

81073-2

10/2/2009

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460



Office of Pesticide Programs

OCT 2 2009

Clean Earth Teachnologies, LLC  
13378 Lakefront Drive  
Earth City, MO 63045

Attention: Erin M. Tesch

**Subject: Peridox with Electostatic Decontamination System**  
EPA Registration No. 81073-2  
Notification Dated September 4, 2009

This will acknowledge receipt of your notification to add the following additional brand name and to make minor grammatical changes to the master label and instruction manual, submitted under the provisions of FIFRA Section 3(c)(9). Based on a review of the submitted material, the following comments apply.

ADDITIONAL BRAND NAME

"PERIDOX WITH EDS"

The Notification is in compliance with PR Notice 98-10 and is acceptable. This information has been added to your product file.

If you have any questions concerning this letter, please contact Demson Fuller at (703) 308-6217.

Sincerely

Marshall Swindell  
Product Manager (33)  
Regulatory Management Branch 1  
Antimicrobials Division (7510P)

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United States  
**Environmental Protection Agency**  
 Washington, DC 20460

Registration  
 Amendment  
 Other

OPP Identifier Number

**Application for Pesticide - Section I**

1. Company/Product Number 81073-2	2. EPA Product Manager Marshall Swindell	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Peridox with Electostatic Decontamination System	PM# 33	
5. Name and Address of Applicant (Include ZIP Code) Clean Earth Technologies, LLC 13378 Lakefront Drive Earth City, MO 63045 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

**Section - II**

Amendment - Explain below.  Final printed labels in response to Agency letter dated \_\_\_\_\_

Resubmission in response to Agency letter dated \_\_\_\_\_  "Me Too" Application.

Notification - Explain below.  Other - Explain below.

**Explanation: Use additional page(s) if necessary. (For section I and Section II.)**

Addition of an alternate brand name plus minor grammatical changes to the master label and instruction manual per PR Notice 98-10. Please confirm with Erin Tesch: etesch@tsgusa.com or via fax (202) 872-0745.

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formulation for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

**Section - III**

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per container

3. Location of Net Contents Information  
 Label  Container

4. Size(s) Retail Container

5. Location of Label Directions  
 on the label

6. Manner in Which Label is Affixed to Product  
 Lithograph  
 Paper glued  
 Stenciled  Other \_\_\_\_\_

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)

Name Erin M. Tesch Technology Sciences Group, Inc.	Title Consultant for Clean Earth Technologies	Telephone No. (include Area Code) (202) 828-8966
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**Certification**  
 I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

2. Signature  
*Erin M Tesch*

3. Title  
Regulatory Consultant

4. Typed Name  
Erin M. Tesch

5. Date  
September 4, 2009

6. Date Application Received (Stamped)



**WASHINGTON**

1150 18th Street, N.W.

Suite 1000

Washington, D.C. 20036

Telephone 202 223-4392

Fax 202 872-0745

September 4, 2009

Mr. Marshall Swindell  
Office of Pesticide Programs  
Antimicrobial Division (7504P)  
Office of Pesticide Products  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 South Crystal Drive  
Arlington, VA 22202-4501

**SACRAMENTO**

712 Fifth Street

Suite A

Davis, CA 95616

Telephone 530 757-1298

Fax 530 757-1299

**RE: Clean Earth Technologies LLC: Peridox® with Electrostatic  
Decontamination System (EPA Reg. No. 81073-2)  
Notification for Label Changes per PR Notice 98-10**

Dear Mr. Swindell:

Technology Sciences Group Inc., on behalf of Clean Earth Technologies, is submitting the enclosed notification to address minor grammatical revisions on the master label and the instruction manual. This notification also includes the addition of an alternate brand name of "**Peridox® with EDS**". The changes to the enclosed label and instruction manual can be seen in red text.

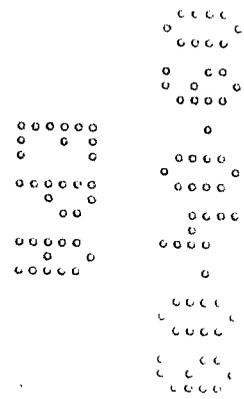
You will find the following included with this submission:

- 1) EPA Application Form,
- 2) One redline version of the revised label and instruction manual, and
- 3) Three clean copies of the revised label and instruction manual.

Please do not hesitate to contact me directly with any questions and/ or concerns at (202) 828-8966 or via e-mail: [etesch@tsgusa.com](mailto:etesch@tsgusa.com).

