

SIGAR

**Special Inspector General for
Afghanistan Reconstruction**

SIGAR 14-81 Inspection Report

Shindand Airbase: Use of Open-Air Burn Pit Violated Department of Defense Requirements



JULY
2014

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE JUL 2014	2. REPORT TYPE	3. DATES COVERED 00-00-2014 to 00-00-2014			
4. TITLE AND SUBTITLE Shindand Airbase: Use of Open-Air Burn Pit Violated Department of Defense Requirements		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S)		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Special Inspector General for Afghanistan Reconstruction, 2530 Crystal Drive, Arlington, VA, 22202		8. PERFORMING ORGANIZATION REPORT NUMBER			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)			
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified	Same as Report (SAR)	21	

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WHAT SIGAR REVIEWED

In May 2011, the U.S. Army Corps of Engineers awarded a \$4.4 million contract to construct solid waste management facilities, including two incinerators, at Shindand Airbase, a coalition base located in Herat province in western Afghanistan housing approximately 4,000 U.S. and Afghan military personnel and contractors. At the time of the contract award, Shindand Airbase was primarily using open-air burn pit operations to dispose of its solid waste. In addition to the two U.S. Forces-Afghanistan-operated incinerators, in September 2009 the U.S. Army Corps of Engineers awarded an \$11 million contract for incinerators at various bases for use by the Afghan military. Shindand Airbase has two of these Afghan-operated incinerators, which were provided to the Afghan military in August 2012 and cost about \$755,000.

This report assesses whether (1) construction of the incinerators was completed in accordance with contract requirements and applicable construction standards, (2) the incinerators and supporting facilities were being used as intended and maintained, and (3) the use of an open-air burn pit to dispose of solid waste complied with applicable requirements.

July 2014

Shindand Airbase: Use of Open-Air Burn Pit Violated Department of Defense Requirements

SIGAR INSPECTION 14-81

WHAT SIGAR FOUND

SIGAR found that the two U.S. Forces-Afghanistan (USFOR-A) operated incinerators at Shindand Airbase were generally constructed in accordance with contract specifications and transferred to the base in operable condition in June 2012. Further, the two U.S.-funded incinerators built for the Afghan military were transferred in August 2012 with no significant issues that would inhibit their operation.

However, a USFOR-A report completed in December 2012 found that the USFOR-A-operated incinerators were operating at a highly reduced capacity due to mechanical problems and that only 35 percent of U.S.-generated solid waste was being incinerated, with the remaining burned in an Afghan-run open-air burn pit. While these incinerators were repaired under warranty in January 2013, U.S.-generated solid waste continued to be sent to the Afghan-operated burn pit after these repairs took place. USFOR-A did not provide justification for the continued use of the Afghan-operated burn pits after the incinerators



Open-Air Burn Pit at Shindand Airbase, with Unused Afghan-Operated Incinerators in Background

Source: SIGAR, February 14, 2014

became fully operational. Additionally, a May 2013 USFOR-A evaluation found that the Afghan-operated incinerators were in operable condition and the Afghans had been trained and had the proper equipment to operate their incinerators; however, the Afghans did not use them because the burn pits were cheaper to operate.

Despite U.S. Central Command (CENTCOM) requirements to find alternatives to open-air burn pit operations, USFOR-A sent their solid waste to the open-air burn pit until June 2013 and the Afghan military continued to use burn pits to dispose of its own waste until October 2013. Further, environmental surveys released in 2011 and 2012 stated that solid waste such as batteries and plastics—referred to as “covered” waste, which is prohibited from being disposed of in open-air burn pits—was sent to the Shindand open-air burn pit. Moreover, pursuant to the National Defense Authorization Act for Fiscal Year 2010, use of open-air burn pits is prohibited unless the Secretary of Defense determines that no alternative disposal method is feasible. The Secretary of Defense is also required to notify Congress of this determination. Despite evidence that prohibited “covered” waste has been disposed of in open-air burn pits at Shindand Airbase, neither CENTCOM nor USFOR-A have justified the use of burn pits to dispose of this waste, determined that there is no alternative to the use of burn pits, or made the required Congressional notifications.

WHAT SIGAR RECOMMENDS

SIGAR recommends that the Commander, CENTCOM, direct the appropriate CENTCOM units to conduct inquiries and report back to SIGAR within 90 days to:

1. **Determine why the U.S. military continued to send its solid waste to the open-air burn pits at Shindand Airbase for 5 months after USFOR-A incinerators became fully operational.**
2. **Determine why prohibited “covered” waste was burned in open-air burn pits at Shindand Airbase as early as January 2011 and why DOD did not notify Congress, as required under Section 317 of the 2010 NDAA.**

As part of these inquiries, CENTCOM should determine which officials were responsible for the decision to burn solid waste generated by U.S. forces in open-air burn pits even after the incinerators became fully operational and did not notify Congress as required by law and DODI 4715.19. CENTCOM should also identify what steps will be taken to hold these officials accountable.

