



LAC-IEE-05-14

### ENVIRONMENTAL THRESHOLD DECISION

<b>Country:</b>	Haiti
<b>Activity Title:</b>	Health System 2007 (HS-2007)
<b>Activity Number:</b>	521-0267 (Contract No: 521-C-00-04-00032-00)
<b>Life of Project:</b>	FY 2005 – FY 2007
<b>Life of Project Funding:</b>	\$64,742,000
<b>IEE Prepared by:</b>	Danielle Typinski, Acting MEO USAID/Haiti
<b>Date Prepared:</b>	February 12, 2005
<b>Recommended Threshold Decision:</b>	Categorical Exclusion/Negative Determination with Conditions
<b>Bureau Threshold Decision:</b>	Categorical Exclusion/Negative Determination with Conditions

#### Comments:

Pursuant to 22 CFR 216.2 (c)(2)(i) and (viii), it is recommended that a **Categorical Exclusion** be issued for activities involving technical assistance, training, capacity building, and other actions which will not have an adverse impact on the natural or physical environment, including programs involving nutrition, health care or population/family planning services.

A **Negative Determination with Conditions** is recommended for activities generating medical waste or infrastructure rehabilitation.

Conditions include:

1. Those outlined in the IEE attached.
2. The plan for medication waste disposal mentioned in Step two of the IEE will include separation of normal solid waste (to be disposed of in an approved sanitary landfill) from medical waste.
3. Any infrastructure rehabilitation funded by this activity will follow applicable parts of USAID’s “Guidelines for Development Activities in Latin America and the Caribbean,” December 2003, Chapter Two: Small Scale Infrastructure, Section A Construction Activities, and Section B Water and Sanitation; in addition to the measures mentioned in the IEE. Any new infrastructure will require an approved supplemental Initial Environmental Examination
4. Pesticides, including “natural” pesticides such as rotenone, neem or pyrethrin, will not be procured or used in relation to this activity unless a supplemental Initial Environmental Examination is approved for their use according to USAID Environmental Procedures [216.3. (b) Pesticide Procedures analysis conducted ]

CTOs are responsible for making sure environmental conditions are met. It is the responsibility of the SO Team to ensure that activity related SOAGs, MAARDs and contracting documents contain specific instructions reflecting this Threshold Decision, including the provision of (and any necessary training in the use of) the indicated LAC Environmental Guidelines for activities that have a Negative Determination with Conditions.

\_\_\_\_\_Date\_\_\_\_\_  
Victor H. Bullen  
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Copy to: IEE File

**Attachment: IEE**

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**INITIAL ENVIRONMENTAL EXAMINATION**

Activity Location: Haiti

Activity Title: Health System 2007 (HS-2007)

Activity Number: 521-0267 (Contract No: 521-C-00-04-00032-00)

Funding: \$64,742,000

Life of Project: FY 2005-2007

Recommended Threshold Decision: Categorical Exclusion/Negative Determination with Conditions

IEE Prepared by: Danielle Typinski, Acting MEO  
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## Background

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USAID/Haiti's health program aims to improve the health and well-being of Haiti's most vulnerable population groups, particularly women and children. USAID's primary goal in these sectors is sought by addressing Haiti's most pressing health concerns—malnutrition, child mortality, reproductive health, and HIV/AIDS. As with all development problems facing Haiti, health and related services are rendered more difficult by a high population growth rate and a fragile political and economic environment.

USAID works to achieve objectives in the areas of child survival, reproductive health, HIV/AIDS, and tuberculosis (TB). Through a USAID-funded network of health service providers, 2.6 million Haitians have access to basic health care. The increased access to health care has resulted in increased contraceptive use, reduction of chronic child malnutrition, improved child and maternal health, and increased immunization rates. Through a new departmental strategy, USAID is working in collaboration with both the public and private sectors to extend the outreach of these comprehensive health services nationwide.

