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To: Jody Olsen, Director
Angela Kissel, Chief Compliance Officer

From: Kathy A. Buller, Inspector General 

Date: July 28, 2020

Subject: Management Advisory Report: Peace Corps/Ghana Gas Tank Cooking Safety (IG-20-02-SR)

The purpose of this report is to bring to your attention needed improvements that the Office of Inspector General (OIG) identified while reviewing gas cooking safety in Peace Corps/Ghana. Following the death of a Peace Corps/Ghana Volunteer who succumbed to burn injuries from a gas tank explosion, we initiated this review to assess the sufficiency of Volunteer training and Volunteer housing procedures to mitigate the risk of future accidents involving gas tanks used for cooking. Our review found that Peace Corps/Ghana was not providing adequate training to Volunteers on gas tank and cookstove safety, and headquarters staff had differing opinions on how prevalent training on cooking safety was globally. Additionally, we found that Peace Corps/Ghana's housing approval procedures and site visit practices were not sufficient to identify and address vulnerabilities to gas tank safety.

Our report makes four recommendations to improve the agency's actions regarding gas cooking safety. The agency has 45 days from the issuance of the report to provide its response to these recommendations. Once we receive the response, the report will be updated to include it in Appendix A.

SCOPE AND METHODOLOGY

This review was initiated as a result of questions that were raised by an OIG investigation into the 2019 death of a Peace Corps/Ghana Volunteer. Our objective in this report was to determine: 1) whether there was more that Peace Corps/Ghana could have done to prepare Volunteers and Volunteer housing to prevent injuries due to propane tank explosions, and 2) whether the risk factors related to propane tank safety that presented in Ghana are pervasive in other Peace Corps countries. The scope of this review encompasses September 2017 to May 2020 to coincide with when the deceased Volunteer first arrived at the post until the time of writing this report.

As part of this review, we conducted interviews with 14 headquarters and post staff members, reviewed relevant documentation provided by the agency or generated by an OIG investigation, reviewed a sample of Peace Corps/Ghana site visit reports kept in the Volunteer information database, compared housing requirements for a selection of Peace Corps posts, and conducted a literature review regarding gas tank cooking safety in Ghana and other developing countries.

We stress that OIG has not concluded that the tragic accident involving the deceased Volunteer would have been prevented had there not been the gaps in Peace Corps policy and procedures. We issued this report so that the agency can take timely action to mitigate future risk of

Volunteer injury when using gas tanks to cook. OIG has separately finalized an investigation of the accident involving the deceased Volunteer and is currently conducting a separate review that assesses the post's response to the accident.

This review was conducted in accordance with OIG Directive 2020-02 – Reporting Procedures for MIRs and MARs issued on January 6, 2020.

RELEVANT FACTS AND CIRCUMSTANCES OF 2019 GAS TANK ACCIDENT

On Friday, October 18, 2019, at approximately 12:00 am in Ghana, a Volunteer was cooking at home when a gas explosion caused severe burns to the Volunteer's body. The Volunteer was transported to a nearby hospital and later transferred to a hospital in Johannesburg, South Africa. The Volunteer succumbed to those injuries and died on October 26, 2019.



Figure 1: The deceased Volunteer's gas tank in its location in an improvised kitchen.

OIG's investigation found that the explosion likely resulted from a malfunctioning gas tank fitting that caused gas to leak from the tank. The police report completed by Ghana police observed that the deceased Volunteer's tank was kept in an improvised kitchen in the Volunteer's house which was poorly ventilated. At the time of the police visit on October 21, 2019, the gas tank was in a cabinet under the kitchen counter, about two feet to the right of the cookstove which sat on the countertop. Unlike natural gas, liquefied petroleum gas (LPG) is denser than air, so the gas sinks to the ground when it is released and does not disperse easily; therefore, a spark can trigger an explosion near ground level. It is safer to store gas tanks outside in a well-ventilated area rather than in the living space.

In December 2019, OIG visited the deceased Volunteer's home and found that the tank still had gas in it and that the gas did not have an aroma. One of the deceased Volunteer's friends reported that the gas tank had been refilled about a week prior to the accident.