CENTCOM commented on a draft version of this report. The draft version contained three recommendations. Two of the recommendations were substantially the same as the recommendations contained in this report. Namely, SIGAR recommended that CENTCOM conduct inquiries to determine why the U.S. military continued to send its solid waste to the open-air burn pits at Shindand Airbase for 5 months after USFOR-A incinerators became fully operational and to determine why prohibited “covered” waste was burned in open-air burn pits without the required notifications to Congress. CENTCOM agreed with both of these recommendations and stated in its comments that it has directed USFOR-A to conduct these inquiries.

SIGAR’s draft report also recommended that CENTCOM conduct an inquiry as to why the Afghans continued to dispose of their solid waste in open-air burn pits after USFOR-A provided incinerators to them. CENTCOM disagreed with this recommendation, stating that the coalition does not have the authority to direct the ANSF to use the incinerators that were provided. Moreover, CENTCOM commented that the Afghans fail to use the incinerators because they do not perceive that the health benefits of using the incinerators are worth the cost of the fuel to run them. Nevertheless, CENTCOM stated that coalition leadership continues to encourage the ANSF to use the incinerators. As a result of CENTCOM’s comments, SIGAR removed this recommendation from the final report. SIGAR believes CENTCOM needs to continue to strongly encourage the Afghans to use the incinerators USACE provided because toxic smoke emanating from Afghan burn pits poses a threat to the health of U.S. and coalition personnel serving with Afghans at Shindand Airbase.



SIGAR

Office of the Special Inspector General
for Afghanistan Reconstruction

July 14, 2014

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Commander, U.S. Central Command

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Commander, U.S. Forces–Afghanistan, and
Commander, International Security Assistance Force

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Commanding General and Chief of Engineers,
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This report discusses the results of SIGAR's inspection of incinerators and supporting waste management facilities at Shindand Airbase in Herat province, Afghanistan. The report recommends that the Commander, U.S. Central Command (CENTCOM), direct the appropriate CENTCOM units to conduct inquiries and report back to SIGAR within 90 days to (1) determine why the U.S. military continued to send its solid waste to the open-air burn pits at Shindand Airbase for 5 months after USFOR-A incinerators became fully operational and (2) determine why prohibited "covered" waste was burned in open-air burn pits at Shindand Airbase as early as January 2011 and why DOD did not notify Congress, as required under Section 317 of the 2010 NDAA. As part of these inquiries, and to the extent possible, CENTCOM should determine which official or officials were responsible for these decisions and identify what steps will be taken to hold them accountable.

CENTCOM commented on a draft version of this report. The draft version contained three recommendations. Two of the recommendations were substantially the same as the recommendations contained in this report. Namely, we recommended that CENTCOM conduct inquiries to determine why the U.S. military continued to send its solid waste to the open-air burn pits at Shindand Airbase for 5 months after USFOR-A incinerators became fully operational and to determine why prohibited "covered" waste was burned in open-air burn pits without the required notifications to Congress. CENTCOM agreed with both of these recommendations and stated in its comments that it has directed USFOR-A to conduct these inquiries.

Our draft report also recommended that CENTCOM conduct an inquiry as to why the Afghans continued to dispose of their solid waste in open-air burn pits after USFOR-A provided incinerators to the Afghans. CENTCOM disagreed with this recommendation, stating that the coalition does not have the authority to direct the Afghan National Security Forces (ANSF) to use the incinerators that were provided. Moreover, CENTCOM commented that the Afghans fail to use the incinerators because they do not perceive that the health benefits of using the incinerators are worth the cost of the fuel to run them. Nevertheless, CENTCOM stated that coalition leadership continues to encourage the ANSF to use the incinerators. As a result of



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CENTCOM's comments, we removed this recommendation from the final report. We commend CENTCOM for continuing to encourage the Afghans to use the incinerators that we provided. However, toxic smoke emanating from Afghan burn pits poses a threat to the health of coalition personnel serving with Afghans at Shindand Airbase and will not be confined to the Afghan-controlled side of the base.

This is the fourth in a series of inspections involving the construction of incinerators and supporting facilities at bases that support U.S. operations throughout Afghanistan. SIGAR conducted this inspection under the authority of Public Law No. 110-181, as amended; the Inspector General Act of 1978, as amended; and in accordance with the *Quality Standards for Inspection and Evaluation*, published by the Council of the Inspectors General on Integrity and Efficiency.

A handwritten signature in black ink, appearing to read "John F. Sopko". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

John F. Sopko
Special Inspector General
for Afghanistan Reconstruction

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ABBREVIATIONS

ANSF	Afghan National Security Forces
CENTCOM	U.S. Central Command
DOD	Department of Defense
DODI	Department of Defense Instruction
OEHSA	Occupational Environmental Health Site Assessment
USACE	U.S. Army Corps of Engineers
USFOR-A	U.S. Forces-Afghanistan

Waste incinerators at U.S. and coalition military bases throughout Afghanistan have been installed for several reasons, including concerns about the possible health hazards to base personnel from emissions generated by disposing of solid waste material through the use of open-air burn pit operations. One such base where incinerators were installed is Shindand Airbase, which is a coalition base with U.S., International Security Assistance Forces, and Afghan National Security Forces operations located in Herat province, near the Afghanistan border with Iran. As of February 2014, the base housed approximately 4,000 U.S. and Afghan military personnel and contractors. Photo 1 shows two of these incinerators at Shindand Airbase.

