Report No. DODIG-2025-167

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INSPECTOR GENERAL

U.S. Department of Defense

SEPTEMBER 25, 2025

(U) Audit of U.S. Air Force Government-Owned, Government-Operated Aviation Bulk Fuel Facilities Within South Korea

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INDEPENDENCE ★ INTEGRITY ★ EXCELLENCE ★ TRANSPARENCY

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(U) Results in Brief

Audit of U.S. Air Force Government-Owned, Government-Operated Aviation Bulk Fuel Facilities Within South Korea

September 25, 2025

(U) Objective

(U) The objective of this audit was to assess the effectiveness of the DoD's efforts to maintain the required quantities and quality of maritime and aviation fuel stored in DoD land-based bulk fuel storage facilities within the U.S. Indo-Pacific Command area of responsibility.

(U) Specifically, we focused on Defense Logistics Agency (DLA) Energy's and Air Force's efforts to maintain the required quantities and quality of jet propellant 8 (JP-8) fuel stored in the four Air Force government-owned, government-operated Defense Fuel Support Points (DFSPs) within South Korea.

(U) Background

~~(CUI)~~ The DFSPs are fuel storage facilities capable of receiving, storing, and issuing large amounts of fuel. The DFSPs use bulk fuel storage tanks to store petroleum products, such as jet fuel, marine diesel, and gasoline. Bulk fuel storage tanks have a capacity of 55 gallons or more. The DLA Energy Indo-Pacific region is DLA Energy's largest geographical fuel region. There are [redacted] DFSPs within the U.S. Indo-Pacific Command area of responsibility.

(U) Findings

(U) We determined that the DoD's efforts, executed by DLA Energy and Air Force personnel, to maintain the required quantities of JP-8 fuel were effective. Specifically, DLA Energy Korea and the four Air Force DFSPs in South Korea generally maintained the required quantities of JP-8 fuel. DLA Energy and the Air Force effectively implemented inventory controls and procedures to ensure that DLA Energy Korea and the four Air Force DFSPs coordinated to generally maintain JP-8 fuel inventories between the control limit and maximum authorized inventory level. In addition, DLA Energy required automatic tank gauge verifications to ensure the accuracy of the JP-8 fuel inventory. DLA Energy Korea and the four Air Force DFSPs' efforts to maintain the required quantities of JP-8 fuel ensured that the Air Force sustained readiness and performed operations without fuel shortages or delays, which could compromise mission success.

(U) Findings (cont'd)

(U) We also determined that the DoD's efforts, executed by the Air Force, to maintain the required quality of JP-8 fuel were effective. Specifically, the four Air Force DFSPs in South Korea met the quality standards for JP-8 fuel in bulk storage. To ensure that the four Air Force DFSPs in South Korea met quality standards for JP-8 fuel, the Air Force implemented effective policies and procedures to conduct bulk fuel sample testing. The Air Force's efforts to maintain the required quality of JP-8 fuel prevented engine failures, which could have resulted in decreased mobility of aircraft, damage or loss of aircraft, and loss of life.


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September 25, 2025

MEMORANDUM FOR COMMANDER, U.S. INDO-PACIFIC COMMAND
DIRECTOR, DEFENSE LOGISTICS AGENCY
AUDITOR GENERAL, DEPARTMENT OF THE AIR FORCE

SUBJECT: (U) Audit of U.S. Air Force Government-Owned, Government-Operated Aviation Bulk Fuel Facilities Within South Korea (Report No. DODIG-2025-167)

(U) This final report provides the results of the DoD Office of Inspector General's audit. We are providing this report for information and use. This report does not contain recommendations. We coordinated a discussion draft of this report with officials from DLA Energy and the four Air Force DFSPs. They concurred with our report and provided no additional comments. Therefore, we are publishing this report in final form.

(U) We appreciate the cooperation and assistance received during the audit. If you have any questions, please contact me at [redacted].

Richard B. Vasquez
Assistant Inspector General for Audit
Readiness and Global Operations

(U) Contents

Contents (cont'd)


INSPECTOR GENERAL
INTEGRITY
EFFICIENCY
DEPARTMENT OF DEFENSE

(U) Introduction

(U) Objective

(U) The objective of this audit was to assess the effectiveness of the DoD's efforts to maintain the required quantities and quality of maritime and aviation fuel stored in DoD land-based bulk fuel storage facilities within the U.S. Indo-Pacific Command (USINDOPACOM) area of responsibility.

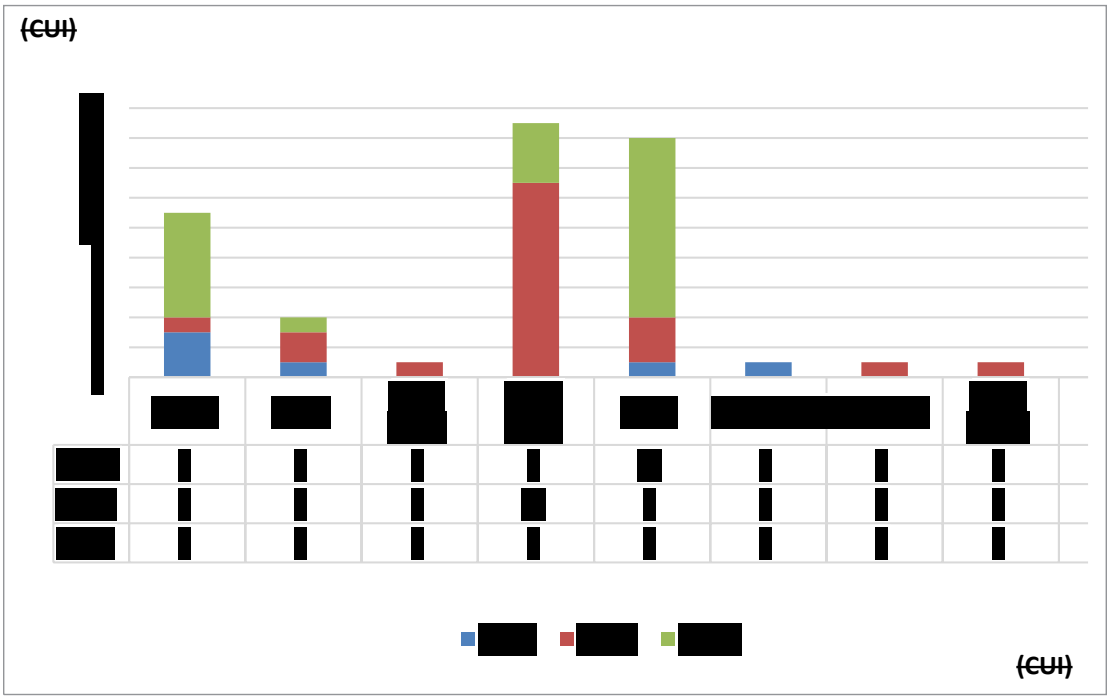
(U) Specifically, we focused on Defense Logistics Agency (DLA) Energy's and Air Force's efforts to maintain the required quantities and quality of jet propellant 8 (JP-8) fuel stored in the four Air Force government-owned, government-operated (GOGO) Defense Fuel Support Points (DFSPs) within South Korea. See Appendix A for details on the audit scope and methodology.

(U) Background

(U) The DoD commonly refers to land-based bulk fuel storage facilities as DFSPs. The DFSPs are fuel storage facilities capable of receiving, storing, and issuing large amounts of fuel. The DFSPs use bulk fuel storage tanks to store petroleum products, such as jet fuel, marine diesel, and gasoline. Bulk fuel storage tanks have a capacity of 55 gallons or more. We reviewed bulk fuel storage tanks that contained more than 30,000 gallons of fuel.

~~(CUI)~~ The DLA Energy Indo-Pacific region is DLA Energy's largest geographical fuel region. There are [redacted] DFSPs within the USINDOPACOM area of responsibility. The DoD has three primary owner-operator types for DFSP operations—GOGO; Government-Owned, Contractor-Operated; and Contractor-Owned, Contractor-Operated. Figure 1 shows the number of DFSPs and the owner-operator type within USINDOPACOM.

