United States
Environmental Protection
Agency

Prevention, Pesticides
And Toxic Substances
(7508W)

EPA 738-R-93-031
December 1993

EPA

Reregistration Eligibility Decision (RED)

Flower and Vegetable Oils

United States Environmental Protection Agency | Prevention, Pesticides And Toxic Substances (7508W) | EPA-738-F-93-027 December 1993

EPA R.E.D. FACTS

Flower and Vegetable Oils

Pesticide Reregistration

All pesticides sold or distributed in the United States must be registered by EPA, based on scientific studies showing that they can be used without posing unreasonable risks to people or the environment. Because of advances in scientific knowledge, the law requires that pesticides which were first registered years ago be reregistered to ensure that they meet today's more stringent standards.

In evaluating pesticides for reregistration, EPA obtains and reviews a complete set of studies from pesticide producers, describing the human health and environmental effects of each pesticide. The Agency imposes any regulatory controls that are needed to effectively manage each pesticide's risks. EPA then reregisters pesticides that can be used without posing unreasonable risk to human health or the environment.

When a pesticide is eligible for reregistration, EPA announces this and explains why in a Reregistration Eligibility Decision document, or RED. This fact sheet summarizes the information in the RED document for the case Flower and Vegetable Oils, which contains the active ingredients essential oils (covering 24 substances), oil of lemongrass, oil of eucalyptus, soybean oil, oil of mustard, and oil of anise.

Use Profile

The reregistration case Flower and Vegetable Oils is composed of a group of compounds that are natural components of plants. These oils are active ingredients in pesticide products registered for use as animal repellants, feeding depressants, insecticides and miticides. Some of the essential oils also are included as active ingredients in antimicrobial pesticide products (disinfectants, sanitizers, bacteriostats, microbiocides and fungicides). However, since the essential oils have no independent pesticidal activity in antimicrobial products, these uses are not eligible for reregistration. Many of the flower and vegetable oils have other, more significant, non-pesticidal uses as food additives, flavorings, and components of cosmetics, soaps, perfumes, plastics, resins, and other products.

Regulatory History

The case Flower and Vegetable Oils originally included eleven active ingredients. However, five of these active ingredients were not supported by their manufacturers for reregistration (cottonseed oil, linseed oil, sesame oil, hydrogenated castor oil, and oil of geranium). The following six active ingredients are being supported for reregistration.

Essential oils, defined as any volatile oil that gives distinctive odor or flavor to a plant, flower or fruit, were first registered as pesticide active ingredients in 1947. A total of 24 distinct chemicals are covered under this active ingredient. EPA now requires that registrants identify the particular oil(s) contained in their products, rather than naming "essential oils" as the active ingredient. Approximately 25 pesticide products currently are registered which contain essential oils as active ingredients. These products are used as repellants, feeding depressants, insecticides and miticides, as well as antimicrobials. They are marketed as liquid sprays, crystals and pellets.

Oil of lemongrass was first registered in 1962 as a dog repellant. Currently, two products are registered which contain this active ingredient; both are formulated as pellets and used to repel cats and dogs from ornamentals, shade trees, patio furniture and garbage cans.

Oil of eucalyptus was first registered in 1948 as an insecticide and miticide. Currently, only one product (an herbal flea collar for pets) is registered which contains oil of eucalyptus.

Oil of mustard (allyl isothiocyanate) was first registered in 1962 as a dog repellant. Five products currently are registered; four are used outdoors either to repel cats and dogs from lawns, flowers, bushes, shade trees and refuse containers, or to kill insects. The fifth product is used indoors in a carpet freshener to repel pets. Products are formulated as liquids or pellets/tablets.

Soybean oil was first registered in 1959 for use as an insecticide and miticide. Three products currently are registered. They are emulsifiable concentrate formulations used to control insects and mites on citrus fruits and a variety of ornamentals.

Oil of anise was first registered in 1952 for use as an insecticide and miticide. Only one product currently is registered, a liquid spray used on soil near lawns, gardens and flower beds to repel cats and dogs.

Human Health and Environmental Assessment

The flower and vegetable oils are among those pesticides for which EPA believes a broadly reduced set of generic data requirements is appropriate for reregistration. The Agency therefore has waived most generic data requirements, except certain technical chemistry information, for most of the chemicals included in this RED. In evaluating the flower and vegetable oils' potential risks to human health and the environment, EPA relied on information commonly available in scientific literature.

Generally, these chemicals are of low acute toxicity (except for oil of mustard). Many are Generally Recognized as Safe (GRAS) by the Food and Drug Administration, are exempted from the requirement of food additive tolerances, and are used in food preparation. As pesticides, they employ a non-toxic mode of action. Since they are formulated in low concentrations into products that are used at low volumes in the United States, exposure to humans and the environment is expected to be very low. EPA has received no incident reports of adverse effects for these chemicals. In summary, the flower and vegetable oils are not likely to result in adverse effects in humans or the environment.

Outdoor use of the pelleted formulation of oil of mustard could result in exposure and adverse effects to nontarget organisms, particularly birds ingesting these pellets. However, since all presently registered products contain low concentrations of oil of mustard, exposure and risk to terrestrial species are believed to be low.

The use of essential oils for antimicrobial purposes is ineligible for reregistration. Essential oils normally have no independent pesticidal activity when included in antimicrobial products; these products contain one or more other chemicals that perform as the active ingredients. Essential oils in antimicrobial products must instead be classified as inert ingredients, or must be deleted from the product formulations.

The Agency concludes that the use of flower and vegetable oils as active ingredients in currently registered pesticide products should not result in unreasonable adverse effects to human health or the environment.

Additional Data Required

Although EPA has waived most generic studies, the Agency is requiring additional physical chemistry studies for all active ingredients in this case, as confirmatory data. EPA also is requiring product-specific data including product chemistry and acute toxicity testing, as well as revised Confidential Statements of Formula and revised labeling for reregistration.

Product Labeling Changes Required

The labels of all registered pesticide products containing flower and vegetable oils must comply with EPA's current pesticide labeling requirements. In addition,

- All registrants who have a mixture of essential oils listed as the active ingredient on their product label (and the product is not an antimicrobial) must list separately on the label each essential oil and its percentage of the product's composition.
- All registrants with antimicrobial products containing essential oils must either delete that active ingredient from their product formulations or convert that active ingredient to an inert.

Regulatory Conclusion

The use of currently registered pesticide products containing flower and vegetable oils in accordance with approved labeling will not pose unreasonable risks or adverse effects to humans or the environment. Therefore, all current uses of these products are eligible for reregistration except the use of essential oils in antimicrobial products, which is not eligible for reregistration. Essential oils must either be deleted from or converted to inert ingredients in antimicrobial products.

The eligible flower and vegetable oils products will be reregistered once the required physical chemistry studies, terrestrial ecological effects data for oil of mustard, product-specific data, revised Confidential Statements of Formula and revised labeling are received and accepted by EPA. Products also containing other active ingredients will be reregistered only when the other active ingredients are eligible for reregistration.

For More Information

EPA is requesting public comments on the Reregistration Eligibility Decision (RED) document for Flower and Vegetable Oils during a 60 day time period, as announced in a Notice of Availability published in the Federal Register. To obtain a copy of the RED or to submit written comments, please contact the Pesticide Docket, Public Response and Program Resources Branch, Field Operations Division (7506C), Office of Pesticide Programs (OPP), US EPA, Washington, DC 20460, telephone 703-305-5805.

Following the comment period, the Flower and Vegetable Oils RED will be available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, telephone 703-487-4650.

For more information about EPA's pesticide reregistration program, the Flower and Vegetable Oils RED, or reregistration of individual products containing the active ingredients covered by this RED, please call the Special Review and Reregistration Division (7508W), OPP, US EPA, Washington, DC 20460, telephone 703-308-8000.

For information about the health effects of pesticides, or for assistance in recognizing and managing pesticide poisoning symptoms, please contact the National Pesticides Telecommunications Network (NPTN). Call toll-free 1-800-858-7378, 8:00 am until 6:00 pm Central Time, Monday through Friday.

REREGISTRATION ELIGIBILITY DECISION

Flower and Vegetable Oils

LIST D

CASE 4097

ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAMS
SPECIAL REVIEW AND REREGISTRATION DIVISION

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GLOSSARY OF TERMS AND ABBREVIATIONS

a.i.	Active Ingredient
CAS	Chemical Abstracts Service
CSF	Confidential Statement of Formula
EEC	Estimated Environmental Concentration. The estimated pesticide concentration in an environment, such as a terrestrial ecosystem.
EP	End-Use Product
EPA	U.S. Environmental Protection Agency
FDA	Food and Drug Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FFDCA	Federal Food, Drug, and Cosmetic Act
GRAS	Generally Recognized As Safe as designated by FDA
HDT	Highest Dose Tested
LC_{50}	Median Lethal Concentration. A statistically derived concentration of a substance that can be expected to cause death in 50% of test animals. It is usually expressed as the weight of substance per weight or volume of water, air or feed, e.g., mg/l, mg/kg or ppm.
LD_{50}	Median Lethal Dose. A statistically derived single dose that can be expected to cause death in 50% of the test animals when administered by the route indicated (oral, dermal, inhalation). It is expressed as a weight of substance per unit weight of animal, e.g., mg/kg.
LD_{lo}	Lethal Dose-low. Lowest Dose at which lethality occurs
LEL	Lowest Effect Level
LOEL	Lowest Observed Effect Level
MP	Manufacturing-Use Product
MPI	Maximum Permissible Intake

GLOSSARY OF TERMS AND ABBREVIATIONS

MOE	Margin Of Exposure (PAD)
MRID	Master Record Identification (number). EPA's system of recording and tracking studies submitted.
N/A	Not Applicable
NPDES	National Pollutant Discharge Elimination System
NOEL	No Observed Effect Level
OPP	Office of Pesticide Programs
PADI	Provisional Acceptable Daily Intake
ppm	Parts Per Million
Q^*_1	The Carcinogenic Potential of a Compound, Quantified by the EPA's Cancer Risk Model
RED	Reregistration Eligibility Decision
RfD	Reference Dose
RS	Registration Standard
TD	Toxic Dose. The dose at which a substance produces a toxic effect.
TC	Toxic Concentration. The dose at which a substance produces a toxic effect.
TMRC	Theoretical Maximum Residue Contribution.

EXECUTIVE SUMMARY

The Agency has determined that the uses of Flower and Vegetable Oils as currently registered (except for the use of essential oils as perfumes in antimicrobial products) will not cause unreasonable risk to humans or the environment and these uses are eligible for reregistration. The Agency is requiring additional studies on the generic physical chemistry for all active ingredients in this case. When essential oils are present in pesticide products solely as perfumes, they are not considered as "active ingredients." Pesticide labels and confidential statements of formula (CSF) must be revised as necessary to reflect this.

Before reregistering the products containing Flower and Vegetable Oils, the Agency is requiring that product specific data, revised CSF and revised labeling be submitted within eight months of the issuance of this document. These data include product chemistry and acute toxicity testing for each registration. After reviewing these data and any revised labels and finding them acceptable in accordance with Section 3(c)(5) of FIFRA, the Agency will reregister a product. Those products which contain other active ingredients will be eligible for reregistration only when the other active ingredients are determined to be eligible for reregistration.

