified that shipped to NCCCP, only two shippers were military installations. The rest were vendors shipping DVDs to or through NCCCP. The largest offender with 51 percent of contribution towards frustration was U.S. AbilityOne Commission.

AbilityOne employed four of the offending vendors responsible for distribution of supplies and equipment.<sup>123</sup> AbilityOne maintained and managed Base Supply Centers, Self-service or Base Service Stores in most military installations to provide supplies and equipments to the DOD.<sup>124</sup>

The auditors suspected that the vendors were not familiar with DTS rules and requirements.

Auditors identified a few consequences due to frustrated cargo to include DVD challenges. High priority shipments may be lost and delayed in the frustrated bay beyond RDD. In addition to DSS only archiving its data up to 21 days, it does not track frustrated cargo data, which limits the ability to analyze problems such as frustrated cargo. All frustrations were corrected at NCCCP without feedback to the vendors. Furthermore, the DOD lacked the ability or authority to take actions to correct the vendors.<sup>125</sup>

Dover AFB APOE personnel in-checked and processed using GATES, approximately 12,000 to 15,000 TCNs on a monthly basis. During cargo in-check operation, APOE personnel moved identified frustrated cargo to the designated frustrated bay. Once in frustrated cargo bay,

CSB personnel took necessary actions to correct all discrepancies and placed un-frustrated cargo in DTS.<sup>126</sup> Two months worth of records reviewed by auditors revealed that Dover APOE had 2,307 No-Hits and 1,094 frustrated shipments out of 26,764 shipments processed. Six percent of the frustrated shipments were DVDs through contracts and up to 12 percent were DVDs purchased with GPCs. However, the report suggested much more of the frustrated cargo were DVDs but the auditors could not locate evidence. Since primary source of frustrated cargo arrived from DLA's depots such as CCPs and DSCs, it is possible that a large portion of frustrated cargo were DVDs.<sup>127</sup>

There were three most common reasons for No-Hits. Cargo arrived at APOE without having ATCMD data in the Financial and Air Clearance Transportation System (FACTS) or not transferred from FACTS into GATES and ATCMD data sent to the wrong APOE through FACTS.<sup>128</sup> The FACTS is a U.S. Navy managed transportation system and all Services' transportation systems transfers ATCMD data to GATES through FACTS.<sup>129</sup> The auditors reviewed records, inspected and observed the operation at Dover APOE terminal for two days. During the two-day review, they discovered 61 No-Hits and identified that 34 percent of No-Hits cargo were not in FACTS, and 66 percent were in FACTS but ATCMD data did not transfer to GATES. The auditors could not identify the reason(s) for cargo arriving at the APOE without first transmitting ATCMD data through FACTS.<sup>130</sup> They also found another disparity which could not be explained. A two-month report from Traffic Management Office (TMO) identified that Dover APOE processed 26,764 shipments. GATES report, however, revealed only 15,894 shipments processed. In addition, CSB reported 2,307 No-Hits in two months versus GATES' 1,571 No-Hits.<sup>131</sup> TMO is an official office or unit assigned to a military installation to provide transportation services to personnel and units assigned to the installation.<sup>132</sup>

Out of the two months of records reviewed, the auditors analyzed one week's worth of data and observed the cargo processing operation at Dover APOE terminal. Most common reasons for frustrated cargo at Dover APOE were, missing TCNs and shipping labels, incorrect destination, improper documentation or packaging, and missing Transportation Account Code (TAC).<sup>133</sup> TAC is an account number used to pay for transportation charges for each shipment.<sup>134</sup> The most problematic frustrated items were hazardous cargo, which mostly originated from depots and CCPs. The majority of hazardous cargo frustrations were due to errors in HAZMAT declarations.<sup>135</sup> DTR, Part II, Chapter 204, *Hazardous Material*, required certification of all HAZMAT shipments by military air using *Shipper's Declaration for Dangerous Goods* (SDG) in accordance with AFMAN 24-204\_IP, *Preparing Hazardous Materials for Military Air Shipments*.<sup>136</sup>