For this inspection, we assessed whether (1) construction of the incinerators was completed in accordance with contract requirements and applicable construction standards, (2) the incinerators and supporting waste management facilities were being used as intended and maintained, and (3) the use of an open-air burn pit to dispose of solid waste complied with applicable requirements.

We conducted our inspection work at Shindand Airbase in Herat province and in Kabul,

Afghanistan, from February 2014 through June 2014, in accordance with the *Quality Standards for Inspection and Evaluation*, published by the Council of the Inspectors General on Integrity and Efficiency. The engineering assessment was conducted by a professional engineer in accordance with the National Society of Professional Engineers' *Code of Ethics for Engineers*. We also reviewed relevant documentation related to operation of the incinerator systems and open-air burn pits at Shindand Airbase, as well as previous SIGAR reports and alert letters examining incinerators and burn pit construction and operation.¹ Appendix I provides more detail on our scope and methodology.

Photo 1 - Two USFOR-A Incinerators Burn Solid Waste at Shindand Airbase



Source: SIGAR, February 14, 2014

¹ See SIGAR Inspection 13-8, *Forward Operating Base Salerno: Inadequate Planning Resulted in \$5 Million Spent for Unused Incinerators and Continued Use of Potentially Hazardous Open-Air Burn Pit Operations* (April 25, 2013); SIGAR Inspection 14-13, *Forward Operating Base Sharana: Poor Planning and Construction Resulted in \$5.4 Million Spent for Inoperable Incinerators and Continued Use of Open-Air Burn Pits* (December 16, 2013); SIGAR Alert 14-42, *USACE Area Engineer and Contracting Officer Did Not Hold Contractor Accountable for Poor Construction* (March 18, 2014); SIGAR Alert 13-4, *Observations on Solid Waste Disposal Methods in Use at Camp Leatherneck* (July 11, 2013).

BACKGROUND

On May 31, 2011, the U.S. Army Corps of Engineers (USACE) awarded a \$4.4 million contract (W5J9JE-10-D-0022 Delivery Order 0006) to two contractors in a joint venture—ECC International, based in Burlingame, California, and METAG Insaat Ticaret, based in Istanbul, Turkey—to construct solid waste management facilities at Shindand Airbase. The two incinerators at Shindand, which were transferred by USACE to the base in June 2012, are operated by KD Limited under a contract managed by U.S. Forces-Afghanistan (USFOR-A).²

In addition to the USFOR-A incinerators, on September 23, 2009, USACE awarded an \$11 million contract (W917PM-07-D-0019) to FCEC United Infrastructure Projects, based in Aliso Viejo, California, for the purchase and installation of incinerators for Afghan military use at bases throughout Afghanistan.³ Through this contract, the U.S. government funded two Afghan-operated incinerators at Shindand Airbase at a cost of about \$755,000. These incinerators were transferred to the Afghan military in August 2012.⁴

CONSTRUCTION OF SHINDAND AIRBASE INCINERATORS GENERALLY MET CONTRACT REQUIREMENTS

Our site visit on February 14, 2014, found that the two USFOR-A incinerators, each with a capacity to burn 8 tons of solid waste per day, were generally constructed in accordance with contract specifications. The transfer documents noted some construction deficiencies.⁵ These items ranged from a lack of fire extinguishers on site to unfinished work on the site drainage and holding pond. However, our engineer determined that these items would not have affected the operational capacity of the incinerators.

In addition, USACE documents transferring the Afghan-operated incinerators in August 2012 to the Afghan military did not identify any significant issues that would inhibit their operation. Almost a year after the installation of the Afghan-operated incinerators, an evaluation issued by USFOR-A in May 2013 found that the two Afghan-operated incinerators were operable and Afghan personnel had been trained and possessed the resources to operate the incinerators.⁶

² For the purposes of this report, we will refer to the incinerators built at Shindand Airbase and operated under a contract managed by USFOR-A as the USFOR-A incinerators.

³ This inspection examines incinerators operated under contract by USFOR-A as well as incinerators managed by the Afghan military. Our previous inspections on incinerators involved only USFOR-A-operated incinerators.

⁴ For the purposes of this report, we refer to the incinerators built for operation by the Afghan military as the Afghan-operated incinerators.

⁵ DD Form 1354, Transfer and Acceptance of DoD Real Property, August 2013. This document states that the facilities transferred were in accordance with maps, drawings, and specifications and change orders were approved by the authorized representative.

⁶ DA Form 11-2, Internal Control Evaluation Certification, May 5, 2013.

USFOR-A INCINERATORS ARE OPERATING, BUT AFGHAN-OPERATED INCINERATORS REMAIN UNUSED

An Occupational Environmental Health Site Assessment (OEHSA) survey report completed in December 2012, 6 months after the USFOR-A incinerators were transferred to the base in operable condition, found that these incinerators were operating at a highly reduced capacity due, in part, to structural failure of the refractory liner⁷ inside the incinerators and poor fuel injection systems.⁸ The report also stated that approximately 35 percent of solid waste was incinerated at the USFOR-A incinerators, with the rest burned at the Afghan-run open-air burn pit also located on the base.