Flower and Vegetable Oils is composed of a group of compounds that are natural components of plants. Some essential oil mixtures may also contain solvents and other components (salts, etc.). Oils in this case are used in pesticidal products for diverse pesticidal uses: insecticide, miticide, disinfectant, fungicide, bacteriostat, microbiocide, repellant or feeding depressant, and sanitizer.

I. INTRODUCTION

In 1988, the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) was amended to accelerate the reregistration of products with active ingredients registered prior to November 1, 1984. The amended Act provides a schedule for the reregistration process to be completed in nine years. There are five phases to the reregistration process. The first four phases of the process focus on identification of data requirements to support the reregistration of an active ingredient and the generation and submission of data to fulfill the requirements. The fifth phase is a review by the U.S. Environmental Protection Agency (referred to as "the Agency") of all data submitted to support reregistration.

FIFRA Section 4(g)(2)(A) states that in Phase 5 "the Administrator shall determine whether pesticides containing such active ingredient are eligible for registration" before calling in data on products and either reregistering products or taking "other appropriate regulatory action." Thus, reregistration involves a thorough review of the scientific data base underlying a pesticide's registration. The purpose of the Agency's review is to reassess the potential hazards arising from the currently registered uses of the pesticide; to determine the need for additional data on health and environmental effects; and to determine whether the pesticide meets the "no unreasonable adverse effects" criterion of FIFRA.

This document presents the Agency's decision regarding the reregistration eligibility of the registered uses of flower and vegetable oils . The document consists of six sections. Section I is the introduction. Section II describes flower and vegetable oils, their uses, data requirements and regulatory history. Section III discusses the human health and environmental assessment based on the data available to the Agency. Section IV presents the reregistration decision for flower and vegetable oils . Section V discusses the reregistration requirements for flower and vegetable oils . Finally, Section VI is the Appendices which support this Reregistration Eligibility Decision. Additional details concerning the Agency's review of applicable data are available on request.

II. CASE OVERVIEW

A. Chemical Overview

The following active ingredients are covered by this Reregistration Eligibility Decision. The common name "essential oils" refers to a number of compounds, including alcohols, aldehydes, esters, and acids, that are derived from plants. Under this reregistration decision, the Agency recognizes the following specific substances as essential oils.

Chemical overview for the group Essential oils (chemical code 40501)

Common Name	CAS Registry Number	OPP Chemical Code
Bergamot Oil	8007-75-8	129029
Oil of Rue	8014-29-7	40519
Oil of Orange	8008-57-9	40517
Trans-alpha-ionone	127-41-3	129030
Geraniol	106-24-1	597501
Dihydro abietyl alcohol	none	none
Allyl caproate	none	none
Allyl heptoate	none	none
Isoamyl isovalerate	none	none
Geranyl butyrate	none	none
Phenyl ethyl isovalerate	none	none
Benzo isovalerate	none	none
Geranyl acetate	none	none
Iso amyl formate	110-45-2	none
Iso amyl acetate	123-92-2	none
Citronellyl Butyrate	none	none
Oil of Orange-five fold	none	none
Geranyl formate	none	none
Cinnamyl isovalerate	none	none
Acetyl methyl carbinol	none	none
Vanillin	121-33-5	115801
Isobutyric acid	79-31-2	101502
Methyl phenylacetate	none	none
Acetyl anisole	none	none

Chemical overview for the remaining active ingredients in the case flower and vegetable oils

- **Common Name:** Oil of Lemongrass
- **CAS Registry Number:** 8007-02-01
- **OPP Chemical Code:** 40502

- **Common Name:** Oil of Eucalyptus
- **CAS Registry Number:** 8000-48-4
- **OPP Chemical Code:** 40503

- **Common Name:** Soybean oil
- **CAS Registry Number:** 8001-22-7
- **OPP Chemical Code:** 31605

- **Common Name:** Oil of mustard
- **Chemical Name:** Allyl isothiocyanate
- **CAS Registry Number:** 57-06-7
- **OPP Chemical Code:** 4901
- **Trade and Other Names:** Allyl isosulfocyanate, Isothiocyanic acid (allyl ester), 2-Propenyl isothiocyanate, allyl mustard oil, 3-isothiocyanto-1-propene

- **Common Name:** Oil of Anise
- **CAS Registry Number:** 8007-70-3
- **OPP Chemical Code:** 4301
- **Trade and Other Names:** Aniseed oil, Star Anise oil

B. Use Profile

The following is information on the current registered uses of this case with an overview of use sites and application methods. A detailed table of the uses of essential oils, oil of lemongrass, oil of eucalyptus, soybean oil, allyl isothiocyanate, and oil of anise is in Appendix A.

1. For Essential Oils:

Type of Pesticide: Types eligible for reregistration - feeding depressant, insecticide, repellant.

Types not eligible for reregistration - disinfectant, fungicide, tuberculocide, virucide, bacteriostat.

Use Sites: Use sites eligible for reregistration - cats (adults/kittens), dogs/canines (adults/puppies), household/domestic dwellings contents, household/domestic dwellings indoor premises, household/domestic dwellings outdoor premises, ornamental and/or shade trees, ornamental herbaceous plants, ornamental lawns and turf, ornamental woody shrubs and vines.

Use sites not eligible for reregistration - hatchery equipment, hatcheries, food processing, handling and storage plants/areas, eating establishments (all or unspecified), eating establishment equipment and utensils, hospitals and related institutions (all or unspecified), hospital critical premises (e.g. operating rooms), hospital patient premises (e.g. clinics, wards), hospital non-critical premises (e.g. labs, waiting rooms), hospital critical items (items enter blood or living tissue), hospital semicritical items (items contact mucosal membrane), hospital noncritical items (items contact only unbroken skin), hospital janitorial equipment, barber and beauty shop equipment, morgues, mortuaries and funeral home premises, equipment and instruments, commercial, institutional and

industrial areas/premises, commercial, institutional or industrial equipment, laundry (hospital, commercial, household), diapers (presoak, hospital, commercial, household), laundry equipment, bathroom premises, toilet bowls and urinals, toilet tanks or water closets, air treatment, surfaces treatments (all or unspecified), hard non-porous surface treatments, hard porous surface treatments, wood surface treatments (seasoned/unpainted).

Target Pests: Target pests eligible for reregistration - clothes moth, dog, cat, flea.

Target pests not eligible for reregistration - ammonia-producing bacteria, animal pathogenic bacteria (G- and G+ vegetative), Pseudomonas spp., Mycobacterium spp. (tubercle bacilli), animal pathogenic fungi, animal viruses, adenoviruses, vaccinia virus, herpes simplex virus, influenza virus, and mold and mildew.

Formulation Types
Registered: crystals, liquid ready-to-use, pressurized liquid, impregnated collar/tag, impregnated material, pelleted/tableted.

Methods and Rates of Application:

Equipment - aerosol can, by hand, pump spray bottle, sprayer.

Method and Rate -

cats and dogs (animal treatment [spray], animal wound treatment), rate not calculated due to lack of data (on label).

flea collar for "pets", 7.813×10^{-5} lb/animal.

household domestic dwellings indoor premises and contents (fumigation, spot treatment, spray, contact and/or surface treatment), 0.001563 lb/50 cu. ft to 0.02 lb/90 cu. ft.

household domestic dwellings outdoor premises (sprinkle), 0.002 pellets/sq.ft; (rub-on, scent post application), rate not calculated due to lack of data (on label).

ornamental and/or shade trees (sprinkle), 0.002 pellets/sq.

ft; (scent post application), rate not calculated due to lack of data (on label).

ornamental herbaceous plants (scent post application), rate not calculated due to lack of data (on label).

ornamental lawns and turf (sprinkle), 0.002 pellets/sq.ft.

ornamental woody shrubs and vines (sprinkle), 0.002 pellets/sq.ft; (scent post application), rate not calculated due to lack of data (on label).

Timing - when needed

Use Practice Limitations: none

2. For Oil of Lemongrass:

Type of Pesticide: repellant

Use Sites: ornamental herbaceous plants, ornamental woody shrubs and vines, ornamental and/or shade trees.

Target Pests: dogs and cats

Formulation Types Registered: impregnated material

Method and Rates of Application:

Equipment - sprinkle by hand

Method and Rate - up to 10 pellets per square foot

Timing - when needed

Use Practice Limitations: none

3. For Oil of Eucalyptus:

Type of Pesticide: repellant and insect feeding depressant

Use Sites: pets

Target Pests: fleas

Formulation Types Registered: impregnated material (collar)

Method and Rates of Application:

Equipment - by hand

Method and Rate - up to one ounce per animal

Timing - as needed

Use Practice Limitations: none

4. For Soybean Oil:

Type of Pesticide: acaricide and insecticide

Use Sites: citrus fruits, household/domestic dwellings outdoor premises, ornamental and/or shade trees, ornamental and/or shade trees, ornamental herbaceous plants, ornamental nonflowering plants, ornamental woody shrubs and vines, recreational areas.

Target Pests: citrus rust mite, clover mite, Texas citrus mite, citrus red mite, European red mite, two-spotted spider mite, thrips, anobiid beetles, cerambycid bark beetles, lyctid beetles, rose chafer, Japanese beetle, gnats, rose midge, midges, mosquitoes, homopterans, whiteflies, aphids, leafhoppers, mealybugs, roseslug, gypsy moth (eggs).

Formulation Types Registered: emulsifiable concentrate

Method and Rates of Application:

Equipment - high volume ground sprayer, sprayer,

Method and Rate - up to 10.67 gallons per acre or up to 0.5 fluid ounces in 1 gallon of water diluent.

Timing - when needed or foliar or potted

Use Practice Limitations: none

5. For Allyl Isothiocyanate:

Type of Pesticide: insecticide, repellant, miticide and feeding depressant

Use Sites: household/domestic dwellings contents, household domestic dwellings indoor premises, household/domestic outdoor dwellings outdoor premises, ornamental and/or shade trees, ornamental lawns and turf, ornamental woody shrubs and vines, farm or agricultural structures/premises, bird feeding areas (for vertebrate pests only), and refuse and solid waste containers.

Target Pests: centipedes, millipedes, spiders, earwigs, silverfish, ants, cockroaches, waterbugs, crickets, squirrels, dog, raccoon, cats, and deer.

Formulation Types Registered: pelleted/tableted, impregnated material, liquid ready-to-use, and pressurized liquid, and dust.

Method and Rates of Application:

Equipment - aerosol can, sprayer, by hand, and trigger spray bottle.

Method and Rate - by hand 0.2 - 10 pellets per square foot, trigger spray

at up to 0.20 fluid ounces per square foot, dust at 2 grams per square foot.

Timing - when needed

Use Practice Limitations: none

6. For Oil of Anise:

Type of Pesticide: repellant

Use Sites: vegetables, household/domestic dwellings outdoor premises, ornamental herbaceous plants, ornamental lawns and turf, ornamental woody shrubs and vines.

Target Pests: ticks, lice, fleas, dogs, and cats.

