

US EPA ARCHIVE DOCUMENT

244432  
RECORD NO.

125401  
SHAUGHNESSEY NO.

EEB REVIEW

DATE: IN 06-09-89 OUT JUN 13 1989

FILE OR REG. NO. 89-LA-05

PETITION OR EXP. NO. \_\_\_\_\_

DATE OF SUBMISSION 04-25-89

DATE RECEIVED BY EFED 06-09-89

RD REQUESTED COMPLETION DATE 06-24-89

EEB ESTIMATED COMPLETION DATE 06-24-89

RD ACTION CODE/TYPE OF REVIEW 510

TYPE PRODUCT Herbicide

DATA ACCESSION NOS. \_\_\_\_\_

PRODUCT MANAGER NO. D. Stubbs (41)

PRODUCT NAME(S) Command 4EC

COMPANY NAME Louisiana Dept. of Agriculture and Forestry

SUBMISSION PURPOSE Proposed Section 18 for use on  
sweet potatoes

SHAUGHNESSEY NO.	CHEMICAL & FORMULATION	%AI
<u>125401</u>	<u>Command herbicide</u>	<u>47.1%</u>
_____	_____	_____
_____	_____	_____

\* \* 892

EEB BRANCH REVIEW

Command Herbicide (Clomazone)

100 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

The State of Louisiana is requesting an emergency exemption (Section 18) for the use of Command herbicide to control broadleaf weeds and grasses in sweet potatoes. No new data were submitted with this request.

100.2 Formulation Information

Command 4EC

ACTIVE INGREDIENT:

2-(2-Chlorophenyl) methyl-4,4-dimethyl-3-isoxazolidinone . . . . .	47.1%
INERT INGREDIENTS . . . . .	52.9%

This product contains 4 lb ai per gallon.

100.3 Application Methods, Directions, Rates

A. Timing and Method of Application

Application is to be made with ground equipment. Command 4EC should be applied at the rate of 2 to 3 pints (1.0 to 1.5 lb ai) per acre. All restrictions and precautions on the EPA registered label must be strictly adhered to.

Command will be applied preemergence (not soil incorporated) under this exemption.

100.4 Target Organisms

The following annual grasses and broadleaf weeds are listed in the submission package:

Large crabgrass, broadleaf signalgrass, cocklebur, teaweed, velvetleaf, and goosegrass.

100.5 Precautionary Labeling (from Command label)

APPLICATION PRECAUTIONS

Do not apply Command 4EC within 1000 feet of the areas listed below:

893

Towns and subdivisions  
 Commercial vegetable production  
 Commercial fruit production  
 Commercial nurseries  
 Commercial greenhouses

Off-site movement of spray drift or vapors of Command Herbicide can cause foliar whitening or yellowing of some plants. Prior to making applications, read and strictly follow all precautions and application instructions on this label.

Product label (see attached copy) contains numerous additional precautions, as well as a list of susceptible nontarget plants.

## 101 Hazard Assessment

### 101.1 Discussion

The state of Louisiana is requesting an emergency exemption for the use of Command herbicide to control annual grasses and broadleaf weeds in sweet potatoes. Proposed maximum application rate is 3 pt (1.5 lb ai) per acre, with one application allowed. Exemption period is May 15 - July 15, 1989. This request is for use on 10,000 acres of sweet potatoes in the following parishes: Avoyelles, Bienville, Evangeline, Franklin, Grant, Morehouse, St. Landry, St. Martin, West Carroll, and West Feliciana.

Command herbicide is currently registered for use on soybeans, which are grown on approximately 3 million acres in Louisiana. (1982 Census of Agriculture).

### 101.2 Likelihood of Adverse Effects on Nontarget Organisms

#### Terrestrial

Data from previous EEB reviews indicate that Command is practically nontoxic to birds on both an acute oral basis and a dietary basis (bobwhite quail and mallard LD50's > 2510 mg/kg, LC50's > 5620 ppm). The available data on rats suggest that the chemical also has a low mammalian toxicity. Thus, significant acute hazards to nontarget terrestrial organisms are not anticipated from use under the proposed exemption.

