

Factsheet

PHOSPHINE FUMIGATION COMPLIANCE REQUIREMENTS FOR USAID PROJECTS

PHOSPHINE FUMIGATION: NEED & RISKS

Fumigation with phosphine gas is a critical tool to assure protection of agricultural food commodities from waste and spoilage. It is also an intrinsically dangerous process: phosphine is deadly, flammable and corrosive.

Failure to properly conduct fumigation poses serious risks to fumigators, warehouse workers and nearby residents. It also creates a high risk that fumigation will be ineffective, posing both an immediate problem for the program *and* contributing to the significant and growing problem of phosphine resistance.

Resistance increases commodity spoilage and costs. And, by requiring longer exposure times and higher concentrations of gas, it increases health and safety risks. In the worst case, resistance could lead to the loss of phosphine fumigation as an effective tool.



THE NEW FUMIGATION PEA

In recognition of these risks and to develop clear guidance and tools for USAID programs, DCHA has undertaken a Programmatic Environmental Assessment (PEA) for Phosphine Fumigation of USAID Food Commodities under USAID's environmental procedures.

This PEA for *Commodity Protection in USAID Food Aid Programs by Phosphine Fumigation* (the "Fumigation

PEA") establishes compliance requirements for all USAID Partners who undertake phosphine fumigation.

The public comment period for the PEA is now closed and the PEA is in process of finalization. Upon finalization (expected in July 2016), these requirements take effect.

REQUIREMENTS IN BRIEF

PERSUAP. Under the requirements established by the PEA, each USAID Program supporting phosphine fumigation must develop and USAID must approve a fumigation Pesticide Evaluation Report and Safer Use Action Plan (PERSUAP). A PERSUAP is an amendment to a USAID program's Initial Environmental Examination (IEE) fulfilling the analysis and safeguard requirements established by 22 CFR 216.3(b) for any use of pesticides in a USAID activity. See Tool Annex 2 for the fumigation PERSUAP template

The PERSUAP authorizes phosphine fumigation subject to the safer use requirements established by the PEA. In summary, these requirements are:

- Implementation of specified **"good housekeeping" and integrated pest management measures** to control pests as a mandatory complement to fumigation.
- Completion of a **Fumigation Management Plan** for each fumigation event & adherence to its provisions. . See Tool Annex 3 for the Fumigation Management Plan template. Key provisions include:
 - Efficacy monitoring. Monitoring of phosphine gas concentrations under the sheeted commodity stacks.
 - Hazard monitoring. Monitoring of ambient concentrations of phosphine.
 - Use of personal protective equipment by fumigators INCLUDING appropriate canister respirators or self-contained breathing apparatus.
 - Gas Impermeable Tarps. All tarps must be impermeable, otherwise fumigation is incomplete, and promotes insect resistance.

- Use of **fumigation services solicitations and contracts** that specify required safer practices. ([Detailed templates are provided.](#))

Partners that use the templates provided and follow through on implementation and reporting as specified therein will be in compliance. The “Tools Annexes” to the PEA provide compliance guidance and all tools and templates.

The PEA and all its tools and templates can be accessed at www.usaidgems.org/fumigationpea.htm



QUESTIONS AND ANSWERS

Q: Are efficacy and hazard monitoring, gas impermeable tarps and use of canister respirators firm requirements?

A: Yes.

Q. What if monitoring equipment and breathing apparatus are not available in-country?

A. If necessary, partners can procure fumigation equipment, including monitoring equipment, breathing apparatus, and appropriate tarps. Partners should discuss this situation with their AORs.

Q. Can the PERSUAP and Fumigation Management Plan templates provided be altered?

A. The PERSUAP can be used to request changes to the Fumigation Management Plan, which sets out requirements for the fumigation process. However, exceptions must be well-justified and will likely slow down the process of approval.

Q. Are these rigorous requirements for fumigation management really necessary?

A. The requirements established by the PEA are not a “gold standard” for phosphine fumigation. They are rather the set of basic, acceptable technical practices necessary for safe, successful fumigation. Note that often the same practices are necessary for BOTH safety and efficacy.

Q. Will existing USAID programs need to develop a fumigation PERSUAP right away and otherwise immediately comply with PEA requirements?

A. Existing programs are expected to comply within a reasonable period of time. It is understood that compliance presents a set of issues for programs in implementation, including those of cost, that cannot be instantly resolved. These issues can be discussed between the partner, the AOR and DCHA BEO.

Q. Are these requirements permanent?

A. The core requirements—a fumigation management plan for each event that requires hazard and efficacy monitoring, an exclusion zone, and proper breathing apparatus—are very unlikely to change. These are basic elements of effective, safe fumigation.

However, DCHA expects to adjust the templates and tools provided, and the specific guidance for implementation of these requirements based on field experience.