

# OFFICE OF INSPECTOR GENERAL

# USAID/MADAGASCAR EXCEEDED GOAL FOR MALARIA PROTECTION WITH INDOOR RESIDUAL SPRAYING BUT COULD BETTER MANAGE INSECTICIDE SUPPLY

AUDIT REPORT NO. 4-687-16-001-P AUGUST 5, 2016

REISSUED AUGUST 10, 2016

PRETORIA, SOUTH AFRICA



August 10, 2016

### **MEMORANDUM**

TO: USAID/Madagascar Mission Director, Susan Riley

GH/HIDN/MAL, Division Chief, Julie Wallace

FROM: Policy, Planning, and Analysis Director, David Thomanek /s/

**SUBJECT:** USAID/Madagascar Exceeded Goal for Malaria Protection With

Indoor Residual Spraying but Could Better Manage Insecticide Supply

(Report No. 4-687-16-001-P)

This memorandum transmits the revised final report on the subject audit. Our objective was to determine whether the project reached the intended beneficiaries with spray activities. In finalizing the audit report, we considered your comments on the draft and included them in their entirety in Appendix II. The original audit report has been revised to clarify our evaluation of management comments—i.e., to acknowledge explicitly USAID's actions on all recommendations, particularly those on which it has taken final action. These revisions do not affect the report's conclusions, recommendations, or the mission's management decisions thereon.

The report contains ten recommendations to help USAID/Madagascar strengthen its indoor residual spraying program. After reviewing information provided in response to the draft report, we acknowledge management decisions on Recommendations 1 through 9 and final action on Recommendations 1, 2, 8, and 9. While we acknowledge the management decisions and final action, we disagree with the decisions on Recommendations 1 and 2 for the reasons given on page 14. After considering management comments on Recommendation 10, we have revised the recommendation to clarify the Bureau for Global Health's role in implementing the recommendation; since we revised it, we cannot acknowledge a management decision on Recommendation 10. Within 30 days, please provide the planned actions to implement Recommendation 10. Also, please provide evidence of final action on the open recommendations to the Audit Performance and Compliance Division.

Thank you and your staff for the cooperation and assistance extended to us during this audit.

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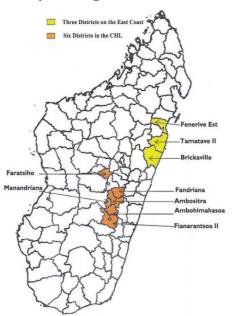
## SUMMARY OF RESULTS

Since 2008, the President's Malaria Initiative (PMI)<sup>1</sup> has funded projects to reduce deaths from malaria in sub-Saharan Africa. Its largest is the Africa Indoor Residual Spraying (AIRS) Project. Active in 17 countries, the project applies insecticide to surfaces inside homes and other structures to kill the mosquitoes that spread the disease. Madagascar, where malaria is among the top five causes of death,<sup>2</sup> is one of the 17 project countries.

In August 2011, USAID issued a \$189 million task order under a centralized Washington D.C. contract to Abt Associates Incorporated, the U.S. company that implements the project in all locations, to work in Madagascar. When that ended in 2014, it issued Abt a second, 3-year contract. Both contracts were to do indoor residual spraying and covered the procurement of commodities, logistics, short-term technical assistance, and the monitoring of spraying in malaria zones.

USAID/Madagascar and international and local partners worked with Madagascar's National Malaria Control Program (NMCP) to select the districts to spray and make decisions on which insecticides to use. Jointly, they required the project to spray at least 85 percent of eligible<sup>3</sup> structures in the highest-prevalence areas of six Central Highlands districts and spray as many eligible structures as possible in three districts in eastern Madagascar (shown below) in campaigns from September to December 2014 and other activities that ended March 31, 2015.

### **Map of Targeted Districts**



Source: Program staff, February 2015.

<sup>&</sup>lt;sup>1</sup> Begun in 2005, PMI's goal is to reduce malaria deaths in high-prevalence countries, nearly all of them in sub-Saharan Africa.

<sup>&</sup>lt;sup>2</sup> PMI Fact Sheet, "Fighting Malaria and Saving Lives," https://www.pmi.gov/.

<sup>&</sup>lt;sup>3</sup> Project officials defined an "eligible" structure as any freestanding building, in which people sleep at night, made of sprayable surfaces such as mud, cement, bamboo, straw, or wood.

The purpose of this audit was to determine whether the project had reached the intended beneficiaries with spray activities. Project officials reported that they had. Specifically, they reported spraying 274,533 structures, 96 percent of those targeted, and protecting more than 1.3 million people—2 percent of them pregnant women and 13 percent children under 5. NMCP officials also reported that the project's spraying activities aligned with the government's strategy.

To verify these results, the audit team assessed various processes associated with the project's data collection, management, and verification and did site visits and interviews. The assessment found no anomalies in how the contractor recorded spray activities. Through visits to three of nine districts and interviews of residents, based on review of the 86 eligible structures, the audit team concluded that 93 percent had been sprayed. However, because inclement weather made roads impassable, limiting access to many areas during fieldwork, we selected the three districts judgmentally. Therefore, the conclusions are limited to the items tested and cannot be projected to all locations the project reported spraying.



Some inhabited structures sprayed in eastern Madagascar are near standing water, where mosquitoes breed. (Photo by Regional Inspector General/Pretoria on March 5, 2015)

In spite of these positive results, the audit team found:

 USAID did not ensure that the contractor managed its insecticide supply chain costeffectively (page 5). In some cases, it ordered too much insecticide; in other cases, it let unopened stock expire in the warehouse.

Three other matters came to the team's attention:

 The Government of Madagascar has not reimbursed vendors for value-added taxes (VAT) (page 9). Without repayment, the vendors threatened to stop providing goods and services to contractors implementing the project.

- The contractor kept insufficient records on the use of mobile soak pits (page 10). The pits, a new technology, require careful placement and monitoring to prevent pesticide waste from leaching into groundwater. But because the project adopted the pits after preparing the environmental plan, the plan omitted requirements to document their monitoring.
- USAID provided inadequate oversight of contract expenses (page 13). The contracting
  officer's representative (COR) did not verify that project costs were reasonable, allocable,
  and allowable for the services rendered.

To address the weaknesses noted, we recommend that the Bureau for Global Health's Malaria Division, in coordination with the responsible contracting officer, take the following actions:

- 1. Modify the task order to require the contractor to provide insecticide inventories, expiration dates, and values before and after spraying for immediate management oversight (page 7).
- 2. Require the contractor to document its review of the project's warehouse procedures and inventories before, during, and after spray activities and provide information to USAID officials routinely (page 8).
- 3. Require the contractor to review its inventory process to identify deficiencies and implement corrective action (page 8).
- 4. Require the contractor to develop a commodities disposition plan to expedite relocation or disposal of expired or nearly expired insecticide products (page 8).