Sincerely,

Erin M. Tesch  
Regulatory Agent for Clean Earth Technologies



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**MASTER LABEL**

**For use only by:**

- Federal On-Scene Coordinators and contractors and other trained federal/state/local response personnel under the FOSC's supervision;
- Trained U.S. Military personnel and contractors under their supervision;
- Persons who, within the preceding 24 months, have been trained and determined to be competent by the registrant (or its contractor) following completion of the required training.

*Under the terms and conditions of this product's registration, this product may only be sold or distributed by the registrant directly to the persons identified above.*

**PERIDOX<sup>®</sup> with the ELECTROSTATIC DECONTAMINATION SYSTEM (EDS) [PERIDOX<sup>®</sup> with EDS] as a SPORICIDAL DECONTAMINANT**

**for INACTIVATION of *Bacillus anthracis* SPORES on DRY, PRE-CLEANED, HARD, NON-POROUS SURFACES**

EPA Reg. No. 81073-2

**ACTIVE INGREDIENTS:**

Hydrogen Peroxide.....	24.0%
Peroxyacetic Acid.....	1.2%
Other Ingredients.....	74.8%
Total.....	100.0%

**KEEP OUT OF REACH OF CHILDREN  
DANGER PELIGRO**

**FIRST AID**

<b>IF IN EYES</b>	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. Call a poison control center or physician for treatment advice.
<b>IF SWALLOWED</b>	Call a poison control center or physician immediately after for treatment for advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or physician. Do not give anything by mouth to an unconscious person.
<b>IF ON SKIN OR CLOTHING</b>	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or physician for treatment advice.
<b>IF INHALED</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or physician for further treatment advice.
Have the product container with you when calling a poison control center or going for treatment.	
<b>FOR EMERGENCY MEDICAL INFORMATION CALL TOLL FREE: 1-800-222-1222</b>	
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.	

Manufactured by: Clean Earth Technologies, LLC  
13378 Lakefront Drive

Net Contents:  
EPA Est. No.

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## CLAIMS

The ~~PERIDOX® with EDS Process plus PERIDOX®~~ may be applied as a sporicidal decontaminant to dry, pre-cleaned, hard, non-porous surfaces contaminated with *Bacillus anthracis* spores, including:

- Buildings, Structures, Vehicles and Aircraft
- Articles/Items
- Personal Protective Equipment (PPE)

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER. CORROSIVE.** Causes irreversible eye damage and skin burns. May be fatal if absorbed through the skin or inhaled. Harmful if swallowed. Do not get in eyes, on skin or on clothing. Do not breathe vapor or spray mist.

When mixing this product, use with appropriate respiratory protection such as 3M Air Purifying Respirator 500 series plus P-100 filters and cartridges, or Advantage 200 LS respirator and cartridges. When mixing this product, wear protective eyewear (goggles, face shield, or safety glasses), long-sleeved shirt, long pants, and chemical resistant gloves. Wash thoroughly after handling with soap and water and before eating, drinking or using tobacco. Remove PERIDOX®-contaminated clothing and wash clothing before reuse. Dilute the concentrated PERIDOX® to the 4% Use Dilution solution in a well-ventilated area or have available proper respiratory protection. This use dilution is made by mixing one part PERIDOX® concentrate with 5 parts of water (52 oz. of PERIDOX® concentrate per 2 gallons of water) and is comprised of 4% hydrogen peroxide and 0.2% peracetic (peroxyacetic) acid as active ingredients. In case of exposure of skin or garments to concentrated PERIDOX®, wash thoroughly with soap and water. When applying the product to areas contaminated with *Bacillus anthracis* spores, use personal protective equipment (PPE).

Follow manufacturer's instruction for cleaning/maintaining protective eyewear and respirator users:

- The respirator user must be fit tested and fit checked using a program that conforms with OSHA's requirements (29 CFR 1910.134).
- The respirator user must be trained using a program that conforms with OSHA's requirements (29 CFR 1910.134).
- The respirator user must be examined by a qualified medical practitioner to ensure the physical ability of the user to safely wear the type of respirator to be worn.
- The respirator equipment must be maintained according to a program that conforms with OSHA's requirements (29 CFR 1910.134).

When using the Light Wand, wear eye protection to prevent injury by the ultraviolet (UV) and intense visible light. For most circumstances, use wrap-around, high quality sunglasses (such as

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Polaroid™ sunglasses). Wear gloves, a long-sleeved shirt and long pants to prevent exposure of skin to the UV light. Do not expose unprotected bystanders to the intense light and to PERIDOX®.

**PHYSICAL AND CHEMICAL HAZARDS:** Strong Oxidizing Agent. Corrosive. Do not use in concentrated form. Mix only with water according to label instructions. Never bring concentrate in contact with other sanitizers, cleaners or organic substances.