(U) Figure 1. Number of DFSP Locations Within USINDOPACOM



(U) LEGEND

(U) GOGO Government-Owned, Government-Operated
(U) GOCO Government-Owned, Contractor-Operated
(U) COCO Contractor-Owned, Contractor-Operated

(U) Source: The DoD OIG.

(U) Roles and Responsibilities

(U) DLA Energy and DFSP personnel are responsible for maintaining the required quantities and quality of fuel stored in the DFSPs. DLA Energy and DFSP personnel work collectively to maintain the required quantity and quality of JP-8 fuel.

(U) DLA Energy

(U) DLA Energy is the integrated material manager for bulk fuel. The integrated material manager is the DoD-level manager responsible for procurement, transport, storage, distribution, ownership, quality assurance, and surveillance of bulk fuel. DLA Energy Indo-Pacific is a strategic national partner and supporter of the USINDOPACOM Joint Petroleum Office.[1] DLA Energy Indo-Pacific provides product support to military agencies in USINDOPACOM and to a host of foreign countries in the region. DLA Energy Indo-Pacific maintains supervision over product inventory,

[1] (U) The USINDOPACOM Joint Petroleum Office works with the Military Service's Sub-Area Petroleum Offices and DLA Energy Headquarters to plan, coordinate, and oversee all phases of bulk petroleum support.

(U) provides theater contingency and exercise support, monitors product quality throughout the region, and coordinates unique alternative fuels and renewable energy requirements.

(U) Defense Fuel Support Points

(U) The DFSPs are either owned or operated by the DLA, the Military Services, or a contractor. For example, the Military Service might own a DFSP, but it is operated by a contractor. A majority of the DFSPs are either owned or operated by the Military Services. Therefore, the Military Services provide product oversight and handling at the DFSPs. DFSP personnel coordinate fuel issues related to quantity and quality with the appropriate DLA Energy office. DFSP personnel are responsible for conducting fuel sample testing to ensure the quality of fuel products are received, stored, and issued properly. DFSP personnel are also responsible for inventory and records management of fuel to ensure that the required quantity is maintained. Table 1 shows the number of DFSP types by USINDOPACOM Component.

(U) Table 1. Number of DFSP Types Within USINDOPACOM

~~(CUI)~~ Component	GOGO	GOCO	COCO
Army	[redacted]	[redacted]	[redacted]
Navy	[redacted]	[redacted]	[redacted]
Marine Corps	[redacted]	[redacted]	[redacted]
Air Force	[redacted]	[redacted]	[redacted]
DLA Energy	[redacted]	[redacted]	[redacted]
Total	[redacted]	[redacted]	[redacted] ~~(CUI)~~

(U) LEGEND

(U) GOGO Government-Owned, Government-Operated
(U) GOCO Government-Owned, Contractor-Operated
(U) COCO Contractor-Owned, Contractor-Operated

(U) Source: The DoD OIG.

(U) Policies and Procedures to Maintain Bulk Fuel Quantities and Quality

(U) The DoD and DLA Energy established policies and procedures to maintain bulk fuel quantities and quality. These policies and procedures focus on inventory management, supply chain efficiency, and fuel quality control. DFSP personnel must follow DoD and DLA Energy policies and procedures to ensure accurate inventory tracking, quality control, and timely fuel delivery to meet mission needs.

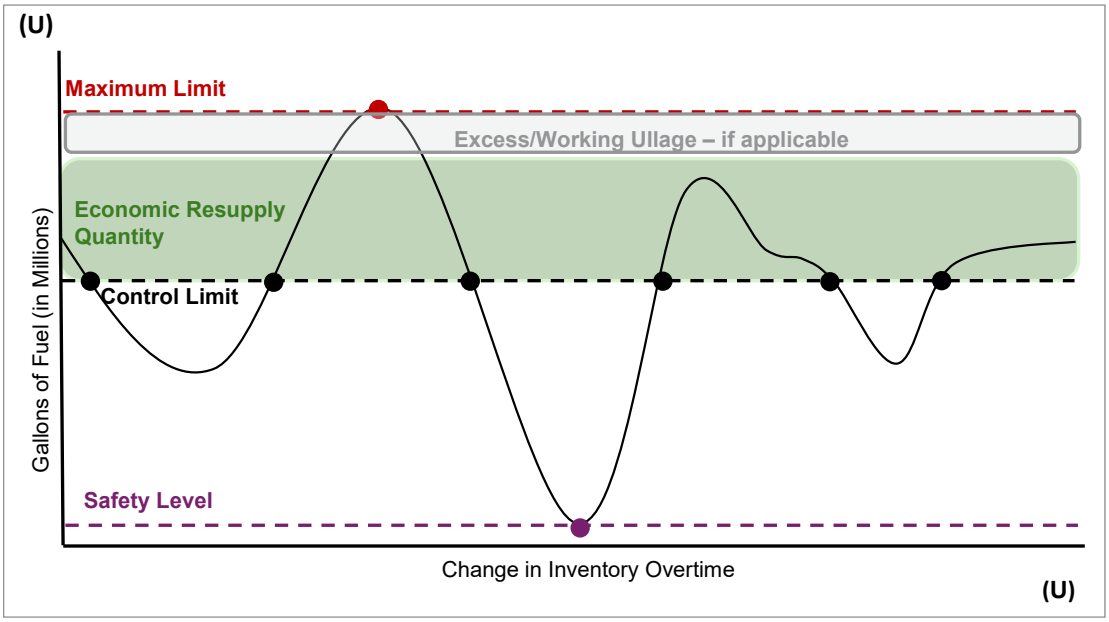
(U) Policies and Procedures for Maintaining Bulk Fuel Supply Levels

(U) Bulk fuel quantities are maintained at various supply levels to ensure fuel availability. DLA Energy manages bulk fuel by establishing an annual inventory management plan. The annual plan identifies the required inventory levels and DFSP storage requirements. The control limit (CL) is the lowest level of fuel that a DFSP maintains to meet its operational needs. The maximum limit (ML) is the highest level of fuel that a DFSP should store.[2] DLA Energy maintains inventory levels between the CL and ML for each DFSP during normal operations. DLA Energy can adjust the supply levels, if needed, for various reasons to include increased operations or exercises. DLA Energy also established the following fuel supply levels.

- **(U) Economic resupply quantity** – The economic resupply quantity is used to ensure the fuel quantity at the DFSP is within economic and operational needs.
- **(U) Safety level (SL)** – The SL is used to compensate for time or demand variability to protect the DFSPs from stock depletion.
- **(U) Working ullage** – The working ullage is available storage space within a tank that does not require additional fuel inventory.

(U) Figure 2 shows an example of the various supply levels.

(U) Figure 2. Example of DLA Energy-Established Supply Levels



(U) Source: The DoD OIG.

[2] (U) Throughout this report, we refer to the maximum authorized inventory level as maximum limit (ML). The ML is different than the physical system storage capacity limits of the tanks.

(U) DFSP personnel tracks bulk fuel inventory through automated systems, manual processes, and standardized procedures in accordance with DoD Manual 4140.25 and DLA Energy Procedural Guidance 7.[3] Each DFSP uses the FuelsManager Defense (FMD) system to report physical inventories to DLA Energy. To assist with physical inventory accounting, DFSP personnel use automatic tank gauges (ATGs). The ATGs measure the height and temperature of the fuel within the bulk fuel storage tank. In accordance with DLA Energy Procedural Guidance 7, manual tank gauging is required for periodic ATG verifications and nonfunctional ATGs. DFSP personnel must follow DoD and DLA Energy procedures for fuel management to ensure accurate and accountable reporting.

(U) Policies and Procedures for Quality Surveillance of Bulk Fuels

(U) In accordance with DoD Standard Practice 3004-1B (MIL-STD-3004-1B), quality surveillance of bulk fuel products begins upon receipt and continues as long as the product is in physical possession of the storage facility.[4] MIL-STD-3004-1B also establishes the minimum sampling and testing requirements for bulk fuel.

(U) In addition, the Military Services establish policies and procedures applicable to their DFSPs. For example, the Air Force Technical Manual 42B-1-1 establishes quality control and fuel sample testing procedures, such as requirements for Fuel System Icing Inhibitor (FSII) and Conductivity (CU) testing, for Air Force managed installations.[5] See Appendix B for the Air Force's aviation bulk fuel sampling and testing requirements.