We also recommend that USAID/Madagascar:

- 5. Implement written procedures to remind the government periodically of its obligations to refund VAT and the consequences of noncompliance (page 10).
- 6. Implement a written process to address the government's nonreimbursement of VAT and communicate the results to the contractor for the project (page 10).

The Bureau for Global Health's Malaria Division should also:

- 7. Require the contractor to update its environmental mitigation and monitoring plan to include mobile soak pits (page 12).
- 8. Require the contractor to use the environmental mitigation and monitoring report format and certification form designed for indoor residual spraying activities by the 2013-2018 supplemental environment assessment (page 12).
- 9. Require the contractor to identify the locations of mobile soak pits used in the past two spray campaigns, determine whether the pits have had any negative environmental impact, and document the actions taken to mitigate any adverse effects of insecticide contaminants (page 12).

Finally, we recommend that USAID/Madagascar:

10. Require the contracting officer's representative to perform periodic reviews of documentation supporting expenditures for the Africa Indoor Residual Spraying Project (page 13).

Detailed findings appear in the following section, and Appendix I presents the scope and methodology. Management comments are included in their entirety in Appendix II, and our evaluation of them begins on page 14.

### **AUDIT FINDING**

### USAID Did Not Ensure That the Contractor Managed the Insecticide Supply Chain Cost-Effectively

Abt reported that three classes of insecticide were available in project warehouses before the 2014 spray campaign: organophosphates, carbamates, and pyrethroids. During the audit, the insecticide inventories were estimated at \$1,094,708—44,010 bottles of organophosphates valued at \$1,034,235; 4,652 sachets of carbamates valued at \$49,404; and 5,951 sachets of pyrethroids valued at \$11,069. The total represented about 6 percent of the implementer's obligations as of December 2014.

Abt was responsible for establishing cost-effective supply chain mechanisms for commodity procurement, and for monitoring spraying activities to ensure the quality of such commodities.

However, Abt's management of the insecticide supply chain was not cost-effective and put USAID's investments at risk. For example:

- The project used 30,915 bottles of organophosphate during the 2014 campaign; it did not use 13,095 bottles (30 percent) of the stock, valued at \$307,733, indicating the implementer had ordered too much stock.
- A large quantity of insecticide—10,603 sachets of carbamates and pyrethroids—was left over from spray activities in the Central Highlands. Because of insecticide resistance in Madagascar, USAID and project officials reported that the project would replace this stock with organophosphates.
- The project did not rotate inventory using the first-in, first-out method. As a result, 8,031 bottles of insecticide (like those pictured on the next page) expired before they could be used and needed to be tested by an independent lab.<sup>4</sup> Of these,
  - 1,512 bottles of organophosphates expired during June and October 2014 and failed the independent lab's testing.
  - 5,064 bottles of organophosphates, expired between May and October 2014 and needed to be recertified before they could be used. Although mission officials reported that some of this stock was recertified for use with extended shelf life until April 2016, officials did not provide any information on the numbers or values of remaining inventory as of May 26, 2016.

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<sup>&</sup>lt;sup>4</sup> According to the freight forwarder, an independent laboratory performs tests to determine if the active ingredients still meet requirements. If they do, the manufacturer can reformulate the product for use. If the product fails, the manufacturer may refund the program for useable expired or expiring product and disposal costs.





Expired insecticides from 2012 and 2013 are stacked in a project warehouse in Toamasina, Madagascar. (Photo by Regional Inspector General/Pretoria on March 4, 2015)

To explain the overstock, project officials cited changes to the spray locations and reliance on spray-use data from areas with dissimilar characteristics. For example, the contractor had not sprayed in the east before and did not realize that the structures there—shown on the next page—were made primarily of porous plant material similar to bamboo and would require less insecticide than those in the Central Highlands.

As for what caused the expired and expiring insecticide, the contractor's technical director, the USAID/Washington COR, and the freight forwarder listed different factors. The technical director and the Washington COR said the project received product with a short shelf life. One official said that during 2013 and 2014, the manufacturer supplied substantial quantities of old organophosphate that would not be viable for 2 years. The freight forwarder, on the other hand, cited the lack of good warehouse practices, changes to areas planned for the insecticide use, insufficient lead times for orders, and transfers of insecticide stock to the project from other countries where Abt had contracts.

Although project officials said they notified the COR about the expired or expiring insecticide in August 2014, the COR said the issue was not raised until January or February 2015. E-mail correspondence shows that Abt and freight-forwarding officials discussed recertifying, replacing, and disposing of expired product as early as September 2014. Yet only in April 2015 did Abt make an urgent request to the freight forwarder to contact an independent lab to retest insecticide that would expire in June 2015. And at the time, Abt did not have any finalized plans to replace the expiring insecticide, send the expiring insecticide to other locations in sub-Saharan Africa, or dispose of the expired insecticide that had failed recertification.

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<sup>&</sup>lt;sup>5</sup> According to a freight-forwarding official, most insecticide lasts about 2 years from the manufacturer's production date when properly stored.



These houses in eastern Madagascar are made of plant materials, wood, and tin. (Photo by Regional Inspector General/Pretoria on March 5, 2015)

The urgent appeal to test the aging insecticide might not have been necessary if Abt had kept USAID better informed. Abt officials provided information on the quantities of insecticide in stock and expiration dates in their work plan and budget for May 1, 2014, through March 31, 2015. The information included the amount of excess insecticide, but omitted pertinent information about product value, expiration dates, testing, relocation, and disposal. Such information (usually contained in a commodities disposition plan) prepared before, during, or after spray activities would have allowed USAID officials to make informed decisions about expedited uses, relocation, or disposal of expired insecticide products, or products nearing expiration.

Belated attempts to relocate the insecticides could be costly. Abt reported that the project expected to replace some of the outdated product in time for the next spray season, and planned to ship up to 5,951 sachets of recertified pyrethroids to another country. Abt officials also noted that the manufacturer agreed to pay for the recertification costs for some of the expired or nearly expired insecticide. Still, costs associated with unused products include the original purchase price, transportation, storage, repacking and shipping, disposal, and product replacement. Ordering and maintaining insecticide requires effective cost controls that will not threaten an important U.S. Government investment to reduce malaria in Africa.

To ensure adequate quantities of insecticides that Malagasies need to protect their health and to make good use of the U.S. Government investment, we make the following recommendations.

**Recommendation 1.** We recommend that the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division in coordination with the responsible contracting officer, modify the active task order to require the contractor to provide insecticide inventories, expiration dates, and values before and after spraying for immediate management oversight.