**ENVIRONMENTAL HAZARDS:** This pesticide is toxic to birds, fish and aquatic invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office at the EPA.

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### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

See the accompanying Instruction Manual for this product for complete use directions and safety precautions for inactivating *Bacillus anthracis* (anthrax) spores.

For use as a sporicidal decontaminant for inactivation of *Bacillus anthracis* spores on dry, pre-cleaned, hard, non-porous surfaces at the sites listed under the CLAIMS section of this label. This product is for use only by persons listed in the enclosed box above the product name. Read and follow all labeling, including the accompanying INSTRUCTION MANUAL for this product.

This product is not intended for use on food contact surfaces.

**STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Store in original containers in a cool, well-vented area, away from direct sunlight. Do not allow product to become overheated in storage. This may cause increased degradation of the product, which will decrease product effectiveness. In case of spill, flood area with large quantities of water. **Note:** Mix fresh 4% Use Dilution of PERIDOX® daily. Dispose of unused 4% Use Dilution solution within 24 hours after mixing.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. If material has spilled, an acceptable method of disposal is to dilute with at least 20 volumes of water followed by discharge into suitable treatment system in accordance with all local, state, and Federal environmental laws, rules, regulations, standards and other requirements.

**CONTAINER DISPOSAL:**

(1 gal plastic) Do not reuse empty containers. Wrap container and put in trash.

(15, 30, 60 gal plastic) Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**WARRANTY**

This material is safe and effective under the conditions of application as specified in the Directions for Use. To the fullest extent permitted by law, the manufacturer shall not be liable for improper application or use of this product beyond those purposes referred to in the Directions for Use. NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY IS MADE.

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# INSTRUCTION MANUAL

***For use only by:***

- Federal On-Scene Coordinators and contractors and other trained federal/state/local response personnel under the FOSC's supervision;
- Trained U.S. Military personnel and contractors under their supervision;
- Persons who, within the preceding 24 months, have been trained and determined to be competent by the registrant (or its contractor) following completion of the required training.

***Under the terms and conditions of this product's registration, this product may only be sold or distributed by the registrant directly to the persons identified above.***

## **PERIDOX<sup>®</sup> with the Electrostatic Decontamination System (EDS) as a Sporocidal Decontaminant for Inactivation of *Bacillus anthracis* Spores on Dry, Pre-cleaned, Hard, Non-porous Surfaces**

EPA Reg. No. 81073-2

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Clean Earth Technologies, LLC  
13378 Lakefront Drive  
St. Louis, MO 63045  
USA

## GENERAL DIRECTIONS

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

USE WITH THE ELECTROSTATIC DECONTAMINATION SYSTEM (EDS). Before using this product, read the entire label and INSTRUCTION MANUAL, and complete the EDS process training and competency examination, which is provided by a Certified Manufacturer's Training Specialist. Persons other than Federal On-Scene Coordinators, U.S. Military, their contractors or trained response personnel under their supervision must take the training and pass the competency examination. Applicator training is comprised of instruction in the operation, use, and maintenance of the EDS by a qualified instructor, followed by a written examination to determine competency. Training for these persons must be documented and repeated every two years. For information on training, call Clean Earth Technologies, LLC toll free at 1-866-843-6394.

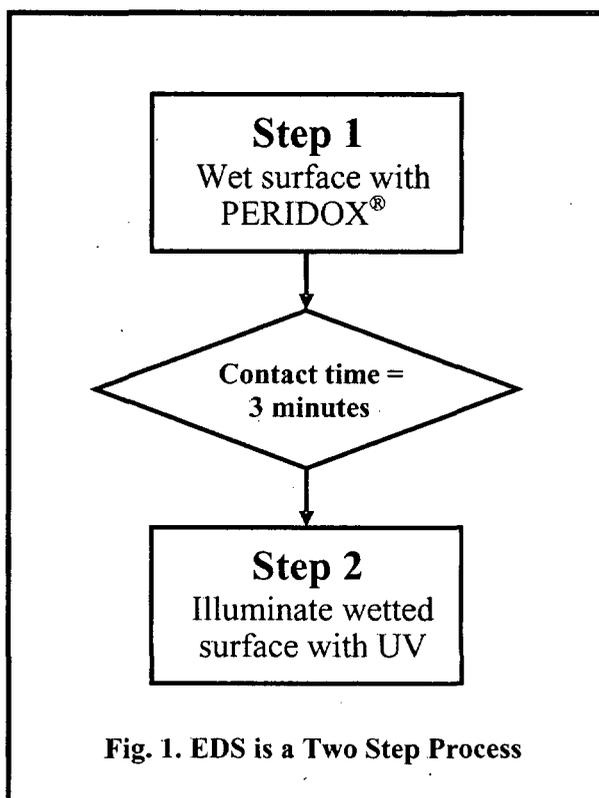
PERIDOX<sup>®</sup> with EDS is effective for use as a sporicidal decontaminant for inactivation of *Bacillus anthracis* spores on dry, pre-cleaned, hard, non-porous surfaces at the sites listed under the CLAIMS section of the main label as a 4% Use Dilution solution (52 oz of PERIDOX<sup>®</sup> concentrate per 2 gallons of water.), which comprises 4% hydrogen peroxide and 0.2% peracetic (peroxyacetic) acid as active ingredients.