Formulation Types Registered: ready-to-use solution

Method and Rates of Application:

Equipment - sprayer

Method and Rate - spot application at 16 fluid ounces per 300 square feet

Timing - no minimum interval between spot treatments

Use Practices Limitations: none

C. Data Requirements

The Agency has waived most of the generic data requirements for most active ingredients in this case. In some cases the Agency has relied on commonly available information on the active ingredients in this case. Appendix B includes all data requirements identified by the Agency for currently registered uses needed to support reregistration.

D. Regulatory History

Originally, the reregistration case, Flower and Vegetable Oils, included eleven active ingredients. The following active ingredients were not supported for reregistration by their registrants; cottonseed oil, linseed oil, sesame oil, hydrogenated castor oil, and oil of geranium. The remaining active ingredients are being supported.

Essential oils are commonly defined as any volatile oil that gives distinctive odor or flavor to a plant, flower, or fruit. Essential oil mixtures may also contain other components other than oils such as alcohols, and chemical variations of the oil such as a salt, aldehyde, alcohol or ester. Only certain essential oils or mixtures of essential oils are being reregistered at this time. The Agency now requires that registrants must specify the specific essential oil(s) contained in their products and no longer allows the registrants simply to list "essential oils" as the name of their active ingredient. Each specific component of mixtures formerly listed as "essential oils" are now being identified. (For this reason the number of active ingredients in this case has increased to twenty-four.) These essential oils are listed below in Section III. A. Physical Chemistry Assessment. Products containing essential oils as an active ingredient were first registered in 1947 as an insecticide and miticide for use on domestic animals. Subsequently, products containing essential oils have been registered for use as a disinfectant, fungicide, fungistat, tuberculocide, sanitizer, virucide, and a repellant. Further products have also been subsequently registered for the original use as an insecticide and miticide. A total of 24 products containing essential oils are currently registered. The concentration of essential oils in these products ranges from 0.18-5.0%, of which each specific oil or compound appears at a much lesser percentage.

A product containing oil of lemongrass was first registered in 1962 for use as a dog repellant. Products were subsequently registered for the following uses: sanitizer, virucide, fungicide, bacteriostat, micobiostat, microbiocide. However, only two products are currently registered. They are used as domestic animal repellents. The concentration of oil of lLemongrass contained in these products ranges from 0.01-0.025%. These registrations are for products in the form of impregnated solid material or pellets used to repel cats and dogs from out-of-door areas.

Products containing oil of eucalyptus were first registered in 1948 for insecticide and miticide use. Products were subsequently registered for the following uses: repellant or feeding depressant, disinfectant, sanitizer, and fungicide. The only currently active registration is used as an insecticide and a miticide containing one percent oil of eucalyptus.

The first product containing oil of mustard was registered in 1962 for use as a dog repellant. Several other products were subsequently registered for the same use. Seven products are currently registered; five are registered as repellant and feeding depressants and two are registered as an insecticide and miticide. Each of these products contains 0.2% oil of mustard.

A product containing soybean oil was first registered in 1959 for use as an insecticide and a miticide. Three products are currently registered for this same use. Two of the products contain 40% soybean oil and four and seven other active ingredients, respectively. The other product contains 93% soybean oil as its only active ingredient.

A product containing oil of anise was registered in 1952 for use as an insecticide and miticide. Subsequent products were also registered for this use. However, only one product is currently registered. Oil of anise comprises 1.6% of this product's formulation.

III. SCIENCE ASSESSMENT

A. Physical Chemistry Assessment

Essential oils, specifically:

Dihydro abietyl alcohol. Abietic Acid is a widely available organic acid, prepared by isomerization of rosin. It is used in the manufacture of esters, vinyl and glyceral esters for use in lacquers and varnishes. It is also used in the manufacture of "metal resinates", soaps, plastics and paper sizes. It is insoluble in water but soluble in organic solvents (3).

Allyl caproate. N-Caproic Acid or hexanoic acid occurs naturally in milk fats, in coconut oil, various palm and other oils. It is manufactured using many methods including catalytic reduction of the corresponding ß-lactone, the catalytic oxidation of n-hexanol and ozonolysis of tall oil unsaturated fatty acids among others. It is used in the manufacture of esters for artificial flavors. It is slightly soluble in water and readily soluble in ethanol and ether. It has a characteristic goat-like odor (3).

Allyl heptoate. Heptanoic acid is an oily liquid that has been found in rancid oils and in fusel oils in appreciable amounts. It is prepared by the oxidation of heptaldehyde with potassium permanganate in dilute sulfuric acid. It has a disagreeable rancid odor. It is soluble in ethanol and ether and other organic solvents (3).

Isoamyl isovalerate. Valeric acid is a colorless liquid with an unpleasant odor. It is used as an intermediate in perfumery. It is prepared industrially by oxidation of amyl alcohol or by a fermentation process. It is freely soluble in alcohol and ether (3).

Geranyl butyrate. Geraniol is an olefinic terpene alcohol constituting the chief part of oil of rose and oil of palmarosa. It is also found in many other essential oils such as citronella, and lemongrass. It is an oily liquid with a sweet rose odor. It is practically insoluble in water but very soluble in alcohol. It is used in perfumery (3).

Ethyl pelargrate. Pelargonic acid occurs as an ester in oil of pelargonium. It is a colorless oily liquid. It is practically insoluble in water and soluble in organic solvents. It is used in the production of lacquers and plastics (3).

Phenyl ethyl isovalerate. See valeric acid.

Benzo isovalerate. See valeric acid.

Geranyl acetate. See geraniol.

Iso amyl formate is a colorless liquid with a fruity odor. It is miscible with alcohol and ether and soluble in 3000 parts water. It is used in artificial fruit syrups (3).

Iso amyl acetate is also known as pear oil or banana oil. It is a colorless liquid with a pear-like odor and taste. It is soluble in 400 parts water and miscible with many organic solvent. It is used in an alcohol solution for a wide variety of non-pesticidal uses including as a pear flavoring, a solvent for old oil colors, for tannins, celluloid, manufacturing artificial silk and dyeing and finishing textiles (3).

Citronellyl butyrate. Citronellal is a chief constituent of citronella oil and is also found in many other volatile oils, such as lemon, lemongrass, and melissa. It is soluble in alcohols and very slightly soluble in water. It is used in soaps and perfumes (3).

Geranyl formate. See geraniol.

Cinnamyl isovalerate. Cinnamol is a colorless to yellowish oily liquid. It is sparingly soluble in water and soluble in organic solvents. It is used in the manufacture of plastics; synthetic rubber, resins and insulation (3).

Vanillin is a white or very slightly yellow solid powder. It occurs naturally in

vanilla and in potato parings. It can be synthesized from eugenol or guaiacol and also from the waste lignin of the wood pulp industry. It is soluble in water and is freely soluble in organic solvents (3).

Isobutyric acid is a liquid with a pungent odor. It is soluble in six parts water and is miscible with alcohol and other organic solvents (3).

Acetyl anisole. Anisole is a liquid with an agreeable aromatic odor. It is insoluble in water and soluble in alcohol and ether. It is used in perfumery and organic synthesis (3).

Oil of Rue is a naturally occurring mixture of compounds extracted from the plant Ruta graveolens L. (3).

Trans-alpha-ionone (irisone) from the volatile oil of the plant Boronia megastigma Nees., Rutaceace.; or can also be produced synthetically (3).

Oil of Bergamot is a volatile oil expressed from the rind of fresh fruit of Citrus aurantium L., var. bergamia. (3).

Oil of Orange is a volatile oil expressed from fresh peel or ripe fruit of the orange (Citrus aurantium var. sinensis L., Rutaceae. It consists of about 90% d-limonene, citral, decyl aldehyde, methyl anthranilate, linalool, and terpineol (3).

For the remaining active ingredients in this case:

Oil of Lemongrass is a volatile oil expressed from the grasses Cymbopogon Andropogon) citratus or Cymbopogon flexuosus. It is used as a source of citral which in turn is used in the synthesis of vitamin A. It is a reddish-yellow or brownish-red liquid. It has a strong odor of verbena. It is slightly soluble in water and soluble in alcohol, chloroform and ether. It is composed mostly (75-85%) of citral, methylheptenone, citronellal, geraniol, limonene, and dipentane (3).

Oil of Eucalyptus is a volatile oil from the fresh leaves of Eucalyptus globulus and of some other species of Eucalyptus. It is almost insoluble in water, but soluble in alcohol. It is miscible with absolute alcohol, oils and fats. It is composed mostly (70-80%) of eucalyptol, alpha pinene, phellandrene, terpineol, citronellal geranyl acetate, eudesmol, eudesmyl acetate, piperitone, and volatile isovaleric aldehydes (3).

Soybean oil is obtained from soybeans, Glycine max., by solvent extraction using petroleum hydrocarbons or, to a lesser extent, by expression using continuous screw press operations. The oil is usually refined with alkali. It is a pale yellow to brownish-yellow oil. It is miscible with organic solvents (3).

Oil of Mustard (allyl isothiocyanate) is isolated from the black mustard seed, Brassica nigra L. (Family: Cruciferae). It may also be prepared from allyl iodide and potassium thiocyanate. It is a colorless to pale yellow liquid. It is slightly soluble in water and miscible with alcohol and most organic solvents. The allyl moiety, which is a component of numerous odoriferous compounds, probably contributes to the odor of the compound which forms the basis of its repellent action toward insects and animals. Upon hydrolysis, isothiocyanate gives rise to disubstituted thioureas (3).

Oil of Anise is a volatile oil from dried ripe fruit of Pimpinella anisum L. or from Illicium verum L.. It is a colorless to pale yellow liquid. It is slightly soluble in water, soluble in alcohol and freely soluble in chloroform and ether (3).

B. Human Health and Environmental Assessment

The Agency has waived the generic data requirements, except for certain technical chemistry information, for certain essential oils, oil of lemongrass, oil of eucalyptus, soybean oil, and oil of anise because of their natural occurence, their GRAS status and low exposure. EPA is relying on commonly available information about these substances and their uses to reach a decision about their potential risks to the environment associated with the current uses of registered products.

Generally, these substances have low acute toxicity, except for allyl isothiocyanate, as described below. Also, many have GRAS (Generally Recognized As Safe) status by FDA under 21 CFR 172, 173, and 182 and are used in food preparation. Exposure to humans and the environment from the individual ingredients is expected to be very low. For example these products are formulated in very low concentrations (most at 1 percent or less) and the products are used at low volumes in the United States. Only the three current soybean oil-containing products are formulated with significant amounts (40, 40 and 93 percent). Since people are exposed to this compound from food or other sources, the incremental exposure from the pesticide products is expected to be negligible.

Toxicological information about the essential oils is listed below and is grouped by uses (or products).

The following essential oil active ingredients are used in one product, Holiday Chew Stop. This product is a liquid animal repellent intended to be sprayed on household contents (e.g. furniture, shoes, etc.) or on bandages or fur to prevent cats and dogs from chewing. The mode of action is non-toxic -- repellent. Many of the components have non-pesticidal uses; some are used in foods. The total concentration of essential oils in the product is five percent. Each component comprises a small portion of the total formulation (see below); exposure to people and the environment is

expected to be low. The concentration in the formulated product and the known toxicological properties of the components are listed below.