According to the Peace Corps safety and security officer for Ghana, the deceased Volunteer reported to another Volunteer after the accident there was no gas smell in the house before the explosion. OIG visited the two gas tank refilling stations where the deceased Volunteer would have likely filled the gas tank and found that the gas there did not emit the odor typically associated with propane gas. OIG's investigation determined that since the gas in the tank was not odorized, the Volunteer would have been unable to recognize the danger posed by the leaking gas.

BACKGROUND ON PROPANE TANK USE IN GHANA AND ELSEWHERE

In 2011, the World Bank conducted a study of LPG markets in 20 developing countries, including Ghana. To varying degrees in each of the countries studied, the World Bank identified

several risks to LPG use safety, including weak regulatory frameworks for safety, inadequate information to the public on safety issues, and weak enforcement of regulations. The study found that the laws and regulations in some countries are “incomplete, outdated, or both,” and the “regulations in nearly all 20 countries are deficient when it comes to requiring consumer education and training and certification of the personnel of LPG suppliers.”

Through interviews and research on gas tank use in Ghana, we learned that the supply chain for LPG in Ghana presented two risk factors that appeared to be rare globally. First, because LPG is odorless, it is typically given an odor to make leak detection easier. However, we learned that locally produced LPG in Ghana did not reliably contain an odorant. We interviewed several Peace Corps safety and security staff members with oversight of numerous countries who said they had not heard of or encountered this risk in other countries they covered. The second risk factor in Ghana was the LPG distribution system. According to the World Bank report cited above, most countries have a centralized distribution system where consumers exchange empty gas tanks for filled tanks, but we learned that Ghana had a decentralized system in which most consumers owned their own tanks that they had refilled at mini-filling stations. The decentralized distribution system reduced costs but tended to compromise safety since operators of filling stations often did not check recertification dates, visually inspect the tanks, or reject tanks that were due for testing or that did not pass visual inspection. LPG accidents in Ghana were on the rise as the population more frequently adopted use of LPG for cooking. In early 2020, Ghana began piloting a program to move away from the decentralized system to the centralized system due to safety concerns.

Peace Corps staff reported that gas cookstove usage was fairly common among Peace Corps Volunteers world-wide, though the frequency of usage varied by country, region, and whether the site was urban or rural. Staff reported that Volunteers used other cooking methods including charcoal, wood, and electricity, which each have their own risks.

WHAT WE FOUND

Peace Corps/Ghana was not sufficiently training Volunteers on the safe use of gas tanks and cookstoves before the accident.

Peace Corps Manual Section (MS) 270 requires posts to provide Volunteers/trainees with ongoing safety and security training that promotes “a realistic understanding of the possibility of accident, crime, disaster, injury, psychological trauma, and loss of property during service.” The manual section specifies that training must help them “recognize factors that contribute to those risks.”

OIG found that Peace Corps/Ghana was not consistently training trainees on safe use of gas cookstoves and tanks before the accident. The post had a training session called “practical cooking” that demonstrated to trainees how to prepare meals in Ghana. This session was typically taught using charcoal cookstoves, but sometimes a language and cultural facilitator (LCF) would bring in a gas tank and cookstove for the demonstration. OIG learned that even when the practical cooking session included a gas cookstove demonstration, the session did not cover important aspects of gas safety—such as how to check for leaks, the importance of ventilation, and considerations for placement of the gas tank away from the cookstove—unless the LCFs were asked a direct question about any of these topics.

We asked several headquarters safety and security staff whether or not posts were providing cooking safety training, and they expressed different opinions about the prevalence of such training throughout the agency. Staff reported two good examples of posts providing training: Peace Corps/Morocco, which provided an individual hands-on training for each Volunteer on how to connect and check hoses, and Peace Corps/Benin, which provided training with a practical component and a handout, complete with pictures, on setup of gas cookstoves and how to check for leaks.

