SHAUGHNESSEY NO. _____ REVIEW NO. _____

EEB BRANCH REVIEW

DATE: IN 6-3-83 OUT AUG 09 1983

FILE OR REG. NO. 476-EUP-RNG, 476-EUP-RNE

PETITION OR EXP. PERMIT NO. _____

DATE OF SUBMISSION 3-18-83

DATE RECEIVED BY HED 6-1-83

RD REQUESTED COMPLETION DATE 8-22-83

EEB ESTIMATED COMPLETION DATE 8-15-83

RD ACTION CODE/TYPE OF REVIEW 700/Eup

TYPE PRODUCT(S): I, D, H, F, N, R, S Herbicides

DATA ACCESSION NO(S). _____

PRODUCT MANAGER NO. R. Taylor (25)

PRODUCT NAME(S) SC-0224 Concentrate: 476-EUP-RNE

SC-0224 4LC: 476-EUP-RNG

COMPANY NAME Stauffer Chemical Company

SUBMISSION PURPOSE Proposed EUP's for use in non-crop areas such as airports, cemeteries, ditch banks, etc.

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.

100.0 Section 5 Application

SC-0224 4-LC and SC-0224 are formulations of a nonselective foliar systemic herbicide that is to be used on non-crop areas (cemeteries, fence rows, road ways, rights of way, industrial areas, irrigation ditches during noncrop season, forest planting sites, etc.)

100.1 Application Rates/Methods/Directions

Under the proposed Expermimental Use Permit (EUP), C-0224 4-LC and SC-0224 are to be applied by spray, wiper and hand directed spot application. See accompaning labels and directions.

100.2.3 Precautionary Labeling

Do not apply to any body or water. Do not contaminate water by cleaning of equipment or disposal of wastes.

100.3 Target Organisms

Control of perennial weeds (Refer to accompaning label).

100.4 Objectives of Proposed EUP Program

1. Obtain sufficient efficacy data to register the product

2. Obtain product formulation information, such as stability under field conditions, foaming and emulsification with varing hardnesses of water.

3. Obtain product performance information on various commerical spray and wick application equipment under field conditions.

100.6 4. Evaluate the product performance to determine: specific rates for specific weeds; as well as whether commercially significant regrowth of weeds occur if the entire plant parts aren't controlled, and if multiple applications are necessary for control of some weeds.

100.6.1 Duration/Date/Amount Shipped

1. Proposed period of shipment: September 1, 1983 to September 1, 1985

2. Permission is requested for 2,500 gallons or; 10,000 lbs active equivaldent (SC-0224 4-LC)

3. Permission is requested for 725 gallons or 4000 lbs. active equivalent (SC-0224)

100.6.2 Geograhical Distribution

Stauffer proposes that SC-0224 4-LC be tested in 41 states (Maximum of 20,000 acres). Refer to List of State Distribution and acreage.

101.0 Physical and Chemical Properties

Data not reviewed by EAB.

103.2 Toxicology Properties

103.2 Minimum Requirements

103.2.1 Avian Acute Oral LD50

Organism	Test results	Compound	Acceptability
Mallard duck	LD_{50} = 950 (766-1178) mg/kg	tech.	core

103.2.2 Avian Dietary LC50

Organism	Test results	Compound	Acceptability
Mallard duck	LC_{50} >5000 ppm	tech.	core
Bobwhite quail	LC_{50} >5000 ppm	tech.	core

103.2.3 Fish Acute 96h LC50

Organism	Test results	Compound	Acceptability
Rainbow trout	LC_{50} = 1800 (1100-3000) mg/l	tech.	core
Bluegill sunfish	LC_{50} = 3500 (2800-440) mg/l	tech.	core

103.2.4 Aquatic Invertebrate LC50

Organism	Test results	Compound	Acceptability
Daphnia magna	LC_{50} = 71 (49-130) mg/l	tech	core

104.0 Hazard Assessment

SC-0224 is a nonselective foliar systemic herbicide for weed control in non-crop areas. This is a new product and has not been previously registered. The preposed EUP calls for an application of SC-0224 equivalent to 2 lb ai/A.

104.1 Likelihood of Adverse Effects to Non-Target Organisms

Toxicological findings suggest that SC-0224 is slightly toxic to birds (mallard duck LD_{50} = 950 mg/kg), practically non-toxic to fish (trout LC_{50} = 1800 mg/l) and slightly toxic to aquatic invertebrates (Daphnia LC_{50} = 71 mg/L).

SC-0224 is to be applied at the maximum rate of 2 lbs ai/A. The expected residue values from this application are listed in table 1.

Table 1. Maximum Expected Residues on Terrestrial Substrates (ppm).

Short Rangegrass	500
Long Grass	210
Leaves	250
Insects	130
tap 0.1 inch soil	44.1
direct application to water (top 0.5 inches)	1.5

These expected residues suggest that SC-0224 is acutely non-toxic to birds and aquatic organisms. However, the Ecological Effects Branch (EEB) can not complete a hazard assessment until data pertaining to SC-0224's physical and chemical properties are evaluated by the Ecological Assessment Branch (EAB).

Exposure

104.2 Adequacy of Toxicity Data

The registrant has met the requirements for acute toxicity testing. However, EEB may require chronic testing after reviewing EAB's conclusions regarding the physical and chemical properties of SC-0224.

104.3 Endangered Species

The toxicity of SC-0224 to a wide selection of plants suggests that endangered plants could be impacted if found in the treatment area.

The use of this product should be cleared with the respective state or Federal Office of Endangered Species to determine if endangered plants are located in the treatment area.

105.0 Conclusions

The Ecological Effects Branch (EEB) has completed the proposed EUP review for the use of SC-0224 on non-crop areas. Based upon the available data, EEB concludes that the proposed use provides for no significant exposure to nontarget fish and wildlife. However, the registrant should be aware of the possible danger to endangered plants and must contact the Office of Endangered Species prior to spraying to determine whether the treatment areas coincide with endangered plant habitat.

Labeling:

"Do not apply directly to water. Do not contaminate water by cleaning equipment or disposal of wastes."

Michel Rexrode 8/9/83
Michel Rexrode
Fishery Biologist
EEB/HED

Harry Craven 8/9/83
Harry Craven
Section #4
EEB/HED

Clayton Bushong 8/9/83
Clayton Bushong
Chief
EEB/HED