

# SIGAR

**Special Inspector General for  
Afghanistan Reconstruction**

**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

# Report Documentation Page

*Form Approved*  
*OMB No. 0704-0188*

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1. REPORT DATE <b>APR 2013</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2013 to 00-00-2013</b>	
4. TITLE AND SUBTITLE <b>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</b>				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) <b>Special Inspector General for Afghanistan Reconstruction, 2530 Crystal Drive, Arlington, VA, 22202</b>				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 <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>25</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

# SIGAR

Special Inspector General for  
Afghanistan Reconstruction

## WHAT SIGAR REVIEWED

In July 2010, the U.S. Army Corps of Engineers (USACE) awarded a \$5.4 million contract to construct solid waste management facilities at Forward Operating Base (FOB) Salerno. The contract required installing two 8-ton capacity incinerators and supporting facilities such as an ash landfill and management office. At the time of contract award, the base was primarily using open-air burn pit operations to dispose of its solid waste. FOB Salerno stated it was moving to incineration for several reasons including the possible health hazards to personnel from emissions generated by open-air burning of solid waste material.

This report assesses (1) whether construction was completed in accordance with contract requirements and applicable construction standards, (2) whether the incinerators and supporting facilities were being used as intended and maintained, and (3) the status of open-air burn pit operations. SIGAR reviewed contract and design documents, technical specifications, quality assurance reports, and regulations governing the use of open-air burn pit operations. SIGAR conducted its work in Kabul, Afghanistan, and at FOB Salerno, in Khowst province, from September 2012 through April 2013, in accordance with *Quality Standards for Inspection and Evaluation* published by the Council of the Inspectors General on Integrity and Efficiency.

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April 2013

**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**

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SIGAR INSPECTION 13-8

## WHAT SIGAR FOUND

FOB Salerno spent \$5 million constructing incinerators and supporting facilities that it will never use. The two 8-ton capacity incinerators generally met technical specifications and were properly sized for the base's daily solid waste, assuming they could operate 24 hours per day. SIGAR found that the base's threat conditions would limit the incinerators' use to no more 12 hours per day, allowing it to process only 50-57 percent of the daily solid waste. Therefore, if the incinerators were used, the base would still have to rely on other means—such as open-air burn pit operations—for its solid waste disposal. However, there are health concerns with breathing the smoke emissions from open-air burning.

Although construction was never fully completed due to open “punch list” items, FOB Salerno officials accepted the facilities and closed the contract. Also, due to the lack of maintenance the facilities have fallen into disrepair. In one case, stagnant water has formed in an area beneath the incinerators, thereby creating a possible health hazard from malaria-infected mosquitoes. All of these factors considered, plus the estimated \$1 million annually to operate and maintain the facilities, led FOB Salerno officials to decide not to use the incinerators and supporting facilities.

Absent the incinerators, FOB Salerno continues potentially hazardous open-air burn pit operations which violate Department of Defense guidelines and U.S. Central Command regulation. Although the base is now planning to contract for trash removal, it will not begin until July 2013, which is 3 to 5 months before the base's scheduled closure. As part of closure, FOB Salerno officials are exploring options for disposing of the incinerators, but have not conducted a cost-benefit analysis to determine the best option for the U.S. government.

## WHAT SIGAR RECOMMENDS

SIGAR recommends that the Commander, U.S. Forces–Afghanistan, (1) take appropriate measures to prevent a reoccurrence of stagnant water at the FOB Salerno incinerator facility; (2) expedite the contract for the base's trash removal; and (3) develop a list of disposition options for the FOB Salerno incinerators, determine the most cost effective option for the U.S. government, and provide SIGAR the results within 60 days. U.S. Forces–Afghanistan acknowledged the first recommendation, disagreed with the second, and concurred with the third. SIGAR also received comments from the U.S. Army Corps of Engineers, which were incorporated into the report, as appropriate. Agency comments can be found in appendices V and VI.



FOB Salerno open-air burn pit operations violate Department of Defense guidance and a U.S. Central Command regulation.

Source: SIGAR, September 30, 2012



**SIGAR** | Office of the Special Inspector General  
for Afghanistan Reconstruction

April 25, 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

Lieutenant General James L. Terry  
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

This report discusses SIGAR's inspection results of the U.S. Army Corps of Engineers' (USACE) solid waste management (incinerators and supporting facilities) project at Forward Operating Base (FOB) Salerno, in Khowst province, Afghanistan. The report recommends that the Commander, U.S. Forces–Afghanistan, (1) take appropriate measures to prevent a reoccurrence of stagnant water at the FOB Salerno incinerator facility; (2) expedite the contract for the base's trash removal; and (3) develop a list of disposition options for the FOB Salerno incinerators, determine the most cost effective option for the U.S. government, and provide SIGAR the results within 60 days.

This is the first in a series of inspections involving the construction of incinerators and supporting facilities at U.S. bases throughout Afghanistan. SIGAR conducted this inspection under the authority of Public Law 110-181, as amended and the Inspector General Act of 1978, as amended.