On January 28, 2003, President Bush announced a plan to combat HIV/AIDS through an initiative called the President's Emergency Plan for AIDS Relief (PEPFAR). PEPFAR is a five-year, \$15 million program. PEPFAR encompasses HIV/AIDS activities in more than 75 countries worldwide and seeks to develop comprehensive and integrated prevention, care and treatment programs in 14 focus countries in Africa and the Caribbean, including Haiti. PEPFAR builds on existing USG and international programs and setting aggressive goals for these focus countries—preventing seven million new infections, treating two million HIV-infected people with anti-retroviral therapy, and caring for 10 million HIV-infected individuals and AIDS orphans.

USAID and the Centers for Disease Control and Prevention (CDC) is the largest bilateral donor for HIV/AIDS activities in Haiti. The HS-2007 program includes a comprehensive set of prevention, care and treatment activities, designed to attain specific five-year targets in line with the 2-7-10 overall Plan goals. To achieve these targets, USAID/Haiti supports voluntary counseling and testing for HIV and related service delivery, behavior change communication, ARV treatment and community-based programs for care and support for people living with HIV/AIDS. Most of USAID/Haiti's program is implemented through public/private partnerships, which include the Ministry of Health and a broad spectrum of NGOs, both faith-based and community-based.

This Initial Environmental Examination (IEE) addresses the activities implemented under USAID/Haiti's Health Systems-2007 (HS-2007) program, which consists of initiatives in reproductive health, family planning, infectious diseases, child and maternal health, and HIV/AIDS treatment and prevention. Management Sciences for Health (MSH) is the implementing partner.

## Program Description

Under the MSH-2007 program, USAID/Haiti will continue to support basic services through a network of non-governmental organizations (NGOs) and faith-based organizations which work in the health sector in Haiti, and to further strengthen and expand access to health services.

This program supports USAID/Haiti's health strategic objective (SO3) of "healthier families of desired size." This SO has five intermediate results with a series of activities under each intermediate result. To achieve Intermediate Result 3.1—*increased use of quality child survival and nutrition services*—the following activities will be implemented:

- Support of operational costs of essential child health services in collaboration with partner NGOs;
- Provision of key equipment, healthy behavior material, supplies, and tools (such as health and vaccination cards) for facility-based and community-based services;
- Support of training and supervision of community-health workers to increase use of services and improve knowledge of appropriate home-based health care;
- Training of health promoters, care-givers and providers in health practices and education techniques;
- Education of community members on health issues;
- Building of partnerships and linkages between NGOs and government health departments;
- Provision of technical assistance to promote routine vaccination and other child health services;
- Other activities related to education initiatives, training programs, and general organizational capacity building.

To achieve Intermediate Result 3.2—*increased use of quality reproductive health services*—the following activities will be implemented:

- Support of operational costs of essential reproductive health services in collaboration with partner NGOs;
- Expand family planning methods through technical assistance and training;
- Introduce outreach and mobile clinics;
- Strengthening of social marketing of condoms and other family planning methods;
- Other activities related to education and social marketing initiatives, training programs and general organizational capacity building.

To achieve Intermediate Result 3.3—*reduced transmission of selected infectious diseases*—the following activities will be implemented:

- Provision of technical assistance and training to the national tuberculosis control program;

- Strengthening of the capacity of the departmental network to support departmental plans and follow national norms and standards;
- Conduct mapping of existing services;
- Support operational costs of improved case-finding and treatment logistics;
- Support the creation of a Network Detection Center and Detection and Treatment Center;
- Training of workers and health promoters in the cross-screening of TB and HIV
- Enhance drug management capacity at national, departmental and local levels;
- Implement social mobilization and communication plans;
- Strengthening the national TB laboratory, including the establishment of national network referral laboratories; and
- Provision of technical assistance in the areas of donor and provider coordination, governmental strategy planning; and development of training programs.