(U) What We Reviewed

(U) We focused on DLA Energy's and Air Force's efforts to maintain the required quantities and quality of JP-8 fuel in the four Air Force GOGO DFSPs within South Korea. The Air Force GOGO DFSPs in South Korea are at the following locations.

- (U) Gimhae DFSP, Gimhae Republic of Korea Air Force Air Base
- (U) Daegu DFSP, Daegu Republic of Korea Air Force Air Base
- (U) Gwangju DFSP, Gwangju Republic of Korea Air Force Air Base
- (U) Kunsan DFSP, Kunsan Air Base, South Korea

[3] (U) DoD Manual 4140.25, Volume 6, "DoD Management of Energy Commodities: Defense Fuel Support Point (DFSP) Management," March 2, 2018 (Incorporating Change 2, April 4, 2019).
(U) DLA Energy Procedural Guidance 7, "Accountability and Custodial Responsibilities for Defense Working Capital Fund Inventory and Government Property," April 11, 2023 (Incorporating Change 1, August 9, 2023).

[4] (U) MIL-STD-3004-1B, "Quality Assurance for Bulk Fuels, Lubricants and Related Products," February 8, 2024.

[5] (U) Air Force Technical Manual 42B-1-1, "Quality Control of Fuels," February 5, 2024.

(U) Specifically, we reviewed 24 JP-8 bulk fuel storage tanks with capacities ranging from 48,745 gallons to 4,442,391 gallons. To determine whether the four Air Force DFSPs maintained the required quantities of JP-8 fuel, we reviewed the inventory reports from January 1, 2023, through January 31, 2025, and observed the processes and procedures for verifying fuel levels. In addition, to determine whether the four Air Force DFSPs met quality standards for JP-8 fuel in bulk storage, we reviewed laboratory testing results from January 1, 2024, through January 31, 2025, and observed the procedures for conducting bulk fuel sample testing.

(U) Finding A

(U) DLA Energy and Air Force Personnel in South Korea Generally Maintained the Required Quantities of JP-8 Fuel Through Effective Implementation of Policies and Procedures

(U) The DoD's efforts, executed by DLA Energy and Air Force personnel, to maintain the required quantities of JP-8 fuel were effective. Specifically, DLA Energy Korea and the four Air Force DFSPs in South Korea generally maintained the required quantities of JP-8 fuel. Inventory records from January 1, 2023, through January 31, 2025, showed that the:

- (U) Gimhae DFSP maintained quantities of JP-8 fuel between the CL and ML for 25 (100 percent) of 25 months;
- (U) Gwangju DFSP maintained quantities of JP-8 fuel between the CL and ML for 21 (84 percent) of 25 months; maintained quantities below the CL for 2 (8 percent) of 25 months; and maintained quantities above the ML for 2 (8 percent) of 25 months;
- (U) Daegu DFSP maintained quantities of JP-8 fuel between the CL and ML for 22 (88 percent) of 25 months and maintained quantities above the ML for the remaining 3 (12 percent) of 25 months; and
- (U) Kunsan DFSP maintained quantities of JP-8 fuel between the CL and ML for 7 (28 percent) of 25 months; maintained quantities below the CL for 17 (68 percent) of 25 months; and maintained quantities above the ML for 1 (4 percent) of 25 months.

(U) DLA Energy and the Air Force effectively implemented inventory controls and procedures to ensure that the DFSPs generally maintained the required quantity of JP-8 fuel. Specifically, DLA Energy Korea and the four Air Force DFSPs coordinated to generally maintain JP-8 fuel inventories between the CL and ML. In addition, DLA Energy required ATG verifications to ensure the accuracy of the JP-8 fuel inventory. DLA Energy Korea and the four Air Force DFSPs' efforts to maintain the required quantities of JP-8 fuel ensured that the Air Force sustained readiness and performed operations without fuel shortages or delays, which could compromise mission success.

(U) DLA Energy and Air Force Personnel in South Korea Generally Maintained the Required Quantities of JP-8 Fuel

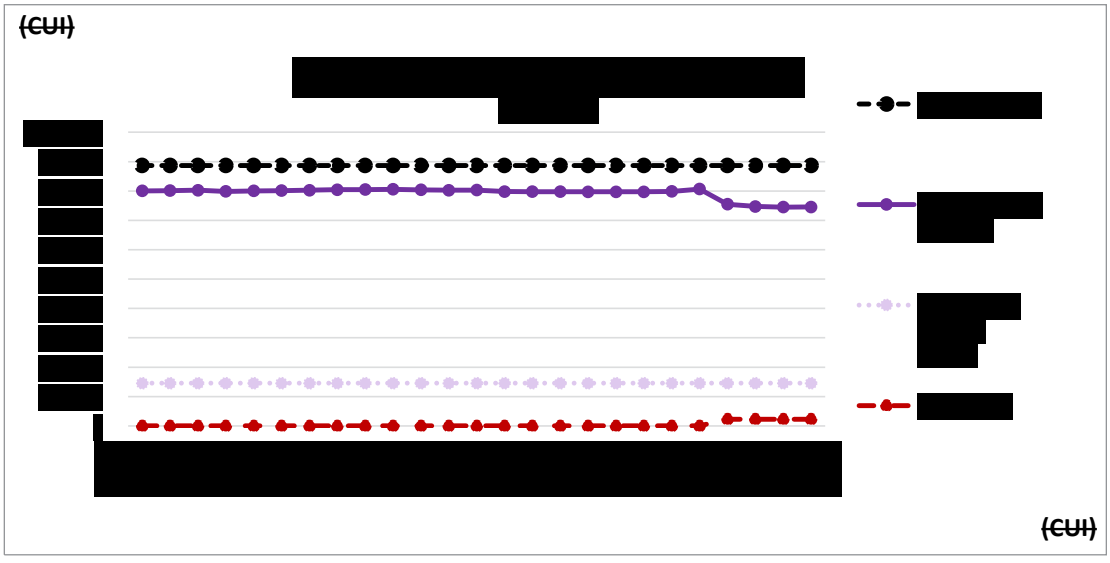
(U) The DoD's efforts to maintain the required quantities of JP-8 fuel were effective. Specifically, DLA Energy Korea and the four Air Force DFSPs in South Korea generally maintained the required quantities of JP-8 fuel. We reviewed the inventory reports from January 1, 2023, through January 31, 2025, to determine whether the four DFSPs complied with DLA Energy Headquarters (HQ) requirements. Specifically, we compared end-of-month reports to the CL and ML established by DLA Energy HQ. We determined that the four DFSPs generally maintained quantities of JP-8 fuel between the CL and ML.

(U) The DoD's efforts to maintain the required quantities of JP-8 fuel were effective.

(U) Gimhae DFSP Met JP-8 Fuel Inventory Requirements

(U) The Gimhae DFSP maintained quantities of JP-8 fuel between the CL and ML for 25 (100 percent) of 25 months. According to Gimhae DFSP personnel, the JP-8 fuel was in long-term storage.[6] Therefore, there was minimal use, and the JP-8 fuel inventory did not fluctuate frequently. Figure 3 shows the Gimhae DFSP's JP-8 fuel inventory and the DLA Energy HQ-established ML, CL, and SL from January 1, 2023, through January 31, 2025.