**Recommendation 2.** We recommend that the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division, in coordination with the responsible contracting officer, require the contractor to document its review of the project's warehouse procedures and inventories before, during, and after spray activities and provide information to USAID officials routinely.

**Recommendation 3.** We recommend that the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division, in coordination with the responsible contracting officer, require the contractor to review its inventory process to identify deficiencies and implement corrective action.

**Recommendation 4.** We recommend that the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division, in coordination with the responsible contracting officer, require the contractor to develop a commodities disposition plan to expedite relocation or disposal of expired or nearly expired insecticide products.

## OTHER MATTERS

# **Government of Madagascar Has Not Reimbursed Vendors for Value-Added Taxes**

Under USAID's agreements with the government, the purchase of supplies, materials, and equipment used in connection with USAID-funded projects is exempted from VAT. To reimburse vendors, who pay the tax for each transaction, USAID collects vendor invoices from its implementers (known as implementing partners) and sends the invoices to the government for approval. The government then reimburses vendors directly.

Although the government acknowledges this responsibility, it has not reimbursed some project vendors for VAT in 2 years. As of 2013, 27 project vendors were still waiting for \$256,000 in VAT reimbursements for supplies and services provided. According to the mission controller, the nonreimbursement of VAT is a recurring problem for many of the vendors that provide supplies and services to the mission's Malagasy partners. The mission director said the government owed one vendor not associated with the project at least \$2 million in VAT.

USAID/Madagascar has lived up to its end of the agreement but could do more. For example, it documented the mission's role in VAT refunds for implementers. The document lays out the steps for the review of VAT reimbursement requests and the submission process to the government. However, the mission did not develop a process to follow up with the government on submissions; communicate with its partners on the status of submissions; or act promptly, forcefully, and efficiently to collect the funds owed.

In January 2015, in advance of a partners' meeting, the mission controller contacted USAID/Southern Africa's regional contracting officer for advice on how to improve the process. The controller asked if the mission could reimburse its partners for VAT paid when the government fails to do so. However, the contracting officer said that blanket permission to reimburse USAID implementing partners for VAT paid was not appropriate.

The controller also contacted the regional legal officer, who recommended that mission officials enforce the terms of the agreements with the government. He reminded mission officials of the options available, such as bills for collection. For example, USAID/Madagascar could issue a bill to the government to collect overdue vendor VAT reimbursements or request that U.S. lawmakers reduce the appropriation to Madagascar as allowed by law.<sup>6</sup>

Vendors and implementing partners were seeking relief. One mission employee said some vendors want entire bills for services and VAT paid when services are rendered. An implementing partner that complied with that request later complained to mission officials after not being reimbursed for at least \$2 million in VAT. Even with different terms, according to some project employees, many suppliers have threatened not to provide services in the future.

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<sup>&</sup>lt;sup>6</sup> Under some circumstances, including Secretary of State certification, the U.S. may withhold a portion of future assistance payments from countries that have taxed U.S. assistance funds. The amount withheld is 200 percent of the amount of the tax imposed. See Department of State, Foreign Operations, and Related Projects Appropriations Act of Fiscal Year 2014, Public Law 113-76, Division K, Title VII, Sec. 7013.

Since the audit began, mission officials have taken some actions. In May 2015, they provided the audit team with the draft of a diplomatic note to the government about its VAT responsibilities. The officials planned to send the note with a list of unreimbursed VAT due to implementing partners and vendors. Accordingly, we make the following recommendations.

**Recommendation 5.** We recommend that USAID/Madagascar, in consultation with U.S. Embassy Antananarivo, its regional legal officer, and its regional contracting officer, implement written procedures to remind the Government of Madagascar periodically of its obligations to refund value-added taxes and the consequences of noncompliance.

**Recommendation 6.** We recommend that USAID/Madagascar, in consultation with U.S. Embassy Antananarivo, its regional legal officer, and its regional contracting officer, implement a written process to address the Government of Madagascar's nonreimbursement of value-added taxes, and communicate the results to the contractor for the African Indoor Residual Spraying Project.

# Contractor Kept Insufficient Records on Use of Mobile Soak Pits

USAID guidance<sup>7</sup> requires an assessment to determine if planned program activities will pose a significant threat to the environment. After it gets the results, USAID must define preventive activities that will mitigate any adverse environmental repercussions identified. The implementer is then responsible for creating and implementing an environmental mitigation and monitoring plan, which details mitigation measures, tells how and when to monitor their effectiveness, and names responsible parties.<sup>8</sup> The implementer tracks implementation of the plan, and reports on monitoring efforts in an environmental mitigation and monitoring report to the mission's environmental officer and the appropriate COR.

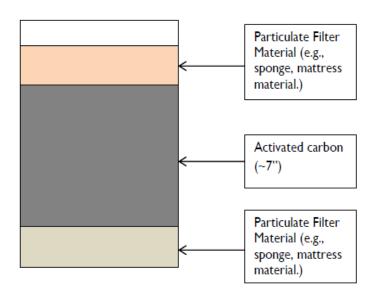
In 2013, after Abt did testing in the United States and got USAID's approval, the project began using a new technology—mobile soak pits—piloted by Abt to dispose of contaminated wastewater in remote areas. Project officials said these pits, illustrated on the next page, would extend spray coverage to remote locations since sprayers could work a full day and stay overnight without having to return to permanent cleaning and waste facilities. A U.S. chemical laboratory determined its filter, which Abt used in the devices, could remove as much as 85 percent of organophosphates' active ingredients. However, because of the high toxicity of pesticides used for spraying, the test protocol recommended installing the pits in elevated ground at least 30 meters from frequented public areas, waterways, and water sources. In addition, the protocol called for mandatory, ongoing testing of mobile soak pit sites, since scientists are still not certain at what point a pit exhausts its insecticide-absorbing capability.

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<sup>&</sup>lt;sup>7</sup> Automated Directives System (ADS) 204, "Environmental Procedures," updated February 22, 2013.

<sup>&</sup>lt;sup>8</sup> Global Environmental Management Support Project, "Mitigation, Monitoring & Reporting," <a href="http://www.usaidgems.org">http://www.usaidgems.org</a>, updated April 15, 2016.

<sup>&</sup>lt;sup>9</sup> Public areas include crop areas, animal enclosures, footpaths, and community buildings.





