To: Mountfort
Product Manager #23
Registration Division (TS-767)

From: Carolyn K. Offutt, Chief
Environmental Processes and Guidelines Section
Exposure Assessment Branch, HED (TS-769)

Attached please find the EAB review of...

Reg./File No.: 1471-70

Chemical: Trifluralin

Type Product: Herbicide

Product Name: TREFLAN

Company Name: Elanco

Submission Purpose: progress report - field monitoring study

ZBB Code: 3(c)(5)  ACTION CODE: 436
Date In: 8/8/83  EFB # 3478
Date Completed: 8/31/83  TAIS (level II) Days

Deferrals To:

X Ecological Effects Branch

Residue Chemistry Branch

Toxicology Branch
Trifluralin

I. Introduction:

Elanco is submitting an eleven-month report on an ecological effects field monitoring study with trifluralin. This report and study is in response to the Trifluralin Data Call-in Notice.

II. Chemical/Physical Data:

Trade Name: TREFLAN 4 MTF
Common Name: Trifluralin
Structure:

III. Discussion:

This eleven-month report provides information on the selection of the sites, the application of the pesticide, and the initial population sampling of the ponds.

The selection and characterization of the watersheds was conducted by Dr. David B. Beasley of Purdue University, West Lafayette, IN. The watersheds are numbers 51 and 56. See attached list of prioritized sites. These two sites met all the specifications set by the Data Call-In and the approved protocol:

Slopes 5 to 10°C; max. 10-30%
Drainage into a catchment pond; basin: pond ratio 10:1 to 25:1

Similar geological, hydrological, and biological characteristics
Treatable site - at least 60% of total basin
Pond with year-round fish population

Site 51 is 2 mi E of Trafalgar IN and 0.75 m N of Indiana route 252. Site 56 is 0.5 mi N of Indiana route 252 and 0.75 mi W of U.S. route 31. Maps of the two sites are attached.
### General Description of the Study Sites

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<tr>
<th></th>
<th>Site No. 51</th>
<th>Site No. 56</th>
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<tr>
<td>Watershed size</td>
<td>39 acres</td>
<td>63 acres</td>
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<tr>
<td>Treated area</td>
<td>81%</td>
<td>60%</td>
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<td>Pond size</td>
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<td>Neneveh</td>
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<td>Carl Sleightter</td>
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The information sheets on pesticide application provided in the report are appended to this report.

### IV. Conclusion

The selection and characterization of the sites and application of the pesticide appears to satisfy the needs of Exposure Assessment Branch to monitor trifluralin runoff into ponds. We defer to Ecological Effects Branch on the animal population studies.

Robert W. Holst, Ph.D.
Exposure Assessment Branch
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*Watersheds 7-8 and 9-10 are nested.

**These values arrived at through simulation study (a more thorough characterization).
T4N PROJECT

TREFLAN 4MTF Application on the Cark Sleighter Farm

TREFLAN 4MTF applied June 8, 1983
31 acres treated
TREFLAN applied in tank mix combination with Lexone 4L
TREFLAN rate 1 lb a.i./A
Lexone rate 0.5 lb. a.i./A
Application Technique: Big A with 55 ft. boom width
Nozzles: TKSS 20 flood type, 60 inch spacing on the boom
Application Speed: 15 mph
Carrier: Water at 20 gallons/acre
Soil Texture: Variable from medium to fine
Incorporation Device: First pass with an Allis Chalmers 26 ft. wide field cultivator with 3 rows of C shanks and overlapping shovels with a Kasco harrow pulled in tandem with the field cultivator. Incorporation equipment pulled at 6 mph, operated at 3 to 4 inches deep.
Second pass with an Allis Chalmers 20 ft. wide tandem disc equipped with 24 inch diameter blades on a 9 inch spacing pulled at 6 mph, operated 4 inches deep.
Planter: John Deere Max-Emerge 7000; 30 inch row spacing with a planting depth of 1 to 1-1/4 inches seeding 50 lbs/A.
Seed Source: Pioneer 3481 planted June 8, 1983
Weather at Application: Clear, 75°F, wind, west-northwest at 3-7 mph
T4N PROJECT

TREFLAN 4MTF Application On The Jeff Ward Farm

TREFLAN 4MTF applied on June 9, 1983
Approximately 30 acres treated
TREFLAN applied in tank mix combination with Lexone 4L
TREFLAN rate 1 lb a.i./A
Lexone rate 0.5 lb. a.i./A
Application Technique: Big A with 55 ft. boom width
Nozzles: TKSS 20 flood type, 60 inch spacing on the boom
Application Speed: 15 mph
Carrier: Water at 20 gallon/acre
Soil Texture: Variable from medium to fine
Incorporation Device: First pass with an International Harvester 21 ft. tandem disc equipped with 20 inch blades on a 9 in spacing operated at a speed of 5-1/2 mph at a depth of 3-4 inches.
Second pass with a Midwest spring tooth harrow operated at 6 mph, 2-3 inch depth
Planter: International Harvester Cyclo Airflow planter with 30 inch row spacing planting to a depth of 1-1/4 inches. Seeding rate of 50 lbs/A
Seed Source: Pioneer 3981 planted June 10, 1983
Weather at Application: Clear, 85°F, wind calm
T4N PROJECT

Lasso 4EC Application On The Wayne Roach Farm

Lasso 4EC applied on May 31, 1983
Approximately 39.1 acres treated
Lasso applied in tank mix combination with Lexone 4L
Lasso rate 2.5 lb a.i. /A
Lexone at 0.5 lb a.i. /A
Application Technique: Big A with 55 ft. boom width
Nozzles: TKSS 20 flood type, 60 inch spacing on the boom
Application Speed: 15 mph
Carrier: Water at 20 gallons/acre
Soil Texture: Variable from medium to fine
Incorporation Device: Tandem disc equipped with 21 inch blades in 9 inch spacing
operated at a speed of 5-1/2 to 6 mph at a depth of 3
inches.

Seed Source: Stewarts soybean seed
Weather at Application: Clear, 79°F, wind calm