OIG found that the Peace Corps did not have regional or global policy or requirements instructing posts to train Volunteers on gas or cooking safety, nor was there any post-specific guidance or requirements for Peace Corps/Ghana. Without specific guidance, the practical cooking session in Ghana may not necessarily include a gas cookstove demonstration, and LCFs may not remember what topics to cover when a gas cookstove demonstration takes place. Posts, too, may not know to provide training on this topic without regional or global guidance to do so.

As a result of the lack of training, Volunteers over the years may have been generally unaware of risks associated with using propane tanks and how to mitigate them. During our interviews, Peace Corps staff told us about two other gas related accidents in Volunteer homes, each in a different country.

Following the accident in October, Peace Corps/Ghana staff added a new session to their January 2020 PST that was developed and facilitated by a contractor with the Ghana National Fire Service Academy with support from the post's safety and security team. The session covered fire safety, gas tank safety, and how to use fire extinguishers and featured a hands-on component. In addition, the Office of Safety & Security (OSS) reported that the agency was working on a new core training requirement in PST on home safety that would include cooking safety, and OSS planned to add content on home safety to their safety guidance document for all Volunteers, the "MySafety Guide: A Safety and Security Resource."

We recommend:

- 1. That the associate director for the Office of Safety and Security provide guidance to posts about identifying post-specific cooking safety risks and incorporating related learning objectives into Volunteer training.**

Peace Corps/Ghana's housing standards, housing check procedures, and site visit practices would not identify and address vulnerabilities in Volunteer kitchen setups related to gas cooking safety.

According to Safety and Security Instruction (SSI) 410, "Post should utilize a "minimum housing standards" checklist... [that] addresses the social, economic, health, environmental, and security issues related to [Volunteer] housing at post." Furthermore, it requires that all Volunteer housing "must be inspected prior to occupancy" and that a Peace Corps staff member "must inspect the home and give final approval." Africa Region Site Management Standards and Guidelines suggests that posts may use Volunteer site visits "to ensure that safety and security issues such as housing remain in compliance with Peace Corps standards." Both the Inter-America and the Pacific Region and the Europe, Mediterranean, and Asia Region have site

management guidance that make similar suggestions to ensure housing remains in compliance with Peace Corps standards. Additionally, Peace Corps/Ghana’s 2018 site development and site monitoring standards and procedures state that during site visits programming staff “should ensure that the following items are covered during their site visits:…Review the Volunteer’s home and ensure that it still meets post’s housing standards.”

In interviews, we learned that a spare room with poor ventilation had been converted into a kitchen, either by the deceased Volunteer or a previous occupant. Additionally, the gas tank was about two feet to the right and below the cookstove in a cabinet inside the house which increased the risk of an accident. OIG found that Peace Corps/Ghana’s current housing standards, housing checks, and site visit practices would not have identified and addressed the risks associated with this configuration, namely the poor ventilation and the location of the gas tank.

Housing Standards. The version of Peace Corps/Ghana’s housing approval checklist used before October 2019 had requirements that 1) the “[l]iquid propane gas cylinders, if [Volunteer] is using one, must be stored outside the home in a shady area (e.g., hose appears in good condition, chain should secure the tank from theft)”, and 2) the house has a “[d]ouble window or two single windows to provide adequate cross ventilation and light.” However, Ghana’s current housing checklist—which was reportedly approved and implemented in October 2019 before the accident—does not have any criteria related to gas cooking safety or ventilation. Post staff we spoke with who had been involved in updating the housing checklist could not tell us why the item related to propane tank placement was removed from the housing checklist, though we learned that the update to the checklist was done to bring it in line with Africa Region guidance. The Africa Region had provided a sample housing standards checklist and minimum housing requirements in its February 2019 update to site management guidance. Posts were expected to update their post-specific site management guidance by September 2019, and the housing standards sample stated that posts should develop their own housing checklist based on post-specific housing criteria.¹

Housing Checks. When the deceased Volunteer first arrived at site in December 2017, the housing checklist in effect had requirements for the placement of the gas tank outside and for ventilation as described above. A Peace Corps staff member we interviewed told us that prior to the accident, housing checks were not expected to be completed for Peace Corps/Ghana Volunteer housing if they were replacing another Volunteer as was the case for the deceased Volunteer. A different staff member reported that the Volunteer leaving the site performed the housing check and submitted it to staff. OIG requested but did not receive a completed housing checklist for the deceased Volunteer. Regardless of whether the departing Volunteer performed a housing check, staff were not following SSI 410 cited above which required a *staff member* to inspect the home prior to occupancy.

