39096-2 12/31/2012 1/20

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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVETION

Decision 473473

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DEC 31 2012

Aquabiotics Corporation
6075 NE Tolo Road
Bainbridge Island, WA 98110

Attention: Mr. Stephan Paschal

Subject Fintrol® Fish Toxicant Kit
EPA Reg. No. 39096-2
Addition of Website Link to Standard Operating Procedure
Revised Label of December 27, 2012

Purpose You have agreed to revise your labeling to add links to your Standard Operating Procedure that the National Park Service hosts on its website.

Labeling The labeling attached to this letter, under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) is acceptable.

Per 40 CFR 156.10(a)(6), submit one copy of your final printed labeling before you release the product for shipment.

Follow the enclosed "Minimum Type Size Requirements for Final Printed Label".

Existing stocks You may distribute or sell existing stocks of this product with current labeling for eighteen (18) months from the date of this letter.

Revisions to Labeling If you wish to revise the product labeling (outer container, two bottles, leaflet, or SOP) in the future, submit the revised labeling to the Agency for review, including a list of the proposed changes, their location, and the reasons for such changes.

Prior to distribution of the new labeling, the Agency must approve any changes.

Consequence for non-compliance If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Questions If you have questions about this letter, please contact Mr. Dan Peacock at 703-305-5407 (phone) or peacock.dan@epa.gov (E-Mail).

Sincerely,

John Hebert
Product Manager (07)
Insecticide-Rodenticide Branch
Registration Division (7505P)

Enclosure
1. Stamped Label
2. Minimum Type Sizes for Final Printed Labels

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ACCEPTED
DEC 31 2012
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under: 39096-2

[1. Outer Can Label]

039096-00002.20121227

[Front Panel]

EPA. Reg. No:

RESTRICTED USE PESTICIDE [Type Size Requirement]
Due to toxicity to fish and other aquatic organisms, the need for specialized training, acute oral toxicity, and eye irritation

For retail sale to, and use only by, Certified Applicators or person under their direct supervision and only for those uses covered by the Certified Applicator's certification.

FINTROL® FISH TOXICANT KIT
(contains Fintrol® Concentrate, Fintrol Diluent, and Use Direction Leaflet)

Ingredient Statements

FINTROL® CONCENTRATE

Active Ingredients:		
Antimycin A	23%	w/w
Other Ingredients		
Acetone	77%	w/w
	100%	

8 fl oz (bottle)

FINTROL® DILUENT

Other Ingredients:		
Diethyl Phthalate (surfactant).....	30.5%	w/w
Nonoxynol-9- (detergent)	16.7%	w/w
Acetone	52.8%	w/w
	100.0%	w/w

8 fl oz (bottle)

KEEP OUT OF REACH OF CHILDREN [Type Size Requirement]
WARNING [Type Size Requirement]
See Side Panels for additional precautionary statements.

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING, INCLUDING THE CONTAINER LABEL AND SOP MANUAL [Standard Operating Practices for the Use of Fintrol® (Antimycin A) for Restoration of Native Fish Populations, National Park Service, USDI, November 2012] AVAILABLE ON-LINE [https://irma.nps.gov/App/Reference/Profile/2191334], AND FROM THE REGISTRANT, WITH ADDITIONAL DIRECTIONS FOR USE.

READ AND UNDERSTAND THE CONTAINER LABEL AND SOP PRIOR TO USE.

THE APPLICATOR IS RESPONSIBLE FOR FOLLOWING THE DIRECTIONS AVAILABLE FOR USE IN THE LABELING.

See "USE DIRECTIONS LEAFLET" in this kit and the SOP for additional use directions.

[Side Panels]

FINTROL CONCENTRATE®

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMAN AND DOMESTIC ANIMALS

WARNING. May be fatal if swallowed. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses), long-sleeved shirt, long pants, shoes, and socks. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are butyl rubber, and to a lesser extent, polyethylene. If you want more options, follow the instructions for category "B' on an EPA chemical-resistance category selection chart.

All mixers, loaders and other handlers exposed to the concentrate through cleaning equipment or spills must wear:

- long-sleeved shirt and long pants,
- chemical-resistant gloves,
- shoes plus socks,
- protective eyewear (goggles, face shield, or safety glasses),
- a dust mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P, or HE filter, and
- a chemical-resistant apron.