The drawing at left illustrates Abt's design for the mobile soak pit. The photo at right shows mobile soak pits ready for use. (Photo and drawing by Abt Associates Inc., February 2015)

Contrary to the ADS guidance, Abt did not sufficiently report its monitoring of mobile soak pits. The environmental officer said project staff sent environmental monitoring reports from the field via smart phone to the implementer's U.S. office. The documentation, which was belatedly provided to the auditors, was incomplete and contradicted information from USAID/Madagascar. For example, the documentation was not clear on how many mobile soak pit sites the project had, or on whether cleanup activities were required or had occurred. And whereas USAID/Madagascar's report listed 427 mobile soak pit sites in eight districts of the Central Highlands and eastern Madagascar, Abt's report identified 25 sites across eastern, southern, and central Madagascar. Neither included the dates of the corresponding spray campaign. Moreover, a PMI report published in April 2015 documented 57 mobile soak pits were used during the September 8 to December 10, 2014 spray campaign.

Two main factors contributed to the insufficient monitoring reports and the contradictory information.

First, Abt never updated the environmental plan to include the use of mobile soak pits. Therefore, the plan did not differentiate between permanent and mobile soak pits, and neither did the pre-, mid-, and postseason field inspection checklists. Consequently, the monitoring of this new form of waste management was overlooked. Although the COR said there was no need to differentiate between mobile and in-ground soak pits, USAID/Madagascar's environmental officer said that monitoring mobile soak pits was necessary, and agreed that documentation was insufficient as of March 2015.

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<sup>&</sup>lt;sup>10</sup> Auditors requested evidence of monitoring activities on multiple occasions during staff interviews on February 20 and March 6, and through e-mail correspondence with Abt on March 6, 8, and 30. Documents were provided a month later.





Project staff prepare ground (left) and then install mobile soak pits (right). (Photos by Abt Associates Inc., February 2015)

Second, instead of adopting the reporting format prescribed by the plan and outlined in the
 Madagascar Supplemental Environmental Assessment for Indoor Residual Spraying for
 Malaria Control, 2013-2018, the implementer made up its own, which lacked detail. For
 example, the project reported clogged mobile soak pits in two of the nine districts, but gave
 no details on planned corrective measures. The mission's environmental officer told auditors
 that using the prescribed format would have prompted project staff for corrective measures
 and aided monitoring efforts.

Further, Abt didn't follow the soak pit testing protocols. Since they did not document their site selection methodology or installation practices, project officials could not confirm the exact location of mobile soak pits used during the 2014 campaign. Consequently, neither the mission nor Abt knew whether the pits had been sited in accordance with regulations or whether cleanup of the mobile soak pits was sufficient.

Increased use of mobile soak pits may improve implementation of spraying projects by allowing the project to extend its reach, coverage, and benefits to isolated populations in less time than was previously possible. However, without comprehensive monitoring and reporting to ensure that the locations of mobile soak pits are known and documented and that the soak pits are operating as intended, USAID risks polluting water supplies, which will make people sick—defeating the program's purpose—and cause other environmental damage. Accordingly, we make the following recommendations.

**Recommendation 7.** We recommend that the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division, require the contractor to update its environmental mitigation and monitoring plan to include mobile soak pits.

**Recommendation 8.** We recommend that the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division, require the contractor to use the environmental mitigation and monitoring report format and certification form designed for indoor residual spraying activities by the 2013-2018 supplemental environmental assessment to comply with annual environmental reporting requisites.

**Recommendation 9.** We recommend that the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division, require the contractor to identify the locations of mobile soak pits used in the past two spray campaigns,

determine whether the pits have had any negative environmental impact, and document the actions taken to mitigate any adverse effects of insecticide contaminants.

# **USAID Provided Inadequate Oversight of Contract Expenses**

USAID's policy<sup>11</sup> requires the COR to identify any improper claims when reviewing vouchers for payment. Specifically, the COR is to determine if goods and services were received at costs that were reasonable, allocable, and allowable, and if services were rendered.

To fulfill these tasks, the COR, who works with the Bureau for Global Health in Washington, D.C., normally visits Madagascar twice a year. They also review the project's monthly financial reports and Abt's proposed costs to determine if the costs are on track and reasonable. However, the COR's efforts are not enough to determine if AIRS Madagascar's costs are reasonable, allowable, and allocable. As long as the costs appear reasonable, she approves the invoices without reviewing any supporting documentation. She does not routinely identify or seek support for high-value or high-risk transactions, such as insecticide procurements, mobile banking, and transportation/travel services.

The COR said they do not have time to review supporting documentation before or after USAID makes payments. According to her, she has had a 5-day turnaround to process vouchers for the 15 countries where spraying is conducted. She added that it is not realistic to expect the activity manager, who works at USAID/Madagascar, to help her conduct any type of financial review so that USAID can make timely payments.

Insecticide procurements valued at \$1.5 million, mobile banking services valued at \$557,000, and transportation/travel services valued at \$403,000 for the 2014-2015 spray campaign represent a significant portion of the project budget. Without strong financial oversight of such expenses, USAID cannot be sure that its money is well spent. Accordingly, we make the following recommendation.

**Revised Recommendation 10.** We recommend that Bureau for Global Health require the contracting officer representative to perform periodic reviews of documentation supporting expenditures for the Africa Indoor Residual Spraying Project.

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<sup>&</sup>lt;sup>11</sup> ADS 630.3.2.2, "COR Adjustments for Amounts Claimed or Invoiced," effective August 26, 2011.

# EVALUATION OF MANAGEMENT COMMENTS

In responding to the draft report, officials with USAID/Madagascar and the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division provided clarifications to the report, some of which we have incorporated in this final report.

As for the recommendations, the officials agreed with seven (Recommendations 3, 4, 5, 6, 7, 8, and 9) and disagreed with two (Recommendations 1 and 2). They made management decisions on nine and took final action on Recommendations 1, 2, 8, and 9. We acknowledge the management decisions and final action; however, we disagree with the decisions on Recommendations 1 and 2 for the reasons described below. After considering management comments on Recommendation 10, we have revised the recommendation and cannot acknowledge a management decision on Recommendation 10.

**Recommendation 1.** Global Health Bureau officials and the responsible contracting officer disagreed with modifying the task order to require Abt to provide insecticide inventories, expiration dates and values before and after spraying. They explained that Abt is required to provide this information as part of the annual work plan and the End of Spray report. We acknowledge the Agency's management decision and final action.

We maintain that Abt did not fully comply with this requirement. In its May 1, 2014 – March 31, 2015 work plan, Abt reported inventory levels for each of the insecticides left over from the prior spray campaign, along with expiration periods for each of the three types. Abt noted in the work plan that it had overestimated the amount of insecticide needed for past spraying campaigns. In its End of Spray report, approved on April 17, 2016, Abt gave the quantities used and in stock, but did not provide the expiration periods for each of the three types of insecticides. It did not report the value of the inventory levels in either report. And, although it self-reported overestimating insecticides in its 2015 work plan, its End of Spray report for the 2014-2015 spray season shows it again overestimated.