This INSTRUCTION MANUAL contains procedures and techniques for the use of a fully assembled EDS that contains a 4% Use Dilution solution of PERIDOX<sup>®</sup> mixed per label instructions as a means to kill *Bacillus anthracis* spores on dry, pre-cleaned, hard, non-porous surfaces. The EDS process is for the decontamination of surfaces that can be wetted with the PERIDOX<sup>®</sup> and illuminated by UV light from the EDS Light Wand. The wavelength of the light delivered by the wand ranges from 200 to 850 nm. Procedures are given for equipment set-up, surface decontamination, post-treatment equipment shut-down and disposal of remaining PERIDOX<sup>®</sup>. The EDS process is to be applied only by a trained operator wearing the appropriate personal protective equipment (PPE) as described in the User Safety Requirements section below.

Heavily soiled surfaces must be pre-cleaned. Wash soiled surfaces with a compatible detergent using a cloth, sponge, or cleaning device to ensure visible soils are removed. Rinse with potable water and allow to dry. All surfaces in the treatment area must be dry (i. e., must not be visibly wet) prior to EDS application.

The EDS process requires 2 steps (Figure 1): Step 1 is wetting of the surface to be decontaminated with a 4% Use Dilution solution of PERIDOX<sup>®</sup> by spray application at a rate of 1-2 oz/yd<sup>2</sup> (0.1 – 0.25 oz/ft<sup>2</sup>). A Use Dilution solution comprising 52 oz. of PERIDOX<sup>®</sup> concentrate and 2 gallons of water (amounting to a total volume of 2.4 gal., which is the reservoir capacity of the EDS Delivery Unit) will treat approximately 1385-2770 ft<sup>2</sup>. After a contact time of at least three (3) minutes, proceed to Step 2, which is the illumination of the wetted surface by the EDS Light Wand at a distance of less than two (2) feet from the surface and with a motion across the surface at a rate of not more than one (1) foot per second. The surface after applying the 4% Use Dilution solution must remain wet for the entire time prior to

illumination. Reapply 4% Use Dilution by spraying as necessary to maintain the wet surface. Illuminate the wet surface within ten (10) minutes of the spray application.



**GENERAL PROCEDURE**

**Filling and Pressurizing the Delivery Unit:** Prepare the PERIDOX® Use Dilution solution by adding 5 parts of water (2 gallons) to 1 part of PERIDOX® concentrate (52 oz.). Make a new batch daily and use immediately after mixing; do not store overnight. The 4% Use Dilution solution may be mixed in the reservoir of the EDS Delivery Unit, or it may be mixed in a separate clean container, and then added to the EDS Delivery Unit. Slight agitation of the EDS Delivery Unit will ensure complete mixing. The EDS Delivery Unit is pressurized by turning the regulator knob clockwise until the pressure gauge reads between 55-60 psig, not to exceed 100 psig.

**Area of Treatment:** Working with 10-30 square feet at a time rather than treating larger areas is recommended. If the surfaces dry prior to 3 minutes, reapply the PERIDOX® to keep the surface wet. Illuminate the wet surface within ten (10) minutes of the spray application. When treating floors and other surfaces, plan application so that applicator and/or other workers do not re-contaminate area by moving from untreated to treated areas. Treat rooms working from innermost area or corner toward door.

**Activation of the Electrostatic Sprayer:** ~~The Remove the Spray Wand, attached to the EDS Delivery Unit through a Spray Wand Hose, is removed from its resting cradle, and Activate the~~

Electrostatics Power Supply is ~~activated~~ with the push-button switch on the Spray Wand. A green LED on the Power Supply will be illuminated when the electrostatics capability is ready. Briefly test the spray deposition by spraying a small area with the Spray Wand.

**Activation of the UV Light Wand:** ~~The Remove the~~ EDS Light Wand is ~~removed~~ from its resting cradle and open the baffles ~~are opened~~ until the hinges stop. ~~The Turn the~~ Power switch is ~~turned~~ to the "On" position. The operation of the cooling fans on the Light Wand and the Activation Pack will be audible at this time.