All applicators and other handlers must wear:

- long-sleeved shirt and long pants,
- chemical-resistant gloves,
- shoes plus socks, and
- protective eyewear.

In addition, applicators using handheld equipment, handheld nozzles or other equipment must wear:

- coveralls, and
- a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P, or HE filter.

Exception: Applicators exposed to splashing water or walking in water that is being treated must wear waders instead of coveralls. All other applicators and handlers may substitute waders for long pants if necessary.

User Safety Requirements

Do no wear contact lenses while handling this product. Ocular contact with this product can melt a contact lens onto the eye,

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Remove PPE immediately after handling this product.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with concentrated product. Do not reuse them.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet..

User Safety Recommendations

Certified Applicators applying or supervising any aspect of the application of this product should attend a training program for piscicide applications.

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

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FIRST AID
HAVE LABEL WITH YOU WHEN SEEKING TREATMENT ADVICE (1-800-858-7378)

IF SWALLOWED: Call a Poison Control Center, doctor, or 1-800-858-7378 immediately for treatment advice or transport the person to the nearest hospital.
Do not give any liquid to the patient. Do not administer anything by mouth. Do not induce vomiting unless told to do so by the poison control center or doctor.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center, doctor, or 1-800-858-7378 immediately for treatment advice.

TREATMENT FOR PET POISONING
If animal consumes Fintrol® Concentrate or diluted product, call veterinarian at once.

ENVIRONMENTAL HAZARDS
This product is extremely toxic to fish and other aquatic organisms. Do not contaminate water **outside the treatment area** by cleaning of equipment or disposal of equipment wash waters. Do not contaminate water outside the treatment area, food, or feed by storage or disposal. Do not discharge effluent containing this pesticide into sewage systems without notifying the sewage treatment plant authority (POTW).

PHYSICAL OR CHEMICAL HAZARDS
Extremely flammable. Keep away from fire, sparks, and heated surfaces.

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STORAGE AND DISPOSAL [Type Size Requirements]

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

PESTICIDE STORAGE: Store only in original container, in a cool, dry place inaccessible to children and pets. Keep containers closed and away from other chemicals.

Fintrol Concentrate: Product is stable for minimum of 3 years when stored in unopened, original glass bottles. Product will thicken if stored at temperatures below 65F. Before use, store overnight above 70F.

Fintrol Diluent: Before use, store overnight above 70F.

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.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. [Metal Can and Glass Bottles] Triple rinse container (or equivalent) promptly after emptying. Triple rinse rinse as follows: Fill container ¼ full with water and recap. Shake for 10 seconds. Drain for 10 seconds after the flow begins to drip. Follow Pesticide Disposal instructions for rinsate disposal. Repeat procedure two more times. Offer for recycling if available or place in trash or in a sanitary landfill.

[Note: As stated in 40CFR156.140(a)(4), a batch code must be included on the label or package for container and containment for nonrefillables.]

Aquabiotics Corp. 6075 NE Tolo Road Bainbridge Island, WA 98110	EPA Reg. No. 39096-2 EPA Est. No. 39096-WA-01

[2. Fintrol® Concentrate Label]

FINTROL® CONCENTRATE
Use with FINTROL ® DILUENT

Active Ingredients:		
Antimycin A	.....	23% w/w
Other Ingredients		
Acetone	.....	77% w/w
		100%

8 fl oz (bottle)

WARNING

KEEP OUT OF REACH OF CHILDREN

See FINTROL® FISH TOXICANT KIT label, Use Direction Leaflet, and Fintrol SOP for additional precautions, use directions, storage and disposal instructions, and other requirements.

Aquabiotics Corp.
P.O. Box 10576
Bainbridge Island, WA 98110

EPA Reg. No. 39096-2
EPA Est. No. 39096-WA-01

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[3. Fintrol® Diluent Label]

FINTROL® DILUENT
Use with FINTROL ® CONCENTRATE

Other Ingredients:		
Diethyl Phthalate (surfactant).....	30.5%	w/w
Nonoxynol-9- (detergent)	16.7%	w/w
Acetone	52.8%	w/w
	100.0%	w/w

8 fl oz (bottle)

WARNING

KEEP OUT OF REACH OF CHILDREN

See FINTROL® FISH TOXICANT KIT label, Use Direction Leaflet, and Fintrol SOP for additional precautions, use directions, storage and disposal instructions, and other requirements.

