

Southern California Chemical Co., Inc.
c/o Linda Elliott
Pesticide Development Services
Route 1, Box 282
Mableton, GA 31632

OCT 9 1986

Gentlemen:

Subject: Amendment - Revised Labeling/Add Use on Rice, Wood
Copper Sulfate Pentahydrate Algicide/Herbicide
EPA Registration No. 11435-2
Your Submission Dated September 22, 1986

Labeling referred to above submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided you:

1. Submit/cite all data required for registration/reregistration under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Make the changes listed below before releasing the product for shipment bearing amended labeling:
 - a. Since you are not including instructions for fungicidal or sewer uses, references to these uses should appear separately (as to those for industrial applications), stating that "This product may also be used for formulating algaecides, fungicides and for other nonpesticidal uses."
 - b. Instructions for "Leafy and Sago Pond Weeds" should be moved to the "Irrigation Systems" section since they refer to application in these sites rather than static situations.
 - c. Under Environmental Hazards, after "oxygen levels" add:

. . . from decaying vegetation. Allow 1 to 2 weeks between treatments for oxygen levels to recover.

90557:Mountfort:MF-7:KENCO:10/2/86:10/14/86:eg:vo

CONCURRENCES

SYMBOL ▶								
SURNAME ▶								
DATE ▶								

d. Delete "Reentry" references since farmworker safety language is not appropriate for this product.

e. The correct Pesticide Disposal language for this product is:

Pesticide wastes are acutely hazardous. . . .

Refer to PR Notice 83-3. Also, add ". . . empty bag into application equipment and dispose of . . ." to the Container Disposal instructions.

f. Instructions for Wood Treatment did not include directions for preparing the copper sulfate solution, i.e., "Mix x copper sulfate in x gallons of water." Add appropriate figures for this use.

g. Modify the "If Swallowed" statement to read:


Drink promptly a large quantity of milk, egg white, gelatin solution, or if these are not available, large quantities of water. Avoid alcohol. Note to Physician: Probable mucosal damage may contraindicate use of gastric lavage.

3. Submit one (1) copy of final printed labeling, incorporating changes above.

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 bearing amended labeling constitutes acceptance of these conditions.

A stamped copy of labeling is enclosed for your records.