Damaged cargo caused the longest delays due to sourcing of packaging specialist from TMO for repair services and the time required to repair or fabricate packages or crates. Auditors concluded that CCP personnel operated under different guidelines, alluding to not being familiar with air cargo transportation requirements, resulting in SDG errors and damaged cargo. These were ceaseless, recurring problems and according to the report, Transportation Discrepancy Reports (TDR) does not reach the vendors or NCCCP, whom were the sources of the problems.<sup>137</sup> According to the DTR, transportation personnel accomplish the TDR to document and report discrepancies such as loss, damaged or shortage of cargo caused by cargo carriers.<sup>138</sup>

According to the auditors, it took 495 hours to correct 2,307 No-Hits that occurred within a two-month timeframe. For the same two months, it took approximately 1,728 hours to fix and process 864 frustrated shipments. An average delay for the frustrated cargo was 11 days. In addition, auditors found a discrepancy in the report for frustrated cargo as they did with No-Hits.

A two-month report from CSB identified that Dover APOE had 1,094 frustrated shipments but GATES report identified only 479. The study report indicated that data transfer problems such as this were caused by the Services and DOD components using different transportation systems. For instance, APOE uses GATES and DLA uses FACTS to communicate and transmit data to GATES from DSS. This interaction of differing systems caused No-Hits resulting in APOE personnel manually entering required data into GATES which resulted in the 495 hours to correct two months worth of No-Hits.<sup>139</sup>

The auditors for the DASD/TP study provided several recommendations. For NCCCP, the auditors recommended a partnership between DLA and AbilityOne through appropriate chain-of-command to produce corrective actions on recurring problems, particularly fixing lack of TCNs and documentation. Develop a notification system to inform and correct other high-volume shippers that were not in compliance with DOD requirements. Develop means to assess results of programs developed to improve frustrated cargo.<sup>140</sup> For Dover AFB APOE, the auditors recommended partnerships between DLA depots and APOEs to establish consensus on reliable standards for HAZMAT declarations and institute means to provide feedback for continuous improvements. For damaged cargo, it was recommended that APOE conduct a study to determine cost of resources for repair and develop a program to recover expenditures on repair or replacement of packaging. Auditors suggested system enhancements for GATES, FACTS and DSS to better communicate and transfer data. Develop a notification system to inform and correct shippers that were not in compliance with air cargo transportation requirements.<sup>141</sup>

The DASD/TP's study was the only audit that quantified the impact of challenges in cargo transportation, namely frustrated and No-Hits cargo, including DVDs.<sup>142</sup> Auditors quantified the impact of challenges by providing the length of delays and matching with labor

hours to correct No-Hits and frustrated cargo. In doing so, auditors solidified their credibility and added strength to their argument as well as recommendations. However, since there were no known studies of frustrated cargo prior to this, auditors should have analyzed more records for causes of problems than just two days for No-Hits and five days for frustrated cargo. All responsible parties could dismiss the audit's finding as isolated incidents. In addition, the examination only focused on shipments from NCCCP to Dover APOE. The audit report would have been more convincing had the study looked at San Joaquin, the second CCP and the rest of the five CONUS APOEs.<sup>143</sup> There is no telling if there were other causes for frustrations. Audit of the rest of the APOEs and CCP could have either bolstered the study or provided alternative viewpoints, results and recommendations.

The auditors did a good job in identifying the causes of No-Hits and frustrated cargo but could have done better in determining the root causes and providing possible solutions. Auditors did not press further to discover the root causes of why some shipments were arriving at APOE without first transmitting ATCMD data through FACTS.<sup>144</sup> They also did not recommend further study of this occurrence. In addition, the mismatched two-month reports between TMO, CSB and GATES could not be explained.<sup>145</sup> The auditors did not pursue the discovery of root causes and did not recommend further study of this incident.

The auditors should have recommended corrective actions for DSS to provide longer archiving capabilities than 21 days and the ability to track frustrated cargo.<sup>146</sup> At least nine origins identified in this audit were vendors that shipped to NCCCP and 61 percent of the shipments were destined to APOEs for military air transportation.<sup>147</sup> Contracting officers are the primary points of contact for the vendors. All shipments from vendors were accomplished through contracts or GPCs. Since the auditors suspected that the vendors were not familiar with

DTS rules and requirements, especially HAZMAT declaration, recommendations should have been to ensure military air cargo preparation instructions were codified in the contracts or instructions provided to vendors if using GPCs. The auditors should have also recommended liaison with contracting officers for providing feedback to vendors for improvements and corrective actions. There were no recommendations to ensure high priority shipments were not lost in the frustrated bay or a follow-up study to ensure corrective actions were accomplished.

