

112701  
SHAUGHNESSEY NO.

13  
REVIEW NO.

EEB BRANCH REVIEW

DATE: IN 8/10/81 OUT 10/30/81

FILE OR REG. NO. \_\_\_\_\_

PETITION OR EXP. PERMIT NO. 10182-EUP-21

DATE OF SUBMISSION 8/6/81

DATE RECEIVED BY HED 8/7/81

RD REQUESTED COMPLETION DATE 11/7/81

EEB ESTIMATED COMPLETION DATE \_\_\_\_\_

RD ACTION CODE/TYPE OR REVIEW 350/

TYPE PRODUCTS(S): I, D, H, F, N, R, S Rodenticide

DATA ACCESSION NO(S). \_\_\_\_\_

PRODUCT MANAGER NO. W. Miller (16)

PRODUCT NAME(S) Valid

COMPANY NAME ICI Americas, Inc.

SUBMISSION PURPOSE \_\_\_\_\_

EUP Application for Evaluation of Secondary Hazards to

Screech Owls and Great Horned Owls

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

112701 Brodifacoum 0.001

## **Brodifacoum**

### **100.0    Pesticidal Use**

Valid is an anticoagulant rodenticide with single dose properties containing brodifacoum for use on orchard mice of the genus Microtus.

### **100.1    Application methods/directions/Rates** **Hand (Spot) Baiting**

For control of voles, apply up to 10 lb/A per application. Do not exceed 20 lb/A per season. Apply 1 to 2 place packs in burrows or active runs. Based on 40 trees/A apply 1 place pack per tree for 5-16/A rate.

### **Broadcast Baiting**

Hand or machine broadcast bait evenly and penetrate vegetative cover. Do not broadcast over bare ground. Apply at 10-16/A or higher. If vole activity remains high at 2 weeks after treatment, make a second applicaiton. Do not exceed 20 lb/A per season.

Apply VOLID for control for Microtus species such as pine voles and meadow voles during the dormant season only. Do not make applications until all fruits are harvested and harvestable drops have been removed. Removal of culls from orchard before treatment will help eliminate an alternate food supply. Consult your ICI Technical Representatives for specific methods applicable to your local area and regarding data requirements for ICI.

Apply bait in active areas near trees or in active runways or burrows. In baiting, do not disturb existing vole burrows. It is recommended that all hand bait applications be individually covered with boards, shingles, or other covers.

### **100.2    Precautionary Labeling**

#### **ENVIRONMENTAL HAZARD:**

This product may be toxic to fish and wildlife. Keep out of lakes, ponds, or streams. Do not contaminate water by cleaning of equipment or disposal of wastes. Baits must be placed in areas not accessible to children, pets, wildlife and domestic animals.

Do not graze animals in treated orchards. Do not use hay cut from treated areas for feed or bedding.

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### 100.3 Proposed EUP Program

#### 100.3.1 Objectives

1. ICI Americas has contracted with USFWS to conduct a definitive test in regards to secondary hazards to raptors when brodifacoum bait is broadcast in orchards for the control of voles.
2. The general efficacy of VOLID rodenticide against Microtus will be determined through evaluations conducted in different geographic regions of the country on several Microtus species of regional pest importance.
3. Determination of optimum application methods for the different regions and baiting schedules during the dormant season will be determined. Rate and frequency of application will be determined.
4. Regional climatic variations and physical site variations will be determined so that they can be used to evaluate efficacy data differences.
5. Determination of suitability and comparability of Evaluation Methods for orchard efficacy.

The above is merely a summary of detailed program. Additional information that should be gathered will be stated in Sec. 107.

#### 100.3.2 Duration/Date/Amount Shipped

##### 100.3.2.1 Virginia Secondary Hazard Study

This reviewer proposes a one year plan starting Nov. 1, 1981 and ending October 31, 1982. A total of 10,000 pounds of formulated product is requested to treat a total of 500 acres, in the contiguous counties of Frederick, Clark and Warren counties, Virginia. This constitutes 10 pounds of Active Ingredient.

##### 100.3.2.2 Nationwide EUP

It is proposed that the permit be issued for October 1, 1981 and last until spring 1982. We propose Nov. 1, 1981 to May 31, 1982. A total of 67,500 lb of formulated product (20,000 pounds are for bait packs) is requested to treat 3,375 acres. See attached table for specific states and acreages.

#### 100.3.3 Target Pest

##### 100.3.3.1 Virginia Study

Microtus spp.