**Application of PERIDOX®:** To apply the PERIDOX® Use Dilution solution to dry, pre-cleaned, hard, non-porous surfaces, move the EDS Delivery Unit Spray Wand at a rate of approximately one (1) foot per second for thin film deposition. For walls, the PERIDOX® should be applied starting at the top of the wall and continuing to the floor moving the Spray Wand from left to right and right to left in an overlapping "S" motion with the applicator no greater than two (2) feet from the surface being treated. For horizontal surfaces, such as floors, tabletops, benchtops, drains, troughs, and drip pans, the Spray Wand should not be greater than two (2) feet away from the surface being treated. The surface to be treated must be visibly wet with a thin layer of PERIDOX® solution for an entire contact time of at least 3 minutes before application of the UV light. A fine layer of solution on area to be treated is required for the product to be effective.

**Application of the UV Light:** Illumination from the EDS Light Wand should be at a distance of no greater than two (2) feet away from the surface being treated.

Repeat this procedure for next area to be treated.

Limitations of the Light

1. UV light has poor penetration, therefore the operator should ensure that there is a clear path between the light source and the target surface as follows:
  - a. The Light Wand should not be used when there is liquid inside any part of the light wand. If there are any liquids inside the Light Wand let it dry before use.
  - b. The Light Wand baffles should be fully opened before use.
  - c. The quartz window, Light Wand housing and bulb should be intact without any cracks before use.
  - d. The quartz window, bulb, baffle reflectors, and the main reflector should be clear of any dirt, grease or other contaminants before use.
2. The Light Wand bulb has a finite life beyond 30 hours of continuous use.

Indications Concerning Use and Proper Functioning of the Light Wand

A red fault light is visible on the Light Wand and Activation Pack. This will light if the system detects an error or abnormality in its function. An intermittent flashing of the fault light is normal due to a specific sensor in the system, but if the fault light stays on permanently or flashes once a second, STOP using this Light Wand immediately. In such a case, the flashlamp

in the Light Wand may need to be replaced. After shutting off the power on/off switch of the Activation Pack and then waiting a sufficient time for the flashlight to cool adequately for safe handling, the flashlamp can be replaced. After replacement, the power to the Activation Pack may be turned on. If the fault light has returned to normal status as described above, then the Light Wand may be used. If the fault light does not return to normal status, then STOP using this Light Wand immediately. The Activation Unit should be serviced only by qualified persons.

**USER SAFETY REQUIREMENTS**

**DANGER. CORROSIVE.** Causes irreversible eye damage and skin burns. May be fatal if absorbed through the skin or inhaled. Harmful if swallowed. Do not get in eyes, on skin or on clothing. Do not breathe vapor or spray mist. In the event of accidental exposure, see First Aid instructions on the front panel of the Master Container Label.

When mixing this product, use appropriate respiratory protection such as 3M Air Purifying Respirator 500 series plus P-100 filters and cartridges, or Advantage 200 LS respirator and cartridges. When mixing this product, wear protective eyewear (goggles, face shield, or safety glasses), long-sleeved shirt, long pants, and chemical resistant gloves. Wash thoroughly after handling with soap and water and before eating, drinking or using tobacco. Remove PERIDOX<sup>®</sup>-contaminated clothing and wash clothing before reuse. Dilute the concentrated PERIDOX<sup>®</sup> to the appropriate use concentration (4%) in a well-ventilated area or have available proper respiratory protection. In case of exposure of skin or garments to concentrated PERIDOX<sup>®</sup>, wash thoroughly with soap and water.

When applying the product to areas contaminated with *Bacillus anthracis* spores, use personal protective equipment (PPE) specified in the Remediation Action Plan (or equivalent plan) discussed below. PPE may include such items as full body Tyvek coveralls, unpowdered disposable gloves made of lightweight nitrile or vinyl, and a full-face Powered Air Purifying Respirator (PAPR). Guidance may be obtained from the Occupational Safety and Health Administration (<http://www.osha.gov/SLTC/etools/anthrax/ppe.html>), the National Response Team (NRT) ([http://www.nrt.org/Production/NRT/NRTWeb.nsf/AllAttachmentsByTitle/A-47AnthraxTAD/\\$File/Anthrax\\_TAD\\_72905.pdf?OpenElement](http://www.nrt.org/Production/NRT/NRTWeb.nsf/AllAttachmentsByTitle/A-47AnthraxTAD/$File/Anthrax_TAD_72905.pdf?OpenElement)), and from the Centers for Disease Control and Prevention (CDC) (<http://www.bt.cdc.gov/documentsapp/Anthrax/Protective/10242001Protect.asp>).

