

EEB BRANCH REVIEWDATE: IN 6-9-82 OUT 7-6-82FILE OR REG. NO. 264-336

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

DATE OF SUBMISSION 5-20-82DATE RECEIVED BY HED 6-8-82RD REQUESTED COMPLETION DATE 8-8-82EEB ESTIMATED COMPLETION DATE 8-1-82RD ACTION CODE/TYPE OF REVIEW 601/Resubmission - ReregistrationTYPE PRODUCT(S): I, D, H, F, N, R, S Plant Growth Regulator

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

PRODUCT MANAGER NO. R. Taylor (25)PRODUCT NAME(S) Tre-Hold Sprout Inhibitor A-112COMPANY NAME Union Carbide Agricultural ProductsSUBMISSION PURPOSE Submission of data in support of reregistration

| SHAUGHNESSEY NO. | CHEMICAL, & FORMULATION | Z A.I. |
|------------------|-------------------------|--------|
| _____            | _____                   | _____  |
| _____            | _____                   | _____  |
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| _____            | _____                   | _____  |



2003838

1/4

Pesticide Name      Napthaleneacetic Acid

100      Purpose of Submission

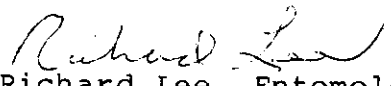
Submission of chemical analyses regarding confirmation of actual NAA concentration in test solutions and identification of precipitates in order to upgrade previous submitted trout, bluegill and daphnia studies (see previous EEB review by L. Touart, 1/6/82).

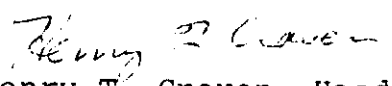
101-104      1) Refer to EEB file and NAA Registration Standard.

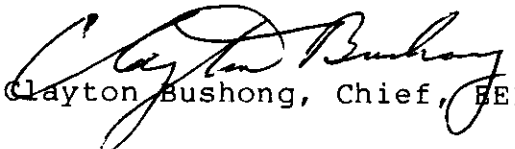
2) Helfant, L. J. (1982) Union Carbide project Report; Protocol Evaluation, NAA Solubility in Aquatic Testing (860F60).

107      Conclusions

In order to repair these studies with the deficiency of unknown precipitate in the test media, the chemical analyses were conducted. The actual concentration was measured and the white precipitate identified. The LC50 values were also recalculated based on new findings. Therefore, these studies are scientifically sound and fulfill the registration guidelines requirements.

 7/7/82  
Richard Lee, Entomologist, Section 4

 7/7/82  
Henry T. Craven, Head, Section 4

 7/9/82  
Clayton Bushong, Chief, EEB

## DATA EVALUATION RECORD ADDENDUM

1. Chemical: Napthaleneacetic Acid
2. Formulation: Technical (98% a.i.)
3. Citation: 1) Refer to previous EEB review by L. Touart (1/6/82).  
2) Helfant, L. J. (1982) Union Carbide project Report; Protocol Evaluation, NAA Solubility in Aquatic Testing (860F60)
4. Reviewed by: Richard Lee  
Entomologist  
EEB/HED
5. Data Reviewed: 7/2/82
6. Discussion/Conclusion

The chemical analyses were conducted to upgrade these studies with the deficiency of unknown precipitate in the test media. The test solutions were prepared in the analytical laboratory as performed in the test protocol. Water of comparable hardness and pH was utilized as well as NAA from the same source of manufacture and comparable purity. White precipitate was observed floating on the top and precipitated on the bottom after dilution of DMF stock solution. This particulate was confirmed to be technical NAA by means of GLC. The solubility of NAA after filtration was further quantitated by means of titrating acid equivalent with 0.01 N NaOH (see table 1). The result shows greater NAA solubilities at the more dilute concentrations with decreasing solubilities as more NAA is introduced into the water. The average recovery rate was found to be 47%. Using a 50% solubility factor for simplicity, the various LC50s are recalculated and are shown in the table 2. Therefore, these studies are scientifically sound and fulfill the registration guideline requirements.

Table 1. Results of NAA solubility test

Stock Solution: 10.1 g NAA/50 ml DMF (ie 200 mg.NAA/ml DMF)

Water Hardness: 46 ppm

Temperature: 22°C

| <u>Aliquot/L.H<sub>2</sub>O</u> | <u>measured (ppm)</u> | <u>nominal (ppm)</u> | <u>Recovery</u> |
|---------------------------------|-----------------------|----------------------|-----------------|
| 0.4 ml                          | 50                    | 80                   | 62.5            |
| 0.8 ml                          | 68                    | 160                  | 42.5            |
| 1.2 ml                          | 97                    | 240                  | 40.4            |
| 1.6 ml                          | 140                   | 320                  | 43.8            |
| 2.0 ml                          | 158                   | 400                  | 39.5            |
| 2.4 ml                          | 181                   | 480                  | 37.7            |

Table 2. Recalculated LC50 values

SPECIES

Rainbow trout  
Bluegill sunfish  
Daphnia

| <u>LC50 (hr), mg/liter</u> |           |           |           |
|----------------------------|-----------|-----------|-----------|
| <u>24</u>                  | <u>48</u> | <u>72</u> | <u>96</u> |
| 28                         | 28        | 28        | 28*       |
| 50                         | 41        | 41        | 41*       |
| 225                        | 180**     | --        | --        |

\* slightly toxic

\*\* practically non-toxic