John F. Sopko  
Special Inspector General  
for Afghanistan Reconstruction

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## ABBREVIATIONS

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FOB	Forward Operating Base
USACE	U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (USACE) awarded a \$5.4 million contract (W917PM-07-D-0017, task order 0011) on July 20, 2010, to Yuksel-Metag-Tepe-Yenigun-Zafer Joint Venture, a Turkish company, to construct solid waste management facilities at Forward Operating Base (FOB) Salerno.<sup>1</sup> The contract required installing two 8 ton capacity incinerators (see photo 1) for processing solid waste material; storage and sorting facilities; an ash landfill; management office; utilities, including water tanks and communications; paving and walkways; and security fencing.<sup>2</sup> At the time the contract was awarded, the base was primarily using open-air burn pit operations to dispose of its solid waste material.

International Security Assistance Force officials decided to install incinerators at FOB Salerno, located in Khowst province near the Afghanistan border with Pakistan, for several reasons including concerns about the possible health hazards to base personnel from emissions generated by open-air burn pit operations of solid waste material.<sup>3</sup>

For this inspection, we assessed (1) whether construction was completed in accordance with contract requirements and applicable construction standards, (2) whether the incinerators and supporting facilities were being maintained and used as intended, and (3) the status of open-air burn pit operations. Appendix I contains a detailed discussion of our scope and methodology.

We conducted our work in Kabul, Afghanistan, and at FOB Salerno from September 2012 through March 2013, 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 professional engineers in accordance with the National Society of Professional Engineers' *Code of Ethics for Engineers*.

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**Photo 1 - Two 8-Ton Capacity Incinerators at FOB Salerno**



Source: SIGAR, December 11, 2012

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<sup>1</sup> Appendix II contains a listing of the contract's line items and the modifications that reduced the contract's overall value to about \$5 million. Also, throughout this report we refer to the solid waste management facilities as the incinerators and supporting facilities.

<sup>2</sup> Appendix III presents a layout of the incinerators and supporting facilities.

<sup>3</sup> Some of the possible health hazards associated with smoke emitted by burning waste include breathing particulate matter such as lead, mercury, dioxins, and irritant gases, and the effects they may have on various organs and body systems such as the adrenal glands, lungs, liver, and stomach. See *Epidemiological Studies of Health Outcomes among Troops Deployed to Burn Pit Sites*, jointly prepared by The Armed Forces Health Surveillance Center, The Naval Health Research Center, and The U.S. Army Public Health Command (Provisional), May 2010; *Afghanistan and Iraq: DOD Should Improve Adherence to Its Guidance on Open Pit Burning and Solid Waste Management*, U.S. Government Accountability Office, GAO-11-63, October 2010; and *Long-Term Health Consequences of Exposure to Burn Pits in Iraq and Afghanistan*, Institute of Medicine, Committee on the Long-Term Health Consequences of Exposure to Burn Pits in Iraq and Afghanistan, October 2011.



## INCINERATORS GENERALLY MET TECHNICAL SPECIFICATIONS, BUT COULD NOT MEET DAILY SOLID WASTE DISPOSAL NEEDS BECAUSE OF OPERATING RESTRICTIONS

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SIGAR conducted its FOB Salerno inspections on September 30, 2012 and December 11, 2012. Based on our observations and review of design and contract documents, we found that, with the exception of some open “punch list” items,<sup>4</sup> the two 8-ton capacity incinerators were generally constructed in accordance with contract technical specifications. However, our inspections were limited because the incinerators were inoperable during our two site visits. As discussed later in this report, the incinerators and supporting facilities have never been made operational for disposing of the base’s solid waste.<sup>5</sup>

Regional Command-East,<sup>6</sup> within the International Security Assistance Force, initiated the incinerator project because FOB Salerno was scheduled for expansion under the 30,000 U.S. troop surge in 2010-2011. The written justification for the incinerators noted that the current methods of open-air pit burning or burying the solid waste in landfills (1) could not handle the increase in personnel due to the surge, (2) created unsafe and unhealthy emissions and contaminated the air and ground, and (3) created a danger to personnel and potential long-term harm to the local environment.

In 2008, according to U.S. Army Central officials, planning engineers estimated FOB Salerno’s future end strength at 3,500 personnel, with each person generating 8 pounds of solid waste per day. Based on 3,500 personnel, and considering recycling efforts, the engineers calculated that this would produce 12-13 tons of solid waste per day. Using these numbers, planning engineers determined that the base would need a solid waste processing capacity of 16 tons per day. As a result, the contract specified the installation of two incinerators, each capable of processing 8 tons of solid waste per day.

FOB Salerno’s operation and maintenance manual for the incinerators states that the maximum capacity for each incinerator is 8 tons of solid waste per day based on continuous operation or 24 hours per day. It also notes that continuous operation only needs to be interrupted for repair, maintenance, and cleaning of several parts of the incinerators. However, FOB Salerno is a “black-out” base due to threat conditions in the area in which it is located. Based on SIGAR analysis, this limits the incinerators use to daylight operations or, under the best of conditions, no more than 12 hours per day. U.S. Army Central officials informed us that the black-out conditions were taken into consideration, but our review shows that the incinerators would have to operate more than 12 hours per day to process the base’s solid waste.