To achieve Intermediate Result 3.4—*improved public policy environment for reproductive health and child survival programs*—the following activities will be implemented:

- Organization of strategy meetings;
- Building capacity of public and private sectors to coordinate;
- Develop an institutional capacity building plan;
- Provision of technical assistance and training to improve management and coordination capacity of government departmental offices;
- Other training and technical activities focused on building organizational capacity building.

To achieve Intermediate Result 3.5—*support scale-up of HIV prevention, treatment, and care/support for infected and at-risk individuals under the PEPFAR/Haiti program*—the following activities will be implemented:

- Provision of technical assistance, training, and materials (testing kits) to expand voluntary HIV testing and counseling programs;
- Strengthening of community care networks associated with life-extending care and home visits and provision of anti-retroviral treatment;
- Co-location of community-based care, recruitment, and prevention communication activities with clinic-based services; and
- Provision of technical assistance to strengthen the ability of government and non-government partners to coordinate program activities.

### **Description of Environmental Impact**

The components of this program basically consist of training, technical assistance, education, social marketing programs, and other institutional capacity building activities. Consequently, the majority of the activities conducted under this program will not have negative impacts on the physical environment or pose any significant risks to the welfare

of target populations or surrounding communities. However, direct environmental impacts could result from medical/sanitary waste disposal or construction activities if these activities are not implemented using appropriate Best Management Practices (BMPs).

*Medical Waste*—in many cases, USAID-supported clinics may only offer the most basic consultation services on family planning and child survival and generate a minimum amount of waste. However, a few clinics also offer more comprehensive services and generate medical waste that if not properly disposed of, could cause infection through skin puncture or contact. The service provided and associated potential medical wastes are listed below:

Service Provided	Contaminated Medical Waste
Surgical Contraception, e.g., tubal ligations, vasectomies	Human tissue (small segments of fallopian tubes and vas deferens), bandages, sutures, gauze, cotton, rubber gloves, scalpel blades, needles/syringes
Gynecological Examination, can include IUD insertion, contraceptive pill prescription, or Depo Provera injection	Swabs, gauze, cotton, rubber gloves, needles/syringes (for Depo Provera)
Obstetrical Services, i.e., sonograms, vaginal births	Human tissue (placentas), gauze, cotton, rubber gloves, needles/syringes
Pediatric Services, e.g., well baby clinics and in limited sites, immunizations	Gauze, cotton, tongue depressors, needles/syringes
Lab Services, e.g., pap smears, blood tests	Gauze, cotton, lancets, rubber gloves, needles/syringes, culture slides
X Ray Machines	x-ray development solution

The medical waste produced by these clinics is classified into two categories:

- Disposable medical implements: needles, syringes, culture slides, lancets and scalpel blades
- Solid waste: human tissue, bandages, sutures, gauze, cotton, rubber gloves, tongue depressors, and swabs.

*Sanitary Waste*—improperly disposed sanitary waste from clinics and hospitals can contaminate ground water, surface water, soil and other parts of the surrounding environment and result in exposure to bacterial diseases.

*Construction/Rehabilitation*—the rehabilitation of clinics under this program will not involve large earth-moving equipment or large purchases of chemicals. However, the construction of toilets and sanitation systems requires proper design and maintenance to ensure that environmental contamination or human health risks do not occur.

### **Mitigation Measures for Disposal of Solid, Sanitary, and Medical Waste**

USAID/Haiti recommends the following steps:

- Step One: Within two months of the approval of this IEE, MSH must verify to the HS-2007 Cognizant Technical Officer (CTO) that training has been conducted for implementing partners on international standards and recommendations for the handling and disposal of medical wastes.
- Step Two: Within four months, MSH and/or implementing partner must develop a BMP plan for medication waste disposal at the facilities they directly operate based on the guidance described herein. The BMPs should be reviewed and filed by the CTO to ensure completion and consistency with guidance. The BMP plans should include the following:
- Procedures for disposal of solid waste, sharp objects, liquid waste, and chemical containers;
  - Procedures for handling waste containers; and
  - Procedures for using a combination of incineration and burying to provide the safest ultimate waste disposal.