Officials of KD Limited, the contractor responsible for operating the incinerator, stated that the problems limiting operation were due to the continuous operation of the incinerators immediately after transfer to the base in June 2012. Specifically, the officials stated that the incinerators had operated 24 hours a day, seven days a week to process all of the solid waste produced by the base, which did not allow time for required maintenance. In January 2013, about 7 months after the incinerators were transferred to the base, repairs to the incinerator system were conducted under warranty by the manufacturer, and the incinerators were again made fully operational. The KD Limited system operator told us that, due to increased recycling of solid waste

after the incinerators were repaired, it is now necessary to operate the incinerators only about 18 hours a day. This decrease in usage allows maintenance to be conducted more regularly. Base officials stated there have been no further problems with the USFOR-A incinerators since the January 2013 repairs. As such, the base would have been able to incinerate all U.S.-produced solid waste beginning in January of 2013; however, Shindand Airbase continued to burn U.S.-produced solid waste in the open-air burn pits until June 2013.⁹

Conversely, the December 2012 OEHSA survey report revealed that the Afghan-operated incinerators were not being used. More than 14 months after the December 2012 OEHSA survey report, our February 2014 inspection of the Shindand Airbase incinerators showed, and base officials confirmed, that the two smaller Afghan-operated incinerators have never been used following their transfer to the Afghan military in August 2012. Photo 2 shows the unused incinerators. A May 2013 USFOR-A evaluation found that the Afghan military was still using an open-air burn pit to dispose of its solid waste, even though Afghan base personnel possessed the training and equipment necessary to operate their incinerators. Similarly, in June 2013, a USFOR-A information paper reported that the open-air burn pit was being used while the two Afghan-operated incinerators sat unused. The paper stated, "It should be a priority to discontinue the use of the burn pit as soon

Photo 2 - Afghan-Operated Incinerators Sit Unused Behind a Locked Gate at Shindand Airbase



Source: SIGAR, February 14, 2014

⁷ A refractory liner is made from a cement-like material that can either be cast into bricks which are then stacked into place or cast in its final shape.

⁸ U.S. Forces-Afghanistan, *Occupational and Environmental Health Site Assessment Survey Report*, December 2012. This survey was conducted to evaluate the potential health threats associated with environmental contaminants, disease vectors, and other occupational and environmental conditions experienced by U.S. forces operating at Shindand Airbase.

⁹ USFOR-A officials did not provide documentation identifying the amount of U.S.-produced solid waste disposed of in the Afghan-operated burn pit after the USFOR-A incinerators became operational in January 2013.

as possible.”¹⁰ In February 2014, base officials stated that the Afghan military chose to use the open-air burn pit instead of its two incinerators because the open-air burn pit costs less to operate. Moreover, in its comments on a draft version of this report, CENTCOM stated that the Afghans fail to use the incinerators because they do not perceive that the health benefits of using the incinerators are worth the cost of the fuel to run them. The Afghan military continued to use the open-air burn pit until October 2013, when a contract to haul the solid waste from the airbase was put in place.

SHINDAND AIRBASE USED OPEN-AIR BURN PITS WITHOUT PROVIDING REQUIRED NOTIFICATIONS TO CONGRESS AND DESPITE HEALTH RISK TO BASE PERSONNEL

Disposal of Hazardous Waste in Open-Air Burn Pits Is Prohibited by Law and Regulation

Section 317 of the National Defense Authorization Act for Fiscal Year 2010 (the Act) required the Secretary of Defense to “prescribe regulations prohibiting the disposal of covered waste in open-air burn pits except in circumstances in which the Secretary determines that no alternative disposal method is feasible.”¹¹ In such an event, the Act requires the Secretary to notify the House and Senate Armed Services Committees of the determination within 30 days and, after this notice has been given, submit justifications to the Committees every 180 days to continue to operate open-air burn pits.

In response to the requirements of Section 317 of the Act, the Department of Defense (DOD) issued DOD Instruction (DODI) 4715.19 on February 15, 2011, which requires each operational commander in contingency operations to develop and approve a solid waste management plan. DODI 4715.19 states that the use of open-air burn pits is prohibited unless included within such a plan. In addition, DODI 4715.19 states that “open-air burn pits should be a short-term solution during contingency operations where no other alternative is feasible. For the longer term, incinerators, engineered landfills, or other accepted solid waste management practices are to be used whenever feasible. When used, open-air burn pits should be operated in a manner that prevents or minimizes risk to human health and safety of DOD personnel and, where possible, harm to the environment.”

Further, DODI 4715.19 delegates the authority and responsibility of the Secretary of Defense to determine circumstances in which no alternative method for disposing of “covered” waste is feasible to the Commanders of Combatant Commands. In the case of Afghanistan, the CENTCOM commander is responsible for making such determinations. To support each determination, the commander is responsible for developing a determination package, which must include the “circumstances, reasoning, and methodology for the determination.” DODI 4715.19 also requires that the commander complete a health assessment report for

¹⁰ U.S. Forces-Afghanistan, *Information Paper on Shindand 838 Air Base–Solid Waste Disposal*, 30 June 2013.