Follow manufacturer's instruction for cleaning/maintaining protective eyewear and respirator users:

- The respirator user must be fit tested and fit checked using a program that conforms with OSHA's requirements (29 CFR 1910.134).
- The respirator user must be trained using a program that conforms with OSHA's requirements (29 CFR 1910.134).
- The respirator user must be examined by a qualified medical practitioner to ensure the physical ability of the user to safely wear the type of respirator to be worn.
- The respirator equipment must be maintained according to a program that conforms with OSHA's requirements (29 CFR 1910.134).

When using the Light Wand, wear eye protection to prevent injury by the ultraviolet (UV) and intense visible light. For most circumstances, use wrap-around, high quality sunglasses (such as Polaroid™ sunglasses). Wear gloves, a long-sleeved shirt and long pants to prevent exposure of skin to the UV light. Do not expose unprotected bystanders to the intense light and to PERIDOX®.

**EFFICACY AND USE APPLICATIONS**

~~PERIDOX®~~The ~~with EDS Process~~ plus ~~PERIDOX®~~ may be applied as a sporicidal decontaminant to dry, pre-cleaned, hard, non-porous surfaces contaminated with *Bacillus anthracis* spores, including:

- Buildings, Structures, Vehicles and Aircraft
- Articles/Items
- Personal Protective Equipment (PPE)

**REMEDICATION ACTION PLAN (RAP)**

The applicator (i.e., persons listed in the black box on page 1) is responsible for assisting the property owner and/or responsible government agency to develop a site-specific Remediation Action Plan (RAP) or equivalent plan. The applicator is responsible for all tasks of the sporicidal decontamination process unless otherwise noted in the RAP, and must be on site for the entire treatment process. The RAP may address the factors that are discussed in the following subsections.

A Remediation Action Plan (RAP) or equivalent plan describes the procedures and steps that are necessary for ensuring a legal and effective remediation of the contaminated area. It guides the applicator and others in complying with the requirements of the pesticide product label as well as any other applicable laws. It is intended to be prescriptive yet flexible enough to allow the applicator to apply experience and judgment in carrying out the plan.

**Before treatment begins, the applicator must read, understand and follow all directions in the RAP or equivalent plan, the pesticide label, and the INSTRUCTION MANUAL. In addition, the applicator must follow applicable laws.** If the applicator has any questions about the RAP, he/she should consult Clean Earth Technologies, LLC and/or the owner or Incident Commander in charge of the site.

**QUALIFIED APPLICATORS AND TRAINING**

As indicated on the first page of the INSTRUCTION MANUAL, this product may only be used by certain qualified, trained persons. Persons other than federal On-Scene Coordinators (OSC) or trained military personnel, their contractors to either, or first responders under their

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supervision, must be trained and determined to be competent (by written examination) by Clean Earth Technologies, LLC or its contractor to use this product in accordance with the labeling and other applicable laws. Such training and competency determination must be renewed every two years.

### **SITE PREPARATION**

1. Seal facility. If appropriate, shut down HVAC and seal HVAC vents.
2. Set up air monitoring to detect concentrations of hydrogen peroxide and peroxyacetic (peracetic) acid that exceed applicable protective action levels.
3. For exterior use, set up an exclusion perimeter to provide sufficient standoff distance downwind (nominally 60 ft for a 20 mph wind speed)
4. Use the EDS process to treat items before removal from the contaminated area.

Typically, decontamination should proceed from the top down, treating the highest points first and working down to floor level. The EDS process is applied to any dry, pre-cleaned hard, non-porous interior surface that can be wetted and illuminated. For building interiors, these may include walls, floors, ceilings, windows, ductwork, furniture, equipment, etc. For vehicle interiors, these surfaces may include instrument panels, glove boxes, floors, seats, etc. For aircraft interiors, these may include any non-porous surfaces in the cockpit, tactical operations center, storage areas, tray tables, floors, seats, freight compartments, etc. (See note on page 9 concerning FAA regulations.)

Prepare the EDS by ensuring adequate pressurization of the Delivery Unit compressed gas bottle. If the pressure is below 600 psig, then the compressed gas bottle should be replaced with an adequately pressurized bottle. The PERIDOX<sup>®</sup> should be mixed per the label instructions for a 4% Use Dilution solution. It may be mixed directly in the Delivery Unit reservoir or it may be mixed in a separate container and transferred to the Delivery Unit. A ~~nominal~~-full reservoir contains 9 liters (2.4 gal.) of solution. If electrostatic spraying is to be used, then a charged Delivery Unit battery must be installed. The EDS Activation Unit is to be plugged into a 120VAC, 60Hz receptacle. The Light Wand must be plugged into the Activation Pack. The Spray Wand must be plugged into the Delivery Pack.