In addition to the 3,500 personnel level used for original planning purposes at FOB Salerno, we learned at the time of our December 2012 inspection that the base had increased to 4,000 personnel. Table 1 shows SIGAR’s calculations of how much the two 8-ton capacity incinerators combined could process at the 3,500 and 4,000 personnel levels, given 8 pounds of solid waste generated per person, per day. The calculations also evaluate the incinerators’ processing capacity using two scenarios: 24 hours of operation as described in the operation and maintenance manual and 12 hours of operation due to the persistent threat conditions.

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<sup>4</sup> Punch list items are a list of unfinished items that the contractor is required to complete before receiving final payment under the contract.

<sup>5</sup> Appendix IV presents a timeline of key events involving the construction of the incinerators and supporting facilities, and the eventual decision not to use them.

<sup>6</sup> The International Security Assistance Force consists of six regional commands—North, South, Southwest, Capital, West, and East.



**Table 1 - Incinerator Processing Capacity**

FOB Salerno Population	Daily Waste Generated	Hours of Operation per Day	Daily Waste Processed	Capable of Processing Daily Waste
<b>Average of 8 pounds generated/person/day</b>				
3,500	14 tons	24	14 tons	Yes
3,500	14 tons	12	8 tons	No
<b>Average of 8 pounds generated/person/day</b>				
4,000	16 tons	24	16 tons	Yes <sup>a</sup>
4,000	16 tons	12	8 tons	No

Source: SIGAR analysis based on information obtained from U.S. Army Central, FOB Salerno, and the incinerators' operation and maintenance manual.

<sup>a</sup> This does not allow for repair, maintenance, or cleaning time.

Table 1 demonstrates that the incinerators are not capable of processing the base's solid waste produced by either 3,500 or 4,000 personnel, when operating 12 hours per day due to the restricted black-out conditions. Using these personnel numbers, the base's incinerators can only process 8 tons, or 57 percent and 50 percent, respectively, of the base's solid waste produced each day. FOB Salerno officials told us that they believe even less—about 30 to 35 percent of the base's solid waste—could be processed each day operating under the blackout conditions. In either situation, if the incinerators were made operational the base would fall short of processing the solid waste produced each day and, as a result, would still have to rely on other means, such as open-air burn pit operations, for its solid waste disposal.

## **NOT ALL CONTRACT WORK WAS COMPLETED, AND INCINERATORS AND SUPPORTING FACILITIES WERE NOT BEING MAINTAINED**

SIGAR found that not all of the contract work had been completed before FOB Salerno took possession of the incinerators and supporting facilities. On November 27, 2011, USACE provided the construction contractor a letter identifying a number of deficiencies, or so-called punch list items, which needed to be remediated. For example, the deficiencies included (1) rusted housings on electrical motors mounted on the sides of the incinerators, (2) leaking hydraulic lines on one of the incinerators, (3) missing pipe insulation, and (4) a missing guardrail for the incinerators' bilge access pit. In spite of these deficiencies, in a letter dated November 28, 2011, USACE contracting officials notified the contractor that the USACE quality assurance representative had checked the construction work and accepted it as complete.

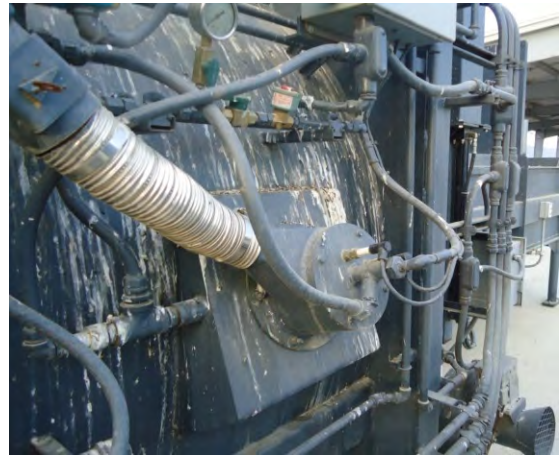
Also in November 2011, the Defense Contract Management Agency directed its operation and maintenance contractor to conduct a technical inspection of the incinerators and supporting facilities in preparation for adding the facilities to its "density list."<sup>7</sup> The contractor had previously submitted an estimate of about

<sup>7</sup> This is the contractor's list of all buildings, facilities, and equipment that it is maintaining.

\$235,000 in mobilization costs to add the incinerators to the density list. An FOB Salerno official stated that the contractor estimated it would cost about \$1 million annually for it to provide operation and maintenance for the incinerators and supporting facilities. Based on these cost estimates, FOB Salerno officials decided not to include the incinerators and supporting facilities in the operation and maintenance contract.

The incinerators and supporting facilities were never placed on the operation and maintenance density list, and we found that, based on lack of maintenance, they had fallen into disrepair. During our December 2012 inspection, the lack of maintenance was evident where we noted that incinerator equipment, such as the primary burner unit, was coated with bird excrement (see photo 2); sensitive electronic connections and hydraulic valves were corroded; and rust had developed around rotating equipment such as motors, pumps, and conveyors. In addition, the incinerators' two fuel tanks were coated in bird excrement and the electronic level sensing devices were corroded or broken.