Abt is under contract to develop supply chain mechanisms that promote cost-effectiveness in procuring insecticides. For two consecutive spray seasons, Abt ended with excess quantities of insecticides—some that expired. According to the World Health Organization's *Operational Manual for Indoor Residual Spraying (IRS) for Malaria Transmission Control and Elimination*, "Insecticides should not be allowed to expire. This can be avoided through proper planning and accurate estimation of needs."

The information that Abt is currently providing in its work plan and End of Spray reports lacks details that will alert USAID to potential losses. Not only is USAID paying for these excess inventories, but it is also paying Abt a 5 percent fee on the cost of the insecticides—in addition to the cost of transport and storage. Therefore, we do not agree that the information Abt is currently providing is sufficient for USAID's COR to make timely and cost-effective decisions.

Recommendation 2. Global Health Bureau officials and the responsible contracting officer disagreed with requiring Abt to document its reviews of pre-, mid-, and post-spray inspections of

operational sites and then update USAID officials routinely. They believe the current process is sufficient. We acknowledge the Agency's management decision and final action.

We disagree that the Agency's current procedures meet the intent of the recommendation. In their response, officials cited Abt's use of checklists contained in the *Supervisory TookKit for Better Indoor Residual Spraying*. The checklists include steps to ensure stock cards are up-to-date, check for a functioning thermometer, and observe the placement of the insecticides within the warehouse. They do not convey Abt's requirements for stocking, handling, tracking, and safeguarding government-funded commodities under Abt's control throughout the spray season. Further, the End of Spray reports that the Agency relies on to gauge how Abt managed warehouse operations come too late for USAID to direct changes or improvements in the process.

Requiring Abt to document and provide its inventory management policies will help USAID understand how Abt manages the movement and storage of merchandise in the warehouse—what inventory valuation method it uses (first-in, first-out or last-in, first-out); what policies and controls it has to prevent fraud, theft, and misuse of inventory; and whether it does periodic physical inventories to ensure accurate record keeping and reporting. Without documented procedures, USAID has little basis for concluding that current procedures suffice.

**Recommendation 3.** Global Health Bureau officials and the responsible contracting officer agreed to review the contractor's inventory processes to identify deficiencies. We acknowledge the Agency's management decision. Final action is expected by September 30, 2016.

**Recommendation 4.** Global Health Bureau officials and the responsible contracting officer agreed to require Abt to include a disposition plan for remaining insecticide stock. We acknowledge the Agency's management decision. Final action is expected to occur after a report for spray campaigns is completed by June 30, 2016.

**Recommendation 5.** Mission officials agreed with the recommendation to remind the government of its VAT obligations. Officials conducted meetings with Government of Madagascar officials and delivered a summary of outstanding VAT claims for vendors through July 2015 valued at \$1.3 million. We acknowledge the mission's management decision. Officials planned by September 30, 2016, to issue written procedures to periodically remind the Government of its obligations.

**Recommendation 6.** Mission officials agreed to implement a written process to address the Government of Madagascar's nonreimbursement of value-added taxes and communicate the results to the project's contractor. We acknowledge the mission's management decision. Officials have set a target completion date of September 30, 2016.

**Recommendation 7.** Global Health Bureau officials and the responsible contracting officer agreed to modify the environmental mitigation and monitoring plan template to include mobile soak pits. We acknowledge the Agency's management decision. Officials set a target completion date of June 30, 2016.

**Recommendation 8.** Global Health Bureau officials agreed to require the contractor to use the environmental mitigation and monitoring report and certification form to comply with annual environmental reporting requirements. During February 2015, the contractor developed a plan and report used during the 2015-2016 spray campaign that included mitigation measures,

monitoring indicators, and monitoring frequency. Having reviewed the documentation, we acknowledge the Agency's management decision and final action.

**Recommendation 9.** Global Health Bureau officials agreed to continue requiring the contractor to identify the locations of soak pits used during the past two spray campaigns, but noted that mobile soak pits are not left in the ground at operating sites. Officials disagreed with having the contractor determine whether the pits have caused environmental damage, noting that World Health Organization guidelines do not require doing so—only checking them if they become clogged or communities report adverse effects. To show that Abt provides location and other information already, mission officials provided reports documenting inspections of soak pits during 2014 end-of-day cleanup activities. These reports provide a record of accidents; complaints of exposure; and the use of soak pits for contaminated water disposal, absorption, and drainage success.

Having reviewed the inspection reports, we conclude that the contractor documents the location of some of the mobile soak pits and inspects them regularly for proper performance. Therefore, we acknowledge the Agency's management decision and final action.

**Recommendation 10.** Agency officials at the mission and in the Global Health Bureau disagreed with scheduling periodic reviews of documentation supporting expenditures reimbursed under the project in Madagascar. Agency officials explained that because the contract is centrally managed in Washington, expenditures are not reported by country but by contract cost categories—Labor, Fringe Benefits, Overhead, Consultants, Travel and Per Diem, Allowances, Other Direct Costs, Equipment and Materials, Subcontracts, Other Indirect Costs and Fees. USAID's policy holds the COR responsible for identifying any improper claims when reviewing the vouchers. Mission and bureau officials said the COR's and activity manager's monitoring of country budgets and pipelines ensures adequate financial management.

We do not agree with the bureau's position that monitoring expenditures is sufficient to determine whether vender costs were reasonable, allocable, and unallowable. However, because this is a centrally awarded contract, we do agree with the Agency's position that because this is a centrally awarded contract, the responsibility for reviewing the support underlying the expenditures rests with the COR. Therefore, we revised Recommendation 10 as shown on page 13; however, since the recommendation was revised, we cannot acknowledge a management decision or final action.

# SCOPE AND METHODOLOGY

### Scope

The Regional Inspector General/Pretoria conducted this performance audit in accordance with generally accepted government auditing standards. They require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions, in accordance with our audit objective. We believe the evidence obtained provides that reasonable basis.

The objective of this audit was to determine whether USAID/Madagascar's PMI-funded program reached the intended beneficiaries with spraying activities. The Africa Indoor Residual Spraying Project was implemented by Abt Associates Inc. The audit covered project activities that included spray campaign activities from September through December 2014 (and other spraying activities that ended March 31, 2015). From August 2011 through December 2014, USAID obligated \$18 million, disbursed, and estimated \$16 million for PMI activities in Madagascar. During spraying activities beginning in April 2014 through April 2015, USAID/Madagascar obligated \$10 million and disbursed \$5.5 million.