Aquabiotics Corp.
P.O. Box 10576
Bainbridge Island, WA 98110

EPA Reg. No. 39096-2
EPA Est. No. 39096-WA-01

[4. Fintrol ® Fish Toxicant "Use Directions Leaflet"]

FINTROL® FISH TOXICANT USE DIRECTIONS LEAFLET

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING, INCLUDING THE CONTAINER LABEL AND SOP MANUAL [Standard Operating Practices for the Use of Fintrol® (Antimycin A) for Restoration of Native Fish Populations, National Park Service, USDI, November 2012] AVAILABLE ON-LINE [https://irma.nps.gov/App/Reference/Profile/2191334], AND FROM THE REGISTRANT, WITH ADDITIONAL DIRECTIONS FOR USE.

READ AND UNDERSTAND THE CONTAINER LABEL AND SOP PRIOR TO USE.

THE APPLICATOR IS RESPONSIBLE FOR FOLLOWING THE DIRECTIONS AVAILABLE FOR USE IN THE LABELING.

General Application Restrictions for all Formulations

The Certified Applicator supervising the treatment must remain on-site for the duration of the application.

Do not allow recreational access (e.g., wading, swimming, boating, fishing) within the treatment area while antimycin A is being applied and for 7 days after treatment.

For "complete kill" use, do not apply this product in a way that will result in treatment concentrations greater than 25 parts per billion. For 'selective kill' use in aquaculture, do not apply this product in a way that will result in treatment concentrations greater than 10 parts per billion.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Do not apply **with any application method** or equipment or **in a manner** not specified on this label or in the antimycin A SOP Manual.

This product must not be applied to estuarine or marine environments.

Where practical, users should collect and bury dead fish.

Additional Requirements for Use in Aquaculture

When antimycin A is applied as a selective kill in aquaculture, the Certified Applicator supervising the application must inform the owner/operator of the aquaculture site being treated that surviving fish must not be harvested for food or feed for a minimum of 12 months after treatment.

When antimycin A is applied as a complete kill in aquaculture, the Certified Applicator supervising the application must inform the owner/operator of the aquaculture site being treated that the water body must not be restocked with fish for a minimum of 7 days after treatment, **OR once 3 consecutive monitoring samples taken no less than 4 hours apart demonstrate that antimycin A levels are below the limit of detection (0.015 ppb).**

Drinking Water Notification

If drinking water intakes are present within the treatment area, or a hydrologic connection to wells exist, 7-14 days prior to application, the Certified Applicator or designee under his/her direct supervision must provide notification to the party responsible for the public water supply or to individual private water users. Drinking water intakes within the treatment area must be closed during treatment and until 3 consecutive monitoring samples taken no less than 4 hours apart demonstrate that antimycin A levels are below the limit of detection (0.015 ppb).

Detailed instructions for public involvement, notifications, and monitoring are presented in the antimycin A SOP Manual.

Placarding of Treatment Areas, Except Aquaculture Applications

The Certified Applicator in charge of the application (or someone under his/her supervision) must placard all access areas to the treatment area. Detailed instructions for placarding are presented in the Antimycin A SOP Manual. Placards must be placed every 250 feet along the shoreline of the treated area, OR, at public access points (e.g., trailheads and roads and trails). Placards must contain the information below:

- DANGER/PELIGRO
- DO NOT ENTER WATER/NO ENTRE: Pesticide Application

- [The name of the product applied]
- [The name, address, and telephone number of the responsible agency or entity performing the application]

- [The purpose of the application]
- [The start date and time of application]
- [The end date and time of application]
- [The duration of the area closure]

- Recreational access (e.g., wading, swimming, boating, fishing, etc.) within the treatment area is prohibited while antimycin A is being applied and for 7 days after treatment.
- Do not swim or wade in treated water.
- Do not consume water or dead fish from treated water.

Signs must remain legible during the entire posting period and must be removed no earlier than 7 days after treatment and no later than 14 days after treatment.