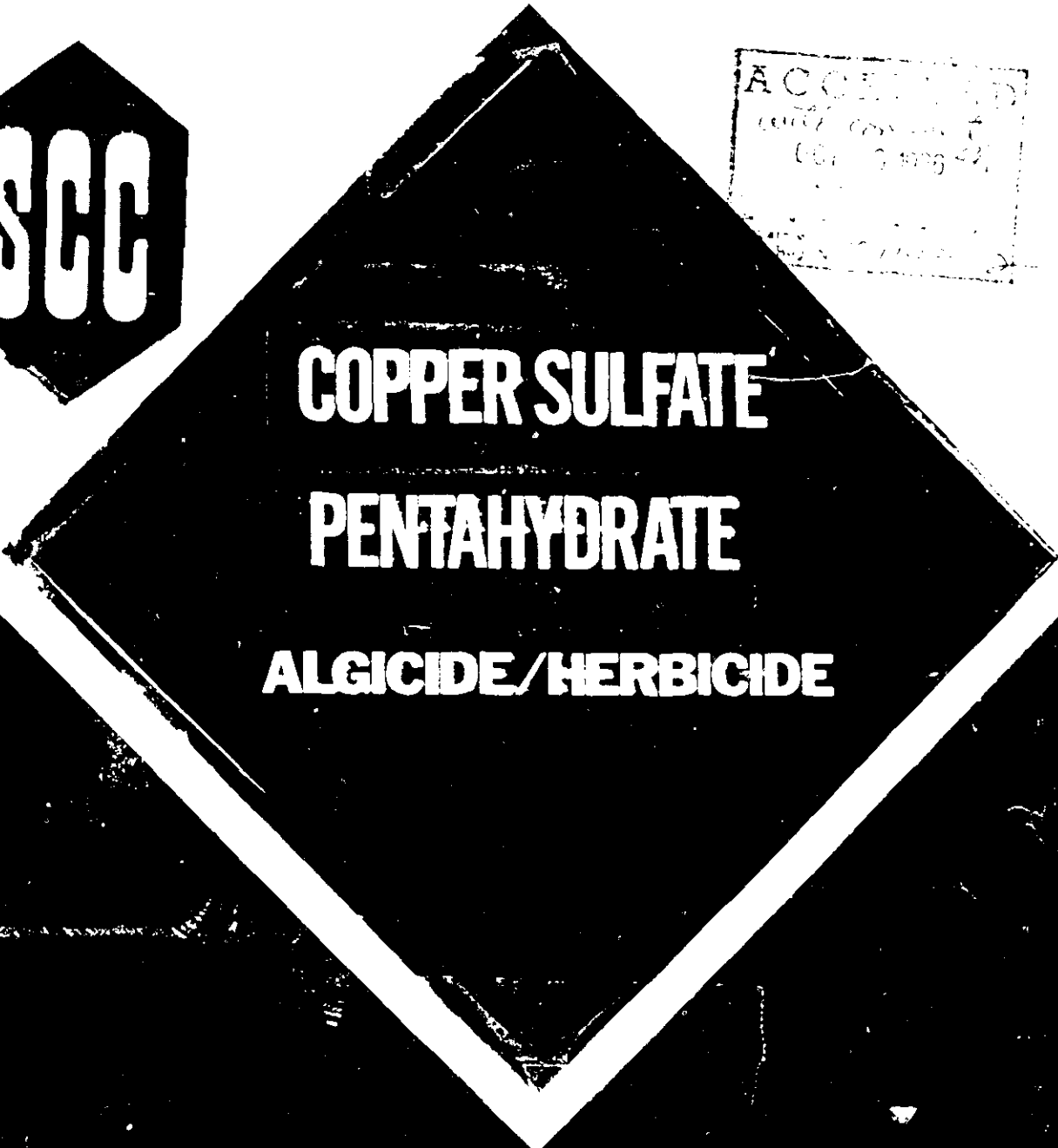
Sincerely yours,

Richard F. Mountfort 
Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (TS-767C)

Enclosure



ACCEPTED
10/17/77
10/17/77



**COPPER SULFATE
PENTAHYDRATE
ALGICIDE/HERBICIDE**

**KEEP OUT OF REACH OF CHILDREN
DANGER — PELIGRO
SEE BACK PANEL FOR STATEMENT
OF PRACTICAL TREATMENT**

ACTIVE INGREDIENTS

Copper Sulfate Pentahydrate.....	99%
Inert Ingredients.....	1%
Total.....	100%
<hr/>	
(Metallic Copper Equivalent.....)	(25.2%)

Net Weight 50 lbs. (22.7 Kg.)

EPA REG. NO. 11499-7
FEDERAL REGISTER

COPPER SULFATE PENTAHYDRATE - ALGICIDE/HERBICIDE

PRECAUTIONARY STATEMENTS
HAZARD TO HUMANS AND DOMESTIC ANIMALS

DANGER - PELIGRO

Causes severe eye and skin irritation. Harmful if absorbed through the skin or inhaled. May cause skin sensitization reactions in certain individuals. Avoid contact with the skin, eyes, or clothing. Avoid breathing dust. Protective clothing, including goggles, should be worn. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Precaucion al usuario: Si usted no lee ingles, no use este producto hasta que le etiqueta haya sido explicado ampliamente.

Statement of Practical Treatment

If in eyes: flush with plenty of water. Call a physician.
If on skin: wash with plenty of soap and water. Get medical attention.

If swallowed: call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

✓ Environmental Hazards

This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water except as directed under the specific instructions section. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites. Direct application of copper sulfate to water may cause a significant reduction in populations of aquatic invertebrates, plants and fish. Do not treat more than one-half of lake or pond at one time in order to avoid depletion of oxygen levels to recover.

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

Trout and other species of fish may be killed at application rates recommended on this label, especially in soft or acid waters. However, fish toxicity generally decreases when the hardness of water increases. Do not contaminate water by cleaning of equipment or disposal of wastes. Consult your State Fish and Game Agency before applying this product to public waters. Permits may be required before treating such waters.

