



**SIGAR**

Office of the Special Inspector General  
for Afghanistan Reconstruction

John F. Sopko  
Inspector General

July 11, 2013

General Lloyd J. Austin III  
Commander, U.S. Central Command

General Joseph F. Dunford, Jr.  
Commander, U.S. Forces-Afghanistan, and  
Commander, International Security Assistance Force

An issue potentially endangering the health of U.S. military and civilian personnel supporting the mission in Afghanistan has come to my attention that I believe requires your immediate action. Specifically, Camp Leatherneck in Helmand province is underutilizing its four solid waste incinerators and, as a result, is continuing to use open-air burn pit operations to dispose of its daily waste. We recently noted in an inspection report concerning waste incinerators at Forward Operating Base Salerno that there are health concerns associated with breathing the smoke emissions from open-air burning.<sup>1</sup> The toxic smoke from burning solid waste each day increases the long-term health risks for camp personnel, including reduced lung function and exacerbated chronic illnesses, ranging from asthma to chronic obstructive pulmonary disease. I am also concerned that, in its efforts to terminate open-air burn pit operations, the camp is pursuing a \$1.1 million contract, which may not be necessary, for hauling its solid waste to a local landfill.

Camp Leatherneck, currently consisting of about 13,500 U.S. military and civilian personnel, spent \$11.5 million to purchase and install two 12-ton and two 24-ton capacity incinerators. My inspectors made several visits to the camp and found that the 12-ton incinerators were not being used to full capacity and the 24-ton incinerators were not being used at all because a contract for their operation and maintenance had not been awarded. As a result, the camp was relying heavily on open-air burn pit operations to dispose of its solid waste. However, Department of Defense guidance and a U.S. Central Command regulation limit the use of open-air burn pit operations. Camp Leatherneck is in violation of this guidance and regulation.

Camp officials advised that they are planning to eventually use all four incinerators and are looking into the feasibility of contracting to have any excess solid waste hauled to a local landfill. In mid-June 2013, my office was notified that a contract was about to be awarded for operating and maintaining the two 24-ton incinerators and that a contract for hauling trash off-site should be in place by the end of July 2013. These are positive steps toward the cessation of open-burn pit operations. However, if the base incinerators were used to their full capacity, hauling trash off-site may not be necessary.

My office's analysis shows that, given Camp Leatherneck's 13,500 personnel, the solid waste generated each day could be processed by operating all four incinerators at least 18 hours a day. According to the manufacturer, these incinerators are built to operate 24 hours a day, 7 days a week. The analysis also shows that as Camp Leatherneck's drawdown continues and eventually reaches 12,000 personnel, it would be capable of processing all daily solid waste by

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<sup>1</sup> SIGAR Inspection 13-08, *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 25, 2013).

operating only three incinerators—one 12-ton and two 24-ton—for 20 hours per day. Consequently, making efficient and effective use of the incinerators would enable the camp to terminate open-air burn pits operations and possibly eliminate the need for the trash hauling contract.

Accordingly, you should consider terminating the use of Camp Leatherneck's open-air burn pit operations as quickly as possible by ensuring that the camp's 12-ton incinerators are used to their full capacity and by awarding an operation and maintenance contract for the 24-ton incinerators. In addition, I suggest that you reevaluate the need for the \$1.1 million contract for hauling the camp's solid waste to a local landfill in light of the incinerators' capability to process all the waste.

The results of my office's preliminary inspection are contained in the enclosure to this letter. Should you have any questions or need additional information, please contact Elizabeth Field, Assistant Inspector General for Audits & Inspections, at (703) 545-6006 or elizabeth.a.field9.civ@mail.mil, or Michael Welsh, Deputy Assistant Inspector General for Audits & Inspections, Kabul, at (301) 490-1042 x7340 or welshLM@state.gov. Thank you in advance for your attention to this matter.

A handwritten signature in black ink, appearing to read 'John F. Sopko', with a long horizontal flourish extending to the right.