Note: Outside of Port-au-Prince, facilities are not likely to have access to either a hospital sponsored-incinerator or a municipal landfill. Since the traditional method of handling solid waste in Haiti is burning and there is not a significant problem with air pollution (particulate matter) outside of Port-au-Prince, USAID recommends that each facility consider constructing at a minimum a drum incinerator for the medical waste. The incombustible and ash material can then be buried in a landfill area that must be identified by each clinic (only low volumes are anticipated).

- Step 3: Within six months, MSH should provide to the CTO and MEO, a table characterizing the types of services offered at USAID supported clinics, the volume of waste generated, the types of procedures in place, and information on whether the clinic has access to water and sanitation.
- Step 4: At least one site visit of each facility to ensure compliance with BMP plans is required. The site visit will be conducted by the CTO or designated representative. Any situations of non-compliance must be brought to the attention of the MEO.

Step 5: On an annual basis, a status report will be submitted to the MEO, which will (1) describe the state of medical waste disposal in the clinics; (2) evaluate the effectiveness of the recommended procedures; and, (3) recommend modifications to the recommended procedures, as necessary.

Note: The USAID/Haiti MEO is available to provide advice on any situation that is complicated and requires special technical assistance.

Below are recommendations for handling various types of medical waste. These recommendations were obtained from "Infection Prevention for Family Planning Service Programs" by Linda Tietjen, Wendy Cronin, and Noel McIntosh, JHPIEGO, 1992, and the approved IEE for HS-2004 (LAC-IEE-09-20).

*Disposal of Solid Waste (including used dressings and items contaminated with blood and organic materials)*

Step One: Wear thick household (utility) gloves when handling and transporting wastes.

Step Two: Dispose of solid wastes in non-corrosive washable containers (plastic or galvanized metal) with tight fitting covers. Use containers that are clearly marked as dangerous to human health both in both graphic and written form. If possible, use red, reinforced garbage bags to discourage scavengers.

Step Three: Collect the waste containers on a regular basis and transport the combustible ones to the incinerator. If incineration is not available, burn or bury using the procedures described below. Bury non-combustible waste.

Step Four: Wash hands after handling wastes. Decontaminate and wash gloves in a chlorine solution prior to reuse or disposal.

Note: Incinerate (burn) or bury waste immediately. Incineration is the best method to kill microorganisms utilizing wherever possible nearby hospital incinerator facilities for solid wastes.

*Disposal of Sharp Objects (needles, razors and scalpel blades)*

Step One: Wear thick, household gloves.

Step Two: If possible, place needles and syringes inside the cap of a glass bottle filled with a chlorine solution. The lancets and blades are also placed in a chlorine solution.

Note: In discussions with a Mission program representative and HS-2007 staff, it was determined that it will not always be practical to use chlorine solution because of time/space constraints in small clinics. This will especially be the case at rally posts, mobile clinics, and at vaccination campaign locations where the health worker sometimes must manually carry his supplies to a remote location.

Step Three: Dispose of all sharp items in a puncture-resistant container. Puncture-resistant containers can be made of easily available objects such as a heavy cardboard box, a tin can with a lid, or a heavy plastic bottle.

Note: Place the container close to the area where it will be used so that workers minimize the distance object are carried before disposal. Avoid accidental needle sticks; do not bend or break needles prior to disposal. Needles should not be recapped routinely; if necessary, a one-handed recap method should be used:

- (1) Place cap on a hard, flat surface, then remove hand.
- (2) With one hand, hold syringe and use needle to "scoop-up" cap.
- (3) When cap covers needle completely, use other hand to secure cap on needle.

Step Four: When the container is 3/4 full; cap, plug or tape it tightly closed. Seal and label the container to indicate danger.