¹¹ National Defense Authorization Act for Fiscal Year 2010, Pub. L. No. 111-84, § 317, 123 Stat. 2190, 2249-50 (2009) (codified at 10 U.S.C. § 2701 note). The Act defines “covered waste” as hazardous waste (as defined by 42 U.S.C. § 6903(5)), medical waste, and other waste as designated by the Secretary. Department of Defense Instruction 4715.19, which DOD issued in response to the 2010 NDAA, designated additional wastes, including tires, treated wood, batteries, compressed gas cylinders unless empty with valves removed, fuel containers unless completely evacuated of contents, aerosol cans, polychlorinated biphenyls, petroleum, oils, and lubricant products (other than waste fuel for initial combustion), asbestos, mercury, foam tent material, or any item containing any of the above items. The instruction allows for a small amount of plastic remaining after a good faith effort to remove or recover plastic materials from the solid waste stream.

each burn pit for which a determination package is required.¹² The Under Secretary of Defense for Acquisition, Technology, and Logistics then submits any determinations made by the Commanders of Combatant Commands to the House and Senate Armed Services Committees. As required by the Act, DODI 4715.19 also requires the commander to provide justification for continued burn pit operations every 180 calendar days thereafter, for as long as prohibited “covered” waste is disposed of in this manner.

Moreover, CENTCOM Regulation 200-2 prohibits the burning of solid waste in contingency operations—unless no feasible alternative can be found—to protect the health of U.S. personnel. Specifically, CENTCOM Regulation 200-2 states that when a base exceeds 100 U.S. personnel for 90 days, it must develop a plan for installing waste disposal technologies, such as incinerators, so that open-air burn pit operations can cease. The regulation further states that if incinerators are chosen, they must be on-site within 180 days of the decision to use them and be operational 180 days after arrival. Open-air burn pit operations must cease not more than 360 days after a base reaches the U.S. personnel threshold—regardless of the technology chosen.

Shindand Airbase’s Use of Open-Air Burn Pits Violated Law and Regulation

Despite the requirement to find alternatives to open-air burn pit operations, USFOR-A sent U.S.-generated solid waste to the open-air burn pit until June 18, 2013—when it began sending all U.S.-generated solid waste to the two USFOR-A incinerators.¹³ Further, the Afghan military continued to use open-air burn pits to dispose of Afghan-generated solid waste until at least October 2013.¹⁴ Photo 3 shows the open-air burn pit with the unused Afghan-operated incinerators in the background. As we reported in December 2013, according to CENTCOM officials, no bases in Afghanistan, which would include Shindand Airbase, have been in compliance with CENTCOM regulation 200-2 regarding the use of open-air burn pits since the regulation was issued in 2011.¹⁵

Photo 3 - Open-Air Burn Pit at Shindand Airbase, with Unused Afghan-Operated Incinerators in Background



Source: SIGAR, February 14, 2014

¹² According to DODI 4715.19, the health assessment is to include (a) an epidemiological description of the short and long term health risks posed to personnel in the area where the open-air burn pit is located because of exposure to the open-air burn pit, (b) the methodology used to determine the health risks described, and (c) an assessment of the operational risks and health risks when making the determination that no alternative disposal method is feasible for the open-air burn pit.

¹³ CENTCOM did not provide us with specific information on when Shindand Airbase started using open-air burn pits to dispose of solid waste; however, base officials stated that all solid waste was disposed of using the open-air burn pits prior to the installation of incinerators at Shindand Airbase.

¹⁴ Open-air burn pit operations at Shindand Airbase were conducted by the Afghan military; however, Shindand Airbase is a CENTCOM coalition base. Therefore, the operation of the open-air burn pit falls under the authority of CENTCOM Regulation 200-2.

¹⁵ SIGAR identified the continued use of open-air burn pit operations in violation of CENTCOM Regulation 200-2 during our inspection of Forward Operating Bases Salerno and Sharana. For more information, see SIGAR Inspection 13-8, *Forward Operating Base Salerno: Inadequate Planning Resulted in \$5 Million Spent for Unused Incinerators and the Continued Use of Potentially Hazardous Open-Air Burn Pit Operations*, April 2013, and; SIGAR Inspection 14-13, *Forward Operating Base Sharana: Poor Planning and Construction Resulted in \$5.4 Million Spent for Inoperable Incinerators and Continued Use of Open-Air Burn Pits*, December 2013.

The reasons for USFOR-A's continued use of the open-air burn pits after January 2013, when the USFOR-A operated incinerators reportedly became fully operational, remain unexplained. According to a June 2013 USFOR-A information paper, a DynCorp site manager stated that one to two truckloads of U.S.-generated solid waste per day were transferred to the Afghan-operated open-air burn pit from at least November 2012 to June 2013.¹⁶ The paper recommended an Army Regulation 15-6 investigation to determine (1) why the commander responsible for the Shindand Afghan burn-pit continued to permit the burning of solid waste despite information provided in health reports, and (2) why solid waste from U.S. military forces continued to be dumped into the Afghan burn pit through June 2013.¹⁷ However, a former USFOR-A official told us that USFOR-A took no action to initiate an investigation, and we were provided no evidence that an investigation took place. We have referred this matter to SIGAR investigators for further action, as appropriate. In addition, the January 2011, July 2011, and December 2012 OEHSA surveys for Shindand Airbase indicate that solid waste disposed of in the Afghan-run burn pits included unsegregated solid waste from USFOR-A, including plastics and other prohibited "covered" waste. Specifically:

- The January 2011 OEHSA survey found that no segregation of solid waste took place at the Afghan-operated burn pit and that small amounts of prohibited "covered" waste, such as aerosol cans and batteries, were mixed in with other solid waste and burned daily.¹⁸
- The July 2011 OEHSA survey noted that "everything is burned at the burn pit," and noted that, among other things, tires, which are considered prohibited "covered" waste by DODI 4715.19, were being burned in the open-air burn pit.¹⁹
- The December 2012 OEHSA survey similarly found that no segregation of solid waste took place at the Afghan-run burn pit and that a small amount of aerosol cans and batteries were mixed in with other solid waste to be burned daily. The survey also noted that trash was not segregated and mixed garbage containing plastics and metals were burned at the Afghan-run burn pit.²⁰

Further, a January 2013 Environmental Conditions Report found that U.S. operations generated the majority of the waste burned in the Afghan-operated open air burn pits.²¹ The report added that the smoke from burned plastics, prohibited "covered" waste, and other miscellaneous waste negatively affected air quality and the health of residents, including U.S. military personnel and civilians, at Shindand Airbase. The report recommended, among other things, that all solid waste be directed to the incinerators so that the contractor running the incinerators could sort through the waste and remove recyclables, including plastics. Any remaining non-covered waste not processed by the incinerators would be transported to the Afghan-operated burn pit. However, CENTCOM provided us with no documentation that this recommendation was implemented.

Despite the Environmental Conditions Report and the OESHA surveys' findings that prohibited "covered" solid waste was disposed of in the open-air burn pit at Shindand Airbase, neither CENTCOM nor USFOR-A prepared determination packages required by DODI 4715.19 detailing the circumstances, reasoning, and methodology justifying the use of open-air burn pits to dispose of prohibited "covered" solid waste. On the contrary, and

¹⁶ DynCorp was the contractor in charge of collecting and transporting solid waste to the USFOR-A incinerators at Shindand Airbase.

¹⁷ Army Regulation 15-6 sets forth procedures for conducting informal and formal investigations. Army Regulation 15-6 investigations are used as the basis for many investigations requiring the detailed gathering and analyzing of facts and the making of recommendations based on those facts.

¹⁸ U.S. Forces–Afghanistan, *Occupational and Environmental Health Site Assessment Survey Report, Shindand Airbase*, January 15, 2011.

¹⁹ U.S. Forces–Afghanistan, *Occupational and Environmental Health Site Assessment Survey Report, Shindand Airbase*, July 21, 2011.

²⁰ SIGAR obtained additional documentation that further corroborates information in the OESHA reports on the disposal of covered solid waste in open-air burn pits at Shindand Airbase. However, this documentation is classified.

²¹ *USFOR-A Environmental Conditions Report for Shindand Airbase, Herat province, Afghanistan*, January 2013.

despite clear evidence, CENTCOM officials have denied that prohibited “covered” solid waste was disposed of in open-air burn pits. Specifically, in response to our December 2013 request for determination packages produced by bases in Afghanistan that were burning prohibited “covered” waste, CENTCOM replied: “Determination packages are not required since the bases in question are not burning covered waste.” The response further stated that, “Covered waste is not authorized to be burned in open-air burn pits in accordance with [CENTCOM Regulation 200-2] and therefore these bases are not burning covered waste [and] they are not required to develop and submit determination packages.”²²

Because no determination packages were prepared, despite evidence that some prohibited “covered” materials were disposed of in open-air burn pits, none of the reports required by the Act were submitted to the House and Senate Armed Services Committees. Such reports would have explained the circumstances, reasoning, and methodology for a determination that no alternatives to open-air burn pits existed as well as an assessment of the short and long term health risks posed to personnel in the area where the burn pit was located.

Burn Pit Operations Continued Operation despite Health Risks Identified at Shindand

The continued use of open-air burn pits posed potential health risks for base personnel. Some possible health hazards associated with smoke emitted by burning waste include breathing particulate matter, lead, mercury, dioxins, and irritant gases. These substances can negatively affect organs and body systems, such as the adrenal glands, lungs, liver, and stomach.²³ According to the December 2012 OEHSA survey, emissions produced by the USFOR-A-operated incinerator were low. However, the Afghan-run open-air burn pit burned at much lower temperatures and thus smoldered much of the time, creating large volumes of smoke and volatile gases. The survey also found that the burn pit was not well managed and that the site had a high potential to produce dioxins and other toxic compounds.²⁴ In addition, the June 2013 USFOR-A information paper reported that in April and May 2013, the Shindand garrison commander received complaints from U.S. and Afghan personnel regarding the poor air quality emanating from the Afghan burn pit. In its comments on a draft version of this report, CENTCOM noted that the Afghans fail to use the incinerators because they do not perceive that the health benefits of using the incinerators are worth the cost of the fuel to run them.

²² CENTCOM statement on determination packages, US CENTCOM External Audits, December 27, 2013.