Allyl caproate. (0.0125%) Oral LD50 in rats (3) is 3000 mg/kg. GRAS (2).
Allyl heptoate. (0.003%) LD50 of heptanoic acid is approximately 1200 mg/kg (3).
Geranyl butyrate. (0.003%) GRAS (2).
Phenyl ethyl isovalerate. (0.0075%) (GRAS (2).
Geranyl acetate. (0.0075%) GRAS (2).
Iso amyl formate. (0.0075%) LD50 in rats is 9840 mg/kg (3). GRAS (2).
Iso amyl acetate. (0.0075%) GRAS (2).
Citronellyl Butyrate. (0.00075%) GRAS (2).
Geranyl formate. (0.000375%) GRAS (2).
Vanillin. (0.000375%) Oral LD50 in rats is 1580 mg/kg (3). GRAS, as vanillin acetate (2).
Isobutyric acid. (0.000375%) GRAS (2).
Methyl phenylacetate. (0.000375%) GRAS (2).
Dihydro abietyl alcohol (0.0125%)
Iso amyl isovalerate (0.003%)
Benzo isovalerate (0.0015%)
Ethyl pelargrate (0.000375%)
Oil of orange five-fold (0.00075%)
Acetyl methyl carbinaol (0.000375%)
Acetyl anisole (0.0007%)

The following essential oil active ingredients are used in two products used out-of-doors as animal repellants.

Oil of bergamot is an ingredient in two active registrations. These products are formulated as impregnated solid material or pellets to repel cats and dogs from areas near ornamentals (shrubs, vines and plants), shade trees, patio furniture and garbage cans. The oil of bergamot concentration in these registrations is 0.11%. Oil of bergamot is used in cosmetics as a perfume and is listed by FDA as GRAS (21 CFR 182.20). The acute oral LD50 for oil of bergamot in the rat is reportedly 11520 mg/kg (4). No adverse incident reports exist in EPA files for oil of bergamot. Human exposure to oil of bergamot is expected to be minimal from pesticide products and appears unlikely to result in adverse human health effects, based upon available reports and information.

Trans-alpha-ionone, also known as irisone, is an ingredient in same two products as oil of bergamot. It is present at 0.01%. These registrations are for the use of

products in the form of impregnated solid material or pellets to repel cats and dogs from areas near ornamentals (shrubs, vines and plants), shade trees, patio furniture and garbage cans. Irisone is used in cosmetics as a perfume. Alpha-ionone (4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3buten-2-one] is also allowed in food for human consumption as a direct food additive (2). The oral LD50 for irisone is reportedly 4590 mg/kg. There are no incident reports of adverse effects on file with EPA for irisone. Human exposure is expected to be minimal from products in this registration. The active ingredient irisone in the registered product is not likely to result in adverse human health effects, based upon available reports and information.

Oil of orange is an essential oil in the same two products mentioned above. Considering its use, and its low concentration in pesticide products, human and environmental exposure is expected to be negligible.

Geraniol is also an essential oil in the above two products at 0.04 percent. It is an olefinic terpene alcohol constituting the chief part of oil of rose (GRAS 182.20) and oil of palmarosa. It is also found in many other essential oils such as citronella (GRAS 182.20), and lemongrass (GRAS 182.20). Minimum exposure to geraniol in the registered products is not likely to result in adverse human health or environmental effects.

The following essential oil active ingredient is used in one products as a flea collar.

Oil of rue is an ingredient in one active product registration, for use in the same herbal flea collar as eucalyptus. Oil of rue is present in the end-use product at 0.125%. Oil of rue contains 70-75% geraniol and citronellol. Oil of rue is used as a flavoring in medicines and in cosmetics at levels of 0.001-0.15% and was proposed for GRAS status by the Fragrance and Essence Manufacturers Association (FEMA) in 1965. The oral LD50 for oil of rue in the rat is reportedly greater than 5000 mg/kg (5). There are no incident reports on file with EPA for products containing oil of rue. Minimum exposure to oil of rue in the registered product is not likely to result in adverse human health effects.

Below is the toxicological information for the remaining active ingredients.

Oil of anise is the active ingredient in one current registration for use on soil near

ornamentals and lawns as a dog and cat repellent. The active ingredient in the registered product is food grade oil of anise. The resulting end-product contains less than 2% of the

active ingredient in liquid form (maximum application rate of 0.0533 gal ai/1000 sq. ft.), The product is applied to soil on areas from which defecated materials are removed. The odor of the registered product, when applied in the manner described, is said to repel cats and dogs and thereby prevent further defecation on lawns, gardens and flower beds.

FDA considers oil of anise as GRAS as cited in 21 CFR 182.20. Oil of anise is commonly used as flavoring in food and medicine. The acute oral LD_{50} for oil of anise in the rat is reportedly 2250 mg/kg (4). There are no incident reports of adverse effects on file at EPA for oil of anise. Human exposure to oil of anise is expected to be minimal from products in this registration. The active ingredient oil of anise in the registered product is not likely to result in adverse human health effects, based upon available reports and information.

Oil of lemongrass, also known as citral, is the ingredient in two registrations. It is formulated as an impregnated solid material or pellets used to repel cats and dogs from areas near ornamentals (shrubs, vines and plants), shade trees, patio furniture and garbage cans. The concentration of the lemongrass active ingredient in the registrations is 0.01-2.0%. Oil of lemongrass, is commonly used in food flavoring and cosmetics and is listed by FDA as GRAS (21 CFR 182.20). The acute oral LD_{50} for oil of lemongrass in the rat is reportedly 5600 mg/kg (4). There are no incident reports of adverse effects on file with EPA for oil of lemongrass. Human exposure to oil of lemongrass is expected to be minimal from pesticide products currently registered. The active ingredient oil of lemongrass in the registered products is not likely to result in adverse human health effects, based upon available reports and information.

Eucalyptus oil is an ingredient in one active registration for use as an herbal flea collar for pets. Eucalyptus oil is present in the end-use product at 1.00%. Oil of eucalyptus is used in medicine as an expectorant, anthelmintic and local antiseptic. Oil of eucalyptus contains 70-80% cineole (eucalyptol). Eucalyptol is allowed in food as a direct food additive (21 CFR 172.515). The oral LD 50 for eucalyptus oil in the rat is reportedly 2480 mg/kg (4). There are no incident reports of adverse effects on file with EPA for products containing eucalyptus oil. Human exposure to eucalyptus oil is expected to be minimal from products in this registration. The active ingredient eucalyptus oil in the registered product is not likely to result in adverse human health effects, based upon available reports and information.

Allyl isothiocyanate, also known as volatile oil of mustard, has a very pungent irritating odor and acrid taste. It is used therapeutically as a counterirritant. The oral LD_{50} in rats is 339 mg/kg (3). There are no incident reports on file with EPA for oil of mustard. Human exposure to oil of mustard is expected to be minimal from products in this registration. The active ingredient oil of mustard in the registered product is not likely to result in adverse human health effects, based upon available reports and information.

There are seven currently registered products containing oil of mustard in combination with other ingredients. Five of these products can be used out-of-doors to either repel cats and dogs from ornamental lawns, flowers, bushes and shade trees, and refuse containers, or to kill insects. One of these registrations is formulated into pellets. The out-of-doors-use and pelleted formulation types may expose nontarget organisms to oil of mustard. The Agency has some concerns about terrestrial species (especially birds) ingesting pellets and causing adverse effects. All of the presently registered products containing oil of mustard are formulated with less than 0.3% of the oil of mustard. The exposure and risk to terrestrial species is likely to be low. In addition, EPA has reviewed a summary of an acute avian oral study (MRID 104087) that reported an LC_{50} of 1500 ppm of formulated product for bobwhite quail. Therefore, EPA has waived the requirements for terrestrial species toxicity testing for products containing mustard oil in percentages below 0.5%. Any new products containing higher percentages of mustard oil may require additional toxicity data submissions. The remaining product is used indoors in a carpet freshener to repel pets. The Agency generally expects that there will be negligible exposure to the environment and to nontarget organisms from use in indoor domestic dwellings.

Soybean oil is used in three currently registered products for use as an insecticide and miticide on citrus fruits and a variety of ornamentals. Soybean oil is considered to be GRAS by FDA (21 CFR 173.340 and 182.70). It is commonly used as a human food. It is widely ditributed in commerce and available to the general public throughout the United States for nonpesticidal uses. There are no incident reports on file for soybean oil. Soybean oil has a non-toxic mode of action for the target pests. It is an organic compound known to be rapidly degraded in the environment to elemental constituents by normal biological, physical and/or chemical processes that can be reasonable expected to exist where the pesticide is applied. The active ingredient soybean oil in the registered product is not likely to result in adverse human health effects, based upon available reports and information.

I. RISK MANAGEMENT AND REREGISTRATION DECISION

A. Determination of Eligibility

Section 4(g)(2)(A) of FIFRA calls for the Agency to determine, after submission of relevant data concerning an active ingredient, whether products containing the active ingredients are eligible for reregistration. As discussed above, the Agency has determined that the set of generic data requirements that would normally be applicable to flower and vegetable oils need not be satisfied for the Agency to reach a decision on potential risks and reregistration eligibility. Rather, it has considered general and commonly available information. The Agency has determined that flower and vegetable oils with the exception of allyl isothiocyanate meet criteria as outlined in the document "Guidance for Making Determinations to Reduce Data Requirements." Flower and vegetable oils met the criteria due to their use and availability for non-pesticide food uses; their regulatory status as a chemical classified as GRAS and their exemption from the requirement of food additive tolerances; their non-toxic mode of action as pesticides; that there is negligible human and environmental exposure to them as a result of their use patterns; and, the lack of reports of adverse effects. No data were submitted under 6(a)(2) of FIFRA, no significant incidents have been reported to the Agency, and there is no indication in the literature that these pesticides pose adverse effects in humans or to the environment when used in a manner prescribed in end-use product labeling. Appendix B identifies the sources for this information including submitted studies that the Agency considered acceptable that the Agency reviewed as part of their determination of reregistration eligibility of flower and vegetable oils.

The Agency believes this information is sufficient to support reregistration and, that flower and vegetable oils can be used without resulting in unreasonable adverse effects to human health and the environment. The Agency therefore finds that all products other than those used as antimicrobials containing flower and vegetable oils as the active ingredient are eligible for reregistration. The reregistration of particular products is addressed in Section V of this document.

The use of essential oils for antimicrobial purposes is ineligible for reregistration. The Agency has concluded that essential oils normally have no independent pesticidal activity when included in antimicrobial products but rather would be classified as inert ingredients (perfume) of such products, within the meaning of FIFRA sec. 2(m). (40 CFR 153.139). These antimicrobial products contain one or more other ingredients that perform as the active ingredient(s).

B. Risk Management Decision

In consideration of the above information about flower and vegetable oils, the Agency finds no reason to impose new risk reduction measures for currently registered uses. The Agency will however, assess the need for product specific risk reduction measures upon receipt of data that are being required under the Product Specific Data Call-in Notice appended to this document.