**Photo 2 - Bird Excrement Coating Incinerator's Primary Burner**



Source: SIGAR, December 11, 2012

Lack of maintenance has resulted in the incinerators becoming a potential health hazard. The incinerators are mounted on pillars that sit in a below-grade concrete bilge pit. The bilge pit was constructed without a drainage pipe and, therefore, it fills with water that becomes stagnant (see photo 3). This situation creates a potential breeding ground for malaria-infected mosquitoes, a health problem in Afghanistan. In commenting on a draft of this report, U.S. Forces-Afghanistan stated that the stagnant water at the site is no longer an issue because most of it has evaporated and because FOB Salerno personnel are treating the remaining puddles with

disinfecting tablets "to prevent the infestation of mosquitoes and malaria."

**Photo 3 - Stagnant Water in Bilge Pit Beneath Incinerators**



Source: SIGAR, September 30, 2012

In April 2012, the FOB Salerno base engineer signed the DD Form 1354 accepting the facility, so that the contract could be closed out. According to the engineer, USACE had urged him to do so. The accompanying transmittal memorandum stated that USACE representatives had verbally certified the project's completeness, the contractor had met all requirements, and the facilities had passed the operation and maintenance contractor's technical inspection. However, the base engineer noted that the incinerators and supporting facilities punch list items were still open, and, as a result, stated that he was conditionally accepting the facilities. It is unclear as to why USACE would allow the contract to be closed out and the contractor released without completing the open punch list items which, according to the Federal Acquisition Regulation,<sup>8</sup> the

<sup>8</sup> See Federal Acquisition Regulation 4.804 and USACE Engineering Regulation 415-345-38.

contractor is responsible for remediating prior to the U.S. government accepting the facility and closing out the contract. In commenting on a draft of this report, USACE stated that, according to an internal engineering regulation, facilities can be accepted from the contractor and transferred to the customer with minor deficiencies that will not interfere with the designed use of the facilities.

FOB Salerno officials told us that, in June 2012, they decided not to operate the incinerators and supporting facilities based on three primary factors. The base would have to (1) spend about \$235,000 to mobilize the resources in preparation for the operation and maintenance contract, (2) spend about \$1 million annually to operate and maintain the incinerators and supporting facilities, and (3) would still need to use open-air burn pit operations to dispose of most of the base's solid waste material produced each day. As a result, FOB Salerno officials determined that it would not be cost-effective to operate the facilities.

## FOB SALERNO CONTINUES TO USE OPEN-AIR BURN PIT OPERATIONS FOR SOLID WASTE DISPOSAL

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Due to the decision not to use the incinerators, FOB Salerno continues to rely on potentially hazardous open-air burn pit operations for its solid waste disposal (see photo 4). This violates Department of Defense guidance and a U.S. Central Command regulation governing the use of this solid waste disposal method at U.S. bases during contingency operations.<sup>9</sup> The guidance and regulation acknowledge that open-air burn pit operations are necessary during contingency operations, especially when bases are first established. However, the U.S. Central Command regulation 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. Lastly, the regulation states that regardless of the technology chosen, open-air burn pit operations must cease 360 days after the U.S. personnel threshold has been met. According to FOB Salerno officials, the base has remained above the 100 U.S. personnel threshold level since issuance of the guidance and regulation in 2010 and 2011, respectively.

In January 2013, FOB Salerno officials told us that the base plans to cease open-air burn pit operations and to contract locally for trash removal to dispose of its solid waste. The target date for beginning trash removal is July 31, 2013. However, FOB Salerno officials told us the base is scheduled for closing in the October–December 2013 timeframe. As a result, using trash removal to dispose of the base's solid waste will only occur

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**Photo 4 - Open-air Burn Pit Emissions**



Source: SIGAR, December 11, 2012

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<sup>9</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.

for about 3-5 months. In commenting on a draft of this report, U.S. Forces–Afghanistan stated that it is not pursuing contracting locally for trash removal and, in fact, is requesting a waiver that would allow FOB Salerno to continue using the burn pits to dispose of solid waste and garbage.

Due to non-use of the incinerators as well as FOB Salerno's impending closure in the October-December 2013 timeframe, FOB Salerno officials told us they are exploring options for disposing of the incinerators. One of those options involves dismantling the incinerators and selling them at scrap metal prices. However, the officials stated that they have not conducted a cost-benefit analysis to determine the most beneficial course of action for the U.S. government.

## CONCLUSION

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FOB Salerno wasted \$5 million constructing incinerators and supporting facilities that it will never use. The incinerators were properly sized for the base's daily solid waste, assuming they could operate continuously. However, that assumption proved wrong because the base's threat conditions—known at the time when USACE entered into the contract to construct the incinerators and supporting facilities—limit the incinerators' use to no more than 12 hours a day. As a result, even if the incinerators were operational, the base would still have to employ additional methods to dispose of its daily solid waste. Further, the base accepted the facilities with unfinished work, did not fund an operation and maintenance contract, which led to deterioration of the facilities, and learned after construction that it would cost about \$1 million annually to operate and maintain the facilities. All of these factors considered led to the base's decision not to use the incinerators and supporting facilities.

Because it opted not to use the incinerators, FOB Salerno has continued open-air burn pit operations, which violate Department of Defense guidance and a U.S. Central Command regulation. This disposal method continues even though it is known that there are possible health risks to base personnel. Furthermore, FOB Salerno has now canceled plans to contract for trash removal. Given its impending closure, FOB Salerno is exploring options for how best to dispose of the incinerators, but has not conducted a cost-benefit analysis to determine the most beneficial course of action for the U.S. government.