(U) Figure 3. JP-8 Inventory Levels for the Gimhae DFSP, from January 1, 2023, Through January 31, 2025



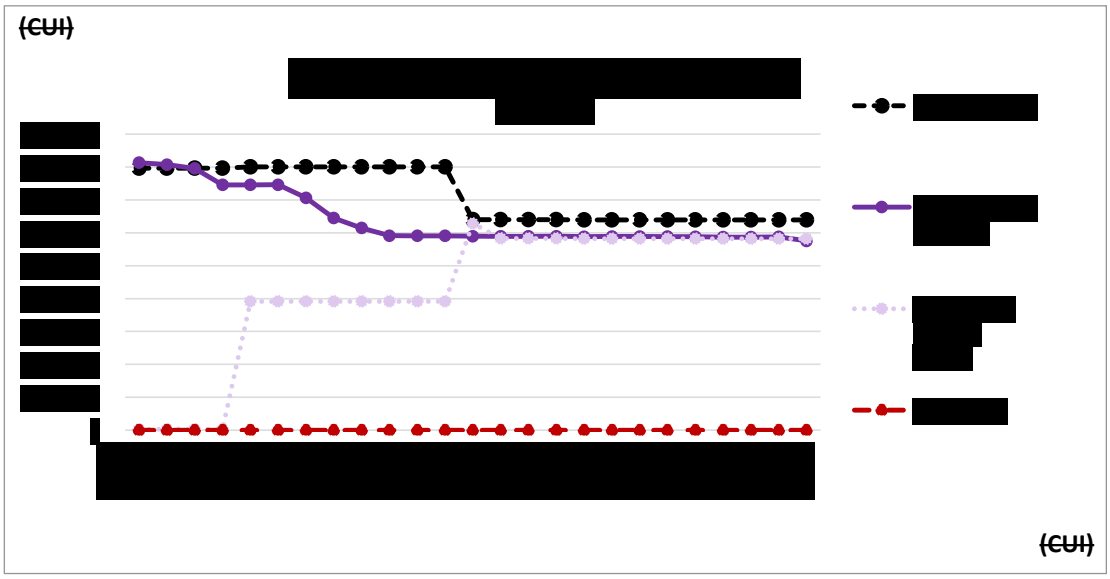
(U) Source: The DoD OIG.

[6] (U) Long-term storage or dormant stock is fuel that is held for 6 months, and two-thirds of the tank contents is not exchanged, turned over, or replenished.

(U) Gwangju DFSP Generally Met JP-8 Fuel Inventory Requirements

(U) The Gwangju DFSP maintained quantities of JP-8 fuel between the CL and ML for 21 (84 percent) of 25 months. For the remaining 4 (16 percent) months, the DFSP maintained quantities below the CL for 2 (8 percent) months and maintained quantities above the ML for 2 (8 percent) months. According to Gwangju DFSP personnel, the JP-8 fuel was in long-term storage, with minimal usage and fluctuation in inventory levels. However, in January 2024, DLA Energy HQ increased the CL. This adjustment temporarily resulted in inventory levels being below the CL for one month. In addition, in January 2025, the inventory levels were slightly below the CL. However, the variance was minimal and did not impact operational needs. Figure 4 shows the Gwangju DFSP's JP-8 fuel inventory and the DLA Energy HQ-established ML, CL, and SL from January 1, 2023, through January 31, 2025.

(U) Figure 4. JP-8 Inventory Levels for the Gwangju DFSP, from January 1, 2023, Through January 31, 2025



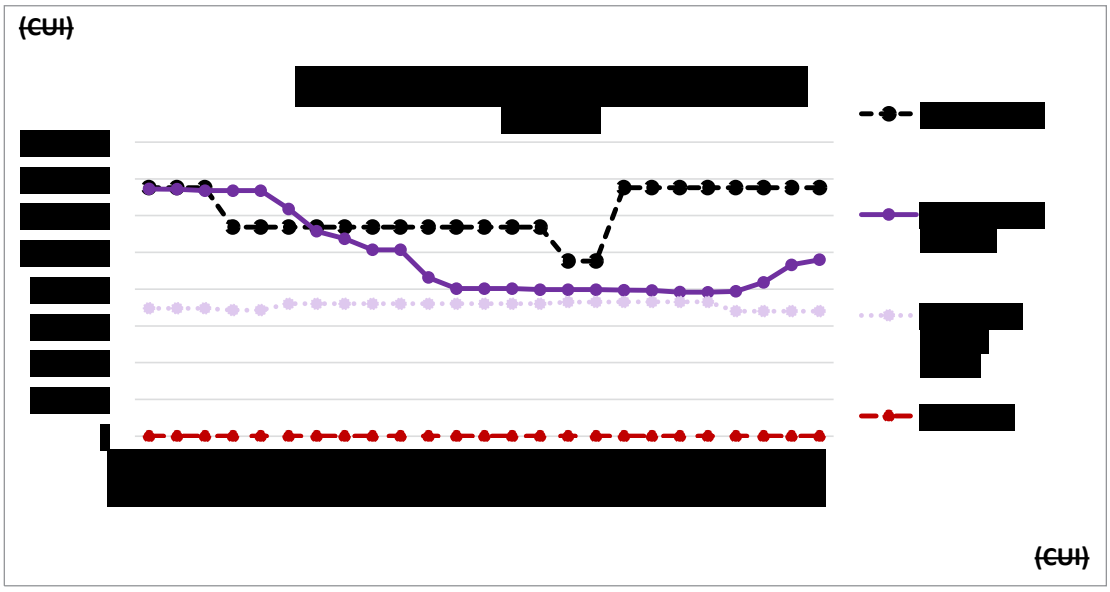
(U) Source: The DoD OIG.

(U) Daegu DFSP Generally Met JP-8 Fuel Inventory Requirements

(U) The Daegu DFSP maintained quantities of JP-8 fuel between the CL and ML for 22 (88 percent) of 25 months. For the remaining 3 (12 percent) of 25 months, the DFSP maintained quantities above the ML. According to Daegu DFSP personnel, the JP-8 fuel at the Daegu DFSP was in long-term storage with minimal use and fluctuation in inventory levels. However, in April 2023, DLA Energy HQ reduced the ML to prepare for the loss of the capacity of a bulk fuel storage tank during routine cleaning. As a result, JP-8 fuel inventory levels exceeded the ML from April 2023 through June 2023.

(U) DLA Energy and the DFSP allowed JP-8 inventory levels to decrease through normal attrition until inventory levels were below the updated ML. Figure 5 shows the Daegu DFSP's JP-8 inventory and the DLA Energy HQ-established ML, CL, and SL from January 1, 2023, through January 31, 2025.

(U) Figure 5. JP-8 Inventory Levels for the Daegu DFSP, from January 1, 2023, Through January 31, 2025



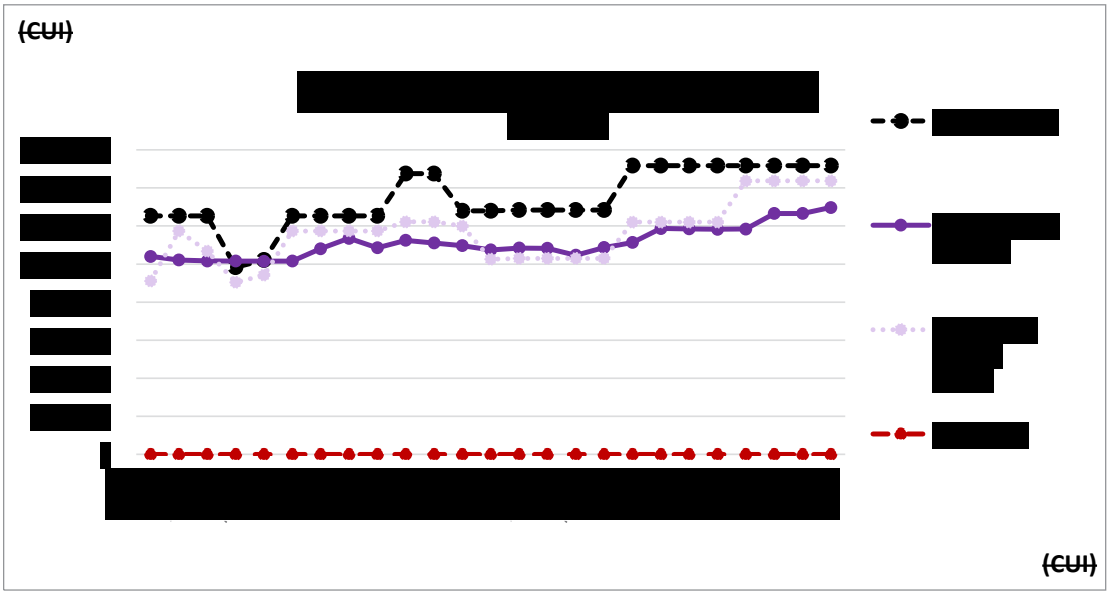
(U) Source: The DoD OIG.