Step Five: 1<sup>st</sup> Choice: If a hospital is nearby, transport all syringes/needles and other disposable implements to the hospitals for incineration.  
2<sup>nd</sup> Choice: Burn waste materials in a container to decrease likelihood of scavenging and to reduce the risk of infection. Needles and other sharp objects may not be destroyed by burning, and may later cause injuries which can lead to a serious infection. Therefore, when the container is 3/4 full, incineration or burning should be followed by transport to either a municipal or local landfill meeting the criteria described herein for burying. If that is not possible, sharps should be buried in a plastic or clay-lined pit.

Step Six: Wash hands after handling containers and decontaminate and wash gloves.

*Disposal of Liquid Contaminated Waste (blood, feces, urine and other body fluids)*

Step One: Wear thick household (utility) gloves when, handling and transporting wastes.

Step Two: Carefully pour wastes down a utility sink drain or into a flushable toilet. Liquid wastes can also be poured into properly designed latrines. Avoid splashing.

Note: Please determine where the sink or toilet drains before choosing to pour the waste down the sink or drain. The ultimate disposal location for untreated waste should meet the criteria for latrines.

Step Three: Rinse the toilet or sink carefully and thoroughly with water to remove residual wastes. Avoid splashing.

Step Four: Decontaminate specimen container with 0.5% chlorine solution or other locally available and approved disinfectant, by soaking for 10 minutes before washing.

Step Five: Wash hands after handling liquid wastes and decontaminate and wash gloves.

#### Disposal of Used Chemical Containers

Step One: Rinse glass containers thoroughly with water. Glass containers may be washed with detergent, rinsed, and reused.

Step Three: For public containers which contained toxic substances rinse three times with water, puncture and dispose by burial. Do not reuse these containers for other purposes.

Note: Tips for handling waste containers

- (1) Use non-corrosive washable containers (plastic or galvanized metal) with covers for contaminated wastes.
- (2) Place waste containers at convenient places for use (carrying waste from place to place increases the risk of infection for handlers).
- (3) Do not use equipment to hold and transport wastes for other purpose in the clinic on health care facility; contaminated waste containers should be marked as dangerous.
- (4) Wash all waste containers with a disinfectant cleaning solution (0.5% chlorine solution) and rinse with water.
- (5) When possible, use separate containers for combustible and non-combustible wastes to avoid workers from having to handle and separate wastes by hand later. Combustible wastes include paper, cardboard, and contaminated wastes such as used dressings and gauze. Non-combustible wastes include glass, metals and plastics.
- (6) If available, use heavy work gloves when handling wastes.

(7) Wash hands after handling wastes.

*Building a Simple Drum Incinerator for Waste Disposal (SEARO, 1988)*

Note: Open burning is not recommended because it results in scattering of the waste which is dangerous and unsightly.

- Step One: Select a site downwind from the clinic.
- Step Two: Build a simple incinerator using local materials (mud or stone) or a used oil drum. The size of the incinerator will depend upon the amount of waste that is collected per day.
- Step Three: Place the incinerator on hardened earth or a concrete base.
- Step Four: Ensure that the incinerator has sufficient air inlets underneath for good combustion, an adequate opening for adding fresh refuse and removing ashes, and a chimney that is sufficiently long to allow for good draught and evacuation of smoke.
- Step Five: Burn all combustible wastes, such as paper and cardboard, as well as used dressings and other contaminated wastes.
- Step Six: Ash from incinerated material can be treated as non-contaminated waste.

*Making a Burial Site for Waste Disposal (SEARO, 1988)*

- Step One: Bury in a specified location:
- (1) Select a site at least 50 meters away from any water source, to prevent contamination of the water table.
  - (2) The site should have proper drainage, be located downhill from any wells, and free of standing water.
  - (3) Ensure that the burial site is not in an area which is prone to flooding.
- Step Two: Dig a pit one meter (three-four feet) wide and two meters (six feet) deep. The bottom of the pit should be six feet above the water table.
- Step Three: Cover with 15-30 centimeters (6-12 inches) of earth each day. Final cover should be 30 centimeters (24 inches) deep.
- Step Four: Fence the site to keep animals and children away.