Mechanism of Action

The active ingredient of FINTROL is antimycin A. When absorbed through the gills of fish, antimycin A kills by interfering with the respiration of body cells. Antimycin A does not repel fish. This is an important advantage, particularly when running waters, bog lakes, and the epilimnion, or upper layer of large lakes are treated. Fish make no attempt to escape contact with the toxicant by seeking to move into waters that are clear of it. FINTROL'S action is rapid and Irreversible.

Sensitivity to FINTROL varies widely among fish species. Hence it may be employed to selectively destroy certain species, without affecting other species concurrently inhabiting the same body of water.

Sensitive:

Gizzard shad, trouts, pikes, carp, minnows, suckers, brook stickleback, white bass, sunfishes, perches, freshwater drum, sculpins.

Least Sensitive:

Shortnose gar, bowfin, goldfish, catfish.

FINTROL also may be used to selectively destroy certain age groups of species; younger fish are more sensitive to FINTROL.

Providing the concentration is correctly estimated, FINTROL can be used effectively at any time of year in either cold, warm, soft, hard, acid, alkaline, clear or turbid (muddy) waters. (See TABLE 1 and instruction for bioassay.)

FINTROL does not impart detectable taste or odor to treated waters. In the usual, recommended concentrations, it causes no apparent harm to aquatic plants, insects, or bottom fauna. Since FINTROL'S active ingredient degrades rapidly, the reclaimed waters may be restocked soon after treatment. (See HOW TO DETERMINE WHEN TREATED WATER MAY BE RESTOCKED.) There is very little interruption in availability of the waters for recreational, agricultural, industrial, or other purpose.

Complete and Selective Kills

This product may be used to achieve a 'complete kill' or a 'selective kill.' Complete kills are intended to eliminate all fish in the treatment area whereas selective kills, used only in aquaculture, are intended to eliminate or reduce the number of only certain (more vulnerable) species. Detailed instructions for conducting complete and selective kills are presented in the antimycin A SOP Manual and are summarized below.

A **complete kill** may be achieved with a concentration of anywhere from 5 to 25 p.p.b. of active ingredient (**See HOW TO DETERMINE THE MOST EFFECTIVE CONCENTRATION.) FINTROL is** particularly advantageous for complete kills because if detoxifies so rapidly the pond can usually be restocked in about a week, or as soon as caged fish survive 48 hours' exposure to the treated waters.

Under optimal circumstances, in ponds managed for sports fishing, **selective kills** may be achieved at concentrations as low as 0.5 to 1.0 p.p.b. However, because these concentrations are extremely low, there is no rule of thumb that can be relied upon to determine them accurately. A BIOASSAY IS ALWAYS REQUIRED TO PINPOINT THE OPTIMAL CONCENTRATION FOR SELECTIVE KILLS.

A **selective kill** has these advantages: It can be made without interrupting sport fishing for more than a week or so, and fishing may be gradually improved without restocking. In the past, when bluegill, minnows, or green sunfish dominated a pond managed for bass, the usual solution to the problem was the total removal of all the fish with a fish toxicant This meant restocking and little or no fishing for one or two years. Now --- with FINTROL --- this is no longer necessary. Low concentrations of FINTROL will affect small bluegill, green sunfish, and minnows primarily. Only a few of the very small bass will succumb. The bulk of the adult bluegill and green sunfish will not be affected. Thus FINTROL helps to bring about a balanced relationship between the bass and bluegill populations. This improves fishing without interrupting it for any appreciable length of time of time.

In **catfish farming** FINTROL can be used to *selectively eliminate* the trash fish (scale fish) that commonly reduce the yields and increase the costs of the commercial catfish farmer. It is possible to do this with FINTROL because concentrations that will eliminate scale fish generally will not harm adult catfish. The scale fish most often encountered by the catfish farmer will succumb to anywhere from 5 to 10 p.p.b. of active ingredient (See TABLE 1) whereas, under ordinary circumstances, it takes in excess of 20 p.p.b. to kill catfish. (Caution should be exercised during stress conditions of unusually high water temperature and reduced oxygen content when the sensitivity of fishes to chemical may increase.)

How to Determine the Most Effective Concentration

The nature of the water to be treated (its depth) and rate of flow) and the character of the surrounding land are factors to be taken into consideration when determining the formulation of FINTROL to employ in a given situation.