In planning and performing the audit, we evaluated internal control processes related to oversight of the project. This included reviewing the contract and task order; work plans; performance reports; trip reports; project budgets and funding data; USAID/Madagascar's performance plan, portfolio performance reviews, and data quality assessment reports; and the contractor's operational manual, end of spray reports, environmental assessments, and environmental monitoring reports. Auditors also reviewed organizational charts for USAID/Madagascar, USAID/Washington PMI, Abt Associates, and the project, along with the CORs' designation letters and position descriptions, to understand the division of responsibilities. Finally, we examined USAID/Madagascar's fiscal year 2014 annual self-assessment of management required by the Agency to fulfill requirements of the Federal Manager's Financial Integrity Act of 1982. 12

We conducted our fieldwork from February 18 through November 2, 2015. In Antananarivo, the audit team met with officials from USAID/Madagascar, NMCP, the Centers for Disease Control and Prevention, and the World Health Organization. In Toamasina, the audit team traveled through the districts of Brickaville, Fenerive Est, and Toamasina II to interview targeted populations.

The scope of the audit was limited because of persistent inclement weather, which limited accessibility to many areas in the Central Highlands and eastern Madagascar from February through April 2015. Many areas where the project reported that it had conducted indoor residual spray activities could be reached only by boat, and muddy terrain limited access to one area in eastern Madagascar during the fieldwork.

<sup>&</sup>lt;sup>12</sup> Public Law 97-255, as codified in 31 U.S.C. 3512.

### Methodology

To answer the audit objective, we interviewed officials from USAID/Madagascar, the Centers for Disease Control and Prevention, the project, NMCP, the World Health Organization, Abt, and USAID/Washington's Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division. In addition, we visited warehouses maintained by the project in Antananarivo and Toamasina to review general storage conditions for insecticide, personal protective equipment, and other project materials including motorcycles, furniture, and supplies. We also observed entomological testing at a laboratory in Toamasina.

To solicit feedback on USAID/Madagascar's spraying activities and to validate reported data about the activities, we interviewed beneficiaries in one of the two areas of the country where the project was responsible for conducting spray activities. In Malagasy villages in eastern districts—Brickaville, Fenerive Est, and Toamasina II—the audit team interviewed beneficiaries who had lived in the structures sprayed during the campaign from September through November 2014.

We determined the number of residents who lived in each structure, the number of rooms sprayed, and the number of targeted beneficiaries who inhabited a structure during the spray activities. In addition, the team assessed the beneficiaries' understanding of the spraying project and the intended results of the activities.

We planned to rely on the contractor's computer-processed data to support some of our audit conclusions. But we could not rely on this data. USAID/Madagascar's data quality assessment identified challenges and constraints of the data because of the contractor's delays in data collection and needs for field supervision and data verification during the spray activities. In addition, the contractor's data on the number of structures and number of beneficiaries reflected the number of structures and beneficiaries during a specific time. By the time of the audit, these numbers had changed because some structures no longer existed and some beneficiaries who inhabited a structure at the time of spraying had moved.

Although we selected a random sample of village structures in the three eastern districts sprayed, we could not travel to them all. Therefore, we judgmentally selected 86 structures out of 286,928 in villages from the chosen random sample that we could visit. Consequently, the results and overall conclusions related to testing are limited to eastern Madagascar and cannot be projected to all sites where the project reported conducting indoor residual spray activities.

# MANAGEMENT COMMENTS



### **MEMORANDUM**

DATE : May 26, 2016

TO : Regional Inspector General/Pretoria, Sarah E. Dreyer

FROM : USAID/Madagascar Mission Director, Susan Riley /s/

GH/HIDN/MAL Division Chief, Julie Wallace /s/

SUBJECT : Audit of USAID/Madagascar's Indoor Residual Spraying Program

Under the President's Malaria Initiative (Report No. 4-687-16-00X-P)

This memorandum transmits five clarifications from the COR Team of GH/HIDN/MAL as well as management responses to the ten recommendations in the subject audit report:

### Requested Clarifications/Edits:

1. Page 5: The 5<sup>th</sup> paragraph states that 10,603 sachets of carbamates and pyrethroids were left over from spray activities, and states that the project should have sent the insecticide to another region for use.

Management Clarification: The IRS contract COR Management Team does not agree with the statement "the project should have sent the insecticide to another region." The carbamate insecticide expired July 2014 (5 batches) and November 2014 (1 batch). In 2014, the only PMI countries which sprayed with carbamates were Ethiopia, Rwanda and Uganda. Ethiopia sprayed August 13 to September 25, 2014, and would not have been able to use the insecticide. In addition, Ethiopia requires an Amharic label, and would not have been able to take product with a French/English label. Rwanda sprayed from September 8 to October 4, 2015 and therefore would not have been able to use the insecticide. Uganda sprayed from October to December 2014, and also would not have been able to use this insecticide.

The pyrethroid insecticide (3 batches) expired on May 2015. Due to insecticide resistance, the only PMI countries which sprayed pyrethroids in 2014 were Angola and Mozambique,

however both countries began spraying before Madagascar's campaign. Angola sprayed from October 7 to November 8, 2014, and Mozambique sprayed from October 20 to December 13, 2014. Both of these campaigns began before Madagascar, which spayed the Central Highlands from November 3 to December 10, 2014.

All this to say that because of insecticide resistance, there was a limited amount of countries to shift the expiring stock of insecticide to. Of those limited countries, the timing of their spray campaigns, which are aligned with the peak malaria transmission season, prevented the transfer of stock.

2. Page 5: The second to last bullet of the draft report states "1,512 bottles of organophosphates expired during June and October 2012 and failed the independent lab's testing."

**Management Clarification:** The information in this statement is incorrect. Madagascar sprayed with carbamates and pyrethroids in 2012; the first time organophophates were used in country was 2013. Therefore no stock of organophosphates existed in Madagascar that expired in June or October 2012.

3. Page 5: The last bullets states that 5,064 bottles of organophosphates were still awaiting recertification in April 2015.

**Management Clarification:** As of May 26, 2015, Syngenta documented that of the 12 batches of Actellic CS 300 retested by CEMAS, 9 batches were re-certified for use, and the shelf life was extended until April 2016.

4. Page 10: The last paragraph states "because of the high toxicity of pesticides used for spraying, the test report from the implementer's pilot project noted that the protocols recommended installing the pits in elevated ground at least 30 meters from frequented public areas, waterways and water sources."