Endangered Species Restrictions

It is a violation of Federal laws to use any pesticide in a matter that results in the death of an endangered species or adverse modification of their habitat.

The use of this product may pose a hazard to certain Federally designated endangered species known to occur in specific areas within the following counties.

STATE	Species	Bulletin No.	COUNTY
CALIFORNIA	Solano Grass	EPA/ES-85-13	Solano
TENNESSEE	Slackwater Darter	EPA/ES-85-04	Lawrence Wayne Hancock
	Freshwater Mussels	EPA/ES-85-07	Claiborne Hawkins Sullivan
ALABAMA	Slackwater Darter	EPA/ES-85-05	Lauderdale Limestone Madison
VIRGINIA	Freshwater Mussels	EPA/ES-85-06	Grayson Smyth Scott Lee Washington

Before using this product in the above counties you must obtain the EPA Bulletin specific to your area. This bulletin identifies areas within these counties where the use of this pesticide is prohibited, unless specified otherwise. The EPA Bulletin is available from either your County Agricultural Extension Agent, the Endangered Species Specialist in your State Wildlife Agency headquarters, or the appropriate Regional Office of the U.S. Fish and Wildlife Service. This Bulletin must be reviewed prior to pesticide use.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste dump facility.

Container Disposal: Completely empty bag in a sanitary landfill, by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY STATEMENT

Product warranted to meet label specifications. CP CHEMICALS, INC. guarantee shall be limited to the terms of the label, and subject thereto the buyer assumes any risk to persons or property arising out of use of handling not in accordance with label directions and accepts the product on these conditions. Nothing hereon should be construed as authorization to practice any unexpired patent.

GENERAL INSTRUCTIONS

Copper Sulfate Pentahydrate can be used to control algae in irrigation systems, impounded waters, lakes, ponds and reservoirs. Application can be made by applying as a spray solution in water or as a granular addition to the water provided directions given under "specific instructions" are followed. Copper Sulfate Pentahydrate, when mixed with lime to form a Bordeaux mixture, can be used as a fungicide to control plant diseases. Other uses include sewer treatment and as a component in a wood preservative formulation. The specific instructions given on this label are based on general applications and circumstances.

DIRECTIONS FOR USE

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

RE-ENTRY STATEMENT

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information. DANGER - Area treated with Copper Sulfate Pentahydrate on (date of application). Do not enter treated area without protective clothing until spray has dried. In case of accidental exposure, wash all exposed skin areas with plenty of soap and water. Because certain states may require more restrictive re-entry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

SPECIFIC INSTRUCTIONS

STATIC OR MINIMAL FLOW SITUATIONS

Impounded Waters, Reservoirs, Lakes and Ponds: Accurately determine the number of acre feet of water to be treated. An acre foot of water is equal to 1 acre of water 1 foot deep, 326,000 gallons, or 2,720,000 lbs. of water.

For control of filamentous and planktonic algae, an average application would be 1.36 lbs. Copper Sulfate Pentahydrate per acre-foot of water. Dilute the recommended amount with at least 20 parts of water and apply the mixture as a uniform surface spray. Break up floating mats prior to application. Most effective algae control is obtained under calm, sunny conditions with a water temperature above 60° F. Two to 3 treatments may be needed in a season. Copper Sulfate Pentahydrate treatments should begin with the first signs of algae growth.

For control of bottom-attached algae (Chara and Nitella) use 2.27 lbs. of Copper Sulfate Pentahydrate per acre-foot of water to be treated. Dilute that recommended amount of Copper Sulfate Pentahydrate in 4 gallons of water and apply as a uniform surface spray.

Leafy and Sago Pond Weed: Using a continuous feeder, apply 1.6 to 2.4 pounds per cubic foot per second per day. For maximum effectiveness, it is necessary to begin addition when water is first turned into the system or ditch to be treated and to continue without interruption as long as the system is operating. The effectiveness of copper sulfate decreases with increased alkalinity especially when the bicarbonate alkalinity exceeds 150 PPM. If inadequate control of pond weeds is observed, it may be necessary to treat the ditch with an approved herbicide or by mechanical means. In either case, the addition of copper sulfate should be resumed as quickly as possible.