## RECOMMENDATIONS

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To ensure compliance with Department of Defense and U.S. Central Command requirements concerning the health of base personnel and to protect the U.S. government's investment, we recommend that the Commander, U.S. Forces–Afghanistan:

- 1. Take appropriate measures to prevent a reoccurrence of stagnant water at the FOB Salerno incinerator facility.**
- 2. Expedite the contract for solid waste removal to facilitate the earlier cessation of open-air burn pit operations.**
- 3. Develop a list of disposition options for the FOB Salerno incinerators, determine the most cost effective option for the U.S. government, and provide SIGAR the results within 60 days.**

## AGENCY COMMENTS

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U.S. Forces–Afghanistan and USACE provided formal comments to a draft of this report. Those comments—and our responses to them—are reproduced in appendices V and VI, respectively.

In response to the first recommendation, U.S. Forces–Afghanistan stated that dismantling the incinerators is the long term solution to prevent the reoccurrence of stagnant water and that it is looking for a way to do so. Although we agree that dismantling the incinerators will ultimately eliminate the stagnant water problems, it will be some time before the incinerators are dismantled. In the meantime, stagnant water may once again accumulate and U.S. Forces–Afghanistan interim solution, using disinfecting tablets, alleviates only the consequences of the problem rather than the problem itself. Therefore, we encourage U.S. Forces–Afghanistan to develop a more immediate prevention plan.

U.S. Forces–Afghanistan disagreed with the second recommendation to expedite the contract for solid waste removal to facilitate an earlier cessation of open-air burn pit operations, stating that there is no feasible course of action to do so and that it will request a waiver to extend open-pit burning. First, U.S. Forces–Afghanistan indicated that increased security required to support trips on and off the FOB to remove trash daily would have an adverse impact on combat operations. While we are sensitive to these security concerns, we note that U.S. Forces–Afghanistan initially planned to conduct trash removal—starting in July 2013—security conditions on the ground, notwithstanding. Our recommendation is simply to begin this process earlier than planned. Second, U.S. Forces–Afghanistan stated that “the Brigade Combat Team lacks the ability to properly enforce the contractor to identify and use a suitable dump site for the garbage.” This statement is puzzling, since U.S. Forces–Afghanistan should have both the authority and ability to design and implement a contract with the oversight and enforcement measures needed to ensure proper performance by the contractor.

Third, U.S. Forces–Afghanistan stated that the environmental impact of the burn pit is low, as documented in the Occupation and Environmental Health Site Assessment and the Periodic Occupational and Environmental Monitoring Summary. Regardless of this assessment's findings, the effects of open pit burning on human health and the environment remain controversial. In fact, a statute signed into law in January 2013 requires tracking of U.S. military and civilian exposures to burn pits in Iraq and Afghanistan and the Department of Veterans Affairs announced a new study in February 2013 of the long term health effects of exposure to burn pits. Moreover, continued use of burn pits is a violation of a Department of Defense instruction and a U.S. Central Command regulation governing the use of this solid waste disposal method at U.S. bases during contingency operations. In particular, the Department of Defense instruction 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” and requires a justification to be submitted to Congress to continue using burn pits in such an event. Therefore, SIGAR continues to recommend that a contract for solid waste removal be expedited. In response to the third recommendation, U.S. Forces–Afghanistan stated that it is working to develop an appropriate FOB Salerno incinerator disposition plan that meets the requirements we stipulated and that it is committed to providing this plan to SIGAR within 60 days. We intend to review this plan carefully upon receiving it.

In its comments, USACE disagreed with a recommendation included in a draft of this report to conduct an investigative inquiry to determine why the FOB Salerno incinerator construction contract was closed out without being completed and to provide us the results within 60 days. USACE indicated that the contract had been closed out because the open punch list items were “minor deficiencies,” which, under regulations, do not prevent USACE from accepting the facilities from the contractor and transferring them to the customer. While we question whether some of the deficiencies—such as leaking hydraulic lines and missing pipe insulation—were minor in nature, we deleted this recommendation from the final report because it was implemented.



## APPENDIX I - SCOPE AND METHODOLOGY

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This report provides SIGAR's inspection results of the Forward Operating Base (FOB) Salerno incinerators and supporting facilities. The base is located in Khowst province near the Afghanistan border with Pakistan. We made two inspections at FOB Salerno on September 30, 2012 and December 11, 2012. However, these inspections were limited because the incinerators and supporting facilities were not operational at the time of our visits. FOB Salerno is one in a series of inspections that will examine incinerator construction projects that have taken place at U.S. bases throughout Afghanistan.

To determine whether construction was completed in accordance with contract requirements and applicable construction standards, whether the incinerators and supporting facilities were being used as intended and maintained, and the status of open-air burn pit operations, we

- reviewed contract documents, design submittals, and geotechnical reports to understand project requirements and contract administration;
- interviewed cognizant officials regarding facility operation and maintenance;
- conducted a physical inspection, reviewed quality assurance and quality control reports, and photographed the incinerators and supporting facilities to determine the current status and quality of construction; and
- toured and photographed the open-air burn pit site.