Management Clarification: As a point of clarification, the recommendation of 30 meters of distance stems from PMI's Best Management Practices for Environmental Compliance, and is applicable to all three classes of insecticides and all soak pits and evaporation tanks – not just mobile soak pits. Page 55 of the WHO Operational Manual for Indoor Residual Spraying (IRS) for Malaria Transmission Control and Elimination outlines the considerations for selecting soak pits sites, however it fails to include a safe recommended distance (see link below).

http://apps.who.int/iris/bitstream/10665/177242/1/9789241508940\_eng.pdf?ua=1&ua=1

5. Page 11: The second paragraph notes a discrepancy with the number of mobile soak pits, with USAID/Madagascar's report listing 427 compared to 25 sites from Abt's report.

**Management Clarification:** The approved 2014 End of Spray Report, which covered September 8 to December 10, 2014, (linked below) documents on page 68 the number of permanent soak pits (27) as well as the number of mobile soak pits (57). Page 68 of the

report also documents previous spray campaigns, and indicates that in the 2013/2014 spray round, there were 41 permanent soak pits and 66 mobile soak pits.

 $\underline{https://www.pmi.gov/docs/default-source/default-document-library/implementing-partner-reports/madagascar-2014-end-of-spray-report.pdf}$ 

### Management Responses to Recommendations:

**Recommendation 1:** We recommend that the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division in coordination with the responsible contracting officer, modify the active task order to require the contractor to provide insecticide inventories, expiration dates and values before and after spraying for immediate management oversight.

**Management Response:** The COR Team of GH/HIDN/MAL does not agree with this recommendation as the requested information is already a requirement for inclusion in both the annually approved country Workplans and the approved End of Spray Reports and thus a contract modification is not needed. The 2014 AIRS/Madagascar Workplan lists this information on page 15. The 2014 End of Spray Report for Madagascar, lists this information on page 55, which is linked below:

https://www.pmi.gov/docs/default-source/default-document-library/implementing-partner-reports/madagascar-2014-end-of-spray-report.pdf

Since the information is already provided both in the annual Workplans and annual End of Spray Reports, two of the contract deliverables under the Task Order, in addition to the annual inventory of project property, we suggest removing this recommendation.

**Recommendation 2:** We recommend that the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division, in coordination with the responsible contracting officer, require the contractor to document its review of the project's warehouse procedures and inventories before, during, and after spray activities and provide information to USAID officials routinely.

Management Response: The COR Team of GH/HIDN/MAL agrees that systematic review of warehousing procedures and inventories at routine intervals prior to, during and following spray operations is important. However, the COR Team of GH/HIDN/MAL does not agree that a new requirement of the contractor is needed as currently IRS implementing partners are required to conduct pre-, mid- and post- spray inspections of all operational sites, which include warehouses and storerooms, as mandated by the Best Management Practices. These environmental compliance checklists incorporated feedback from the BEO prior to approval, and are available from page 19 on, at the link below:

http://www.africairs.net/wp-content/uploads/2012/08/AIRS-Supervisory-Toolkit.pdf

The outcomes of the environmental compliance visits are summarized in the standard End of Spray Report. In addition, weekly reports during the spray implementation are shared with the COR and PMI Activity Managers in the USAID Missions. These reports include coverage and progress of spraying, and also any challenges noted, such as stock imbalances. We agree that periodic routine monitoring is critical, and note that is has been a standard component of spray program monitoring that is on-going and in addition to the required reports at defined intervals the partner is required to report in real-time any problems encountered regarding warehousing procedures and inventories so that the issue can be addressed at the time. This process is working well; therefore we suggest removing this recommendation.

**Recommendation 3:** We recommend that the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division, in coordination with the responsible contracting officer, require the contractor to review its inventory process to identify deficiencies and implement corrective action.

**Management Response:** The COR Team of GH/HIDN/MAL COR team agrees, in coordination with the contracting officer, to have the defined inventory processes of the implementing partner reviewed, with the focus on identifying any deficiencies that could exist. Target completion date is September 30, 2016. It should be noted, however, that the implementing partner at present is required to submit annual inventory reports for all project property. In addition, the End of Spray Reports includes the inventory of key IRS operational items, including insecticide quantities. Currently practice is for these reports to be promptly reviewed by the COR team members in order for the COR to take timely action as needed and as appropriate.

**Recommendation 4:** We recommend that the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division, in coordination with the responsible contracting officer, require the contractor to develop a commodities disposition plan to expedite relocation or disposal of expired or nearly expired insecticide products.

Management Response: The COR Team of GH/HIDN/MAL agrees with the recommendation and will add a requirement to the End of Spray Report to include a proposed plan for the remaining insecticide stock. The target completion date is inclusion in End of Spray Reports for spray campaigns completed as of June 30, 2016. As previously described, the End of Spray Report, which is submitted within 45 days of the end of the spray campaign, includes the updated insecticide stock on hand, plus relevant shelf life information. Based on this information, the implementing partner and COR team can determine the best course of action for any remaining insecticides, if necessary. Examples of proposed options include: a) store insecticide until the next IRS campaign; b) shift insecticide stock to another country, pending NMCP approval and crediting the value of the commodities to the country's pipeline; and c) destruction of the insecticide stock. It should be noted that the resources used for IRS programs, including insecticide procurement, are bilateral resources that have been planned/programmed as part of the overall development assistance agreement between USAID and the respective partner government. Thus any shifting of commodity stock, even for technically sound reasons from one country to another, cannot occur prior to the express consent by the partner government and

without an agreement on reimbursement of the costs of these commodities into the IRS program budget of the partner government's USAID supported spray program.

**Recommendation 5:** We recommend that USAID/Madagascar, in consultation with U.S. Embassy Antananarivo, its regional legal officer, and its regional contracting officer, implement written procedures to remind the Government of Madagascar (GOM) periodically of its obligations to refund value-added taxes (VAT) and the consequences of noncompliance.

Management Response: USAID/Madagascar agrees with the recommendation. Following the audit, US Embassy Antananarivo sent a Diplomatic Note to the Ministry of Foreign Affairs on July 15, 2015 requesting assistance in exempting USAID projects from all taxes, in accordance with the bilateral agreement between the GOM and the USG. USAID representatives held a series of meetings with GOM officials regarding the regularization of the VAT exemption process and delivered a summary of outstanding VAT claims through July 2015 of approximately \$1.3 million. USAID also provided an estimate of new VAT claims expected in calendar 2016 so that the GOM could properly budget for the exemptions for the first time in many years. The GOM is currently using the budgeted \$1.3 million to reimburse vendors for current and prior claims. USAID/Madagascar, in consultation with U.S. Embassy Antananarivo, its regional legal officer, and its regional contracting officer, will implement written procedures to remind the Government of Madagascar (GOM) periodically of its obligations to refund value-added taxes (VAT) by September 30, 2016.

**Recommendation 6:** We recommend that USAID/Madagascar, in consultation with U.S. Embassy Antananarivo, its regional legal officer, and its regional contracting officer, implement a written process to address the Government of Madagascar's non-reimbursement of value-added taxes, and communicate the results to the contractor for the African Indoor Residual Spraying Project (AfricaIRS).