Site Visits. At the time of a site visit to the deceased Volunteer’s house in February 2019, the housing checklist in effect had requirements for the placement of the gas tank outside and for ventilation as described above, but the site visit report did not note that the kitchen setup was out of compliance with the housing checklist. Although we could not verify that the deceased

¹ The 2019 Africa Region site management guide and sample checklist did not specifically address requirements for gas tank location or ventilation.

Volunteer's kitchen was in the same configuration at the time of that visit, we learned from two staff members with oversight responsibilities that site visits included a check of Volunteer housing but staff did not systematically check the kitchen or review all housing checklist items for compliance with Peace Corps/Ghana housing standards. Staff performing site visits were reportedly focused on other safety and health criteria such as window screens, water sanitation, and theft prevention, and did not check the safety of cooking setups, including gas cookstoves, before the accident.

Peace Corps/Ghana staff reported that after the accident they requested all Volunteers send pictures of their gas tank and cookstove setup, and staff then advised Volunteers on needed improvements. Based on our review, we determined that, without sufficient site development and monitoring procedures and practices in place, staff may not be able to identify and address risks of a cooking accident in Volunteer housing in the future.

We recommend:

- 2. That the director of programming and training and safety and security manager review and revise Peace Corps/Ghana's Volunteer housing requirements to include sufficient consideration of the safety of cooking setups prior to occupancy by the Volunteer, clarify to staff the expectation that a staff member should inspect Volunteer housing for replacement Volunteers, and specify how they plan to oversee compliance with the housing requirements.**
- 3. That the director of programming and training and safety and security manager review and revise Peace Corps/Ghana's site visit procedures to specify how the post will inspect the safety of Volunteer cooking setups and address any deficiencies identified, and specify how they plan to oversee compliance with the procedures.**
- 4. That the associate directors for the Offices of Global Operations and Safety and Security review current global site management guidance and determine if additional specificity of safe cooking setups needs to be incorporated into the guidance.**

CONCLUSIONS

Based on a review of agency and post documentation, as well as our interviews with headquarters and post staff, we found that Volunteer training and site management procedures and practices related to gas tank safety needed improvement. Peace Corps/Ghana had already implemented additional Volunteer training, but we addressed two recommendations to headquarters regarding guidance, which, if implemented, will provide better assurance of adequate Volunteer training and site management related to cooking safety at Peace Corps posts globally. The two recommendations directed to Peace Corps/Ghana are intended to improve the post's housing requirements and site visit procedures to reduce the risk of future accidents.

cc: Michelle Brooks, Chief of Staff
Matthew McKinney, Deputy Chief of Staff/White House Liaison
Carl Sosebee, Senior Advisor to the Director
Timothy Noelker, General Counsel
Shawn Bardwell, Associate Director, Office of Safety and Security
David Fleisig, Chief, Overseas Operations, Office of Safety and Security
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Joshua O'Donnell, Regional Security Advisor, Inter-America and the Pacific Region
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Karen Gardenier, Director of Programming and Training, Peace Corps/Ghana
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Marian Fortner, Chief of Programming and Training, Europe, Mediterranean, and Asia Region
Lindsey Suggs, Chief of Programming and Training, Inter-America and the Pacific Region
Ghana Desk

APPENDIX A: AGENCY RESPONSE TO THE MANAGEMENT ADVISORY REPORT



MEMORANDUM

To: Kathy Buller, Inspector General

Through: Angela Kissel, Chief Compliance Officer *Angela Kissel*

From: Jody Olsen, Director *Jody Olsen*

Date: September 14, 2020

CC: Michelle K. Brooks, Chief of Staff
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Lindsey Suggs, Chief of Programming and Training, Inter-America and the Pacific Region

Subject: Management Advisory Report: Peace Corps/Ghana Gas Tank Cooking Safety (IG-20-02-SR)

Enclosed please find the agency's response to the recommendations made by the Inspector General for the Management Advisory Report: Peace Corps/Ghana Gas Tank Cooking Safety (IG-20-02-SR) given to the agency on July 28, 2020.