***Defense Transportation: DOD Needs To Take Actions to Improve the Transportation of Hazardous Material Shipments, GAO Audit Report (FY 2014)***

The FY 2014 GAO audit conducted from April 2013 to May 2014 was an assessment of the DOD's regulatory guidance and procedures on HAZMAT shipments to ensure shipments were safe, delivered on time and cost-effective to the DOD.<sup>148</sup> The audit was conducted in two parts. The first part focused on labeling, packaging and handling of HAZMAT and the second portion concentrated on protection of Arms, Ammunition, and Explosives shipments within the CONUS.<sup>149</sup> This research report is concerned with the first part as it pertained to DVD. The auditors reviewed all pertinent Federal and DOD policies and procedures on labeling, packaging and handling of HAZMAT shipments and visited DSCR, Dover and Norfolk APOEs.<sup>150</sup> The auditors also contacted a minimum of three departments and divisions within the Office of the Secretary of Defense (OSD), five DOD agencies and locations, HQ Services, two DLA centers, U.S. Transportation Command (USTRANSCOM) and its components, five APOEs and Department of Transportation (DOT). The audit reviewed GATES records from FY 2009 to FY 2013.<sup>151</sup>

The audit report acknowledged that HAZMAT shipments could have originated from vendors or DOD locations such as DLA depots. Shipments destined to OCONUS DOD

locations were transported through CCPs and/or APOEs.<sup>152</sup> With knowledge from previous audit reports, it is most likely good portions of the shipments identified in this report were DVDs. Among many steps in preparing and transporting HAZMAT, shippers were responsible for selecting the mode of transportation, packaging, labeling and documentation to include HAZMAT declaration. Auditors asserted that in order to label, pack and handle HAZMAT properly, shippers must navigate through complex volumes of Federal and DOD regulatory guidance.<sup>153</sup>

Auditors identified significant amount of costly documentation errors and packaging discrepancies that led to delay of shipments from a few hours to a number of weeks. According to GATES report, there were 246,747 HAZMAT shipments processed through the five major CONUS APOEs. Out of those shipments, 27 percent were frustrated, which resulted in delays. The report contained a few examples of discrepancies in air shipments of HAZMATs through more than one APOE. One shipment was missing SDG, one had the wrong proper shipping name, one improperly packaged and another damaged. Although the report mentioned there were several instances of documentation and packaging problems with surface shipments, the report provided three examples of packaging errors.<sup>154</sup>

Through discussions with numerous DOD officials, auditors determined that the officials did not have a complete grasp of root causes for HAZMAT problems and delays. The DOD officials did mention probable sources for HAZMAT shipments not being in compliance with regulatory requirements. Some reasons were a number of DOD personnel as well as shippers in the commercial industry did not have adequate schooling or familiarity in preparation of HAZMAT shipments, especially DOD's requirements. Some even lacked trained personnel that could certify HAZMATs. According to APOE officials, personnel rotations added to the

problems in lack of knowledgeable personnel. It was also difficult to ensure shippers complied with DOD requirements due to APOE officials lacking the authority to control noncompliant shippers. Some routine shippers were aware that APOEs personnel would correct their errors.<sup>155</sup>

This FY 2014 GAO report alluded to another possible root cause of HAZMAT problems. The report revealed that the DOD did not follow-up to ensure corrective actions on numerous problems identified to include HAZMAT documentation and packaging errors in the 2008 DASD/TP study. In addition, the auditors visited one of the locations from the 2008 DASD/TP study and discovered it continued to have identical problems. It is possible that the DOD could have avoided some of the challenges identified in this FY 2014 report. Auditors stated that in accordance with Office of Management and Budget's guidance outlined in Management's Responsibility for Internal Control, the DOD should have assessed the 2008 DASD/TP's findings in a timely manner, and established resolutions for corrective actions in accordance with audit's recommendations. Furthermore, the 2014 GAO report surmised that the DOD had not carried out a comprehensive study to establish the source of HAZMAT packaging and documentation problems that were contributing to the shipment delays. Without being able to identify the source of its problems, the DOD will continue to expend resources unnecessarily and remain noncompliant with prescribed guidance. Recommendations in the audit required the DOD to uncover root causes of documentation and packaging discrepancies of HAZMAT cargo frustrated within the DTS. Recommendations included identifying milestones for corrective actions.<sup>156</sup>

The FY 2014 GAO audit report provided outstanding in-depth review of authority and responsibilities of OSD, Services, DLA, USTRANSCOM and its components, APOEs and DOT and corresponding regulatory guidance. The report also provided excellent review of the

HAZMAT shipment processes from origin to ports. It did well by matching the processes and responsibilities with policy guidance.<sup>157</sup> However, of the audits analyzed in this research report, FY 2014 GAO audit provided the least comprehensive review of the challenges and impacts.