We conducted our work in Kabul and at FOB Salerno's incinerators and supporting facilities from September 2012 through April 2013, 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 professional engineers 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. This inspection was conducted by the Office of the Special Inspector General for Afghanistan Reconstruction under the authority of Public Law 110-181, as amended, the Inspector General Act of 1978, and the Inspector General Reform Act of 2008.

## APPENDIX II - SUMMARY OF INCINERATORS AND SUPPORTING FACILITIES TASK ORDER LINE ITEMS

Table I shows the 14 task order line item numbers under contract W917PM-07-D-0017 (task order 0011), along with the original, modification, and final dollar amounts.

**Table 2 - Listing of Line Items under Contract W917PM-07-D-0017 (Task Order 0011)**

Line Items	Description	Original Amount	Modification Amount	Final Amount
0001	General construction and related requirements including design-build work throughout Afghanistan	\$395,720	\$0	\$395,720
0002	Design incinerators 1 and 2 and supporting facilities	\$295,934	\$0	\$295,934
0003	Construct Incinerators 1 and 2	\$840,951	\$0	\$840,951
0004	Construct covered storage and sorting facility	\$1,033,739	(\$28,836)	\$1,004,903
0005	Construct ash landfill	\$193,938	\$0	\$193,938
0006	Construct waste management office	\$254,358	(\$7,808)	\$246,550
0007	Construct site work, site improvements (gravel area), and demolition	\$302,064	\$0	\$302,064
0008	Construct electrical services, generator pad, and communication system	\$462,934	(\$372,413)	\$90,521
0009	Construct site utilities (water and sewer system) including water tanks, holding tanks, and pumps	\$976,176	\$0	\$976,176
0010	Construct water, sewer, and gas services in accordance with the contract documents	\$217,785	\$0	\$217,785
0011	Construct paved walkways and curbs	\$213,230	\$0	\$213,230
0012	Construct storm drainage system	\$37,869	\$0	\$37,869
0013	Construct anti-terrorism measures and fencing	\$126,206	(\$10,985)	\$115,221
0014	Defense Base Act insurance	\$48,596	\$0	\$48,596
<b>Totals</b>		<b>\$5,399,500</b>	<b>(\$420,042)</b>	<b>\$4,979,458</b>

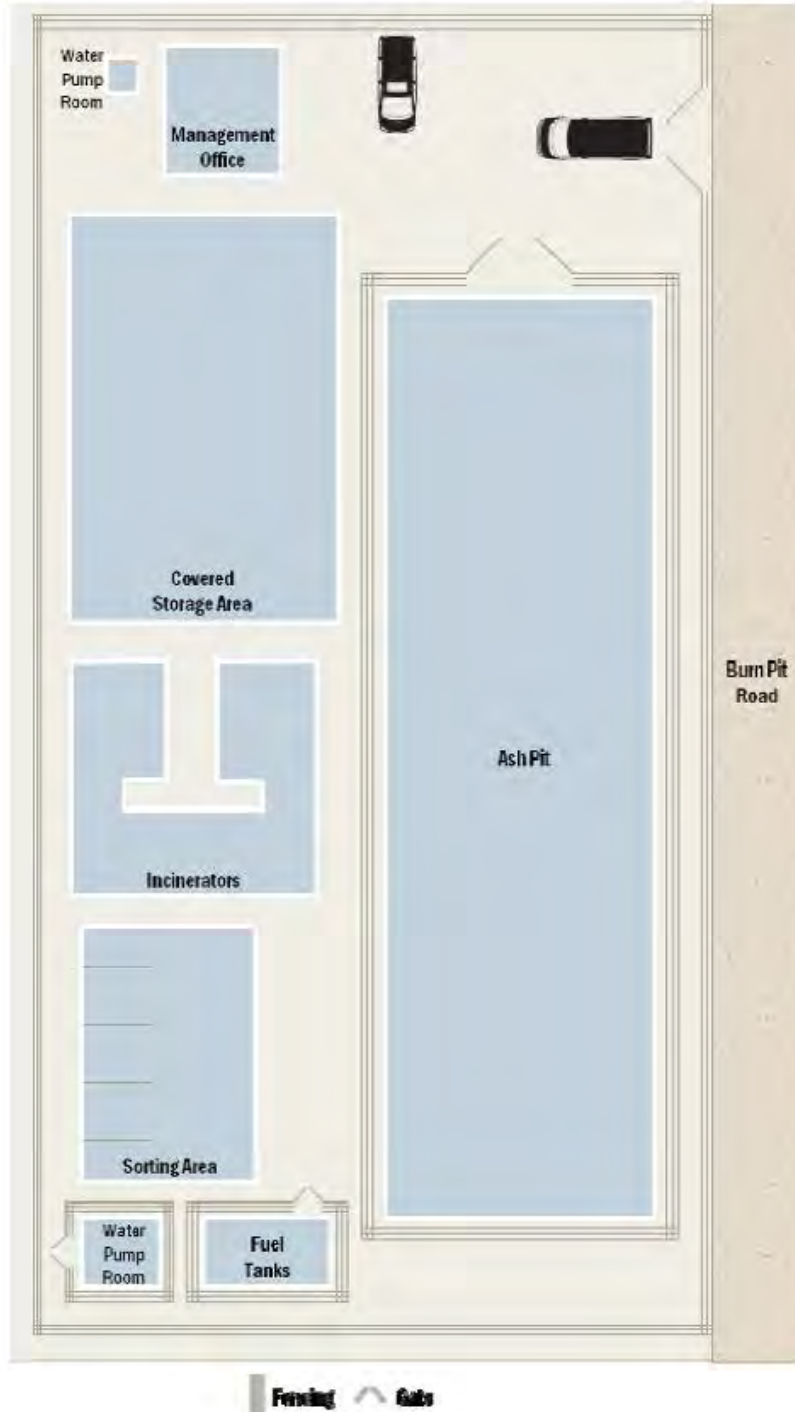
Source: SIGAR summary of contract W917PM-07-D-0017 and modifications.