Section 4(g)(2)(A) of FIFRA calls for the Agency to determine, after submission of relevant data concerning an active ingredient, whether products containing the active ingredients are eligible for reregistration. The Agency has previously identified and required the submission of the generic (i.e. active ingredient specific) data required to support reregistration of products containing flower and vegetable oil active ingredients. The Agency has completed its review of these generic data, and has determined that the data are sufficient to support reregistration of all products containing flower and vegetable oils. Appendix B identifies the generic data requirements that the Agency reviewed as part of its determination of reregistration eligibility of flower and vegetable oils, and lists the submitted studies that the Agency found acceptable.

The data identified in Appendix B were sufficient to allow the Agency to assess the registered uses of flower and vegetable oils and to determine that flower and vegetable oils can be used without resulting in unreasonable adverse effects to humans and the environment. The Agency therefore finds that all products containing flower and vegetable oils as the active ingredients except essential oils in antimicrobial products, are eligible for reregistration. The reregistration of particular products is addressed in Section V of this document.

The Agency made its reregistration eligibility determination based upon the target data base required for reregistration, the current guidelines for conducting acceptable studies to generate such data and the data identified in Appendix B. Although the Agency has found that all uses of flower and vegetable oils except the use of essential oils in antimicrobials are eligible for reregistration, it should be understood that the Agency may take appropriate regulatory action, and/or require the submission of additional data to support the registration of products containing flower and vegetable oils, if new information comes to the Agency's attention or if the data requirements for registration (or the guidelines for generating such data) change.

1. Eligibility Decision

Based on the reviews of the generic data for the active ingredients flower and vegetable oils, the Agency has sufficient information on the health effects of flower and vegetable oils and on its potential for causing adverse effects in fish and wildlife and the environment. Therefore, the Agency concludes that products containing flower and

vegetable oils for all uses, except the use of essential oils in antimicrobial products, are eligible for reregistration.

The Agency has determined that flower and vegetable oils products, labeled and used as specified in this Reregistration Eligibility Decision, will not pose unreasonable risks or adverse effects to humans or the environment.

2. Eligible and Ineligible Uses

The Agency has determined that all current uses of flower and vegetable oils products are eligible for reregistration except the use of essential oils in antimicrobial products. The use of essential oils as an active ingredient in antimicrobial products (i.e. used as a disinfectant, fungicide, tuberculocide, virucide, and bacteriostat) has no independent pesticidal activity when included in antimicrobial products as perfumes, and is therefore, ineligible for reregistration.

C. Regulatory Position

The following is a summary of the regulatory positions and rationales for flower and vegetable oils. Where labeling revisions are imposed, specific language is set forth in Section V of this document.

1. Essential Oils in Antimicrobial Products: Deletion or Conversion to Inert Ingredients.

All registrants with antimicrobial products containing essential oils are required to either delete that active ingredient from their formulation or to convert that active ingredient to inert status. Call contact person listed in Appendix G Attachment A for further information.

V. ACTIONS REQUIRED BY REGISTRANTS

This section specifies the data requirements and responses necessary for the reregistration of both manufacturing-use and end-use products.

A. Manufacturing-Use Products

1. Additional Generic Data Requirements

There are currently no registered technical grade products for the flower and vegetable oils. The generic data base supporting the reregistration of products containing flower and vegetable oils for the above eligible uses has been reviewed and determined to be incomplete. Registrants are required to submit the technical chemistry data corresponding to Series 61 and Series 62 for the analysis and certification of product ingredients. If the product is United States Pharmacopoeia (USP) grade, a copy of USP analysis with citation of the analytical methods used and certification would satisfy the requirement of Series 62.

The Confidential Statement of Formula (CSF) must be supported by analytical data. The data on the physical and chemical characteristics of the flower and vegetable oils from the Material Safety Data Sheet (MSDS) for the product may be compiled by the registrant in the format required by the FIFRA Accelerated Reregistration Phase 3 Technical Guidance, specifically PR Notice 86-5, to satisfy some of the requirements of Series 63. The generic data requirements are listed in Appendix F, the Generic Data Call-in Notice.

2. Labeling Requirements for Manufacturing-Use Products

No manufacturing-use products are registered with the EPA at this time.

B. End-Use Products

1. Additional Product-Specific Data Requirements

Section 4(g)(2)(B) of FIFRA calls for the Agency to obtain any needed product-specific data regarding the pesticide after a determination of eligibility has been made. The product specific data requirements are listed in Appendix G, the Product Specific Data Call-In Notice.

Registrants must review previous data submissions to ensure that they meet current EPA acceptance criteria (Appendix F; Attachment E) and if not, commit to conduct new studies. If a registrant believes that previously submitted data meet current testing standards, then study MRID numbers should be cited according to the instructions in the Requirement Status and Registrants Response Form provided for each product.

2. Labeling Requirements for End-Use Products

The labels and labeling of all products must comply with EPA's current

regulations and requirements as specified in 40 CFR §156.10.

All registrants that have a mixture of essential oils listed on the label as the active ingredient (and the product is not an antimicrobial) must list separately each essential oil and its percentage of the composition on the label. The term "essential oils" will no longer be acceptable to describe a mixture of oils.

All registrants with antimicrobial products containing essential oils are required to either delete that active ingredient from their formulation or to convert that active ingredient to inert status.

All registrants that have "pets" as the use site for their pesticide product must specify which pets are to be treated. The "pets" use site is too general and not eligible for reregistration.

Worker Protection Standard

Any product whose labeling reasonably permits use in the production of an agricultural plant on any farm, forest, nursery, or greenhouse must comply with the labeling requirements of PR Notice 93-7, "Labeling Revisions Required by the Worker Protection Standard (WPS), and PR Notice 93-11, "Supplemental Guidance for PR Notice 93-7, which reflect the requirements of EPA' s labeling regulations for worker protection statements (4 0 CFR part 156, subpart K). These labeling revisions are necessary to implement the Worker Protection Standard for Agricultural Pesticides (40 CFR part 170) and must be completed in accordance with, and within the deadlines specified in, PR Notices 93-7 and 93-11. Unless otherwise specifically directed in this RED, all statements required by PR Notices 93-7 and 93-11 are to be on the product label exactly as instructed in those notices.

After April 21, 1994, except as otherwise provided in PR Notices 93-7 and 93-11, all products within the scope of those notices must bear WPS PR Notice complying labeling when they are distributed or sold by the primary registrant or any supplementally registered distributor.

After October 23, 1995, except as otherwise provided in PR Notices 93-7 and 93-11, all products within the scope of those notices must bear WPS PR Notice complying labeling when they are distributed or sold by any person.

C. Existing Stocks

Registrants may generally distribute and sell products bearing old labels/labeling for 26 months from the date of the issuance of a Reregistration Eligibility Decision

(RED). Persons other than the registrant may generally distribute or sell such products for 50 months from the date of the issuance of a RED. However, existing stocks time frames will be established case-by-case, depending on the number of products involved, the number of label changes, and other factors. Refer to "Existing Stocks of Pesticide Products; Statement of Policy"; Federal Register, Volume 56, No. 123, June 26, 1991.

The Agency has determined that registrants may distribute and sell [add chemical names here] products bearing old labels/labeling for 26 months from the date of issuance of a RED. Persons other than the registrant may distribute or sell such products for 50 months from the date of the issuance of a RED.

VI. APPENDICES

APPENDIX A. Table of Use Patterns Subject to Reregistration

SITE Application Type, Application Timing, Application Equipment - Surface Type & Efficacy Influencing Factor (Antimicrobial only)	Form	Minimum Application Rate	Maximum Application Rates	Soil Text (Max Dse)	Max. Apps @ Max Rate	Maximum Dose /crop cycle, or /year	Min. Interv (days)	Restr. Entry Interv (days)	Geographic Allowed	Geographic Disallowed	Use Limitations Codes
USES ELIGIBLE FOR REREGISTRATION											
NON-FOOD/NON-FEED											
CATS (ADULTS/KITTENS)								**Use Group: INDOOR RESIDENTIAL**			
Animal treatment (spray)., When needed., Aerosol can.	PRL	NA	UC	*	NS		NS	AN	NS		
Animal wound treatment., When needed., Aerosol can.	PRL	NA	UC	*	NS		NS	AN	NS		
DOGS/CANINES (ADULTS/PUPPIES)								**Use Group: INDOOR RESIDENTIAL**			
Animal treatment (spray)., When needed., Aerosol can.	PRL	NA	UC	*	NS		NS	AN	NS		
Animal wound treatment., When needed., Aerosol can.	PRL	NA	UC	*	NS		NS	AN	NS		
HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS								**Use Group: INDOOR RESIDENTIAL**			
Fumigation., When needed., By hand.	CR	NA	.0007813 lb 20 cu.ft	*	NS		NS	AN	NS		
			.001563 lb 50 cu.ft	*							
	CR	NA	.0003125 lb 4 cu.ft	*	NS		NS	NS	NS		
Fumigation., When needed., Not on label.	CR	NA	.02 lb 90 cu.ft	*	NS		NS	NS	NS		

SITE Application Type, Application Timing, Application Equipment - Surface Type & Efficacy Influencing Factor (Antimicrobial only)	Form	Minimum Application Rate	Maximum Application Rates	Soil Text (Max Dse)	Max. Apps @ Max Rate	Maximum Dose /crop cycle, or /year	Min. Interv (days)	Restr. Entry Interv (days)	Geographic Allowed	Geographic Disallowed	Use Limitations Codes
NON-FOOD/NON-FEED (con't)											
HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS (con't)					**Use Group: INDOOR RESIDENTIAL (con't)**						
Spot treatment., When needed., Aerosol can.	PRL	NA		UC	*	NS	NS	AN	NS		
Spot treatment., When needed., Pump spray bottle.	RTU	NA		UC	*	NS	NS	1	NS		
Spray., When needed., Sprayer.	RTU	NA		UC	*	NS	NS	NS	NS		
HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES					**Use Group: INDOOR RESIDENTIAL**						
Contact and/or surface treatment., When needed., Sprayer.	RTU	NA		UC	*	NS	NS	NS	NS		
Fumigation., When needed., By hand.	CR	NA	.0007813 lb 20 cu.ft		*	NS	NS	AN	NS		
			.001563 lb 50 cu.ft		*						
	CR	NA	.0003125 lb 4 cu.ft		*	NS	NS	NS	NS		
Space spray., When needed., Sprayer.	RTU	NA		UC	*	NS	NS	AN	NS		

USES INELIGIBLE FOR REREGISTRATION: ALL DISINFECTANT, FUNGICIDE, TUBERCULOCIDE, BACTERIOSTAT, AND VIRUCIDE USES ON THE FOLLOWING SITES:

HATCHERY EQUIPMENT
HATCHERIES
HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES
HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS
FOOD PROCESSING, HANDLING AND STORAGE PLANTS/AREAS
EATING ESTABLISHMENTS (ALL OR UNSPECIFIED)
EATING ESTABLISHMENTS EQUIPMENT AND UTENSILS
HOSPITALS AND RELATED INSTITUTIONS (ALL OR UNSPECIFIED)
HOSPITAL CRITICAL PREMISES (E.G. OPERATING ROOMS)
HOSPITAL PATIENT PREMISES (E.G. CLINICS, WARDS)
HOSPITAL NON-CRITICAL PREMISES (E.G. LABS, WAITING ROOMS)
HOSPITAL CRITICAL ITEMS (ITEMS ENTER BLOOD OR LIVING TISSUE)
HOSPITAL SEMICRITICAL ITEMS (ITEMS CONTACT MUCOSAL MEMBRANE)
HOSPITAL NONCRITICAL ITEMS (ITEMS CONTACT ONLY UNBROKEN SKIN)
HOSPITAL JANITORIAL EQUIPMENT
BARBER AND BEAUTY SHOP EQUIPMENT
MORGUES, MORTUARIES AND FUNERAL HOME PREMISES
MORGUES, MORTUARIES AND FUNERAL HOME EQUIPMENT
MORGUES, MORTUARIES AND FUNERAL HOME INSTRUMENTS
COMMERCIAL INSTITUTIONAL AND INDUSTRIAL AREAS/PREMISES
COMMERCIAL, INSTITUTIONAL OR INDUSTRIAL EQUIPMENT
LAUNDRY (HOSPITAL, COMMERCIAL, HOUSEHOLD)
DIAPERS (PRESOAK, HOSPITAL, COMMERCIAL, HOUSEHOLD)
LAUNDRY EQUIPMENT
BATHROOM PREMISES
TOILET BOWLS AND URINALS
TOILET TANKS, OR WATER CLOSETS
HEW (FDA/BUREAU OF VETERINARY MEDICINE) (FOR PEST CLAIMS ADMINISTERED BY FDA OR BUREAU OF VETERINARY MEDICINE)
AIR TREATMENTS
SURFACE TREATMENTS (ALL OR UNSPECIFIED)
HARD NON-POROUS SURFACE TREATMENTS
HARD POROUS SURFACE TREATMENTS
WOOD SURFACE TREATMENTS (SEASONED/UNPAINTED)

LEGEND

HEADER ABBREVIATIONS
Max. Apps @ Max Rate : Maximum number of Applications at Maximum Dosage Rate
Min. Interv (days) : Minimum Interval between Applications (days)
Restr. Entry Interv (days) : Restricted Entry Interval (days)

SOIL TEXTURE FOR MAX APP. RATE
* : Non-specific
C : Coarse
M : Medium
F : Fine
O : Others

FORMULATION CODES
CR : CRYSTALLINE
PRL : PRESSURIZED LIQUID
RTU : LIQUID-READY TO USE

ABBREVIATIONS
AN : As Needed

NS : Not Specified (on label)
UC : Unconverted due to lack of data (on label)

APPLICATION RATE
DCNC : Dosage Can Not be Calculated
No Calc : No Calculation can be made
W : PPM calculated by weight
V : PPM Calculated by volume
cwt : Hundred Weight
nnE-xx : nn times (10 power -xx); for instance, "1.234E-04" is equivalent to ".0001234"

SITE Application Type, Application Timing, Application Equipment - Surface Type & Efficacy Influencing Factor (Antimicrobial only)	Form	Minimum Application Rate	Maximum Application Rates	Soil Text (Max Dse)	Max. Apps @ Max Rate	Maximum Dose /crop cycle, or /year	Min. Interv (days)	Restr. Entry Interv (days)	Geographic Allowed	Geographic Disallowed	Use Limitations Codes
USES ELIGIBLE FOR REREGISTRATION											
NON-FOOD/NON-FEED											
HOUSEHOLD/DOMESTIC DWELLINGS OUTDOOR PREMISES									Use Group: OUTDOOR RESIDENTIAL		
Rub-on., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS			
Scent post application., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS			
Sprinkle., When needed., By hand.	P/T	NA	.002 pellets sq.ft	*	NS		NS	10			
ORNAMENTAL AND/OR SHADE TREES									Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL		
Scent post application., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS			
Sprinkle., When needed., By hand.	P/T	NA	.002 pellets sq.ft	*	NS		NS	10			
ORNAMENTAL HERBACEOUS PLANTS									Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL		
Scent post application., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS			
ORNAMENTAL LAWNS AND TURF									Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL		
Sprinkle., When needed., By hand.	P/T	NA	.002 pellets sq.ft	*	NS		NS	10			
ORNAMENTAL WOODY SHRUBS AND VINES									Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL		
Scent post application., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS			
Sprinkle., When needed., By hand.	P/T	NA	.002 pellets sq.ft	*	NS		NS	10			

SITE Application Type, Application Timing, Application Equipment - Surface Type & Efficacy Influencing Factor (Antimicrobial only)	Form	Minimum Application Rate	Maximum Application Rates	Soil Text (Max Dse)	Max. Apps @ Max Rate	Maximum Dose /crop cycle, or /year	Min. Interv (days)	Restr. Entry Interv (days)	Geographic Allowed	Geographic Disallowed	Use Limitations Codes
USES ELIGIBLE FOR REREGISTRATION											
NON-FOOD/NON-FEED											
HOUSEHOLD/DOMESTIC DWELLINGS OUTDOOR PREMISES								**Use Group: OUTDOOR RESIDENTIAL**			
Rub-on., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS	NS		
Scent post application., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS	NS		
Sprinkle., When needed., By hand.	P/T	NA	.002 pellets sq.ft	*	NS		NS	10	NS		
ORNAMENTAL AND/OR SHADE TREES								**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**			
Scent post application., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS	NS		
Sprinkle., When needed., By hand.	P/T	NA	.002 pellets sq.ft	*	NS		NS	10	NS		
ORNAMENTAL HERBACEOUS PLANTS								**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**			
Scent post application., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS	NS		
ORNAMENTAL LAWNS AND TURF								**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**			
Sprinkle., When needed., By hand.	P/T	NA	.002 pellets sq.ft	*	NS		NS	10	NS		
ORNAMENTAL WOODY SHRUBS AND VINES								**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**			
Scent post application., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS	NS		
Sprinkle., When needed., By hand.	P/T	NA	.002 pellets sq.ft	*	NS		NS	10	NS		

LEGEND

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SOIL TEXTURE FOR MAX APP. RATE
* : Non-specific
C : Coarse
M : Medium
F : Fine
O : Others

FORMULATION CODES
IMPR : IMPREGNATED MATERIAL
P/T : PELLETED/TABLETED

ABBREVIATIONS
AN : As Needed
NA : Not Applicable
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APPLICATION RATE
DCNC : Dosage Can Not be Calculated
No Calc : No Calculation can be made
W : PPM calculated by weight
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nnE-xx : nn times (10 power -xx); for instance, "1.234E-04" is equivalent to ".0001234"

SITE Application Type, Application Timing, Application Equipment - Surface Type & Efficacy Influencing Factor (Antimicrobial only)	Form	Minimum Application Rate	Maximum Application Rates	Soil Text (Max Dse)	Max. Apps @ Max Rate	Maximum Dose /crop cycle, or /year	Min. Interv (days)	Restr. Entry Interv (days)	Geographic Allowed	Geographic Disallowed	Use Limitations Codes
USES ELIGIBLE FOR REREGISTRATION											
NON-FOOD/NON-FEED											
SITE TERM TOO GENERAL **Use Group: INDOOR RESIDENTIAL**											
Flea collar., When needed., By hand.	IC/T	NA	7.813E-05 lb animal	*	NS		NS	NS	NS		

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IC/T : IMPREGNATED COLLAR/TAG

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SITE Application Type, Application Timing, Application Equipment - Surface Type & Efficacy Influencing Factor (Antimicrobial only)	Form	Minimum Application Rate	Maximum Application Rates	Soil Text (Max Dse)	Max. Apps @ Max Rate	Maximum Dose /crop cycle, or /year	Min. Interv (days)	Restr. Entry Interv (days)	Geographic Allowed	Geographic Disallowed	Use Limitations Codes
USES ELIGIBLE FOR REREGISTRATION											
NON-FOOD/NON-FEED											
FENCEROWS/HEDGEROWS						Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL					
Spot treatment., When needed., Sprayer.	RTU	NA	UC	*	NS		NS	AN	NS		
HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS						Use Group: INDOOR RESIDENTIAL					
Sprinkle., When needed., Not on label.	D	NA	9.524E-06 lb sq.ft	*	NS		NS	1.5	NS		
HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES						Use Group: INDOOR RESIDENTIAL					
Contact and/or surface treatment., When needed., Trigger spray bottle.	RTU	NA	.0005469 gal sq.ft	*	NS		NS	AN	NS		
HOUSEHOLD/DOMESTIC DWELLINGS OUTDOOR PREMISES						Use Group: OUTDOOR RESIDENTIAL					
Outdoor general surface spray., When needed., Trigger spray bottle.	RTU	NA	.0005469 gal sq.ft	*	NS		NS	AN	NS		
Perimeter treatment., When needed., Sprayer.	RTU	NA	UC	*	NS		NS	AN	NS		
Perimeter treatment., When needed., Trigger spray bottle.	RTU	NA	.001563 gal sq.ft	*	NS		NS	7	NS		
Rubbing., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS	NS		
Scent post application., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS	NS		
Spot treatment., When needed., Sprayer.	RTU	NA	UC	*	NS		NS	AN	NS		
Spray., When needed., Trigger spray bottle.	RTU	NA	.0007813 gal sq.ft	*	NS		NS	7	NS		
Sprinkle., When needed., By hand.	P/T	NA	.02 pellets sq.ft	*	NS		NS	10	NS		
ORNAMENTAL AND/OR SHADE TREES						Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL					
Perimeter treatment., When needed., Sprayer.	RTU	NA	UC	*	NS		NS	AN	NS		
Scent post application., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS	NS		
Spot treatment., When needed., Sprayer.	RTU	NA	UC	*	NS		NS	AN	NS		
Spray., When needed., Trigger spray bottle.	RTU	NA	.0005469 gal sq.ft	*	NS		NS	AN	NS		

Sprinkle., When needed., By hand.	P/T	NA	.02 pellets sq.ft	*	NS	NS 10	NS	

SITE Application Type, Application Timing, Application Equipment - Surface Type & Efficacy Influencing Factor (Antimicrobial only)	Form	Minimum Application Rate	Maximum Application Rates	Soil Text (Max Dse)	Max. Apps @ Max Rate	Maximum Dose /crop cycle, or /year	Min. Interv (days)	Restr. Entry Interv (days)	Geographic Allowed	Geographic Disallowed	Use Limitations Codes
NON-FOOD/NON-FEED (con't)											
ORNAMENTAL HERBACEOUS PLANTS											**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**
Scent post application., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS	NS		
ORNAMENTAL LAWNS AND TURF											**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**
Perimeter treatment., When needed., Sprayer.	RTU	NA	UC	*	NS		NS	AN	NS		
Perimeter treatment., When needed., Trigger spray bottle.	RTU	NA	.0007813 gal sq.ft	*	NS		NS	7	NS		
Scent post application., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS	NS		
Sprinkle., When needed., By hand.	P/T	NA	.02 pellets sq.ft	*	NS		NS	10	NS		
ORNAMENTAL WOODY SHRUBS AND VINES											**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**
Perimeter treatment., When needed., Sprayer.	RTU	NA	UC	*	NS		NS	AN	NS		
Scent post application., When needed., By hand.	IMPR	NA	UC	*	NS		NS	NS	NS		
Spot treatment., When needed., Sprayer.	RTU	NA	UC	*	NS		NS	AN	NS		
Spray., When needed., Trigger spray bottle.	RTU	NA	.0005469 gal sq.ft	*	NS		NS	AN	NS		
Sprinkle., When needed., By hand.	P/T	NA	.02 pellets sq.ft	*	NS		NS	10	NS		