### 100.3.3.2 Nationwide EUP

<u>Common Name</u>	<u>Scientific Name</u>	<u>Region of Occurance</u>
Pine Vole	<u>M. pinetorum</u>	NE, SE, NW
Meadow Vole	<u>M. pennsylvanicus</u>	NE, SE, NW, W
Yellow-nose Vole	<u>M. chrotorrhinus</u>	NE, SE
Prairie Vole	<u>M. ochrogaster</u>	NW, W
California Vole	<u>M. californicus</u>	W
Long-tail Vole	<u>M. longicaudus</u>	W
Mountain Vole	<u>M. montanus</u>	W
Richardson's Vole	<u>M. richardsoni</u>	W
Oregon Vole	<u>M. oregoni</u>	W
Townsend's Vole	<u>M. townsendi</u>	W

101.0 - 101.6 See Review of Turner 9/5/78

### 102.0 Behavior in Environment

Environmental Fate Branch is working on the data they recieved with proposed completion date of 10/30/81.

### 103.0 Toxicological Properties

See previous reviews.

### 104 Hazard Assessment

See Turner review of 9/5/78.

### 107.0. Conclusions

107.1 & .2 See previous reviews

### 107.3 Data Request

Numerous data questions have arisen as a result of submission of a multitude of studies in regards to Talon® and the Weatherbloks®. At this time EEB reserves the right to request further data in regards to brodifacoum. These data request will be forth coming in the Talon® and Weatherbloks® review.

### 107.4 Recommendations

#### 107.4.1 Virginia secondary Hazard Study

1) While evaluation of secondary hazards to screech owl (Otus asio) and Great Horned Owls (Bubo virginianus) are proposed, all raptors in the area should be radio tagged. Kestrels are known to be in the area.

- 2) The registrant proposed by labeling a maximum application rate of 10 pounds per acre, yet in G3, subpart 3 states 5-15 pounds in application rate. The registrant should state in their final report the number and type of applications and the amount applied in each area per application.
- 3) If endangered bald eagles or peregrine falcons are determined to be within feeding distance of this treatment site, the study should cease immediately. All dead and dying mammals and birds that have been using the area should be collected and disposed of.
- 4) No hunting of game birds or mammals should be allowed in the treatment area and warning signs should be displayed cautioning hunter of possible contamination of game species.
- 5) Local Game and Fish authorities should be advised as to the study site and also consulted on possible locations of endangered species in the area.
- 6) Local medical facilities and poison control centers should be advised on the antidote and made aware of potential problems associated with game animals taken outside of the controlled study plot as a secondary hazard to humans may exist.
- 7) Every possible effort should be made to collect dead birds and mammals for analysis. If possible, samples should be collected from deer harvested in the area for analysis as well as any other game animals.
- 8) Every effort should be made to radio-tag enough birds of prey, so that tagged birds are feeding in the treated study area. (The previous study was questionable as to whether birds were feeding in treated areas.).

#### 107.4.2 Nationwide EUP


- 1) Pre-and post bird surveys should be made, especially in regards to raptors.
- 2) If any of the following endangered species are in the area of the study the treatment should not occur: Peregrine falcon, Bald eagle, San Joaquin kit fox, Northern kit fox, Black footed ferret, Masked bobwhite quail, Delmarva peninsula fox squirrel, Columbian white-tailed deer, Grizzly Bear, Timber wolf, Mexican grey wolf.

In addition to this list, the question should be asked to each person contacted "Are there any endangered or threatened species that might be in the general area?"

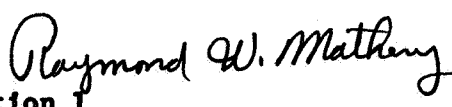
Local Game and Fish personnel or Federal Endangered species personnel should be contacted before treatment to determine that these endangered species do not occur in the treatment areas. The names, addresses, and phone numbers of the personnel contacted are to be submitted with the results of the EUP.

- 3) The registrant proposed by labeling a maximum application rate of 10 pounds per acre, yet in G3, subpart 3 states 5-15 pounds in application rate. The registrant should state in their final report the number and type of applications and the amount applied in each area per application.
- 4) No hunting of game birds or mammals should be allowed in the treatment area and warning signs should be displayed cautioning hunters of possible contamination of game species.
- 5) Local Game and Fish authorities should be advised as to the study site and also consulted on possible location of endangered species in the area.
- 6) Local medical facilities and poison control centers should be advised on the antidote and made aware of potential problems associate with game animals taken outside of the controlled study plot as a secondary hazard to humans may exist.
- 7) Every possible effort should be made to collect dead birds and mammals for analysis. If possible samples should be collected from deer harvested in the area for analysis as well as any other game animals.
- 8) Any scavenging activities noted in the area, particularly vultures and ravens, should be checked out, and the carrion they are consuming should be sampled for brodifacoum residues.

EEBr will concur with this EUP providing the registrant agrees in writing with the restrictions stated above.

  
Russel T. Farringer III  
Wildlife Biologist  
Ecological Effects Branch/HED

Date: 11/02/81

Raymond Matheny   
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Date: 11/2/81

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Date: