



# ENCAP Visual Field Guide: HEALTHCARE WASTE

for quick identification of serious environmental & biosafety concerns in management of waste from small health care facilities

## About the ENCAP Visual Field Guide Series

ENCAP Visual Field Guides are intended for use during field visits by USAID and Implementing Partner staff who are not environmental specialists.

They are intended to ensure that the most common serious environmental deficits in activity design and management are quickly and easily identified for corrective action.

Note that an activity may be subject to environmental design and management conditions specified in its Environmental Assessment or Initial Environmental Examination but not captured in this document.

The field guides complement the more detailed guidance found in USAID's *Environmental Guidelines for Small Scale Activities in Africa*.

Consult the *Guidelines* for guidance regarding remedies, mitigation and corrective actions.

The *Guidelines* are available at [www.encapafrika.org/egssa.htm](http://www.encapafrika.org/egssa.htm).

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**ATTENTION:** Also use the visual field guide for TOILETS/LATRINES when visiting a small health facility.

**PROBLEMS.** A "YES" answer to any of the following indicates an environmental or biosafety deficit in activity design and/or management. In USAID-funded activities, corrective action will be required. Notify the Chief of Party and USAID Project Manager.

**1. Are sharps, bandages, other clearly infectious medical waste or incinerator ash disposed of in open ground? In an unfenced OR unlined burial pit?**

YES



Issue 1: Open access to disposal area allows insect and animal vectors to spread pathogens contained in the waste. Wastepickers, health workers and children at play are directly exposed to infectious agents.

NO

Issue 2: Unlined pits can easily contaminate groundwater.

**2. Is waste intended for burning or burial stored in the open, or in anything other than secure, tightly closed containers?**

YES



As per Issue 1, above.

NO

(At left, "red bag" waste is piled outside a clinic. At right, medical waste is being stored in an open cage open to insect and animal vectors that could spread the waste and its pathogens..)

**3. Is the incinerator (if present) clearly non-functional or damaged? Is it being used for waste storage?**

YES



As above.

NO

(Both photos indicate that the incinerator is not used: At left, vines grow out of the stacks of a non-functional incinerator. At right, an incinerator burn chamber is being used for waste storage.)

**4. Is personal protective equipment for waste handlers absent or show little signs of use? (Includes masks, thick gloves, safety glasses, aprons and boots.)**

YES NO

→ Issue: Significantly heightens infection risks for waste handlers.

**Check for minimum elements of an effective waste management program**


The questions on page 1 and at right identify gaps in minimum good waste management practice.

To the extent feasible during your field visit, ascertain whether these additional minimum elements of a basic waste management program are in place. (Leave blank elements that you cannot assess.)

Written waste management plan exists? (View plan; ask several staff about plan contents.)	Y	N
Staff responsibilities for waste management are clearly assigned/ understood? (Ask several staff.)		
Training. Staff trained in safe handling, storage, treatment and disposal? (View training record; ask several staff.)		
Good hygiene practices. All who handle medical waste follow good hygiene practices; wash stations with soap and water are available? (By observation; check that soap shows evidence of recent use.)		
Staff vaccinated against Hepatitis B & Tetanus? (View records.)		
Waste segregation is systematic? (Going beyond question 5 at right, check if sharps, red-bag & general waste containers are in each treatment area: spot-check to verify "red-bag" containers contain only infectious waste.)		
Infectious waste is disinfected prior to disposal by incineration, autoclaving, etc. (Talk to the incinerator/autoclave operator. Verify frequency of operation.)		

For more information about these "minimum elements," see the *Healthcare Waste* chapter of the *Environmental Guidelines for Small Scale activities in Africa* [www.encapfrica.org/sectors/medwaste.htm](http://www.encapfrica.org/sectors/medwaste.htm).

**5. Do general waste containers have sharps (needles, scalpels) or obviously infectious waste (such as bandages or bloody gauze) mixed in?**

YES		Issue: Significantly heightens infection risks for waste handlers.
NO		As general waste is not disinfected, infection risks to communities and waste pickers also rise.

**6. Does the burn or burial pit contain standing water?**

YES		Issue: Fosters the growth of pathogens contained in the waste. Substantially increases the risk of groundwater contamination. Provides breeding habitat for insect disease vectors.
NO		


<b>7. Are sharps containers absent? If present, can they easily leak or be punctured?</b>	YES	NO
→ Issue: Significantly heightens infection risks for waste handlers		

**POTENTIAL PROBLEMS.** A "YES" answer to any of the following questions indicates **that an environmental or biosafety concern MAY exist; follow-up is required.** Notify the Chief of Party and USAID Project Manager.

**1. Does waste for burning contain > 10% of plastics by volume?**

YES		Issue: Incineration of plastics can produce dangerous levels of airborne toxics.
NO		PVC plastics produce highly dangerous furans and dioxins even in high-temperature incinerators.

**2. Are waste storage and disposal areas closer than 20m to treatment areas, wards, kitchens or canteens?**

YES		Issue: Increases the risk that pathogens contained in waste will contaminate food and treatment areas
NO		At left, infectious waste is stored in open pails under a tree. At right, the tree is visible ~15m away through the unscreened window of the hospital kitchen.

<b>3. Is a shallow well, stream or pond providing drinking water within 30m of a burn or burial pit?</b>	YES	NO
→ Issue: Strong possibility that the burn/burial pit is contaminating drinking water.		