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M : Medium
F : Fine
O : Others

FORMULATION CODES
D : DUST
IMPR : IMPREGNATED MATERIAL
P/T : PELLETED/TABLETED
RTU : LIQUID-READY TO USE

ABBREVIATIONS
AN : As Needed
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No Calc : No Calculation can be made
W : PPM calculated by weight
V : PPM Calculated by volume
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nnE-xx : nn times (10 power -xx); for instance, "1.234E-04" is equivalent to ".0001234"

SITE Application Type, Application Timing, Application Equipment - Surface Type & Efficacy Influencing Factor (Antimicrobial only)	Form	Minimum Application Rate	Maximum Application Rates	Soil Text (Max Dse)	Max. Apps @ Max Rate	Maximum Dose /crop cycle, or /year	Min. Interv (days)	Restr. Entry Interv (days)	Geographic Allowed	Geographic Disallowed	Use Limitations Codes
USES ELIGIBLE FOR REREGISTRATION											
FOOD/FEED USES											
CITRUS FRUITS						Use Group: TERRESTRIAL FOOD+FEED CROP					
High volume spray (dilute)., Foliar., High volume ground.	OIL	NA	118.2 lb A	*	NS		NS	NS	NS		
NON-FOOD/NON-FEED											
HOUSEHOLD/DOMESTIC DWELLINGS OUTDOOR PREMISES						Use Group: OUTDOOR RESIDENTIAL					
Outdoor premise treatment., When needed., Sprayer.	EC	NA	.2501 gal A .7662 lb A	* *	NS		NS	AN	NS		
ORNAMENTAL AND/OR SHADE TREES						Use Group: GREENHOUSE NON-FOOD CROP					
Spray., Foliar., Sprayer.	EC	NA	UC	*	NS		NS	AN	NS		
Spray., Potted., Sprayer.	EC	NA	UC	*	NS		NS	AN	NS		
						Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL					
Spray., Foliar., Sprayer.	EC	NA	UC	*	NS		NS	AN	NS		
Spray., Potted., Sprayer.	EC	NA	UC	*	NS		NS	AN	NS		
ORNAMENTAL HERBACEOUS PLANTS						Use Group: GREENHOUSE NON-FOOD CROP					
Spray., Foliar., Sprayer.	EC	NA	UC	*	NS		NS	AN	NS		
Spray., Potted., Sprayer.	EC	NA	UC	*	NS		NS	AN	NS		
						Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL					
Spray., Foliar., Sprayer.	EC	NA	UC	*	NS		NS	AN	NS		
Spray., Potted., Sprayer.	EC	NA	UC	*	NS		NS	AN	NS		
ORNAMENTAL NONFLOWERING PLANTS						Use Group: GREENHOUSE NON-FOOD CROP					
Spray., Foliar., Sprayer.	EC	NA	UC	*	NS		NS	AN	NS		
Spray., Potted., Sprayer.	EC	NA	UC	*	NS		NS	AN	NS		
						Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL					

Spray., Foliar., Sprayer.	EC	NA	UC	*	NS	NS	AN	NS
Spray., Potted., Sprayer.	EC	NA	UC	*	NS	NS	AN	NS

SITE Application Type, Application Timing, Application Equipment - Surface Type & Efficacy Influencing Factor (Antimicrobial only)	Form	Minimum Application Rate	Maximum Application Rates	Soil Text (Max Dse)	Max. Apps @ Max Rate	Maximum Dose /crop cycle, or /year	Min. Interv (days)	Restr. Entry Interv (days)	Geographic Allowed	Geographic Disallowed	Use Limitations Codes
NON-FOOD/NON-FEED (con't)											
ORNAMENTAL WOODY SHRUBS AND VINES									**Use Group: GREENHOUSE NON-FOOD CROP**		
Spray., Foliar., Sprayer.	EC	NA	UC	*	NS		NS	AN	NS		
Spray., Potted., Sprayer.	EC	NA	UC	*	NS		NS	AN	NS		
									Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL		
Spray., Foliar., Sprayer.	EC	NA	UC	*	NS		NS	AN	NS		
Spray., Potted., Sprayer.	EC	NA	UC	*	NS		NS	AN	NS		
RECREATIONAL AREAS									**Use Group: TERRESTRIAL NON-FOOD CROP**		
Outdoor premise treatment., When needed., Sprayer.	EC	NA	.2501 gal A .7662 lb A	* *	NS		NS	AN	NS		

LEGEND

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SOIL TEXTURE FOR MAX APP. RATE
* : Non-specific
C : Coarse
M : Medium
F : Fine
O : Others

FORMULATION CODES
EC : EMULSIFIABLE CONCENTRATE
OIL : OILS-NO ADDED PESTICIDE

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nnE-xx : nn times (10 power -xx); for instance, "1.234E-04" is equivalent to ".0001234"

Site, Application Type, Application Timing, Application Equipment - Surface Type & Efficacy Influencing Factor (Antimicrobial only)	Form	Minimum Application Rate	Maximum Application Rates	Soil Text (Max Dse)	Max. Apps @ Max Rate	Maximum Dose /crop cycle, or /year	Min. Interv (days)	Restr. Entry Interv (days)	Geographic Allowed	Geographic Disallowed	Use Limitations Codes
USES ELIGIBLE FOR REREGISTRATION											
NON-FOOD/NON-FEED											
FENCEROWS/HEDGEROWS											**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**
Spot treatment., When needed., Sprayer.	RTU	NA		UC	*	NS		NS AN	NS		
HOUSEHOLD/DOMESTIC DWELLINGS OUTDOOR PREMISES											**Use Group: OUTDOOR RESIDENTIAL**
Perimeter treatment., When needed., Sprayer.	RTU	NA		UC	*	NS		NS AN	NS		
Rub-on., When needed., By hand.	IMPR	NA		UC	*	NS		NS NS	NS		

Scent post application., When needed., By hand.	IMPR	NA		UC	*	NS	NS	NS	NS
Spot treatment., When needed., Sprayer.	RTU	NA		UC	*	NS	NS	AN	NS
Sprinkle., When needed., By hand.	P/T	NA	.2 pellets sq.ft		*	NS	NS	10	NS
ORNAMENTAL AND/OR SHADE TREES				**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**					
Perimeter treatment., When needed., Sprayer.	RTU	NA		UC	*	NS	NS	AN	NS
Scent post application., When needed., By hand.	IMPR	NA		UC	*	NS	NS	NS	NS
Spot treatment., When needed., Sprayer.	RTU	NA		UC	*	NS	NS	AN	NS
Sprinkle., When needed., By hand.	P/T	NA	.2 pellets sq.ft		*	NS	NS	10	NS
ORNAMENTAL HERBACEOUS PLANTS				**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**					
Scent post application., When needed., By hand.	IMPR	NA		UC	*	NS	NS	NS	NS
ORNAMENTAL LAWNS AND TURF				**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**					
Perimeter treatment., When needed., Sprayer.	RTU	NA		UC	*	NS	NS	AN	NS
Scent post application., When needed., By hand.	IMPR	NA		UC	*	NS	NS	NS	NS
Sprinkle., When needed., By hand.	P/T	NA	.2 pellets sq.ft		*	NS	NS	10	NS
ORNAMENTAL WOODY SHRUBS AND VINES				**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**					
Perimeter treatment., When needed., Sprayer.	RTU	NA		UC	*	NS	NS	AN	NS
Scent post application., When needed., By hand.	IMPR	NA		UC	*	NS	NS	NS	NS

SITE Application Type, Application Timing, Application Equipment - Surface Type & Efficacy Influencing Factor (Antimicrobial only)	Form	Minimum Application Rate	Maximum Application Rates	Soil Text (Max Dse)	Max. Apps @ Max Rate	Maximum Dose /crop cycle, or /year	Min. Interv (days)	Restr. Entry Interv (days)	Geographic Allowed	Geographic Disallowed	Use Limitations Codes
NON-FOOD/NON-FEED (con't)											
ORNAMENTAL WOODY SHRUBS AND VINES (con't)					Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL (con't)						
Spot treatment., When needed., Sprayer.	RTU	NA	UC	*	NS		NS	AN	NS		
Sprinkle., When needed., By hand.	P/T	NA	.2 pellets sq.ft	*	NS		NS	10	NS		

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USES ELIGIBLE FOR REREGISTRATION											
NON-FOOD/NON-FEED											
ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL)							Use Group: INDOOR NON-FOOD				
Enclosed premise treatment., When needed., Shaker can.	D	NA		UC	*	NS	NS	NS		NS	
CATS (ADULTS/KITTENS)							Use Group: INDOOR RESIDENTIAL				
Animal treatment (dust)., When needed., Brush.	D	NA		UC	*	NS	NS	AN		NS	
DOGS/CANINES (ADULTS/PUPPIES)							Use Group: INDOOR RESIDENTIAL				
Animal treatment (dust)., When needed., Brush.	D	NA		UC	*	NS	NS	AN		NS	
HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS							Use Group: INDOOR RESIDENTIAL				
Spot treatment., When needed., Shaker can.	D	NA		UC	*	NS	NS	AN		NS	
HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES							Use Group: INDOOR RESIDENTIAL				
Spot treatment., When needed., Shaker can.	D	NA		UC	*	NS	NS	AN		NS	
HOUSE/CAMPING EQUIPMENT							Use Group: INDOOR RESIDENTIAL				
Spot treatment., When needed., By hand.	RTU	NA		UC	*	NS	NS	NS		NS	
PET LIVING/SLEEPING QUARTERS							Use Group: INDOOR RESIDENTIAL				
Animal bedding treatment., When needed., Shaker can.	D	NA		UC	*	NS	NS	NS		NS	
Spot treatment., When needed., Not on label.	RTU	NA		UC	*	NS	NS	NS		NS	
Spot treatment., When needed., Shaker can.	D	NA		UC	*	NS	NS	NS		NS	
SITE TERM TOO GENERAL (for example the use of the site "Pets" on the label)							Use Group: INDOOR RESIDENTIAL				
Flea collar., When needed., By hand.	IC/T	NA	.000625 lb animal	UC	* *	NS	NS	NS		NS	
Rub-on., When needed., By hand.	RTU	NA		UC	*	NS	NS	NS		NS	

