US EPA ARCHIVE DOCUMENT

Disclaimer

The document which accompanies this disclaimer is American Cyanamid's avian and aquatic risk assessments. The document presents the company's views. It does not represent EPA's views, which are posted separately at this homepage address. This document is being posted on the EPA homepage at American Cyanamid's request.

The reader may notice that several pages contain the statement "confidential." American Cyanamid has consented to the publication of this document, thereby waiving all claims that this document contains confidential business information.

US EPA ARCHIVE DOCUMENT

KNORR

PIRATE®/ALERT® INSECTICIDE-MITICIDE: REGISTRATION APPLICATION AND TOLERANCE PETITION FOR CHLORFENAPYR ON COTTON (PP 5F4456)

Date Submitted 1/29/98 **MRID No.** _____ **Volume: 3**

Book 1 of 2

STUDY TITLE

An Avian Ecological Risk Assessment for Chlorfenapyr in Cotton

DATA REQUIREMENT

Not Required Under 40 CFR158

444779-01
Volume 1 of 2

AUTHOR

American Cyanamid Company

STUDY COMPLETION DATE

January 29, 1998

PERFORMING LABORATORY

American Cyanamid Company
Agricultural Research Division
P.O. Box 400
Princeton, NJ 08543-0400

REPORT NUMBER

CY190

®Registered Trademarks of American Cyanamid Company

STATEMENT OF DATA CONFIDENTIALITY CLAIMS

No claim of confidentiality is made for any information contained in this study on the basis of its falling within the scope of FIFRA Section 10 (d) (1) (A), (B), or (C).

Company: American Cyanamid Company

Company Agent: Zareen Ahmed **Date:** 1/29/98

Product Registration Manager
Title

Signature

We submitted this material to the United States Environmental Protection Agency specifically under provisions contained in FIFRA as amended and thereby consent to use and disclosure of this material by EPA according to FIFRA. Notwithstanding the marking, "CONFIDENTIAL", this marking by itself conveys no supplemental claims of confidentiality under FIFRA sections 10(a) or 10(b). In submitting this material to the EPA according to the method and format requirements contained in PR Notice 86-5, we do not waive any protection or right involving this material (anywhere else in the world) that would have been claimed by the company if this material had not been submitted to the EPA.

CY190

Good Laboratory Practices Compliance Statement

This volume is an avian ecological risk assessment submitted in support of this petition; there was no data collection directly associated with its preparation. Therefore, it was not conducted according to GLP regulations (40CFR 160).

Sponsor: American Cyanamid Company

Submitter: American Cyanamid Company

Company Agent: Zareen Ahmed **Date:** 1/29/98

Product Registration Manager
Title

Signature

CY 190

An Avian Ecological Risk Assessment for Chlorfenapyr in Cotton

American Cyanamid Company
January 29, 1998

TABLE OF CONTENTS

	Page Number
EXECUTIVE SUMMARY	7
BACKGROUND, FREATURES AND ORGANIZATION OF THE ASSESSMENT	10
PROBLEM FORMULATION	13
Stressor Characteristics	15
Ecosystems Potentially at Risk	23
Assessment Endpoints for Avian Risk	28
Measurement Endpoints for Avian Risk	28
Ecological Effects	31
Conceptual Model	31
Analysis Plan for This Risk Assessment	35
Comments on the Problem Formulation Phase for Chlorfenapyr in Cotton	37
ANALYSIS	38
Characterization of Ecological Effects/Hazard Assessment	40
Characterization of Environmental Exposure	55
Refined Conceptual Model(s)	81
Response Profile	95
Comments on the Analysis Phase for Chlorfenapyr in Cotton	96
RISK CHARACTERIZATION	98
Risk Estimation	99
Uncertainty Analysis	106
Risk Description	108
Interpretation of Ecological Significance: Frequency of Exposure, Extent of Exposure, Importance of Exposed Areas	109
Effectiveness of Label Mitigation Measures	111
SUMMARY AND CONCLUSIONS	112
REFERENCES	114

Appendix Number

APPENDICES

Labels for PIRATE Cotton Insecticide and ALERT Insecticide-Miticide	1
Mode of Action of Chlorfenapyr	2
Summaries of New Avian Toxicity Studies	3
Summaries of Ecosystem Characterization Studies	4
Bird Species and Biology Information	5
Summaries of Residues in Avian Food Items and Soil	6
Arthropod Populations in Cotton	7
Feeding Groups, Breeding and Migratory Information for Common Birds Observed in and Around Cotton Fields	8
Risk Quotients	9
Acreage of Pesticide Usage in Cotton	10
Tests for the Difference Between Two Kaplan-Meier Curves with Investigations of Power	11