Recommendation 1

That the associate director for the Office of Safety and Security provide guidance to posts about identifying post-specific cooking safety risks and incorporating related learning objectives into Volunteer training.

Concur

Response: In coordination with other relevant HQ offices and stakeholders, the Office of Safety and Security will provide guidance to posts about identifying post-specific cooking safety risks and incorporating related learning objectives into Volunteer training.

Documents to be Submitted:

- My safety Guide, Updated Cooking Safety Chapter
- Updated PST session, Home Safety
- Updated terminal learning objectives (KSAs)
- Guidance for identifying post-specific cooking risks
- PCSSO MS 270 risk assessment
- OGO and OSS memo guidance on home safety requirements

Status and Timeline for Completion: December 2020

Recommendation 2

That the director of programming and training and safety and security manager review and revise Peace Corps/Ghana's Volunteer housing requirements to include sufficient consideration of the safety of cooking setups prior to occupancy by the Volunteer, clarify to staff the expectation that a staff member should inspect Volunteer housing for replacement Volunteers, and specify how they plan to oversee compliance with the housing requirements.

Concur

Response: PC/Ghana is in process of reviewing and revising the Site Development Manual to include cooking safety measures and staff oversight of Volunteer housing. The revisions are being made in conjunction with PC/Ghana staff to ensure all necessary staff understand their responsibilities for housing requirements and inspections.

Documents Submitted:

- Updated Site Management Manual
- Staff Meeting Notes highlighting cooking safety and housing discussion
- Email to appropriate staff with new housing guidance

Status and Timeline for Completion: December 2020

Recommendation 3

That the director of programming and training and safety and security manager review and revise Peace Corps/Ghana's site visit procedures to specify how the post will inspect the safety of Volunteer cooking setups and address any deficiencies identified, and specify how they plan to oversee compliance with the procedures.

Concur

Response: PC/Ghana is in process of reviewing and revising the site development manual to include cooking safety measures and staff oversight of Volunteer housing. The revisions are being made in conjunction with PC/Ghana staff to ensure all necessary staff understand their responsibilities for housing requirements and inspections.

Documents to be Submitted:

- Updated Site Management Manual
- Staff Meeting Notes highlighting cooking safety and housing discussion
- Email to appropriate staff with new housing guidance
- Updated site visit checklist
- Updated site visit schedule

Status and Timeline for Completion: December 2020

Recommendation 4

That the associate directors for the Offices of Global Operations and Safety and Security review current global site management guidance and determine if additional specificity of safe cooking setups needs to be incorporated into the guidance.

Concur

Response: In coordination with other relevant HQ offices and stakeholders, the Office of Safety and Security and the Office of Global Operations will provide additional guidance concerning safe cooking setups to be incorporated into region site management guidance.

Documents to be Submitted:

- Updated Regional Site Management Guidance (AF/EMA/IAP) that incorporates updated housing criteria, guidance for conducting kitchen inspections and updated criteria for conducting home inspections during Volunteer site visits.
- Proof of distribution to posts.

Status and Timeline for Completion: December 2020

APPENDIX B: OIG COMMENTS

Management concurred with all four recommendations, which remain open. OIG will review and consider closing these recommendations when the documentation reflected in the agency's response is received. We wish to note that, in closing recommendations, we are not certifying that the agency has taken these actions or that we have reviewed their effect. Certifying compliance and verifying effectiveness are management's responsibilities. However, when we feel it is warranted, we may conduct a follow-up review to confirm that action has been taken and to evaluate the impact.