This audit was to assess if the HAZMAT shipments were safe, delivered on time and cost-effective to the DOD by reviewing all pertinent Federal and DOD policies and procedures on labeling, packaging and handling.<sup>158</sup> The audit report did not identify labeling and handling discrepancies and did not include cost associated with frustrations or delays. Instead, it provided information regarding packaging and documentation discrepancies.<sup>159</sup> Aside from mentioning 246,747 HAZMAT shipments processed through five major CONUS APOEs with 27 percent being frustrated, which delayed shipments from a few hours to a number of weeks, the report provided no other statistics.<sup>160</sup> It did not provide the origin that caused the delays, whether it processed through CCPs, Dover or Norfolk APOEs, or how much of the 27 percent of the frustrated shipments were due to DVDs. Auditors mentioned significant amount of costly documentation errors and packaging discrepancies that led to delays but did not provide information on how much of the 27 percent of frustration were due to documentation or packaging discrepancies.<sup>161</sup>

Since the report provided less than 10 examples of documentation and packaging discrepancies and lacked statistics and detailed analysis, it appeared to readers as if the auditors restated GATES' records from FY 2009 to FY 2013 and visited DSCR, Dover and Norfolk APOEs to verify challenges by sampling a few shipments.<sup>162</sup> It was mentioned in the report that the DOD officials did not have a complete grasp of root causes for HAZMAT problems and delays. However, it appeared the DOD officials did mention some deeper root causes of frustrations and delays other than just documentation and packaging errors. The causes for those

errors as the DOD official mentioned were probably lack of training and knowledge of DOD personnel and commercial shippers in preparation of HAZMAT shipments. Some may even lack trained personnel that could certify HAZMATs and may not have been familiar with DOD's regulatory requirements. Additionally, personnel rotations added to the lack of knowledgeable personnel.<sup>163</sup>

Auditors asserted that in order to label, pack and handle HAZMAT properly, shippers must navigate through complex volumes of Federal and DOD regulatory guidance but offered no recommendation.<sup>164</sup> APOE officials mentioned lacking the authority to control noncompliant shippers.<sup>165</sup> Contracting officers have the authority to ensure contracts were written in ways to ensure shippers complied with DOD requirements. Since this audit lacked critical analysis and did not consider DVDs, it was no surprise that the auditors did not provide any recommendation regarding contracts with vendors. This GAO report suggested the DOD to conduct a comprehensive study to establish the source of HAZMAT packaging and documentation problems that were contributing to the shipment delays.<sup>166</sup> However, the GAO auditors had ample time and opportunity during this FY 2014 audit to conduct a comprehensive analysis to provide stronger argument.

#### **SECTION IV: DISCUSSION OF THE CASE STUDY RESULTS**

Initially, DVD challenges appeared to be costs and delays due to frustrated cargo caused by discrepancies in marking and labeling, packaging, documentation and transportation systems.<sup>167</sup> After in-depth analysis of audit reports, the following were additional discoveries of potential challenges, with some if not all possibly being root causes.

It is possible that the DOD may no longer have challenges as extreme as illustrated by FY 1995 DODIG audit report, which resulted in costing the DOD millions of dollars. It is also possible DVD program may not be saving the DOD millions of dollars as depicted by FY 1997 DODIG Joint Audit report. There is no definitive viewpoint due to lack of follow-up audits on all audits assessed in this report. However, due to FY 2014 GAO audit's confirmation of challenges identified in DASD/TP's 2008 study, DVD challenges exist. DVDs or any procurement shipped from manufacturers to customers are processed and moved through the Supply Chain. Managing this supply chain requires different professions such as acquisition, supply and logistics.<sup>168</sup> Those professionals may not necessarily work together as a cohesive unit to deliver products from the suppliers to customers. Acquisition professionals are responsible for procuring quality, cost-effective, suitable products that meet the needs of customers.<sup>169</sup> Supply professionals are responsible for receipt of the procured products for inventory, processing and issuing products as needed by customers.<sup>170</sup> Logistics professionals are responsible for shipment preparation and transportation of products.<sup>171</sup>

