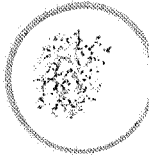


2,4-D/TOX

(55)



7-10-81

(315)

MEMORANDUM

JUL 10 1981

DATE:

SUBJECT:

2,4-D Butoxyethanol ester (BEE) Section 18 request by the Corps of Engineers for the State of Washington for treatment of Eurasian Milfoil in Okanogan Arm of the Columbia River.

FROM:

Henry Spencer, Ph.D.
Review Section #1
Toxicology Branch/HED (TS-769)

TO:

Donald Stubbs, PM #41
ERS/Registration Division (TS-767)

This was approved by H.S. Spencer 7/15/81
4 LG, 7/15/81
16/10/81

Recommendations and Conclusions:

1. Toxicology Branch concludes that even in the absence of a complete data base, the use of 2,4-D (Butoxyethanol ester) can be toxicologically supported for the requested use on 200 acres of lake and river water.
2. Toxicology Branch notes that the proposed label presented indicates a 1/2 mile buffer area from treated space to water intakes to be used. The Seattle office of Corps. of Engineers reported by telephone that only the town of Orville approached the 1/2 mile limit. Other towns were large distances from treatment areas. (Telephone message to H. Spencer - Toxicology Branch dated 6/29/81).
3. Paragraph VI indicates the proposed chemical BEE, to be a granular formulation. Treatment areas are to be closed to swimming, fishing and down stream irrigation until water quality monitoring indicates "safe 2,4-D levels". Toxicology Branch reports in the telephone conversation dated 6/29/81 that 0.1 ppm is the safe value as proposed by the water program by EPA.

te:
 e would only add that water intakes which may be affected should also
 be curtailed until at least the reduced value of 0.1 ppm is reached.
 This is suggested since much of the justification comes from reports
 on treatments by the Tennessee Valley Projects. Even though DMA salt
 was used; it was concluded that little 2,4-D was removed by treatment
 plants. (Wojtalik, et al, 1971).
 Toxicology Branch recommends approval of the Section 18 provided
 that the RCB review does not impact adversely on this review.

Toxicity Data Summary: (2,4-D Acid)

Acute Oral LD50 (Rat) LD50 = 375 mg/kg
 Core-minimum

Supplemental
 (being repeated)

NOTE: LD50 values vary from about 375 - 1000 mg/kg in different species.
 2-Year Chronic feeding - (Rat)
 NOEL = 1250 ppm (62.5 mg/kg/day)
 for systemic effects.

Core-minimum

2-Year Chronic feeding - (Dog)
 NOEL = 500 ppm (12.5 mg/kg/day)
 LEL = 1000

Supplemental
 (being repeated)

Reproduction - (Rat)
 Equivocally positive for reduced viability
 to weanling age at 100 ppm (5 mg/kg)
 (No NOEL)

Core-minimum
 Core-minimum
 Core-minimum

Teratology
 Rat - LEL = 150 mg/kg
 NOEL = 50 mg/kg
 Mouse LEL only = 147=221 mg/kg (1 test dose)

NOTE: Most long term studies have been performed on the 2,4-D acid.
 TS-769:SPENCER:slv:CM#2:Rm.816:X73710:7/8/81 card 2