1. Fill and close the Delivery Pack reservoir.
2. Pressurize the Delivery Pack reservoir to 60 psig.
3. Turn on the electrostatic voltage.
4. Turn on the Activation Pack.
5. Open the baffles of the Light Wand to their fully open position.

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## **DECONTAMINATION OF BUILDINGS, STRUCTURES, VEHICLES, SHIPS, AND AIRCRAFT**

*The Federal Aviation Administration requires that any product used in aircraft must first be approved by the aircraft manufacturer.*

PERIDOX<sup>®</sup> with EDS may be used to decontaminate dry, pre-cleaned, hard, non-porous surfaces in interior or exterior spaces. Examples include the exteriors of containers for containing contaminated items and materials. It is effective as a sporicidal decontaminant against *Bacillus anthracis* spores as a 4% Use Dilution solution (52 oz of PERIDOX<sup>®</sup> concentrate per 2 gallons water).

For heavily soiled areas a pre-cleaning step is required. Wash soiled surfaces with a compatible detergent using a cloth, sponge, or cleaning device to ensure visible soils are removed. Rinse with potable water and allow to dry. All surfaces in the treatment area must be dry (i. e., must not be visibly wet) prior to EDS application.

Decontamination proceeds from the top-down, treating the highest points first and working down to ground level. The EDS process is applied to external compartments, including wheel wells. Doors such as the gas cap door (not the gas cap itself) are to be opened to ensure all surfaces and components get coverage. Access doors and hatches are to be opened to ensure the EDS process covers all surfaces and components.

1. Activate the electrostatic feature of the spray wand for improved coating efficacy. Apply PERIDOX<sup>®</sup> 4% Use Dilution solution to surfaces by holding the spray wand perpendicular to the surface at a distance of less than two (2) feet. Move the spray wand at not to exceed one (1) foot per second along the surface. Follow an "S"-shaped path, with swathes of approximately 3 feet. Working with 10-30 sq. feet at a time rather than treating larger areas is recommended. If the surfaces dry prior to 3 minutes, reapply the PERIDOX<sup>®</sup> 4% Use Dilution to keep the surface wet. Illuminate the wet surface within ten (10) minutes of the spray application.
2. For dry, pre-cleaned, hard, non-porous surfaces such as floors, tabletops, benchtops, drains, troughs, drip pans, and desks, apply a thin layer of PERIDOX<sup>®</sup> 4% Use Dilution solution with the EDS Delivery Unit Spray Wand to all surfaces with a contact time of 3 minutes prior to illumination treatment with the EDS UV Light Wand.
3. After a contact time of 3 minutes, open the light wand baffles to the full stop position. Depress the light wand trigger. Hold the light wand less than two (2) feet from surface and move at not more than one (1) foot per second, keeping the light wand perpendicular to surface.
4. If surfaces are dry before the light is applied, reapply PERIDOX<sup>®</sup> 4% Use Dilution solution to ensure the surface is wet.
5. Move the light wand over all areas wetted with PERIDOX<sup>®</sup> 4% Use Dilution solution. Illuminate the wet surface within ten (10) minutes of the spray application.

## **DECONTAMINATION OF ARTICLES/ITEMS**

PERIDOX® with EDS may be used to decontaminate non-porous articles/items to be removed from contaminated buildings, vehicles, aircraft, and ships. The treatment may also be used for the interiors of such containers after the contaminated items have been removed. It is effective as a sporicidal decontaminant against *Bacillus anthracis* spores as a 4% Use Dilution solution (52 oz. of PERIDOX® concentrate per 2 gallons of water).

For heavily soiled articles/items, a pre-cleaning step is required. Wash soiled surfaces with a compatible detergent using a cloth, sponge, or cleaning device to ensure visible soils are removed. Rinse with potable water and allow to dry. All surfaces in the treatment area must be dry (i. e., must not be visibly wet) prior to EDS application.