At the DOD level, USD (AT&L) is responsible for Supply Chain Management (SCM).<sup>172</sup> Within the operational and tactical levels of DVD SCM, DLA is responsible for acquisition and supply for the DOD inventory, APOEs are responsible for logistics but each Services also has its own acquisition, supply and logistics. Depending on customer's requirement, Services or installations may have procured the DVD instead of DLA. There was no unity of command or unity of effort, which resulted in multitude of complex guidelines, differing transportation systems and gaps in processes led to DVD challenges. This lack of unity of command and effort also resulted in gaps in audits as none of the audits duplicated the other in subject, depth or scope of analysis.

There were DVD challenges throughout the full spectrum of supply chain. Since each audit was addressed only to a particular profession, each segment of the challenges was never connected as a whole to be presented to the supply chain community at the OSD level. There were shortcomings in the audits that could have led to leadership for responsible parties not considering the urgency and seriousness of the audit results and recommendations. Among many other discrepancies, the audits found documentation errors, packaging discrepancies, internal control problems and failure to follow procedures as challenges. However, in more than one audit, auditors relied completely on reports from computer systems that were not 100 percent reliable. For example, in the FY 1995 DODIG audit, the auditors acknowledged they did not verify the validity of the reports derived from the transportation computer systems.<sup>173</sup> Auditors used the GATES report in FY 2014 GAO audit that mentioned there were 246,747 HAZMAT shipments processed through the five major CONUS APOEs with 27 percent frustration that led to delays. There was no reference in the audit report on verifying the GATES report accuracy.<sup>174</sup> By not verifying the accuracy of the reports, the auditors' assessments appeared less credible.

All audit sampling for analysis were very few, which made the audits appear as if the challenges were isolated incidents. Auditors could have posed a stronger argument with much more sampling. For instance, FY 2014 GAO audit sampled less than 10 shipments even though the DOD processed 246,747 HAZMAT shipments.<sup>175</sup> Auditors should have recommended corrective actions for several discrepancies discovered during audits. A few examples out of many mentioned in this research report were, DASD/TP audit lacked recommendations to correct DSS on providing longer archiving capabilities than 21 days and the ability to track frustrated cargo.<sup>176</sup> Several audits should also have contained recommendations to ensure military air cargo preparation instructions were codified in the contracts or instructions provided

to vendors if using GPCs. The auditors should have also recommended liaison with contracting officers for providing feedback to vendors for improvements and corrective actions.

Out of all the challenges and possible root causes, the Services and DLA leadership's lack of responsiveness seemed likely principal cause of challenges. Leadership's involvement is crucial in averting future challenges. There was numerous leadership shortsightedness identified in this research. The following few were worth commenting. According to FY 1995 audit report, DODIG identified exact internal control problems found in FY 1995 audit during audits from FY 1984 to FY 1988.<sup>177</sup> Over seven years passed since FY 1988 audit, yet neither DLA nor the Services' plans for corrective actions came to fruition. The U.S. Army non-concurred with the recommendations provided in FY 1995 audit and asserted that it had acceptable policies and procedures. DLA also non-concurred and provided its own corrective actions.<sup>178</sup>

Similar to all audits up to FY 1995, the DOD did not follow-up to ensure accomplishment of recommended corrective actions provided in 2008 DASD/TP study. Out of the numerous problems identified, HAZMAT documentation and packaging errors were included in 2008, which was the reason for the 2014 GAO audit. During the 2014 GAO audit, auditors visited one of the locations from the 2008 DASD/TP study and verified it continued to have identical problems.<sup>179</sup> The DOD could have avoided a majority of the challenges had there been leadership's involvement to ensure accomplishment of corrective actions.