For Potable/Culinary Water Systems, the amount of Copper Sulfate Pentahydrate applied should not exceed 4 ppm, which is an equivalent copper concentration of 1 ppm in the treated water.

FLOWING WATER SITUATIONS

Irrigation/Potable Water Conveyance Systems: Accurately determine the flow rate of water in Cubic Feet per Second (C.F.S.) or Gallons per minute (Gal./Min.). One C.F.S. equals 450 Gal./Min. Apply 1/4 to 1/2 lb. of Copper Sulfate Pentahydrate per hour per C.F.S. by a gravity feed or similar drip system and maintain this drip rate for 45 minutes.

Make the application at a point of turbulence in the canal for good dispersion of the chemical. The distance of control depends upon the density of algae growth. For this reason, the application should be made as soon as the algae starts

interfering noticeably with the flow of water.

TO CONTROL ALGAE AND WEEDS IN IRRIGATION SYSTEM BY "SLUG" METHOD OF ADDITION - Add 1/2 to 3 lbs. for each C.F.S. of flow, repeat every two weeks. A pile is required for every 50 to 30 miles of length depending on alkalinity of the water.

TO CONTROL PESTS IN ARTIFICIALLY IMPOUNDED WATERS (e.g., farm ponds) - On a calm, sunny afternoon (with water temperature above 60° F) dissolve Copper Sulfate Pentahydrate and distribute over entire pond, pools and tributaries following distribution methods for algae control. To eliminate leeches, a suggested concentration of 5 ppm in moderately hard water is usually sufficient. To kill parasites causing "swimmers itch" it is necessary to kill the various species of host snails, treating the entire pond (as directed above) with 2 to 5 ppm Copper Sulfate Pentahydrate. In very hard waters (alkalinity more than 200 ppm) Copper Sulfate Pentahydrate concentrations as high as 10 ppm may be needed. At these Copper Sulfate Pentahydrate dosages, it is best to keep swimmers and livestock out of the pond for 5 days following treatment; doubling this period in very soft waters. See also "fish caution." Copper Sulfate Pentahydrate crystals or solutions must be kept out of eyes, nose and mouth (see Danger above).

RICE FIELDS

Algae in Rice Fields: Apply 10 - 15 pounds copper sulfate per acre to the water surface as either a surface spray in water or crystals. Application should be made when the algae has formed on the soil surface but prior to rising to the water surface. Apply higher rate, i.e. 15 pounds, in water of six inches or greater.

Tadpole shrimp in rice fields: Apply 5 - 10 pounds of copper sulfate crystals per acre to the flooded field at any time the pest appears between planting time and until the seedlings are rooted and have emerged through the water surface. The lower Rate should be used when the water depth and flow rate are minimal and the higher rate should be used when the water depth and flow are at a maximum.

WOOD TREATMENT

Green Peeled Posts: To prevent fungus decay and/or rot, prepare a solution of 18.0 pounds of sodium chromate in each 26 gallons of water to be used. Soak the peeled green posts, butt end down first in the copper sulfate solution for 3 days, then butt end down in the sodium chromate solution for 2 days, and finally turn the posts upside down in the sodium chromate solution for 1 additional day. Remove and rinse the posts with clear water.

Add instructions for Copper Sulfate Pentahydrate (see page 10)

INDUSTRIAL NON-PESTICIDE APPLICATIONS

A "sweetner" in petroleum refinery sulfur-removal processes: a raw material supplying copper for chemical reagents and starting material for other copper salts: a froth flotation activator for zinc, lead and uranium ores: a battery electrolyte.

A color stabilizer and mordant in dyes and azo dye manufacture: an ingredient in color pigment formulations.

In wire plating, bright copper electroplating, and in the manufacture of electronics.

As a trace component for correcting copper-deficient soils.

A micronutrient additive for fertilizers.

As a fire log coloring agent.

A trace component for correcting Cu deficient animal feeds.