Management Response: USAID/Madagascar agrees with the recommendation. As discussed above, USAID will implement written procedures to address the VAT issues and commits to inform the PMI AIRS Project of the progress. In fact, VAT has been consistently discussed at quarterly meetings with all Implementing Partners (IPs) since it is an issue that affects everyone. On August 11, 2015, the USAID Controller sent an update to all IPs via email explaining that the Diplomatic Note had been sent and that USAID would be collecting a complete list of all outstanding VAT claims. Subsequent updates were given on the budget process for 2016 and the news that the GOM had begun using \$1.3 million to reimburse vendors. IPs have also been instructed to continue to follow the normal VAT reimbursement process and report any issues to their Contracting Officer. USAID/Madagascar will continue to update IPs on the progress and will explain to them our written procedures for engaging the GOM once completed. Target completion date is September 30, 2016.

**Recommendation 7:** We recommend that the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division, require the contractor to update its environmental mitigation and monitoring plan to include mobile soak pits.

**Management Response:** The COR Team of GH/HIDN/MAL agrees to modify the environmental mitigation and monitoring plan (EMMP) template to explicitly mention "mobile soak pits." The target completion date is inclusion in End of Spray Reports for spray campaigns completed as of June 30, 2016, and all future annual workplans. However, please note that page 68 of the previously referenced Madagascar End of Spray Report, which is the environmental mitigation and monitoring report (EMMR) section, documents the number and type of soak pits that were monitored. The EMMP is a standard template and was approved by the Global Health BEO using the current, inclusive terminology of soak pits. Since mobile soak pits and fixed/permanent soak pits are both types of soak pits, we believe the EMMP already incorporates both types of soak pits into the monitoring plan. In addition, the environmental monitoring requirements for fixed/permanent soak pits and mobile soak pits are the same and the monitoring is accomplished in the same way. Similarly, considerations for operational site selection are also the same. This inclusive terminology is also applicable for other types of spray program environmental mitigation tools or approaches. For example, the EMMP does not provided specification regarding personal protective equipment (PPE) with respect to protective clothing. The EMMP does not specify monitoring requirements by one piece (i.e. overalls) PPE or two pieces of pant/top PPE; likewise the washing of PPE (whether one piece or two pieces of PPE) remain the same, and therefore in the EMMP the terminology of PPE is used.

**Recommendation 8:** We recommend that the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division, require the contractor to use the environmental mitigation and monitoring report format and certification form designed for indoor residual spraying activities by the 2013-2018 supplemental environmental assessment to comply with annual environmental reporting requisites.

Management Response: The COR Team of GH/HIDN/MAL agrees with the recommendation, however the COR Team already requires the implementing partner to use the EMMP to report on environmental compliance monitoring. The EMMP included in the 2013-2018 supplemental environmental assessment (SEA) for Madagascar, is considered a living document, and has been revised and updated from the older, outdated version in 2013. The EMMP form is included in a country's annual Workplan, and is completed in the End of Spray Report. The current implementing partner is in compliance with annual environmental compliance reporting activities in Madagascar, as documented in the previously mentioned End of Spray Report.

**Recommendation 9:** We recommend that the Bureau for Global Health's Office of Health, Infectious Diseases and Nutrition, Malaria Division, require the contractor to identify the locations of mobile soak pits used in the past two spray campaigns, determine whether the pits have had any negative environmental impact, and document the actions taken to mitigate any adverse effects of insecticide contaminants.

**Management Response:** The COR Team of GH/HIDN MAL agrees that clear identification of the locations of soak pits – fixed or mobile is important and should continue to be a requirement of the contractor. However, the COR Team of GH/HIDN MAL disagrees that the contractor determine if the mobile soaks pits used over the past two years have had any negative environmental impact. Currently, page 55 of the WHO IRS Manual states "Unless the soak pit becomes clogged with foreign matter and will not drain, it should remain effective for 3 years, at

which time it can be excavated so that the sawdust and coal can be replaced." It is not required that permanent soak pits be excavated, and due to the larger size, they handle substantially more volume (by handling liquid spray program waste from multiple teams), compared to mobile soak pits. Unlike permanent soak pits, mobile soak pits are not left in the ground at an operational site. They can be used at a site for as little as one afternoon, before being safely removed and transported to another site. Many of the operational sites are used for several years in a row. Communities residing in areas targeted for IRS are sensitized as to the adverse effects of insecticide, and to report any unusual occurrence (i.e. suspicious deaths of farm animals, skin irritation, etc.). In addition, the implementing partner conducts pre-, mid- and post- spray environmental compliance inspections, which documents any issues and actions taken to mitigate any contamination. The synthesis of these inspections are included in the End of Spray Reports. Also, an independent monitoring visit during the IRS campaigns is implemented annually either by the USAID GEMS Project, by the USAID and/or PMI in country teams, and/or by the COR Team. Thus far, no unusual occurrences have been reported around operational sites in the 3 East Coast districts of Madagascar where PMI-supported spray programs have occurred.

**Recommendation 10:** We recommend that USAID/Madagascar, with assistance from the Bureau for Global Health, implement a schedule for the periodic review of documentation supporting expenditures for the Africa Indoor Residual Spraying Project in Madagascar.

Management Response: USAID/Madagascar and the COR Team of GH/HIDN/MAL disagree with the recommendation. The IRS contract is a Global Health Bureau centrally managed contract accessible to all countries wishing to support IRS programs under the U.S. President's Malaria Initiative. Central contracts are not structured to officially report against country by country expenditures, but by contract cost category structures, specifically: Labor, Fringe Benefits, Overhead, Consultants, Travel and Per Diem, Allowances, Other Direct Costs, Equipment and Materials, Subcontracts, Other Indirect Costs and Fees. As with other central contracts that accept field support from multiple operating units/missions, cost categories such as direct and indirect costs for the contract are not organized for reporting by country. By selecting a field support mechanism, missions relinquish financial expenditure review and approval responsibility to the contract COR team. This is not unique to the IRS program contract. In addition, during the annual Workplan process, the COR and Mission Activity Managers closely review each line item in the budget for reasonability and accuracy. Furthermore it should be noted that as a supplement to the contractually required expenditure reports, the COR Team actively tracks and monitors country budgets and pipelines with the implementing partner, keeping a budget tracking spreadsheet broken down by country and central/core overall project planned and completed expenditures. Therefore, USAID/Madagascar and the COR Team of GH/HIDN/MAL agree that financial oversight is sufficient and there would be little value added in additional mission review of documentation supporting expenditures.

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