1. Complete kills

The concentration of antimycin A required to kill one or more species of fish in any given body of water depends upon: I) the sensitivity of the species to be eradicated, and 2) the chemical and physical properties of the water at the time of application of the toxicant; the pH and the temperature of the water are the most important of these chemical and physical factors under ordinary circumstances. Therefore, to determine what concentration of antimycin A will be required to kill the undesirable fish in your pond or lake:

1) identify the species to be eradicated,
2) determine the pH and average water temperature by measuring at various sites and depths,
3) refer to TABLE 1 for approximate concentrations.
4) conduct a bioassay to pinpoint the optimal concentration.

TABLE 1 provides a rough estimate of the concentrations required for a complete kill under various environmental conditions. However, since water chemistry is subject to sudden alteration by many variables and often unpredictable factors (pollution, heavy algae bloom, weather, drawdown, etc.) it should be realized that such changes may affect the performance of the toxicant. For this reason, measurements of pH and water temperature should always be taken as close to the time of treatment as is feasible.

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Table 1. Estimate of Antimycin A concentrations needed for complete kill of fish species at different water temperature and pH ranges.

Target Species[1]	Sensitivity (ppb)	Estimated Concentration (ppb) of Antimycin A for Complete Kill			
		If ph is 8.5 or Less		If pH is More than 8.5	
		Water Temperature Above 60F	Water Temperature Below 60F	Water Temperature Above 60F	Water Temperature Below 60F
gizzard shad trouts pikes carp minnows suckers brook stickleback white bass sunfishes perches freshwater drum sculpins	5 -10	5	7.5	7.5	10
short nose gar bowfin goldfish catfish	15 - 25	15	20	20	25

Notes

1. Fish nomenclature according to American Fisheries Society
2. The concentration level suggested by this table should be confirmed by an on-site bioassay.
3. This table is applicable only a *complete* kill is desired. Do not use it for a selective kill. (See the following section.)

The sensitivity of the target species determines the concentration range. To eradicate sensitive species, it is recommended that the appropriate formulation at FINTROL be applied so that the body of water will have a concentration of from 5 to 10 p.p.b. of antimycin A, depending upon variation on in pH and water temperature. For more tolerant species, higher concentrations are recommended. Laboratory Studies indicate that less sensitive fish will succumb at concentrations of from 15 to 25 p.p.b of antimycin A, depending upon variations in pH and water temperature. Columns 3 to 6 show how to adjust for pH and water temperature. Note that, in general, the lower the pH, the less FINTROL required. The higher the water temperature, the less FINTROL required. The ideal situation for a complete kill would combine a highly sensitive species, low pH and high water temperature.

2. **Selective Kills**

The only way to determine the concentration of FINTROL needed for a **selective** kill is to perform a bioassay. This involves subjecting both the target and nontarget fish to several concentrations of FINTROL to determine the minimum lethal dose. (A description of the bioassay procedure is available upon request.)

How to Calculate Amount of Fentrol to be Added to a Body of Water to Obtain a Given Concentration of Antimycin A

To calculate the amount of FINTROL to be added to a body of water for eradication of undesired species, the following steps should be taken:

1. Determine the volume of water to be treated in acre-feet. This can be arrived at by multiplying the surface area in acres by the average depth in feet.
2. Determine the concentration to be used from Table I.
3. Multiply the number of acre-feet by the value given in Table 2, opposite the desired concentration.
4. The value obtained for volume may be divided by the total kit volume (480 cc. or 16 oz.) to get number of Fish Toxicant Kits needed.

Table 2. Rapid estimate of amount of FINTROL® Concentrate needed (per acre-foot) to produce desired concentration of Antimycin A (in ppb).		
Desired Concentration of Antimycin A (ppb)	Amount of Fentrol® Concentrate Needed (per acre-foot)	
	cc[1]	oz
1	12.3	½
2	24.6	¾
3	36.9	1 ¼
4	49.2	1 ½
5	61.5	2
6	73.8	2 ½
7	86.1	2 ¾
8	98.4	3 ¼
9	110.7	3 ¾
10	123.0	4

[1]obtained by multiplying 12.3 cc by the ppb.