1. Activate the electrostatic feature of the spray wand for improved coating efficiency. Apply a thin layer of PERIDOX® 4% Use Dilution solution to surfaces of articles by holding the spray wand perpendicular to the surface at a distance of less than two (2) feet. Move the spray wand at not more than one (1) foot per second along the surface of the article. If surfaces dry prior to 3 minutes, reapply the PERIDOX® 4% Use Dilution solution to keep the surface wet.
2. After a contact time of at least 3 minutes, open the light wand baffles to the full stop position. Depress the light wand trigger. Hold the light wand less than two (2) feet from surface and move at not more than one (1) foot per second, keeping the light wand perpendicular to surface.
3. The EDS process can also be used on potentially sensitive items, however, special qualifications or re-certification for re-use of such items may be necessary. Potentially sensitive items include weapons, personal electronics, avionics, optical equipment, instruments, etc. Decontamination of such items follows the same EDS process as described above. Qualification or re-certification for re-use is not addressed by these Directions for Use. Cognizant authorities should be consulted as required by statute or regulation prior to the re-use of PERIDOX®-with-EDS- treated sensitive items.

## **DECONTAMINATION OF PERSONAL PROTECTIVE EQUIPMENT (PPE)**

The PERIDOX® with EDS process is also applicable to non-porous-PPE-suited persons as part of the decontamination process for their movement from a contaminated zone to a non-contaminated zone. DO NOT use the electrostatics feature of the Spray Wand while decontaminating suited personnel (unplug the low voltage connector from the delivery pack battery box). The electrostatics feature is OFF when the green LED on the power supply attached to the Spray Wand is not illuminated. All surfaces of the PPE must be wetted with PERIDOX® 4% Use Dilution solution. The person being decontaminated must close their eyes to avoid retinal exposure to the intense visible light. Decontamination proceeds from the top down, treating the head first and working down to ground level. Be sure to spray all areas of the suited personnel including under the arms, the bottom of the boots, and the inseam of the legs.

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1. Apply PERIDOX<sup>®</sup> 4% Use Dilution solution to personnel by holding the spray wand at a distance of less than two (2) feet. Move the spray wand at not more than one (1) foot per second.
2. For non-porous surfaces such as Level A suits, apply a thin layer of PERIDOX<sup>®</sup> 4% Use Dilution solution with the EDS Delivery Unit Spray Wand to all surfaces with a contact time of 3 minutes prior to illumination treatment with the EDS UV Light Wand.
3. Open the light wand baffles to the full stop position. Apply light to all wet surfaces no sooner than 3 minutes after the surface has been sprayed. If surfaces are dry before the light is applied, reapply PERIDOX<sup>®</sup> 4% Use Dilution solution as necessary to ensure the surface is wet. Illuminate the wet surface within ten (10) minutes of the spray application. DO NOT shine light in suited person's eyes.
4. Depress the light wand trigger. Hold the light wand less than two (2) feet from the surface and move at a rate of not more than one (1) foot per second, keeping the light wand perpendicular to the surface.
5. Move the light wand over all wet areas.

### **POST-DECONTAMINATION EQUIPMENT PROCEDURES**

This section pertains to decontamination of the EDS equipment and its preparation for storage and reuse.

#### **Post-Treatment**

1. Following treatment, the surface may be wiped with a sterile cloth or wipe. After use, place the cloth or wipe in a sealed container for disposal in accordance with the RAP or equivalent plan. Air drying will not affect the efficacy of the process.
2. The EDS process is complete.
3. Rinse the EDS with water to remove any residue.
4. Wipe off gauges with an absorbent cloth and dispose in accordance with the RAP or equivalent plan.
5. Detach the high voltage connector from the high voltage power supply box on the spray wand. Remove the spray head assembly from the spray wand. Place spray head assembly aside.
6. Empty remaining contents from the Delivery Unit reservoir into a suitable container (HDPE is recommended) by spraying.
7. Dispose of PERIDOX<sup>®</sup> and PERIDOX<sup>®</sup> 4% Use Dilution solution in accordance with the RAP or equivalent plan.
8. Reinstall spray head onto gun body and set aside.
9. Turn gas bottle regulator off to prevent additional gas from entering Delivery Unit reservoir. Pull the discharge valve's red manual override to vent pressure from Delivery Unit reservoir.
10. Remove two-piece fill cap from tank and place aside.

11. Remove Delivery Unit from EDS cart.
12. Rinse Delivery Unit reservoir three times with water. Dispose of the water in accordance with the RAP or equivalent plan.
13. Pour one gallon of water into Delivery Unit reservoir. Reinstall two-piece fill cap, O-ring side down, and pressurize tank to at least 30 psi. Refill the on-board high pressure gas cylinder as required.
14. Spray water from the Delivery Unit reservoir to flush all spray components. Dispose of the water in accordance with the RAP or equivalent plan.
15. After wand no longer sprays water, depressurize tank. Pour any remaining water out of the tank. Dispose of the water in accordance with the RAP or equivalent plan.
16. Reinstall Delivery Unit onto the EDS cart. Store the unit in a covered location.