## **SECTION V: RECOMMENDATIONS**

As the DOD SCM, USD (AT&L) must take the lead in assessing the extent of DVD challenges within the DOD. Since DASD/TP WG was already in the process of accomplishing the tasks identified in the 2014 GAO audit's recommendation, USD (AT&L) should allow the

process to complete.<sup>180</sup> Upon accomplishing the tasks to uncover root causes, provide recommended actions and identify milestones for corrective actions regarding documentation and packaging discrepancies of HAZMAT cargo, USD (AT&L) should accomplish the following.<sup>181</sup> Charge its subordinates, Assistant Secretary of Defense for Acquisition and Assistant Secretary of Defense for Logistics and Materiel Readiness to implement pertinent corrective actions as recommended by the DASD/TP WG.<sup>182</sup>

Concurrently, USD (AT&L) should request DODIG to assess the full range of supply chain to determine DVD challenges since the DOD lacked an audit that captured all challenges and impacts of the DVD program throughout the supply chain. The assessments should include volume of items affected, loss of government funds, delays in shipment due to frustrations, time and manpower spent correcting discrepancies due to DVD challenges. The assessment should also include regulatory guidance, processes and procedures. The DOD must consider if the DVD program is added value in meeting the DOD's LRT goal and if the DOD is still saving money due to DVD. In addition, DASD/TP WG should consider the root causes identified in the in-depth analysis of FY 2014 GAO audit and Section IV of this report.

## **SECTION VI: CONCLUSION**

In 1990, congressional mandate required the DOD to use commercial sector's best practice model as a standard for cost-savings. In response, the DOD incorporated DVD into its supply chain processes. The DODIG first assessed feasibility of the DVD during FY 1995 and discovered instead of cost-savings, it was costing the DOD millions of dollars. Conversely, the DODIG Joint Audit during FY 1997 revealed cost-savings in millions of dollars due to DVD. Subsequent audits however, disclosed DVD challenges that could amount to costing the DOD

millions of dollars. During initial review of the audits, the challenges appeared to be costs and delays due to frustrated cargo caused by discrepancies in marking and labeling, packaging, documentation and transportation systems. In-depth analysis of the audits however, implicated other potential problems that could be root causes of the DVD challenges.

There were shortcomings in the audits, such as auditors relying completely on reports from computer systems instead of verifying the systems' accuracy. Audits' sampling for analysis were very few, which made the audits appear as if the challenges were isolated incidents. Auditors did not recommend corrective actions for several discrepancies discovered and did not conduct follow-up audits. The Services and DLA leadership's lack of responsiveness caused challenges as well. The Services and DLA did not correct internal control problems identified in audits from FY 1984 to FY 1988, the exact cause of DVD challenges identified during FY 1995 audit. The DOD also did not correct discrepancies identified in 2008 DASD/TP study and exact HAZMAT documentation and packaging errors were identified in subsequent FY 2014 audit. All audits being one-of-its-kind was also a challenge where it made it unclear if cost-savings could be realized through the DVD program. It was also unclear if incorporation of DVD was costing the DOD.

Therefore, it is imperative that USD (AT&L) take the lead in assessing the extent of DVD challenges and benefits within the DOD supply chain. Once DASD/TP WG completes the tasks to uncover root causes, USD (AT&L) should charge Assistant Secretary of Defense for Acquisition and Assistant Secretary of Defense for Logistics and Materiel Readiness to implement corrective actions. USD (AT&L) should request DODIG to assess the full range of supply chain to determine DVD challenges. The DOD must consider if the DVD program is added value in meeting the DOD's LRT goal and if the DOD is still saving money due to DVD.

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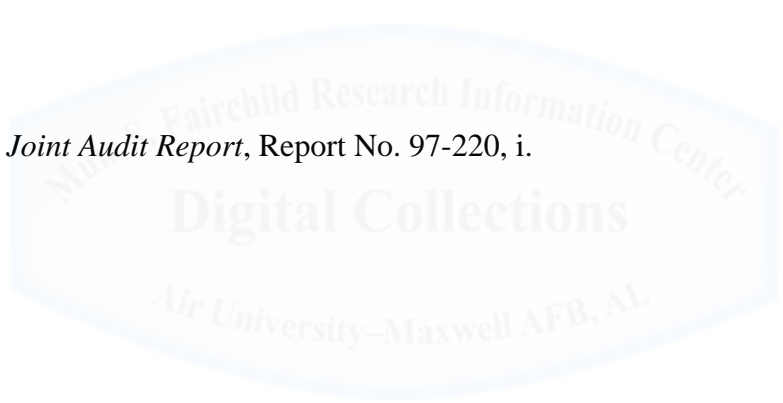
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