Sample calculation:

To treat 75 acre-feet at 3 p.p.b

Using cc measurements:

75 x 36.9 cc = 2,767 cc. of FINTROL-CONCENTRATE

Using ounce measurements:

75 X 1 ¼ fl. OZ. = 93% fl. oz. of FINTROL-CONCENTRATE

Methods of Application

IMPORTANT: Review guidelines in these instructions for use of Personal Protective Equipment (PPE)

Liquid formulation: Directions for mixing: Add the Diluent (blue label] to the FINTROL CONCENTRATE (solution 23%) [Green label] in the oversize mixing container. Cap tightly and invert 2 to 3 times to mix thoroughly. Further dilute with AT LEAST five (5) gallons of water to insure that the acetone contained in FINTROL-CONCENTRATE will not affect rubber parts on any equipment that might be used to apply it. After water has been added, apply within eight (8) hours. (Note: The solution obtained by mixing the Diluent with FINTROL-CONCENTRATE (solution 23%) retains potency for up to seven (7) days. But once water has been added to this solution, it must be used within eight (8) hours to ensure potency.]

After appropriate dilution with water, the liquid formulation of FINTROL can be applied to lakes and ponds by the boat bailer method or spray equipment. Spray methods are useful at depths to one foot. Boat bailer and drip tubes when applied at the propeller wash are useful at greater depths. Pinpoint applications to shoal areas and small, isolated ponds can readily be made with backpack sprayers. (See CAUTION on use of PROTECTIVE GOGGLES AND PROTECTIVE GLOVES.)

In streams, FINTROL-CONCENTRATE is most often applied through drip stations established to meter the toxicant at a precalculated rate. Information on the use of such equipment may be obtained from state and/or federal agencies, experienced in stream treatment.

[t is recommended that all applications of FINTROL be made at daybreak or as soon as there is enough light to work by.

Potency of Mixed Formulations

Leftover portions of mixed liquid formulation retain potency for up to seven (7) days. But once water has been added to FINTROL-CONCENTRATE, it must be used within eight (8) hours to ensure potency.

How to Determine When Treated Water May be Restocked

Since antimycin A degrades rapidly following application, waters can usually be restocked about one week following treatment with FINTROL. Place live cars containing a **sensitive** species of fish in the treated water. Use fingerling rainbow trout or fingerling bluegills if the water temperature is between 35 and 68F. When the water temperature exceeds 68F, use only fingerling bluegills. If the fish survive for 48 hours, the water may be restocked.

Deactivation With Potassium Permanganate ($KMnO_4$)

Flow in a stream and outflow from a treated lake beyond the treatment area must be deactivated with potassium permanganate to minimize exposure beyond the treatment area unless unnecessary. (See the Antimycin A SOP Manual for the definition of treatment area, examples when treatment with potassium permanganate is unnecessary and detailed guidance for deactivating antimycin A with potassium permanganate.)

To prevent killing fish downstream, apply potassium permanganate at 1 part per million (1 p.p.m.) to the outflow. (More potassium permanganate may be needed if the stream has a high permanganate demand. Drip systems of hose-and-clamp or carburetor types can be employed to continuously dispense a solution of potassium permanganate into the water at the discharge outlet.

To evaluate the effectiveness of the detoxification process, place livecars containing fingerling rainbow trout or fingerling bluegills approximately 100 yards downstream from the site of $KMnO_4$ introduction. The water is considered detoxified if the fish survive for at least 48 hours in the livecar.

To detoxify FTNTROL-treated streams, apply $KMnO_4$ at 1 p.p.m. at detoxification stations. (More K.Mn04 may be needed if the stream has a high permanganate demand). Continue the application $KMnO_4$ until all FINTROL-treated water has passed the station. The water may be considered detoxified when fingerling rainbow trout or fingerling bluegills survive for at least 48 hours in livecars place 100 yards downstream from the site of potassium permanganate (KMn04) introduction.

Re-entering The Treatment Area

For the first 7 days after treatment, handlers re-entering treated water must wear, at a minimum, the following PPE:

- Waders and long-sleeved shirt,
- chemical-resistant gloves, and
- protective eyewear.

Special Instructions Regarding State Government Regulatory Agencies

Prior to the use of a fish toxicant in either public or private waters, the Director of the State Fish and Game Department or Conservation Department must be contacted to determine whether a permit is required. Such products must be used by or under the technical supervision where required, of personnel of state and federal fish and game agencies, trained in fisheries management, who will provide any special instructions applicable to the particular geographical area.