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Tifa, Ltd.  
 Tifa Square  
 Millington, NJ 07946

Dear A. M. Livingston:

Subject: Chem-Sect Brand Chem Fish Regular  
 EPA Reg. No. 1439-157  
 Your Letter Dated October 16, 1991

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the revised labeling:
  - a. According to our records the flash point for this product is 140°F. Therefore, the Physical and Chemical Hazards statement should read as follows:  
  
 Do not use or store near heat or open flame.
  - b. An asterisk (\*) must be placed after the words INERT INGREDIENTS to correspond with the statement "\*This product contains aromatic solvents".
  - c. Under APPLICATION DIRECTIONS, Treatment of Lakes and Ponds, section 2., "... divide the number of acre-feet covered by one gallons ..." change the spelling of gallons to gallon.

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CONCURRENCES							
SYMBOL							
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d. Under APPLICATION DIRECTIONS, Treatment of Streams Immediately Above Lakes and Ponds, section 1., the following changes must be made:

1. Correct the spelling of timer to time in the sentence "Measure the timer required...".
  2. Change the word pond to point in the sentence "Take at least three readings at each pond".
  3. Change the letter D to C in the sentence "... D = constant (0.8 for rough bottoms and 0.9 for smooth bottoms ...".
2. Submit a copy of your final printed labeling before you release the product for shipment.

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.

A stamped copy of the label is enclosed for your records.

Sincerely yours,

Robert A. Forrest  
Product Manager (14)  
Insecticide-Rodenticide Branch  
Registration Division (H7504C)

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans and Domestic Animals**

**WARNING:** May be fatal if swallowed. May cause eye injury. Causes skin irritation. Do not get in eyes, on skin, or on clothing. Wear protective goggles, facemask, or safety glasses. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash thoroughly before reuse.

**Statement of Practical Treatment**

**IF SWALLOWED:** Call a physician or Poison Control Center. Do not induce vomiting. This product contains aromatic petroleum solvent. Aspiration may be a hazard.

Promptly drink a large quantity of a milk, egg white, and gelatin solution, or if these are not available, water. Avoid alcohol.

**IF IN EYES:** Flush with plenty of water and get medical attention.

**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention if irritation persists.

**Environmental Hazards**

This pesticide is extremely toxic to fish. Fish kills are expected at recommended rates. Consult your State Fish and Game Agency before applying this product to public waters to determine if a permit is needed for such an application. Do not contaminate untreated water when disposing of equipment washwaters.

**Physical and Chemical Hazards**

**Flammable.** Keep away from heat and open flame. (Flash Point above 20 F to 80 F).

**STORAGE AND DISPOSAL**

**DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE DISPOSAL.**

**STORAGE:** STORE ONLY IN ORIGINAL CONTAINER, IN A DRY PLACE INACCESSIBLE TO CHILDREN AND PETS.

**PESTICIDE DISPOSAL:** WASTES RESULTING FROM THE USE OF THIS PRODUCT MAY BE DISPOSED OF ON SITE OR AT AN APPROVED WASTE DISPOSAL FACILITY.

**CONTAINER DISPOSAL:** TRIPLE RINSE (OR EQUIVALENT). THEN OFFER FOR RECYCLING OR RECONDITIONING OR PUNCTURE AND DISPOSE OF IN A SANITARY LANDFILL OR BY OTHER PROCEDURES APPROVED BY STATE AND LOCAL AUTHORITIES.

*Inject*

**CHEM-SECT BRAND**

**CHEM FISH REGULAR**

(5% Emulsifiable Concentrate)

**RESTRICTED USE PESTICIDE**  
Due to Aquatic Toxicity

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

**CHEM-SECT BRAND**

**CHEM FISH REGULAR**

(For Control of Fish in Lakes and Ponds)

ACTIVE INGREDIENTS . . . . .	15.0%
Rotenone . . . . .	5.0%
Other Cube Extractives . . . . .	10.0%
INERT INGREDIENTS . . . . .	85.0%
TOTAL . . . . .	100.0%

\*This product contains aromatic solvents.

**KEEP OUT OF REACH OF CHILDREN**

**W A R N I N G**

See Left Panel for additional precautionary statements.

Tifa (C.I.) Limited  
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United States of America  
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Facsimile Nos.: 908-647-2517  
908-647-7338

E.P.A. PESTICIDE EST. #44616-MO-1  
E.P.A. REG. NO. 1439-157  
Net Contents \_\_\_\_\_

**ACCEPTED**  
with COMMENTS  
in EPA Letter Data

**NOV 06 1991**

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 1439-157

1439-157

**DIRECTIONS**

It is a violation of FIFRA to use this product in a manner inconsistent with labeling.

**USE RESTRICTIONS:**

Use against fish in lakes (immediately above dam)

Since such factors as water temperature and turbidity will change, use this product only at times authorized and at rates authorized by State and Federal fish control agencies. Rates must be within the labeling.

Properly dispose of excess product. Do not use for any other purpose.

Do not use water treatment chemicals upstream of a potable water intake in a standing body of water, lake, pond, or reservoir.

**APPLICATION DIRECTIONS**

**Treatment of**

**1. Application Rates of Rotenone**

The actual application rate of rotenone needed to control fish varies widely, depending on the species of fish, the type of water, etc.) and the factors listed below is a general guide to application rates and concentrations.

**2. Total Amount of Product**

To determine the total amount of product needed for treatment, divide the area to be treated (in acres) by the application rate (in gallons per acre) indicated in the table below to determine the total amount of product needed in the body of water.

CHEM FISH REGULAR should be applied before application, at the recommended strength. A wash tub or other convenient container of water. CHEM FISH REGULAR mixes readily with all types of water, and penetrates to the depth of 25 feet or more) to the surface. The deeper the water, the longer by pumping the mixture through a garden hose with perforated pipe.

FOR USE IN STREAMS, LAKES, OR RESERVOIRS. To drain from dam or stream at a rate of 0.5-1.0 p.p.m. each cubic foot of water in the stream (0.5-1.0 p.p.m. CHEM FISH REGULAR or 0.025-0.05 p.p.m. CHEM FISH REGULAR).

**BEST AVAILABLE**

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General Guide to the Application Rates and Concentrations of Rotenone Needed to Control Fish in Lakes and Ponds\* (5% Emulsifiable Concentrate Product)

Type of Use	No. of		Product
	Acre-Foot Covered by One Gallon	Parts Per Million Active Rotenone	
Selective Treatment	30 to 24	0.005-0.007	0.10-0.13
Normal Pond Use	6.0 to 3.0	0.025-0.050	0.5-1.0
Remove Bullheads or Carp	3.0 to 1.5	0.50-0.100	1.0-2.0
Remove Bullheads or Carp in Rich Organic Ponds	1.5 to 0.75	0.100-0.200	2.0-4.0
Pre-impoundment Treatment above Dam	1.0 to 0.6	0.150-0.250	3.0-5.0

\* Adapted from Kinney, Edward. 1965. Rotenone in Fish Pond Management. USDI. Washington, D.C. Leaflet FL-576.

COMPUTATION OF ACRE-FOOT FOR LAKES OR PONDS An acre-foot is a unit of water volume having a surface area of one acre and depth of one foot. Make a series of transects across the surface, taking depths with a measured pole or weighted line. Add the measurements and divide by the number made to determine the average depth. To compute total acre-feet, multiply this average depth by the number of surface acres, which can be determined from an aerial photograph or plat drawn to scale.

### 3. Method of Application and Exposure Time

Pre-Mixing and Method of Application: Pre-mix with water at a rate of one gallon CHEM FISH REGULAR to 10 gallons of water. Uniformly apply over water surface or bubble through underwater lines.

Detoxification: CHEM FISH REGULAR treated waters detoxify under natural conditions within 1 week to 1 month, depending upon temperatures, alkalinity, etc. Rapid detoxification can be accomplished by adding chlorine or potassium permanganate to the water at the same rates as CHEM FISH REGULAR in parts per million plus enough additional to meet the chlorine demand of the untreated water.

### 4. Removal of Taste and Odor

CHEM FISH REGULAR treated waters do not retain a detectable taste or odor for more than a few days to a maximum of one month. Taste and odor can be removed immediately by treatment with activated charcoal at a rate of 30 ppm to each 1 ppm CHEM FISH REGULAR remaining. (Note: As CHEM FISH REGULAR detoxifies, less charcoal is required.)

### 5. Restocking

Waters treated with this product detoxify within 3-5 days, depending on pH, temperature, water hardness, and depth. To determine if detoxification has occurred, place live boxes containing samples of fish to be stocked in the treated waters. More rapid detoxification can be accomplished by adding potassium permanganate at the same dosage in parts per million as rotenone was used for the reclamation treatment.

### Treatment of Streams Immediately Above Lakes and Ponds

The purpose of treating streams immediately above lakes and ponds is to improve the effectiveness of lake and pond treatments and not to control fish in streams per se. The term "immediately" means the first available site above the lake or pond where treatment is practical.

### 1. APPLICATION RATE AND CONCENTRATIONS OF Rotenone

#### Computation of Flow Rate for Streams:

Select a cross-section of the stream where the banks and bottom are relatively smooth and free of obstacles. Divide the surface width into 3 equal sections and determine the water depth and surface velocity at the center of each section. In slowly moving streams, determine the velocity by dropping a float attached to 5 feet of loose, monofilament fishing line. Measure the timer required for the float to move 5 feet. For fast-moving streams, use a longer distance. Take at least three readings at each pond. To calculate the flow rate from the information obtained above, use the following formula.

$$F = \frac{W_s \times D \times L \times C}{T}$$

where F = flow rate (cu. ft./sec.), W<sub>s</sub> = surface width (ft.), D = mean depth (ft.), L = mean distance traveled by float (ft.), C = constant (0.8 for rough bottoms and 0.9 for smooth bottoms), and T = mean time for float (sec.).

### 2. Total Amount of Product Needed for Treatment

FOR CONTROL OF ROUGH FISH. CHEM FISH REGULAR should be emulsified at the rate of 1 gallon in about 3-10 gallons of water and then applied to 6 acre-feet of water. Uniform dispersion of CHEM FISH REGULAR throughout the area is essential in order to obtain maximum kill. Maximum kill has been obtained when surface water temperatures have been about 70 degrees. Satisfactory control of fish, however, can also be obtained at lower temperatures.

### 3. Method of Application and Exposure Time

Dumping of liquid CHEM FISH REGULAR from the back of a boat often does not give satisfactory results. It is very important that CHEM FISH REGULAR is uniformly distributed throughout the water treated. Some of the common application methods used in ponds and small lakes are by garden sprayers, backyard pumps, boat bailers, garden hose syphon and gasoline-powered pumps. In using pumps on boat bailers, CHEM FISH REGULAR should be mixed with water before application, rather than apply it at full strength. A wash tub or garbage can make a convenient container for mixing. Liquid CHEM FISH REGULAR mixes readily with water. In some types of water, CHEM FISH REGULAR does not penetrate to the deeper parts of the pond (20 to 25 feet or more) when applied on or at the surface. The deeper parts are usually treated by pumping the mixture through a weighted garden hose with perforated section at the end.

### RE-ENTRY STATEMENT

Do not allow swimming in rotenone-treated water until the application has been completed and all pesticide has been thoroughly mixed into the water according to labeling instructions.

**BEST AVAILABLE COPY**