

## FACILITY DISINFECTION GUIDELINES

The following information is provided as guidance for disinfecting a facility at which an exotic pathogen has been detected. The items are not provided in any order of importance, and are subject to equivalency modification to meet site-specific needs.

1. Protective, disposable plastic boots should be worn when working on the facility grounds or along streams where the viable disease agents may exist.
2. Vehicles should not be driven into aquatic animal rearing areas.
3. Each piece of equipment or clothing that may have become contaminated must be thoroughly cleaned and disinfected (laundered at >100EC or sprayed with 200 ppm sodium hypochlorite with a 30 second contact time, rinse with clean water) before it leaves the facility.
  - a. Torgersen T. and Hastein T. 1995. Disinfection in aquaculture. **In:** *Scientific and Technical Review. Disinfectants: actions and applications*. Office International des Epizooties **14(2)**:419-434.
4. Exposed skin and hair must be thoroughly cleansed with an appropriate material (e.g., antibacterial soap or surgical scrub).
5. Burial trench details:
  - a. The burial trench should be at least 7 feet wide and not less than 7 feet deep with the length determined by allowing 14 square feet of floor space for each 1,000 pounds of aquatic animals to be buried.
  - b. As the aquatic animals are placed in the trench, they should be covered with unslaked lime.
  - c. Lime is to be applied at the rate of one barrel (850 pounds) for each 10,000 pounds of aquatic animals buried. This is to hasten decomposition and to discourage burrowing animals.
  - d. The trench should be filled with earth without delay and the area should be included in the cleaning and disinfection procedures.
6. Facility cleaning and decontamination can start as soon as aquatic animal disposal is complete.
7. Persons working in the contaminated area must be supplied with rubberized rain gear, including boots, coat, hat, and gloves.
  - a. These outer garments will be removed and left in an appropriate location at the end of

each work day.

- b. These items should be thoroughly decontaminated during the final phase of the operation.
8. In addition to the chemicals required, the equipment itemized in the following table would be helpful in the decontamination of facilities. The numbers of specific items are general recommendations. Requirements will vary in relation to the size of the operation.

Description	Quantity
½ ton pickup truck	1
pairs of rubber boots	6
high pressure spray unit	1
sets of rain gear	6
50-foot lengths of hose for sprayer	4
pairs of rubber gloves	6
pairs of safety goggles	3
assorted pumps	5
respirators	6
300 gallon horse troughs	1
wire brushes	2
5-gallon pails	5
heavy brooms	2

9. All aquatic animal rearing facilities should be brushed clean of moss, algae, dirt, and organic wastes. Rearing tanks, incubators, troughs, outdoor raceways, and water supply headboxes and tailraces should all be thoroughly scrubbed.
10. Treatment of the effluent from cleaning operations can minimize the contamination problem.
11. Earthen ponds should be decontaminated, drained and the entire bank area cleared of vegetation and debris. Earthen ponds should be treated before they are dried and should not be entered except under close control.
12. Decontamination can begin as soon as the facilities are clean and readied. All buildings and the equipment within them should be exposed to chlorine or other appropriate disinfectants.
13. Stream water supplies, pipeline systems, and the facility effluent should be chlorinated.
- a. These are difficult to treat and success largely depends upon the length of time the disease organism is exposed to the chlorine.

- b. In no case should chlorine be used at less than 200 ppm for a period of less than 1 hour.
14. Chlorine at 10,000 ppm or more may also be sprayed on hard surfaces where residual activity is not desired.
- a. Protective gear must be worn when working with Chlorine (i.e. full face shield, respirator, protective suit, gloves, etc.)
15. Earthen ponds, canals, and other similar structures present special problems for disinfection.
- a. Consideration should be given to the complete renovation of contaminated earthen ponds.
  - b. Unslaked lime is the compound of choice, and it should be applied to freshly-drained ponds.
  - c. Several treatments with unslaked lime at the rate of 2 tons per acre may be required.
    - i. The ponds should stand for a month or more.
    - ii. At that time, the muck should be removed and buried in a pit.
  - d. The ponds should then be refilled and tested with species of size and age most susceptible to the disease in question, in live boxes for 120 days.
16. The progress of any possible reinfection should be regularly monitored for at least 60 days through laboratory examination of representative aquatic animals. If the ponds are still infective, terminate the bio-assay, treat the ponds again, and continue investigation of water supply.