**Mitigation Measures for Construction**

General Construction

- Only construction rehabilitation is authorized as part of this project occurring only within the footprint of the present structures.
- To the extent that dwellings are located nearby, concentrated noisiest work and take measures to keep dust to a minimum.
- Avoid construction in sites prone to flooding where possible.
- Only non-lead based paints should be purchased under this project. It may be necessary to call the manufacturer of the paint to determine whether or not the paint contains lead if the Material Safety Data Sheet cannot be supplied by the vendor. The MEO can provide assistance, if necessary.
- Avoid any site which is close to a wetland, stream, river, or well. Provisions should be made to include elements such as hand washing facilities and a plastic/clay lined pit for safe burial. Do not site pit where water table is high or underlying geology makes groundwater contamination likely.
- Only minimal vegetative clearing should occur for rehabilitation activities; forested areas must be avoided.
- Where there is any question regarding the potential impact of rehabilitation activities on the environment, the MEO shall be contacted. After the site visit, he or she can designate additional site-specific mitigation measures, if necessary.

Construction of Latrines

For sanitation facilities, the design of the latrines or sanitation systems should be sent to the MEO for review and approval prior to construction. Latrine design information should include construction drawings and information about: 1) who will maintain the latrine; and 2) how, when, and where the sanitary waste will be ultimately disposed when the latrine is full.

The BMPs to be used for pit latrines are described below:

- Use ventilated improved pit latrine design that traps insect vectors
- Evaluate the depth of the water table, including seasonal fluctuations and groundwater hydrology. Pit latrines should not be installed where the water table is shallow or the composition of overlying deposits make groundwater or an aquifer vulnerable to contamination.
- Ensure that a reliable system for safely emptying latrines and transporting the collected material off-site for treatment is used. This should include the use of a small pit-emptying machine that relies on an engine driven vacuum pump.

- Ensure that collected material is adequately treated and not directly applied to fields or otherwise disposed of improperly.
- Properly decommission pit latrines. Do not leave pits open. Fill unused capacity with rocks or soil.

### **Recommendations**

Pursuant to 22 CFR 216.2 (c)(2)(i) and (viii), it is recommended that a Categorical Exclusion be issued for activities involving technical assistance, training, capacity building, and other actions which will not have an adverse impact on the natural or physical environment, including programs involving nutrition, health care or population/family planning services.

For those components involving the disposal of medical and sanitary waste and the construction of latrines and sanitation systems, it is recommended that a Negative Determination with Conditions be issued. MSH and all implementing partners will be required to follow the series of proposed conditions described below:

- (1) Local implementing partners will be made fully aware of the environmental mitigation and monitoring requirements presented in this IEE. In addition, partners must agree to apply listed BMPs and adhere to the requirements.
- (2) The contractor monitoring and evaluation process shall incorporate monitoring features into performance reports.
- (3) New activities introduced into the project which are substantially different from those presented in this IEE will be first reviewed in accordance with Agency environmental regulations.
- (4) This IEE only covers the storage and disposal of medical and sanitary waste and does not cover the procurement, transport, use, storage, or disposal of toxic or hazardous materials. Any situation dealing with such will require an amended or separate IEE.
- (5) The above mitigation measures and guidelines should be translated into local languages (French and Creole) and distributed to all sub-contractors, who will be responsible for training their personnel in these measures, and posting safety guidelines in all appropriate places. USAID/Haiti will facilitate the translation, which will be funded under the HS-2007 program.
- (6) MSH is ultimately responsible for compliance with the mitigation measures and conditions of this IEE.