## APPENDIX III - INCINERATORS AND SUPPORTING FACILITIES LAYOUT

Figure I presents a layout of the incinerators and supporting facilities at Forward Operating Base Salerno.

**Figure 1 - Incinerators and Supporting Facilities Layout**



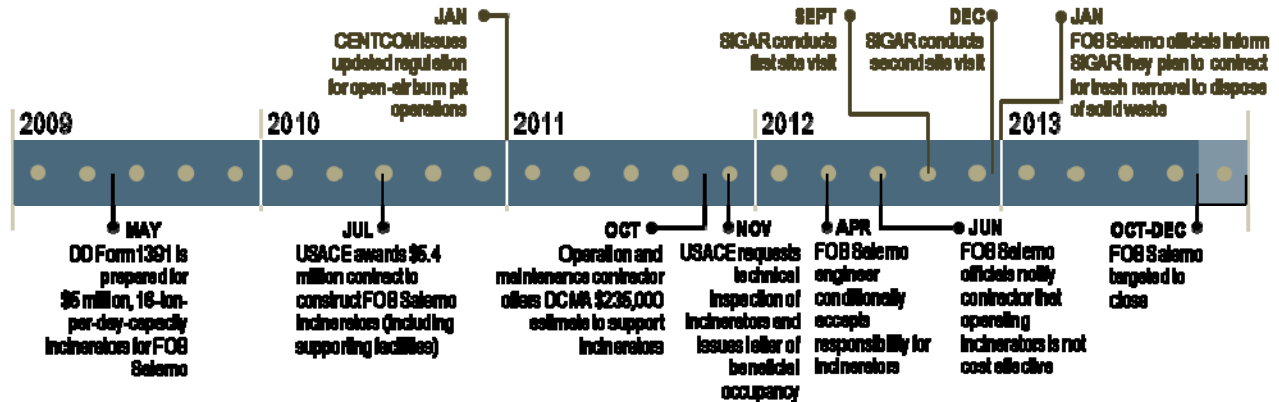
Source: SIGAR-generated figure.

Note: Figure is not to scale.

## APPENDIX IV - TIMELINE OF KEY EVENTS

Figure II presents a timeline of key events in the construction and life cycle of the incinerators and supporting facilities at Forward Operating Base (FOB) Salerno.

Figure 2 - Timeline of Key Events<sup>a</sup>



Source: SIGAR Analysis

Notes:

<sup>a</sup> Acronyms are as follows: CENTCOM is U.S. Central Command, DCMA is the Defense Contract Management Agency, DD Form 1391 is a Military Construction Project Data Sheet that shows the requirements and justifications in support of funding requests for military construction projects, and USACE is the U.S. Army Corps of Engineers.

## APPENDIX V - UNITED STATES FORCES-AFGHANISTAN COMMENTS

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HEADQUARTERS  
UNITED STATES FORCES-AFGHANISTAN  
KABUL, AFGHANISTAN  
APO, AE 09356

USFOR-A-JENG


15 April 2013

MEMORANDUM FOR Special Inspector General for Afghanistan Reconstruction, 2530 Crystal Drive,  
Alexandria, Virginia 22202

SUBJECT: Response to 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

1. The memorandum is in reply to the subject April 2013 draft report provided to United States Forces-Afghanistan for response: We appreciate the opportunity to respond to this report and refer you to our response in the enclosures.
2. Point of Contact is Lt Col Erik Sell, [REDACTED]

Encl

  
ALVIN B. LEE, SES  
Director, JPIO  
USFOR-A

USFOR-A JENG JPIO

SUBJECT: 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

Recommendation Responses to SIGAR Inspection 13-8

**SIGAR Recommendation 2:**

2. Take action to remove the stagnant water at the FOB Salerno incinerator facility, and take appropriate measures to prevent a reoccurrence of the problem.

**USFOR-A Response:**

At the time of the initial investigation, the incinerators had a significant amount of stagnant water; however, it is no longer an issue due to the evaporation of most of the water. Additionally, the FOB Salerno preventive medicine personnel treat the remaining puddles with disinfecting tablets to prevent the infestation of mosquitoes and malaria. USFOR-A continues to look for a solution to dismantle the incinerators, which is the long term solution to prevent the reoccurrence of the problem.