(U) Kunsan DFSP Did Not Always Meet JP-8 Fuel Inventory Requirements

(U) The Kunsan DFSP maintained quantities of JP-8 fuel between the CL and ML for 7 (28 percent) of 25 months. For the remaining 18 (72 percent) months, the DFSP maintained quantities below the CL for 17 (68 percent) of 25 months and maintained quantities above the ML for 1 (4 percent) of 25 months. According to Kunsan DFSP personnel, the JP-8 fuel at the Kunsan DFSP was in both long-term and operational storage.[7] At times, the frequent operations at the Kunsan DFSP made it difficult to maintain JP-8 fuel inventory levels between the CL and ML. Although the Kunsan DFSP had 17 months for which JP-8 fuel quantities were maintained below the CL, it was not at risk of stock depletion because quantities did not fall below the SL. Figure 6 shows the Kunsan DFSP's JP-8 inventory and the DLA Energy HQ-established ML, CL, and SL from January 1, 2023, through January 31, 2025.

[7] (U) Operating stock or operational storage is fuel required to sustain daily operations and ensure fuel availability to support U.S. military forces world-wide.

(U) Figure 6. JP-8 Inventory Levels for the Kunsan DFSP, from January 1, 2023, Through January January 31, 2025



(U) Source: The DoD OIG.

(U) DLA Energy and Air Force Personnel Implemented Inventory Controls and Procedures to Maintain JP-8 Fuel Quantities and Ensure Inventory Accuracy

(U) DLA Energy and the Air Force effectively implemented inventory controls and procedures to ensure that the DFSPs generally maintained the required quantities of JP-8 fuel. Specifically, DLA Energy Korea and the four Air Force DFSPs coordinated to generally maintain JP-8 fuel inventories between the CL and ML. In addition, DLA Energy required ATG verifications to ensure the accuracy of the JP-8 fuel inventory.

(U) Inventory Controls Required DLA Energy and Air Force Personnel to Coordinate to Generally Maintain the Required Quantities of JP-8 Fuel

(U) In accordance with DoD Manual 4140.25, DLA Energy and the Air Force implemented inventory controls that required personnel at DLA Energy Korea and the four DFSPs to coordinate to generally maintain inventory levels between the CL and ML.[8] In addition, DLA Energy HQ coordinated with the USINDOPACOM Joint Petroleum Office to determine the projected annual bulk fuel requirements. DLA Energy HQ issues an inventory management plan annually, which identifies the

[8] (U) DoD Manual 4140.25, Volume 7, "DoD Management of Energy Commodities: Mobility Energy," March 2, 2018 (Change 1, August 31, 2018).

(U) petroleum inventory levels needed to support operating stock requirements. Specifically, the inventory management plan includes bulk fuel quantity levels for the ML, CL, SL, working ullage, and the economic resupply quantity for DFSPs.

(U) Although DFSPs generally maintain inventory levels between the CL and ML, DFSPs can operate outside of those parameters with concurrence from DLA Energy. The four Air Force DFSPs in South Korea coordinated with DLA Energy when fuel quantities were projected to be outside of the inventory requirements. Specifically, the DFSPs notified DLA Energy Korea of operations, exercises, or tank maintenance requirements that could impact inventory levels. When a DFSP's inventory of JP-8 fuel was projected to fall below the CL, DLA Energy Korea ensured that the DFSP received additional JP-8 fuel supply. Additionally, DLA Energy HQ can adjust the inventory requirements, if needed, due to operations, exercises, or tank maintenance.

(U) For example, in April 2023, DLA Energy HQ reduced the ML at the Daegu DFSP to prepare for a routine cleaning of a bulk fuel storage tank. The ML was reduced to align with the capacity of the tank during the routine cleaning. Once the ML was reduced, the JP-8 fuel inventory level gradually decreased through normal attrition until inventory levels were below the ML. During this process, the Daegu DFSP maintained quantities above the ML from April 2023 through June 2023. However, this was coordinated in advance with DLA Energy to support the scheduled tank cleaning.

(U) ATG Verification Requirements Ensured Accurate Inventory Reporting

~~(CUI)~~ DLA Energy required ATG verifications to ensure the accuracy of the JP-8 fuel inventory. Per DLA Energy Procedural Guidance 7, [redacted].

(U) Air Force DFSPs Complied with ATG Verification Requirements

(U) We reviewed ATG verification reports from January 2023 through January 2025 to determine whether the DFSPs documented and reported the results from the ATG verifications to DLA Energy. We determined that all four DFSP locations conducted ATG verifications for all 24 JP-8 fuel storage tanks. The DFSPs reported any discrepancies identified during the verification process and identified any nonoperational ATGs.

(U) In addition, during a site visit in January 2025, we observed DFSP personnel performing ATG verifications for 23 of 24 JP-8 fuel storage tanks at the four DFSPs. At Gwangju DFSP, the ATG for 1 of 24 JP-8 fuel storage tanks was nonoperational. Therefore, personnel conducted manual gauging, as required. Figure 7 shows the process of determining the fuel level during manual gauging.

(U) Figure 7. Manual Gauging During ATG Verification
(U) Source: The DoD OIG.

~~(CUI)~~ We determined that DFSP personnel conducted the ATG verification and manual gauging process in accordance with DLA Energy requirements. The ATGs for 22 of 23 JP-8 fuel storage tanks passed the ATG verification process. For the ATG at the Gimhae DFSP, [redacted]. However, DFSP personnel conducted another ATG verification three days later and the ATG passed the verification process. Table 2 shows the number of ATGs observed during the site visit and the number of ATGs that passed the verification process.

(U) Table 2. Onsite Observation of ATG Verifications at Each DFSP Location

(U) DFSP Location	Total ATGs	ATG Operational Status		Number of Operational ATGs that Passed Verification
		Operational	Nonoperational	
Gimhae	1	1	0	0
Daegu	6	6	0	6
Gwangju	3	2	1*	2
Kunsan	14	14	0	14
Total	**24**	**23**	**1**	**22** (U)

* (U) This ATG was nonoperational because a construction crew damaged the system cabling while working on a construction project adjacent to the JP-8 fuel storage tank. Therefore, DFSP personnel manually gauged the tank while awaiting DLA Energy repairs to the ATG.

(U) Source: The DoD OIG.

(U) DLA Energy and Air Force Personnel Maintained JP-8 Fuel Quantities to Allow for Mission Success

(U) DLA Energy Korea and the four Air Force DFSPs' efforts to maintain the required quantities of JP-8 fuel ensured that the Air Force sustained readiness and performed operations without fuel shortages or delays, which could compromise mission success. Inventory management planning, forecasting, and timely replenishment of supply ensured that the Air Force DFSPs responded quickly and effectively to crises and missions.

(U) DLA Energy Korea, along with personnel at the four Air Force DFSPs, generally maintained JP-8 fuel quantities by implementing effective inventory controls.

(U) DLA Energy Korea, along with personnel at the four Air Force DFSPs, generally maintained JP-8 fuel quantities by implementing effective inventory controls. In addition, DLA Energy required ATG verifications to ensure the accuracy of JP-8 fuel inventory. These efforts allowed personnel at the four Air Force DFSPs to have adequate fuel on hand for potential surges of demand due to exercises, deployments, or contingencies.

(U) Finding B

(U) Air Force DFSPs in South Korea Met Quality Standards for JP-8 Fuel Through Effective Policies and Procedures

(U) The DoD's efforts, executed by the Air Force, to maintain the required quality of JP-8 fuel were effective. Specifically, the four Air Force DFSPs in South Korea met quality standards for JP-8 fuel in bulk storage. We reviewed laboratory testing results from January 1, 2024, through January 31, 2025, and determined that 398 (99.7 percent) of 399 sample tests met testing specifications. However, one sample test at the Gwangju DFSP failed to meet testing specifications. In addition, we determined that the quality of JP-8 fuel met Air Force specifications for all 24 JP-8 fuel storage tanks during our onsite observations at the four DFSPs. The Air Force implemented effective policies and procedures to conduct fuel sample testing and ensured that the four Air Force DFSPs in South Korea met quality standards for JP-8 fuel. The Air Force's efforts to maintain the required quality of JP-8 fuel prevented engine failures, which could have resulted in decreased mobility of aircraft, damage or loss of aircraft, and loss of life.

(U) Air Force DFSPs Met Quality Standards for JP-8 Fuel

(U) The DoD's efforts to maintain the required quality of JP-8 fuel were effective. Specifically, the four Air Force DFSPs in South Korea met quality standards for JP-8 fuel in bulk storage. We reviewed the laboratory testing results from January 1, 2024, through January 31, 2025, and observed onsite bulk fuel sample testing in January 2025 for the 24 JP-8 fuel storage tanks to determine whether the four DFSPs complied with Air Force requirements and specifications.

(U) The four Air Force DFSPs in South Korea met quality standards for JP-8 fuel in bulk storage.

(U) DFSPs Generally Passed Laboratory Testing

(U) We reviewed laboratory testing results from January 1, 2024, through January 31, 2025, to determine whether the four DFSPs met quality standards of JP-8 fuel in bulk storage. The four DFSPs conducted 399 bulk fuel sample tests, including periodic tests and fuel sample tests prior to fuel issuance, upon receipt of fuel, and after completion of tank maintenance. We determined that 398 (99.7 percent) of the 399 bulk fuel samples met testing specifications and 1 bulk fuel sample at the Gwangju DFSP failed to meet testing specifications for

(U) Conductivity (CU) in January 2025. Although the one bulk fuel sample at the Gwangju DFSP failed to meet testing specifications for CU, we determined that the fuel sample test for the same tank passed testing specifications during our onsite observations in January 2025, 5 days after the date of the failed test. Table 3 shows the number of fuel samples tested and test results for the four Air Force DFSPs in South Korea.

(U) Table 3. Number of Fuel Samples Tested and Test Results, from January 1, 2024, Through January 31, 2025

(U) DFSP Location	Number of JP-8 Fuel Samples	JP-8 Fuel Sample Test Results (Number and Percent)	
		Passed	Failed
Gimhae	14	14 (100.0%)	0 (0.0%)
Daegu	106	106 (100.0%)	0 (0.0%)
Gwangju	50	49 (98.0%)	1 (2.0%)
Kunsan	229	229 (100.0%)	0 (0.0%)
Total	**399**	**398 (99.7%)**	**1 (0.3%)** (U)

(U) Source: The DoD OIG.

(U) DFSPs Passed Onsite Sample Testing

(U) During a site visit in January 2025, we observed DFSP personnel conducting sample testing for the 24 JP-8 fuel storage tanks at the four DFSPs. Specifically, we observed DFSP personnel drawing fuel samples from the storage tanks and conducting CU and Fuel System Icing Inhibitor (FSII) testing in the onsite laboratories.[9] DFSP personnel tested JP-8 fuel in bulk storage for CU to ensure that static charges dissipate fast enough to prevent accumulation of static in the tank. In addition, DFSP personnel tested JP-8 fuel in bulk storage for FSII to ensure that the fuel had the proper additive concentration for aircraft usage. Figure 8 shows the apparatus that Gwangju DFSP personnel used to conduct the CU test, and Figure 9 shows the apparatus that Daegu DFSP personnel used to conduct the FSII test. In addition, Figure 10 shows a fuel sample drawn from a JP-8 fuel storage tank at the Gimhae DFSP.

[9] (U) We did not observe Gimhae DFSP personnel conduct the CU test during our onsite observations. However, we observed Gimhae DFSP personnel conduct a FSII test for the tank onsite. In addition, laboratory testing results showed a sample test for CU was conducted on the day of our observation.

(U) Figure 8. CU Test Conducted on January 21, 2025, at Gwangju DFSP, South Korea
(U) Source: The DoD OIG.

(U) Figure 9. FSII Test Conducted on January 17, 2025, at Daegu DFSP, South Korea
(U) Source: The DoD OIG.

(U) Figure 10. JP-8 Fuel Sample Drawn on January 14, 2025, at Gimhae DFSP, South Korea
(U) Source: The DoD OIG.

(U) For the 24 JP-8 fuel tanks observed at the four DFSPs in January 2025, fuel sample tests met specifications for CU and FSII. We did not observe DFSP personnel at Gimhae DFSP conduct a CU test for the one JP-8 bulk fuel tank during our onsite observation. However, laboratory testing results showed that sample tests for CU passed in January 2025. Based on our observations, we determined that the quality of JP-8 fuel in bulk storage met Air Force specifications. Table 4 shows the results of the sample testing observed onsite.

(U) Table 4. Onsite Observations of Fuel Sample Testing Results for CU and FSII

(U) DFSP Location	Number of Tanks	CU Testing (Pass/Fail)	FSII Testing (Pass/Fail)
Gimhae	1	Not Observed	1 Passed / 0 Failed
Daegu	6	6 Passed / 0 Failed	6 Passed / 0 Failed
Gwangju	3	3 Passed / 0 Failed	3 Passed / 0 Failed
Kunsan	14	14 Passed / 0 Failed	14 Passed / 0 Failed
Total	**24**	**23**	**24** (U)

(U) Source: The DoD OIG.

(U) Air Force DFSPs Had Effective Policies and Procedures to Maintain Quality Standards

(U) The Air Force DFSPs had effective policies and procedures to conduct periodic fuel sample testing to detect contaminants, water, or other issues that could compromise fuel quality. According to Air Force Technical Manual 42B-1-1, DFSP personnel must test JP-8 fuel in long-term status every 180 days at an area laboratory.[10] We determined that DFSP personnel must conduct at least two sample tests per year to meet the 180-day requirement for JP-8 fuel in long-term status. Therefore, DFSP personnel were required to conduct a minimum of 42 sample tests from January 1, 2024, through January 31, 2025 (13 months).[11] We determined that DFSP personnel conducted 49 sample tests, exceeding the minimum sample tests required. Specifically, 33 (67.3 percent) of the 49 sample tests were conducted within 180 days from the previous test and 16 (32.7 percent) sample tests were not conducted within 180 days. Table 5 shows the minimum number of sample tests required and the number of tests conducted that met the testing requirement for bulk fuel in long-term status at the four DFSPs.

[10] (U) Air Force Technical Manual 42B-1-1, "Quality Control of Fuels," February 5, 2024.

[11] (U) When bulk fuel storage tanks were under maintenance, DFSP personnel were unable to conduct fuel sample testing. Additionally, when two thirds of inventory was either exchanged, turned over, or replenished, the status of fuel changed from long-term to operational. Therefore, the minimum number of sample tests required could fluctuate based on tank status or fuel status.

(U) Table 5. DFSP Sample Testing Requirements for Bulk Fuel in Long-Term Status, from January 1, 2024, Through January 31, 2025

(U) DFSP Location	Number of Tanks with Bulk Fuel in Long-Term Status	Minimum Number of Bulk Fuel Sample Tests Required	Number of Bulk Fuel Sample Tests Conducted	Met 180-Day Requirement	
				Yes	No
Gimhae	1	2	4	3 (75.0%)	1 (25.0%)
Daegu	6	11[1]	11	11 (100.0%)	0 (0.0%)
Gwangju	3	6	6	2 (33.3%)	4 (66.7%)
Kunsan	12[2]	23[2]	28	17 (60.7%)	11 (39.3%)
Total	**22**	**42**	**49**	**33 (67.3%)**	**16 (32.7%)**

(U)

[1] (U) From May 2024 through October 2024, JP-8 fuel tank number 751 at the Daegu DFSP was under maintenance, and the tank was removed from service; therefore, periodic bulk fuel sample testing was not required.

[2] (U) From January 1, 2024 through February 29, 2024, JP-8 fuel tank number 11 at the Kunsan DFSP was in operational status; therefore, long-term testing was not required.

(U) Source: The DoD OIG.

(U) In addition, according to Air Force Technical Manual 42B-1-1, DFSP personnel must test JP-8 fuel in an operational status every 30 days for CU and FSII. We determined that DFSP personnel must conduct at least 12 sample tests per year to meet the 30-day requirement for bulk fuel in operational status. Therefore, DFSP personnel were required to conduct a minimum of 28 sample tests from January 1, 2024, through January 31, 2025 (13 months).[12] The Kunsan DFSP was the only DFSP with JP-8 fuel in operational status. We determined that Kunsan DFSP personnel conducted 32 fuel sample tests, exceeding the 30-day requirement from January 1, 2024, through January 31, 2025. Table 6 shows the minimum number of fuel sample tests required and the number of tests conducted that met the testing requirement for bulk fuel in operational status at the Kunsan DFSP.