²³ The Armed Forces Health Surveillance Center, The Naval Health Research Center, and The U.S. Army Public Health Command (Provisional), *Epidemiological Studies of Health Outcomes among Troops Deployed to Burn Pit Sites*, May 2010; U.S. Government Accountability Office, GAO-11-63, *Afghanistan and Iraq: DOD Should Improve Adherence to Its Guidance on Open Pit Burning and Solid Waste Management*, October 2010; Institute of Medicine, Committee on the Long-Term Health Consequences of Exposure to Burn Pits in Iraq and Afghanistan, *Long-Term Health Consequences of Exposure to Burn Pits in Iraq and Afghanistan*, October 2011.

²⁴ Dioxins are a name for a family of toxic substances that can be produced when products are burned. Dioxins can cause a number of adverse health effects, and the U.S. Environmental Protection Agency has reported that it is likely to cause cancer.

CONCLUSION

To their credit, USACE and CENTCOM officials ensured mechanical issues with the two USFOR-A incinerators at Shindand Airbase were repaired under warranty. This stands in sharp contrast to other U.S. military bases we have inspected, such as Forward Operating Base Salerno and Forward Operating Base Sharana, where mechanical issues with the incinerators resulted in the complete waste of U.S. taxpayer funds and continued exposure of U.S. military personnel to potentially hazardous chemicals.

However, we remain concerned that the burning of prohibited “covered” waste at Shindand Airbase continued even after USFOR-A and Afghan-operated incinerators became operational. Despite clear evidence in OEHSA survey reports that prohibited “covered” waste had been disposed of in open-air burn pits, CENTCOM officials have denied such prohibited disposal occurred. As a result, the official determinations that no alternatives to open-air burn pits existed and the reports justifying the continued use of burn pits were not submitted to Congress as required. More importantly, however, the disposal of prohibited “covered” waste in burn-pits—even after complaints were received from U.S. military personnel of the poor air quality at the base—put the health and safety of U.S. military, Afghan military, and contractor personnel stationed at the base at risk.

RECOMMENDATIONS

We recommend that the Commander, CENTCOM, direct the appropriate CENTCOM units to conduct inquiries and report back to SIGAR within 90 days to:

1. **Determine why the U.S. military continued to send its solid waste to the open-air burn pits at Shindand Airbase for 5 months after USFOR-A incinerators became fully operational.**
2. **Determine why prohibited “covered” waste was burned in open-air burn pits at Shindand Airbase as early as January 2011 and why DOD did not notify Congress, as required under Section 317 of the 2010 NDAA.**

As part of these inquiries, CENTCOM should determine which officials were responsible for the decision to burn U.S.-generated solid waste in open-air burn pits after the incinerators became fully operational and did not notify Congress as required by law and DODI 4715.19. CENTCOM should also identify what steps will be taken to hold these officials accountable.

AGENCY COMMENTS

We provided a draft version of this report to CENTCOM and USACE for their review and comment. CENTCOM did provide written comments that are reproduced in appendix II. USACE did not provide comments.

The draft version of the report that we provided to CENTCOM contained three recommendations. Two of the recommendations were substantially the same as the recommendations in this report. Namely, we recommended that CENTCOM conduct inquiries to determine why the U.S. military continued to send its solid waste to the open-air burn pits at Shindand Airbase for 5 months after USFOR-A incinerators became fully operational and to determine why prohibited or “covered” waste was burned in open-air burn pits without the required notifications to Congress. CENTCOM agreed with both of these recommendations and stated in its comments that it has directed USFOR-A to conduct these inquiries.

Our draft report also recommended that CENTCOM conduct an inquiry as to why the Afghans continued to dispose of their solid waste in open-air burn pits after USFOR-A provided incinerators to the Afghans. CENTCOM disagreed with this recommendation, stating that the coalition does not have the authority to direct the Afghan National Security Forces (ANSF) to use the incinerators that were provided. Moreover, CENTCOM commented that the Afghans failed to use the incinerators because they do not perceive that the health benefits of using the incinerators are worth the cost of the fuel to run them. Nevertheless, CENTCOM stated that coalition leadership continues to encourage the ANSF to use the incinerators. As a result of CENTCOM’s comments, we have removed this recommendation from the final report. We believe CENTCOM needs to continue to strongly encourage the Afghans to use the incinerators USACE provided because toxic smoke emanating from Afghan burn pits poses a threat to the health of U.S. and coalition personnel serving with Afghans at Shindand Airbase.

APPENDIX I - SCOPE AND METHODOLOGY

This report provides SIGAR's inspection results of the Shindand Airbase incinerators and supporting facilities. We conducted our inspection at Shindand Airbase on February 14, 2014. Shindand Airbase is the fourth in a series of inspections that examine incinerator construction projects that have taken place at U.S. bases throughout Afghanistan. Later this year, we will issue a capping report summarizing the findings of our incinerator inspections.

To determine whether (1) construction was completed in accordance with contract requirements and applicable construction standards, (2) the incinerators and supporting facilities were being used as intended and maintained, and (3) the use of open-air burn pits to dispose of solid waste complied with applicable requirements, we

- reviewed contract documents to understand project requirements and contract administration;
- interviewed cognizant officials regarding facility operation and maintenance; and
- conducted a physical inspection, reviewed environmental surveys and photographed the incinerators and supporting facilities to determine the current status and quality of construction.