SIGAR  
Comment 1

**SIGAR Recommendation 3:**

3. Expedite the contract for solid waste removal to facilitate the earlier cessation of open-air burn pit operations.

**USFOR-A Response:**

Non-concur – USFOR-A believes that no feasible course of action exists to conduct base trash removal, and consequently is processing a waiver request to extend open-pit burning until the base transfers or closes in the fall of 2013. The increase in security required to support numerous trips on and off the FOB to remove trash daily will have an adverse impact on combat operations. Additionally, the Brigade Combat Team (BCT) lacks the ability to properly enforce the contractor to identify and use a suitable dump site for the garbage. The environmental impact of this burn pit is low, as is evidenced by the enclosed May 2012 annual Occupation and Environmental Health Site Assessment (OEHS); it states that the emissions from the burn pit do not have the potential to affect personnel. The next OEHS will occur in May 2013. We have also enclosed the Periodic Occupational and Environmental Monitoring Summary (POEMS), which summarizes air, water, and soil samples from 18 October 2002 to 29 March 2011.

SIGAR  
Comment 2

**SIGAR Recommendation 4:**

4. Develop a list of disposition options for the FOB Salerno Incinerators, determine the most cost effective option for the U.S. Government, and provide SIGAR the results within 60 days.

**USFOR-A Response:**

Acknowledge - USFOR-A is committed to determining an appropriate FOB Salerno incinerator disposition plan that is safe, cost effective and in accordance with applicable policy and guidance within 60 days.

## SIGAR Response to U.S. Forces–Afghanistan Comments

1. Although we agree that dismantling the incinerators will ultimately eliminate the stagnant water problems, the incinerators are not scheduled to be dismantled until the fall of 2013. In the meantime, stagnant water may once again accumulate, and the U.S. Forces–Afghanistan interim solution—using disinfecting tablets—alleviates only the consequences of the problem, rather than the problem itself. Therefore, we encourage U.S. Forces–Afghanistan to develop a more immediate prevention plan.
2. While we are sensitive to the security concerns cited in agency comments, we note that U.S. Forces–Afghanistan initially planned to conduct trash removal—starting in July 2013—security conditions on the ground, notwithstanding. Our recommendation is simply to begin trash removal at an earlier date. Furthermore, U.S. Forces–Afghanistan should have both the authority and ability to design and implement a contract with the oversight and enforcement measures needed to ensure proper performance by the contractor. Finally, while the assessment cited found the health risk of open-air burn pits to be low, their continued use violates Department of Defense guidance and a U.S. Central Command regulation. Moreover, the Department of Veterans Affairs has received numerous complaints about health problems alleged to have been caused by exposure to burn pits in Iraq and Afghanistan. Therefore, we maintain that a contract for solid waste removal should be expedited.

## APPENDIX VI - COMMENTS FROM THE U.S. ARMY CORPS OF ENGINEERS

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REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
UNITED STATES ARMY CORPS OF ENGINEERS  
TRANSATLANTIC DIVISION  
255 FORT COLLIER ROAD  
WINCHESTER, VIRGINIA 22603

April 23, 2013

Internal Review Office

Mr. John F. Sopko  
2530 Crystal Drive,  
Arlington, Virginia 22202-3940

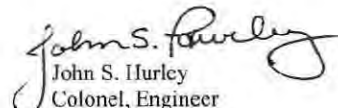
Dear Mr. Sopko:

Enclosed is U.S. Army Corps of Engineers, Transatlantic Division response to recommendation 1 contained in SIGAR Draft Inspection Report 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.

My point of contact for these comments is Mr. George Sullivan, Chief, Internal Review at

[REDACTED]

Sincerely,

  
John S. Hurley  
Colonel, Engineer  
Deputy Commander

Enclosure

USACE Comments to SIGAR Draft Inspection Report 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

USACE comments are provided as shown.

**Recommendation**

**To protect the U.S. Government's investment, we recommend that the Commanding General, USACE:**

**Recommendation 1. Conduct an investigative inquiry to determine why the FOB Salerno incinerator construction contract was closed out without being completed, and provide SIGAR the results within 60 days.**

USACE Response. Non-concur. As stated by SIGAR on page 2 of the report, the incinerators were constructed in accordance with contract technical specifications with the exception of some open punch list items. The open punch list items cited by SIGAR ((1) rusted housing on electrical motors, (2) leaking hydraulic lines on one incinerator, (3) missing pipe insulation, and (4) a missing guardrail) were minor deficiencies that should not have delayed transfer of the incinerators. Per Engineer Regulation 415-345-38, facilities "completed with minor deficiencies which will not interfere with the designed use of the facilities, will be accepted from the contractor and transferred to the customer." The regulation further states that "any further minor deficiencies disclosed during the inspection will normally not be justification to delay transfer." Under some circumstances, minor deficiencies such as these may also be addressed as warranty items requiring coordination between the customer and construction contractor. USACE will coordinate with the customer to ensure that all punch list items have been completed.

SIGAR  
Comment 1



## SIGAR Response to USACE Comments

1. While we question whether the deficiencies were minor, we deleted this recommendation because USACE implemented it in the process of responding to our draft report.

## APPENDIX VII - ACKNOWLEDGMENTS

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Crawford "Les" Thompson, Senior Inspection Manager

Milton Naumann, Auditor-in-Charge

Adriel Harari, Senior Auditor

William Dillingham, Civil Engineer

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

## SIGAR's Mission

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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- Phone Afghanistan: +93 (0) 700-10-7300
- Phone DSN Afghanistan: 318-237-3912 ext. 7303
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Public Affairs Officer

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