[12] (U) When two thirds of the tank contents is not exchanged, turned over, or replenished, the status of fuel changed from operational to long-term. Therefore, the minimum number of sample tests required could fluctuate based on fuel status.

(U) Table 6. DFSP Fuel Sample Test Requirements for Bulk Fuel in Operational Status, from January 1, 2024, Through January 31, 2025

(U) DFSP Location	Number of Tanks with Bulk Fuel in Operational Status	Minimum Number of Bulk Fuel Sample Tests Required	Number of Bulk Fuel Sample Tests Conducted	Met 30-Day Requirement	
				Yes	No
Kunsan	3*	28*	32	30 (93.75%)	2 (6.25%)

(U)

* (U) The JP-8 fuel in storage tank number 11 at the Kunsan DFSP was only in operational status from January 1, 2024, through February 29, 2024; therefore, only two operational tests were required.

(U) Source: The DoD OIG.

(U) In total, the four DFSPs were required to conduct 70 fuel sample tests to meet long-term and operational status requirements. The four DFSPs conducted 81 fuel sample tests from January 1, 2024, through January 31, 2025 and 63 (77.8 percent) fuel sample tests were conducted within the required time frame.[13] Although, the four DFSPs did not always meet the periodic testing requirements, DFSP personnel conducted additional fuel sample tests for CU and FSII, and tests prior to fuel issuance, upon receipt of fuel, and after completion of tank maintenance. In addition, 99.7 percent of sample tests met testing specifications. Therefore, DFSP personnel generally implemented Air Force requirements to maintain quality standards for JP-8 fuel in bulk storage.

(U) Air Force DFSPs Maintained Quality JP-8 Fuel to Prevent Failures

(U) The DFSPs' efforts to maintain the required quality of JP-8 fuel in bulk storage prevented engine failures, which could have resulted in decreased mobility of aircraft, damage or loss of aircraft, and loss of life. Aircraft must respond quickly and effectively to mission needs, which requires a high state of readiness and a reliable fuel supply.

(U) The DFSPs' efforts to maintain the required quality of JP-8 fuel in bulk storage prevented engine failures, which could have resulted in decreased mobility of aircraft, damage or loss of aircraft, and loss of life.

(U) The four Air Force DFSPs in South Korea met quality standards for JP-8 fuel in bulk storage by generally implementing effective policies and procedures, which required periodic fuel sample testing. DFSP personnel conducted periodic fuel sample testing to detect possible causes of contaminants, water, or other issues that could compromise fuel quality. These efforts allowed the four Air Force DFSPs to safely carry out mission requirements.

[13] (U) DFSP personnel conducted 81 of the 399 fuel sample tests to comply with the long-term and operational periodic testing requirements. DFSP personnel conducted the additional 318 fuel sample tests prior to fuel issuance, upon receipt of fuel, and after completion of tank maintenance.

(U) Appendix A

(U) Scope and Methodology

(U) We conducted this performance audit from September 2024 through September 2025 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

(U) Air Force GOGO DFSPs in South Korea

~~(CUI)~~ Of the [redacted] DFSPs within the USINDOPACOM area of responsibility, we focused on the four Air Force GOGO DFSPs in South Korea. Specifically, we focused on DLA Energy's and Air Force's efforts to maintain the required quantities and quality of JP-8 fuel. We reviewed DFSP information related to location, Military Service, owner-operator category, and fuel type. We selected GOGOs because they tend to have more frequent turnover of military personnel in management, affecting installation roles associated with bulk fuel management and quality surveillance, which presents a higher risk of issues or concerns than other owner-operator types. In addition, the Air Force is the only Military Service with GOGO facilities in South Korea.

(U) We conducted site visits at the following Air Force GOGO DFSPs in South Korea in January 2025.

- (U) Gimhae DFSP, Gimhae Republic of Korea Air Force Air Base
- (U) Daegu DFSP, Daegu Republic of Korea Air Force Air Base
- (U) Gwangju DFSP, Gwangju Republic of Korea Air Force Air Base
- (U) Kunsan DFSP, Kunsan Air Base

(U) We reviewed all 24 JP-8 bulk fuel storage tanks located at the four Air Force DFSPs to determine if the DFSPs maintained the required quantities and quality of JP-8 fuel. To determine whether the four Air Force DFSPs maintained the required quantity of JP-8 fuel, we obtained the required inventory levels for the ML, CL, and the SL established by DLA Energy HQ for each DFSP. In addition, we reviewed end-of-month reports from January 1, 2023, through January 31, 2025, and compared the ending quantity of JP-8 fuel to the ML, CL, and SL. Furthermore, to determine whether the four Air Force DFSPs met quality standards for JP-8 fuel

(U) in bulk storage, we reviewed laboratory testing results from January 1, 2024, through January 31, 2025. Specifically, we reviewed the laboratory testing results to determine whether DFSP personnel complied with Air Force bulk fuel sample testing requirements and specifications. Table 7 shows the number of JP-8 fuel storage tanks at the four Air Force DFSPs.

(U) Table 7. Number of JP-8 Fuel Storage Tanks at the Four Air Force DFSPs

(U) DFSP Location	Number of Bulk Fuel Storage Tanks (U)
Gimhae	1
Daegu	6
Gwangju	3
Kunsan	14
Total	**24**

(U) Source: The DoD OIG.

(U) Criteria

(U) We reviewed the following criteria to determine the effectiveness of the DoD's efforts to maintain the required quantities and quality of JP-8 fuel stored in Air Force DFSPs in South Korea. Specifically, we reviewed the following DoD, DLA Energy, and Air Force guidance and requirements applicable to our audit objective.

- (U) DoD Standard Practice (MIL STD) 3004-1B, "Quality Assurance for Bulk Fuels, Lubricants, and Related Products," February 8, 2024
- (U) DoD Manual 4140.25, Volume 6, "DoD Management of Energy Commodities: Defense Fuel Support Point (DFSP) Management," March 2, 2018 (Incorporating Change 2, April 4, 2019)
- (U) DoD Manual 4140.25, Volume 7, "DoD Management of Energy Commodities: Mobility Energy," March 2, 2018 (Incorporating Change 1, August 31, 2018)
- (U) DoD Manual 4140.25, Volume 9, "DoD Management of Energy Commodities: Defense Fuel Support Point (DFSP) Bulk Petroleum Inventory Accounting," March 2, 2018 (Incorporating Change 1, August 31, 2018)
- (U) Air Force Technical Manual 42B-1-1, "Quality Control of Fuels," February 5, 2024
- (U) DLA Energy P-7, "Accountability and Custodial Responsibilities for Defense Working Capital Fund Inventory and Government Property," April 11, 2023 (Incorporating Change 1, August 9, 2023)

- (U) DLA Energy P-14, "Causative Research and Financial Liability Investigation of Property Loss," October 12, 2016 (Incorporating Change 1, April 25, 2018)

(U) Internal Control Assessment and Compliance

(U) We assessed internal controls and compliance with laws and regulations necessary to satisfy the audit objective with a focus on control activities and their implementation. In particular, we assessed the implementation of control activities for managing inventory quantity (ATG verification, daily closeouts, and end-of-month reporting) and inventory quality (fuel sample testing) at the four Air Force DFSP locations. However, because our review was limited to these internal control components and underlying principles, it may not have disclosed all internal control deficiencies that may have existed at the time of this audit.

(U) Use of Computer-Processed Data

(U) We used computer-processed data from DLA Energy's FuelsManager Defense (FMD) system. To determine the reliability of this system, we reviewed system controls, interviewed DFSP personnel about the system's capabilities, and tested the data for completeness and accuracy. We determined that the data were sufficiently reliable for use in the audit.

(U) Use of Technical Assistance

(U) During our site visits to South Korea, a member of the DoD OIG Evaluations Research and Engineering Division accompanied the audit team at the Gwangju and Kunsan DFSPs and provided engineering subject matter expertise. The Research and Engineering Division representative did not identify any specific concerns or negative observations.