Data from hydrolysis, photolysis, and soil metabolism studies indicate that Command herbicide may persist in the environment. However, chronic hazards to avian and mammalian species are unlikely, as the probability of exposure is low, acreage to be treated is limited, and the herbicide will only be applied once per season.

No data are available on effects on pollinators, but in view of the low exposure potential of the proposed use, Command would not be

897

3

expected to impact honey bees.

### Aquatic

Data from previous EEB reviews indicate that Command is slightly toxic to freshwater fish, with reported LC50's of 19 mg/L for rainbow trout and 34 mg/L for bluegill sunfish. A daphnid study indicated that Command is moderately toxic to aquatic invertebrates (LC50 = 5.2 mg/L). And the MATC for Command technical to Daphnia was determined to be between 2.20 and 4.38 mg/L.

The Exposure Assessment Branch determined the aquatic EEC for the soybean use to be 0.05 ppm, based on one application at 1.0 lb ai per acre. For the purposes of this review, EEB will assume a similar scenario for the proposed use. At the maximum rate (1.5 lb ai per acre), calculated aquatic EEC would be 0.075 ppm. Based on these figures, EEB has determined that no acute hazards to populations of freshwater aquatic organisms are anticipated from use under the proposed exemption.

As noted above, environmental fate data indicate a potential for Command to persist in the environment. Under the conditions of the proposed Sec. 18, however, (single application, limited acreage), hazard to aquatic organisms is not expected.

### Nontarget Plants

The Agency record on Command herbicide contains numerous reported incidents of adverse effects on nontarget plants. This potential to impact nontarget plants is reflected in the number of prominent warnings and precautions on the product label.

Data from a number of tests are required prior to registration of this product for any new agricultural use. See EEB review by Vaughan (EUP, field corn, Oct 31, 1988) for a listing of the data requirements. EEB will defer development of a final hazard assessment on nontarget plants, pending receipt of data from these tests. However, it may be concluded that application as proposed (without soil incorporation) does represent a potential hazard to nontarget plants.

### 101.3 Endangered Species Considerations

On the basis of the above discussion, the only endangered organisms of concern would be plants. Information on file indicates that no endangered plant species are listed for the Louisiana counties subject to application under this exemption. Thus, hazard to endangered species of plants is not anticipated under the proposed exemption.

101.4 Adequacy of Toxicity Data

Available data are sufficient to assess hazard under the proposed Section 18. Note that there are still a number of outstanding data gaps for data required to support a full registration on any agricultural crop.

103 Conclusions

EEB has reviewed the proposed emergency exemption for Command herbicide on sweet potatoes in Louisiana. Based on the substantial volume of ecological effects data submitted by the registrant, EEB concludes that the proposed use presents minimal hazard to nontarget organisms other than plants. EEB is unable to complete a risk assessment for plants because data from nontarget plant studies and drift studies are lacking. It should be noted, however, that use as proposed (without soil incorporation) does represent a potential hazard to nontarget plants.

Use under the proposed exemption will not present a hazard to any endangered species in Louisiana.

*Allen W. Vaughan* 6.12.89  
Allen W. Vaughan, Entomologist  
Ecological Effects Branch  
EFED (H7507C)

*Norman J. Cook* 6.12.89  
Norman J. Cook, Supervisory Biologist  
Ecological Effects Branch  
EFED (H7507C)

*James W. Akerman* 6/13/89  
James W. Akerman, Chief  
Ecological Effects Branch  
EFED (H7507C)

Command ecological effects review

---

Page \_\_\_\_\_ is not included in this copy.

Pages 6 through 10 are not included in this copy.

---

The material not included contains the following type of information:

- Identity of product inert ingredients
  - Identity of product impurities
  - Description of the product manufacturing process
  - Description of product quality control procedures
  - Identity of the source of product ingredients
  - Sales or other commercial/financial information
  - A draft product label
  - The product confidential statement of formula
  - Information about a pending registration action
  - FIFRA registration data
  - The document is a duplicate of page(s) \_\_\_\_\_
  - The document is not responsive to the request
- 

- The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.
-