John F. Sopko  
Special Inspector General  
for Afghanistan Reconstruction

Enclosure

cc:  
Lieutenant General Mark A. Milley  
Commander, International Security Assistance Force Joint Command, and  
Deputy Commander, U.S. Forces-Afghanistan

Lieutenant General Thomas P. Bostick  
Commanding General and Chief of Engineers,  
U.S. Army Corps of Engineers

SIGAR Alert 13-4



## OBSERVATIONS ON SOLID WASTE DISPOSAL METHODS IN USE AT CAMP LEATHERNECK

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Camp Leatherneck was built in 2008, for the Marine Expeditionary Force in Helmand province, Afghanistan. The camp, which at one point housed 21,000 U.S. military and civilian personnel, currently houses about 13,500 personnel. Camp Leatherneck currently uses a combination of incineration and open-air burn pit operations to dispose of about 54 tons of solid waste produced each day.

**Photo 1 - Two 12-Ton and Two 24-Ton Capacity Incinerators at Camp Leatherneck**



Source: SIGAR, April 10, 2013.

Camp Leatherneck's solid waste disposal facilities consist of two 12-ton and two 24-ton capacity incinerators (see photo 1), fuel tanks, generators, a covered sorting area, concrete paved truck aprons, ash pits, control systems, office buildings, and a chain link security fence. The camp's open-air burn pits are located in the same area as the incinerators. DynCorp International operates and maintains the two 12-ton capacity incinerators and the open-air burn pits. At the time of our site visits, Camp Leatherneck officials were still in the process of awarding the contract to operate the 24-ton capacity incinerators and, as a result, the camp continued to rely heavily on its open-air burn pit operations.

### **Camp Leatherneck's Waste Incinerators Are Not Being Used to Full Capacity**

SIGAR's inspection team visited Camp Leatherneck on three occasions—April 10, April 25, and May 7-9, 2013. During these visits, we found that the 12-ton incinerators were not being used to full capacity and the 24-ton incinerators were not being used at all.

**12-ton incinerators**—During our April 10 site visit, both incinerators were operational. Contractor personnel stated that both units operate 24 hours a day, 7 days a week and each unit processes one cubic meter of solid waste every 15 minutes. However, during the hour that we observed operations, we did not see any solid waste being loaded into either unit. Rather, we observed several truckloads of solid waste being delivered to the open-air burn pits. During a 1-hour nighttime inspection on the same day, we observed one load of solid waste being loaded into one of the incinerators. During our April 25 site visit, we observed both of the units being used, but only two loads of solid waste were loaded, one in each incinerator, during our 1-hour site visit.

**24-Ton Incinerators**—During our April 10 site visit, the 24-ton capacity incinerators were not operational. Contractor personnel operating the 12-ton capacity incinerators told us that efforts were underway to place them into service within 2 weeks. However, at the time of our April 25 and May 7-9 site visits, these incinerators were still not operational. During our May visit, contractor personnel said that the units would be operational in about 3 weeks, but, as of July 2, 2013, they were still not operational. According to a camp engineer, the units were not operational because the contract to operate and maintain them had still not been awarded.

Camp Leatherneck’s four incinerators, if operated continuously, have a maximum processing capacity of 72-tons of solid waste per day.<sup>2</sup>

We recently conducted a similar inspection at Forward Operating Base Salerno, where we found that the solid waste incinerators were not being used and open-air burn pit operations were continuing.<sup>3</sup> Based on information that U.S. Army Central<sup>4</sup> provided that we used to determine the capacity requirements for incinerators used in a contingency environment, Camp Leatherneck’s 13,500 personnel would produce about 54 tons of solid waste each day.<sup>5</sup> Table 1 shows our calculations of how much the four incinerators combined could process at the 13,500 personnel level. The calculations also evaluate the incinerators’ processing capacity using three scenarios: 24 hours, 20 hours, and 18 hours of operation per day.

**Table 1 - Incinerator Processing Capacity**

Camp Leatherneck Population	Daily Waste Generated	Hours of Operation per Day	Daily Waste Processed
<b>Average of 8 pounds generated/person/day</b>			
13,500	54 tons	24	72 tons
13,500	54 tons	20	60 tons
13,500	54 tons	18	54 tons

Source: SIGAR analysis based on information obtained from U.S. Army Central, Camp Leatherneck, and the incinerators’ operation and maintenance manual.

Table 1 demonstrates that the incinerators are capable of fully processing the camp’s solid waste if operated at least 18 hours per day. This allows ample time for repair, cleaning, and maintenance. As a result, Camp Leatherneck’s proposal for spending \$1.1 million to haul trash off-site may not be necessary. Our calculations show that once the personnel level decreases to 12,000, the camp would be capable of processing all solid waste using only three incinerators—one 12-ton and two 24-ton—and operating them 20 hours each per day.

## Camp Leatherneck’s Continued Use of Open-Air Burn Pit Operations Violates Department of Defense Guidance and a U.S. Central Command Regulation

Camp Leatherneck’s start-up operations in 2008 permitted it to use open-air burn pit operations to dispose of its solid waste. However, their use continues 5 years later, violating Department of Defense guidance and a U.S. Central Command regulation governing open-air burn pit operations at U.S. bases during contingency operations (see photo 2).<sup>6</sup> Department of Defense guidance (*Department of Defense Directive Type*

<sup>2</sup> This does not factor in time for repair, maintenance, or cleaning.

<sup>3</sup> 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 25, 2013).

<sup>4</sup> U.S. Army Central (Third Army) is a subordinate element of U.S. Central Command. Its area of responsibility includes Afghanistan.

<sup>5</sup> U.S. Army Central provided data which shows that one person generates an average of 8 pounds of solid waste per day in a contingency environment.

<sup>6</sup> *Use of Open-Air Burn Pits in Contingency Operations*, Department of Defense Directive Type Memorandum 09-032, March 30, 2010; superseded by *Use of Open-Air Burn Pits in Contingency Operations*, Department of Defense Instruction 4715.19, February 15, 2011. U.S. Central Command Regulation 200-2, *CENTCOM Contingency Environmental Guidance*, dated January 3, 2011.

Memorandum 09-032) specifically prohibits the disposal of waste in open-air burn pits during contingency operations "except in circumstances in which no other alternative disposal method is feasible." Moreover, U.S. Central Command Regulation 200-2 states that when a base houses more than 100 U.S. personnel for more than 90 days, commanders must develop a plan to install waste disposal technologies, such as incinerators, so that open-air burn pit operations can cease. The regulation also states that if commanders decide to use incinerators, the equipment must be on site within 180 days of the decision and be operational 180 days after arrival. The regulation further states that, regardless of the technology chosen, open-air burn pit operations must cease 360 days after the 100 U.S. personnel threshold has been met. Further, a Department of the Army memorandum dated April 15, 2011, noted that poor air quality from open-air burning at Bagram Air Field in Afghanistan "...indicates there is a potential that long-term exposure...may increase the risk for developing chronic health conditions such as reduced lung function or exacerbated chronic bronchitis, chronic obstructive pulmonary disease (COPD), asthma, atherosclerosis, or other cardiopulmonary disease."<sup>7</sup>

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**Photo 2 - Open-Air Burn Pit Emissions at Camp Leatherneck**



Source: SIGAR, April 25, 2013.

Camp Leatherneck could terminate its use of open-air burn pit operations through maximum use of its incinerators, which it paid \$11.5 million to purchase and install. To date, this has not happened and, as a result, possible long-term health risks to the camp's personnel continue. As noted above, the camp's four incinerators are capable of processing all solid waste generated each day. In addition, by using the full capacity of the incinerators, the \$1.1 million contract for hauling solid waste off-site may not be necessary.

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<sup>7</sup> Department of the Army, Combined Joint Interagency Task Force (CJIATF)-435, *Air Quality Summary on Bagram Air Field*, April 15, 2011.