(U) Prior Coverage

(U) During the last 5 years, the DoD Office of Inspector General (OIG), the Government Accountability Office (GAO), the Environmental Protection Agency (EPA) OIG, and the Air Force Audit Agency issued nine reports discussing the management of bulk fuel acquisitions, storage, and management within USINDOPACOM.

(U) Unrestricted DoD OIG reports can be accessed at http://www.dodig.mil/reports.html. Unrestricted GAO reports can be accessed at http://www.gao.gov. The DoD OIG and the GAO do not allow access to restricted audit reports. The Air Force Audit Agency does not publish audit reports publicly.

(U) DoD OIG

(U) Report No. DODIG-2025-012, "Evaluation of DoD Actions Related to the Red Hill Bulk Fuel Storage Facility's Contamination of the Joint Base Pearl Harbor-Hickam Community Water System," November 8, 2024

> (U) The DoD OIG determined that there was an inherent and well-documented risk of contamination due to the co-location of the Red Hill well and the Red Hill Bulk Fuel Storage Facility. In addition, the DoD OIG determined that Navy officials missed opportunities in May 2021 and November 2021 to prevent or lessen the impact of the drinking water contamination incident. Navy officials did not issue the required public notice to effectively communicate the drinking water contamination incident response in a timely manner to the affected community.

(U) Report No. DODIG-2025-011, "Evaluation of the Operation, Maintenance, Safety, and Oversight of the Navy's Red Hill Bulk Fuel Storage Facility," November 8, 2024

> (U) The DoD OIG determined that there were documented risks to the environment, drinking water quality, and health and safety associated with the operation of DFSP Joint Base Pearl Harbor-Hickam. However, DoD officials did not effectively manage and oversee the operations, maintenance, and safety of DFSP Joint Base Pearl Harbor-Hickam. In addition, the DoD OIG determined that Navy officials did not follow the basic tenets of their oil and hazardous substance incident response plans when responding to the fuel incidents discussed in the report. Naval Facilities Engineering Systems Command officials did not properly manage the project to construct the Red Hill Bulk Fuel Storage Facility fire protection system, which contributed to the November 2021 incidents.

(U) Report No. DODIG-2024-075, "Audit of the Defense Logistics Agency Oversight of Defense Fuel Support Points," April 11, 2024

> (U) The DoD OIG determined that DLA did not consistently manage or provide oversight of the DFSPs in accordance with DoD policies.

(U) Report No. DODIG-2021-129, "Audit of Defense Logistics Agency Award and Management of Bulk Fuel Contracts in Areas of Contingency Operations," September 23, 2021

(U) The DoD OIG determined that DLA Energy contracting officials complied with Federal Acquisition Regulation and DoD guidance and generally met bulk fuel requirements, valued at $212.9 million, in Afghanistan, Bahrain, Iraq, Kuwait, the Philippines, Turkey, Qatar, and the United Arab Emirates. In addition, DLA Energy had an adequate system in place to ensure its fuel contractors met contractual obligations and abided by anticorruption practices.

(U) GAO

(U) Report No. GAO-25-106572, "Red Hill Fuel Storage: DoD's Contract Approaches and Oversight before and after the 2021 Fuel Leaks," November 2024

(U) The GAO determined that the Navy changed its contracting approach after the fuel leaks. Specifically, 8 of the 10 contracts that GAO reviewed that were awarded before the 2021 leaks were competitively awarded. After the 2021 fuel leaks, the Navy awarded all six of the contracts that GAO reviewed noncompetitively to address urgent safety or environmental concerns, improve facility operations, and identify needed maintenance and repairs.

(U) Report No. GAO-24-106733SU, "Defense Fuel Contracts: Risks Related to Heavy Reliance on Contractors in Indo-Pacific Region Require DoD Action," September 2024

(U) The GAO determined that the DoD relies heavily on contractors for fuel and its delivery and storage in the Indo-Pacific Command. In addition, contractor-operated facilities provide 52 percent of the DoD's fuel storage capacity in the region and is expected to increase.

(U) Report No. GAO-23-105531, "DoD Bulk Fuel: Improved Management over Transactions Could Lead to More Reliable Financial Reporting," June 2023

(U) The GAO determined that the Military Services and selected DoD Components have not fully documented their end-to-end business process for purchasing, selling, and recording fuel transactions in their financial accounting systems. The Components have documented several aspects of the process in various procedure documents, but the existing documentation is outdated and incomplete.

(U) EPA OIG

(U) Report No. 23-E-0015, "EPA Region 9 Must Continue Oversight Throughout the Decontamination and Closure of the Red Hill Facility," April 25, 2023

(U) The EPA determined that the EPA's regulatory oversight of authorized state programs for underground tanks or drinking water quality would not reasonably have identified the sequence of events that led to the drinking water contamination incident. In addition, the planned defueling, or fuel removal, process and decontamination efforts will require significant coordination between EPA Region 9, the Hawaii Department of Health, and the Navy to minimize potential contamination and clearly communicate health and environmental risks to the public.

(U) Air Force Audit Agency

(U) Report No. F2024-0008-O20000, "Fuel Storage Systems," August 7, 2024

(U) The Air Force Audit Agency determined that although personnel monitored fuel inventories at all three installations reviewed, they did not properly complete and record fuel storage system inspections or perform preventive maintenance and repairs at any of the installations.

(U) Appendix B

(U) Aviation Bulk Fuel Sampling and Testing Requirements

(U) We outlined some of the testing frequency and types within this appendix for aviation bulk fuel, in accordance with Air Force requirements. Table 8 shows the Air Force testing requirements, according to Technical Order 42B-1-1, for sampling and testing of bulk fuel storage.

(U) Table 8. Air Force Bulk Fuel Sample Testing Parameters for Installations and Depots

(U) Sample Point	Test	Test Limits	Sample Frequency
Storage/Operating tanks All-level or continuous sample from the fillstand or transfer line representing tank contents.	Fuel System Icing Inhibitor (FSII)	0.04 - 0.15%	Prior to placing tank on issue after receiving directly from supplier or every 30 days, whichever occurs first.
	Conductivity (CU)	50 - 700 picosiemens per meter (pS/m)	
Long term storage all-level sample	Air Force Petroleum Office Area Lab Analysis	File area lab report	Every 180 days. **(U)**

(U) Note: Picosiemens is a measurement of how well a conductor can carry an electric current.
(U) Source: Air Force Technical Order 42B-1-1, "Quality Control of Fuels," February 5, 2024.

(U) Acronyms and Abbreviations

ATG	Automatic Tank Gauge
CL	Control Limit
CU	Conductivity
DFSP	Defense Fuel Support Point
DLA	Defense Logistics Agency
FMD	FuelsManager Defense
FSII	Fuel System Icing Inhibitor
GOGO	Government-Owned, Government-Operated
HQ	Headquarters
JP-8	Jet Propellant 8
ML	Maximum Authorized Inventory Level or Maximum Limit
SL	Safety Level
USINDOPACOM	U.S. Indo-Pacific Command

(U) Glossary

(U) Control Limit. An unclassified petroleum level. The control limit is the sum of unobtainable, safety level and prepositioned war reserve stock petroleum quantities at a DFSP.

(U) Economic Resupply Quantity. The fuel quantity a DFSP can receive that ideally balances economic and operational requirements. A DFSP should attain or slightly exceed the maximum authorized level upon receipt of an economic resupply quantity. The Defense Energy Support Center Inventory and Distribution Management Division develops economic resupply quantities for each DFSP and determines the economic resupply quantity based on the most efficient and economical method of resupply possible given DFSP storage availability.

(U) Maximum Authorized Inventory Level (Also referred to as the Maximum Limit in this report). An unclassified petroleum level used in conjunction with the control limit to manage bulk petroleum inventories. The maximum authorized inventory level represents the control limit plus the economic resupply quantity and working ullage levels for a DFSP petroleum product grade.

(U) Operating Stock. The fuel required to sustain daily operations and ensure fuel availability to the Military Services worldwide.

(U) Safety Level. The fuel quantity in the peacetime operating stock formula that compensates for time and demand variability during the resupply cycle to protect DFSPs from stock depletion.

(U) Working Ullage. The available storage tank space within a tank that does not require additional fuel inventory.

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