Shaughnessy #: 009001

EAB Log-Out Date: APR 02 1986

Init: SR

To: Dana Pillit
Product Manager
Registration Division (TS-767C)

From: Joseph C. Reinert, Chief
Special Review Section
Exposure Assessment Branch
Hazard Evaluation Division (TS-769C)

JCR

Attached please find the EAB review of...

Reg./File No.: _____

Chemical: Lindane

Type Product: Insecticide

Product Name: _____

Company Name: U.S. Army

Submission Purpose: Exposure Study Protocol

Date In: 02/11/86 ACTION CODE: _____

Date Completed: 04/02/86 EAB # 6357

Days

1

Deferrals To:

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

_____ Benefits and Use Division

Monitoring study requested by EAB [X]

Monitoring study voluntarily conducted by registrant: [ ]

1

1.0 BACKGROUND

In a review dated August 22, 1985 EAB indicated that there were insufficient data to estimate exposure of workers applying lindane dust to personnel for louse control. The data gap for this use was outlined in the Guidance Document for the Reregistration of Lindane (EPA RS-85-027). On January 17, 1986 a meeting was held between OPP staff, representatives from the U.S. Army, and representatives of Centre International d'Etudes du Lindane (CIEL) at which this protocol was discussed in detail. A formal copy of this protocol (Record No. 167355) was received by the reviewer on March 11, 1986.

2.0 Description of Study

The study will be conducted at the Army's testing facility at the Aberdeen Proving Ground in Maryland. A 1.0 percent formulation of lindane in talc will be applied to standard military test dummies. The dummies will be clothed in military filed uniforms and supported in a standing position. The test material will be applied by a trained, certified applicator. The worker will wear gloves, coveralls, and a half face respirator. Application will be made using a gasoline powered duster to dispense the material under the clothing and between layers as specified by the label.

Dermal exposure will be measured for the applicator only. A theoretical maximal exposure estimate will be used to represent that of persons receiving the treatment. The dermal exposure of the applicator will be measured using gauze pads located beneath the clothing on the front of the legs (below the knees and on the thighs), forearms, top of the shoulders, back of the neck, and upper chest ("V" of neck). Exposure of the hands will be measured by hand rinse. Respiratory exposure for both the applicator and the treated individual (testing dummy) will be measured by air samples collected in the breathing zone. Samples will be taken both inside and outside of the respirator for operators. Samples will be analyzed by gas chromatography. Quality assurance data will also be submitted.

3.0 CONCLUSIONS

EAB finds this protocol to be acceptable for this rather unique method of application. EAB understands that this material is only applied under emergency conditions and believes that testing dummies will serve as adequate surrogates for actual personnel receiving the treatment.

David Jaquith

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