This inspection examines incinerators operated under contract by USFOR-A as well as incinerators managed by the Afghan military. Our previous inspections on incinerators involved only USOR-A-operated incinerators.

SIGAR conducted its fieldwork at Shindand Airbase and supporting facilities in Herat province, Afghanistan, and in Kabul, Afghanistan, from February through June 2014, in accordance with *Quality Standards for Inspection and Evaluation* published by the Council of the Inspectors General on Integrity and Efficiency. These standards were established to guide inspection work performed by all of the Offices of Inspectors General. The engineering assessment was conducted by a professional engineer in accordance with the National Society of Professional Engineers' *Code of Ethics for Engineers*. We did not rely on computer-processed data in conducting this inspection. However, we did consider the impact of compliance with laws and fraud risk.

We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our inspection objectives. SIGAR conducted this inspection under the authority of Public Law No. 110-181, as amended; and the Inspector General Act of 1978, as amended.

APPENDIX II - COMMENTS FROM U.S. CENTRAL COMMAND



UNITED STATES CENTRAL COMMAND
OFFICE OF THE INSPECTOR GENERAL
7115 SOUTH BOUNDARY BOULEVARD
MACDILL AIR FORCE BASE, FLORIDA 33621-5101

25 June 2014

TO: SPECIAL INSPECTOR GENERAL FOR AFGHANISTAN RECONSTRUCTION
(SIGAR)

SUBJECT: SIGAR Inspection Draft Report I-007F, "Shindand Airbase: Use of Open-Air Burn Pit Violated Department of Defense Requirements"

1. The report addressed Three Recommendations to the Commander USCENTCOM regarding the use of an Open-Air Burn Pit at Shindand Airbase.
2. SIGAR recommended that the Commander, USCENTCOM, direct the appropriate USCENTCOM units to conduct an inquiry, and report back to SIGAR within 90 days, to determine why:

Recommendation 1. U.S.-generated solid waste continued to be sent to the open-air burn pits at Shindand Airbase for five months after USFOR-A incinerators became fully operational. Based on the results of this inquiry, and to the extent possible, determine which official or officials were responsible for the decision to burn U.S. solid waste in open-air burn pits after the incinerators became fully operational and identify what steps will be taken to hold them accountable.

Response: Concur. USCENTCOM is directing USFOR-A to conduct an inquiry to address SIGAR's concerns.

Recommendation 2. The Afghan military continued to dispose of its solid waste in the open-air burn pits at Shindand Airbase until at least October 2013 or about 14 months after USACE transferred two new incinerators to the Afghan military. Based on the results of this inquiry, and to the extent possible, determine which official or officials were responsible for the decision to allow the Afghan military to continue disposing of solid waste in open-air burn pits after its incinerators became fully operational and identify what steps will be taken to hold them accountable.

Response: Non-Concur. The phrase "which official or officials were responsible for the decision to allow the Afghan military to continue disposing of solid waste in open-air burn pits after its incinerators became fully operational" does not accurately represent either the operating environment or the status of relations between Afghan and Coalition Forces.

Shindand Air Base is effectively split in half between the Afghan owned and controlled west side and the Coalition controlled east side. The incinerators in question are on the west side of the base and are controlled, secured and powered by Afghan National Security Forces (ANSF).

Coalition forces installed the incinerators, trained operators in the use of the equipment, made repairs to the incinerators as needed and transferred responsibility for the operation to the ANSF in August 2012. The Afghans fail to use the incinerators because they do not perceive that the health benefits of using the incinerators are worth the cost of the fuel to run them. There is no command relationship between Coalition forces and ANSF at Shindand Air Base. Coalition Forces do not have the authority to direct ANSF; however, Coalition leadership continues to encourage the ANSF to use the incinerators.

Recommendation 3. Covered waste was burned in open-air burn pits at Shindand Airbase as early as January 2011 and why DOD did not notify Congress, as required under Section 317 of the 2010 NDAA. Based on the results of this inquiry, and to the extent possible, determine which official or officials were responsible for this apparent failure to follow the law and DODI 4715.19, and identify what steps will be taken to hold them accountable.

Response: Concur. USCENTCOM is directing USFOR-A to conduct an inquiry to address SIGAR's concerns.

3. POC is Mr. Banks Edwards; phone: [REDACTED]; e-mail: [REDACTED]



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ACKNOWLEDGMENTS

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This inspection report was conducted
under project code SIGAR-I-007F

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The mission of the Special Inspector General for Afghanistan Reconstruction (SIGAR) is to enhance oversight of programs for the reconstruction of Afghanistan by conducting independent and objective audits, inspections, and investigations on the use of taxpayer dollars and related funds. SIGAR works to provide accurate and balanced information, evaluations, analysis, and recommendations to help the U.S. Congress, U.S. agencies, and other decision-makers to make informed oversight, policy, and funding decisions to:

- improve effectiveness of the overall reconstruction strategy and its component programs;
- improve management and accountability over funds administered by U.S. and Afghan agencies and their contractors;
- improve contracting and contract management processes;
- prevent fraud, waste, and abuse; and
- advance U.S. interests in reconstructing Afghanistan.

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