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SITE Application Type, Application Timing, Application Equipment - Surface Type & Efficacy Influencing Factor (Antimicrobial only)	Form	Minimum Application Rate	Maximum Application Rates	Soil Text (Max Dse)	Max. Apps @ Max Rate	Maximum Dose /crop cycle, or /year	Min. Interv (days)	Restr. Entry Interv (days)	Geographic Allowed	Geographic Disallowed	Use Limitations Codes
USES ELIGIBLE FOR REREGISTRATION											
FOOD/FEED USES											
SITE TERM TOO GENERAL						**Use Group: TERRESTRIAL FOOD+FEED CROP**					
Spot treatment., When needed., Sprayer.	RTU	NA	.05333 lb 1K sq.ft	*	NS		NS	AN	NS		
NON-FOOD/NON-FEED											
HOUSEHOLD/DOMESTIC DWELLINGS OUTDOOR PREMISES						**Use Group: OUTDOOR RESIDENTIAL**					
Spot treatment., When needed., Sprayer.	RTU	NA	.05333 lb 1K sq.ft	*	NS		NS	NS	NS		
ORNAMENTAL HERBACEOUS PLANTS						**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**					
Spot treatment., When needed., Sprayer.	RTU	NA	.05333 lb 1K sq.ft	*	NS		NS	AN	NS		
ORNAMENTAL LAWNS AND TURF						**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**					
Spot treatment., When needed., Sprayer.	RTU	NA	.032 lb 1K sq.ft	*	NS		NS	AN	NS		
ORNAMENTAL WOODY SHRUBS AND VINES						**Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL**					
Spot treatment., When needed., Sprayer.	RTU	NA	.05333 lb 1K sq.ft	*	NS		NS	AN	NS		

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APPENDIX B. Table of the Generic Data Requirements and Studies Used to Make the Reregistration Decision

GUIDE TO APPENDIX B

Appendix B contains listings of data requirements which support the reregistration for active ingredients within the case Flower and Vegetable Oils covered by this Reregistration Eligibility Decision Document. It contains generic data requirements that apply to Flower and Vegetable Oils in all products, including data requirements for which a "typical formulation" is the test substance.

The data table is organized in the following format:

1. Data Requirement (Column 1). The data requirements are listed in the order in which they appear in 40 CFR Part 158. the reference numbers accompanying each test refer to the test protocols set in the Pesticide Assessment Guidelines, which are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 (703) 487-4650.

2. Use Pattern (Column 2). This column indicates the use patterns for which the data requirements apply. The following letter designations are used for the given use patterns:

A	Terrestrial food
B	Terrestrial feed
C	Terrestrial non-food
D	Aquatic food
E	Aquatic non-food outdoor
F	Aquatic non-food industrial
G	Aquatic non-food residential
H	Greenhouse food
I	Greenhouse non-food
J	Forestry
K	Residential
L	Indoor food
M	Indoor non-food
N	Indoor medical
O	Indoor residential

3. Bibliographic citation (Column 3). If the Agency has acceptable data in its files, this column lists the identifying number of each study. This normally is the Master Record Identification (MRID) number, but may be a "GS" number if no MRID number has been assigned. Refer to the Bibliography appendix for a complete citation of the study.

APPENDIX B

Data Supporting Guideline Requirements for the Reregistration of Essential Oils

REQUIREMENT		USE PATTERN	CITATION(S)
PRODUCT CHEMISTRY			
61-1	Chemical Identity	ALL	DATAGAP
61-2A	Start. Mat. & Mnfg. Process	ALL	DATAGAP
61-2B	Formation of Impurities	ALL	DATAGAP
62-1	Preliminary Analysis	ALL	DATAGAP
62-2	Certification of limits	ALL	DATAGAP
62-3	Analytical Method	ALL	DATAGAP
63-2	Color	ALL	DATAGAP
63-3	Physical State	ALL	DATAGAP
63-4	Odor	ALL	DATAGAP
63-5	Melting Point	ALL	DATAGAP
63-6	Boiling Point	ALL	DATAGAP
63-7	Density	ALL	DATAGAP
63-8	Solubility	ALL	DATAGAP
63-9	Vapor Pressure	ALL	DATAGAP
63-10	Dissociation Constant	ALL	DATAGAP
63-11	Octanol/Water Partition	ALL	DATAGAP
63-12	pH	ALL	DATAGAP
63-13	Stability	ALL	DATAGAP
ECOLOGICAL EFFECTS			

Data Supporting Guideline Requirements for the Reregistration of Essential Oils

REQUIREMENT		USE PATTERN	CITATION(S)
71-1A	Acute Avian Oral - Quail/Duck	ALL	WAIVED
71-2A	Avian Dietary - Quail	ALL	WAIVED
72-1A	Fish Toxicity Bluegill	ALL	WAIVED
72-1C	Fish Toxicity Rainbow Trout	ALL	WAIVED
72-2A	Invertebrate Toxicity	ALL	WAIVED
TOXICOLOGY			
81-1	Acute Oral Toxicity - Rat	ALL	WAIVED
81-2	Acute Dermal Toxicity - Rabbit/Rat	ALL	WAIVED
81-3	Acute Inhalation Toxicity - Rat	ALL	WAIVED
81-4	Primary Eye Irritation - Rabbit	ALL	WAIVED
81-5	Primary Dermal Irritation - Rabbit	ALL	WAIVED
81-6	Dermal Sensitization - Guinea Pig	ALL	WAIVED
84-2A	Gene Mutation (Ames Test)	ALL	WAIVED
84-2B	Structural Chromosomal Aberration	ALL	WAIVED
84-4	Other Genotoxic Effects	ALL	WAIVED
ENVIRONMENTAL FATE			
161-1	Hydrolysis	ALL	WAIVED

APPENDIX B

Data Supporting Guideline Requirements for the Reregistration of Oil of Lemongrass

REQUIREMENT		USE PATTERN	CITATION(S)
PRODUCT CHEMISTRY			
61-1	Chemical Identity	ALL	DATAGAP
61-2A	Start. Mat. & Mnfg. Process	ALL	DATAGAP
61-2B	Formation of Impurities	ALL	DATAGAP
62-1	Preliminary Analysis	ALL	DATAGAP
62-2	Certification of limits	ALL	DATAGAP
62-3	Analytical Method	ALL	DATAGAP
63-2	Color	ALL	DATAGAP
63-3	Physical State	ALL	DATAGAP
63-4	Odor	ALL	DATAGAP
63-5	Melting Point	ALL	DATAGAP
63-6	Boiling Point	ALL	DATAGAP
63-7	Density	ALL	DATAGAP
63-8	Solubility	ALL	DATAGAP
63-9	Vapor Pressure	ALL	DATAGAP
63-10	Dissociation Constant	ALL	DATAGAP
63-11	Octanol/Water Partition	ALL	DATAGAP
63-12	pH	ALL	DATAGAP
63-13	Stability	ALL	DATAGAP
ECOLOGICAL EFFECTS			

Data Supporting Guideline Requirements for the Reregistration of Oil of Lemongrass

REQUIREMENT		USE PATTERN	CITATION(S)
71-1A	Acute Avian Oral - Quail/Duck	ALL	WAIVED
71-2A	Avian Dietary - Quail	ALL	WAIVED
72-1A	Fish Toxicity Bluegill	ALL	WAIVED
72-1C	Fish Toxicity Rainbow Trout	ALL	WAIVED
72-2A	Invertebrate Toxicity	ALL	WAIVED
TOXICOLOGY			
81-1	Acute Oral Toxicity - Rat	ALL	WAIVED
81-2	Acute Dermal Toxicity - Rabbit/Rat	ALL	WAIVED
81-3	Acute Inhalation Toxicity - Rat	ALL	WAIVED
81-4	Primary Eye Irritation - Rabbit	ALL	WAIVED
81-5	Primary Dermal Irritation - Rabbit	ALL	WAIVED
81-6	Dermal Sensitization - Guinea Pig	ALL	WAIVED
84-2A	Gene Mutation (Ames Test)	ALL	WAIVED
84-2B	Structural Chromosomal Aberration	ALL	WAIVED
84-4	Other Genotoxic Effects	ALL	WAIVED
ENVIRONMENTAL FATE			
161-1	Hydrolysis	ALL	WAIVED

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Data Supporting Guideline Requirements for the Reregistration of Oil of Eucalyptus

REQUIREMENT		USE PATTERN	CITATION(S)
PRODUCT CHEMISTRY			
61-1	Chemical Identity	ALL	DATAGAP
61-2A	Start. Mat. & Mnfg. Process	ALL	DATAGAP
61-2B	Formation of Impurities	ALL	DATAGAP
62-1	Preliminary Analysis	ALL	DATAGAP
62-2	Certification of limits	ALL	DATAGAP
62-3	Analytical Method	ALL	DATAGAP
63-2	Color	ALL	DATAGAP
63-3	Physical State	ALL	DATAGAP
63-4	Odor	ALL	DATAGAP
63-5	Melting Point	ALL	DATAGAP
63-6	Boiling Point	ALL	DATAGAP
63-7	Density	ALL	DATAGAP
63-8	Solubility	ALL	DATAGAP
63-9	Vapor Pressure	ALL	DATAGAP
63-10	Dissociation Constant	ALL	DATAGAP
63-11	Octanol/Water Partition	ALL	DATAGAP
63-12	pH	ALL	DATAGAP
63-13	Stability	ALL	DATAGAP
ECOLOGICAL EFFECTS			

Data Supporting Guideline Requirements for the Reregistration of Oil of Eucalyptus

REQUIREMENT		USE PATTERN	CITATION(S)
71-1A	Acute Avian Oral - Quail/Duck	ALL	WAIVED
71-2A	Avian Dietary - Quail	ALL	WAIVED
72-1A	Fish Toxicity Bluegill	ALL	WAIVED
72-1C	Fish Toxicity Rainbow Trout	ALL	WAIVED
72-2A	Invertebrate Toxicity	ALL	WAIVED
TOXICOLOGY			
81-1	Acute Oral Toxicity - Rat	ALL	WAIVED
81-2	Acute Dermal Toxicity - Rabbit/Rat	ALL	WAIVED
81-3	Acute Inhalation Toxicity - Rat	ALL	WAIVED
81-4	Primary Eye Irritation - Rabbit	ALL	WAIVED
81-5	Primary Dermal Irritation - Rabbit	ALL	WAIVED
81-6	Dermal Sensitization - Guinea Pig	ALL	WAIVED
84-2A	Gene Mutation (Ames Test)	ALL	WAIVED
84-2B	Structural Chromosomal Aberration	ALL	WAIVED
84-4	Other Genotoxic Effects	ALL	WAIVED
ENVIRONMENTAL FATE			
161-1	Hydrolysis	ALL	WAIVED

APPENDIX B

Data Supporting Guideline Requirements for the Reregistration of Soybean Oil

REQUIREMENT		USE PATTERN	CITATION(S)
PRODUCT CHEMISTRY			
61-1	Chemical Identity	ALL	DATAGAP
61-2A	Start. Mat. & Mnfg. Process	ALL	DATAGAP
61-2B	Formation of Impurities	ALL	DATAGAP
62-1	Preliminary Analysis	ALL	DATAGAP
62-2	Certification of limits	ALL	DATAGAP
62-3	Analytical Method	ALL	DATAGAP
63-2	Color	ALL	DATAGAP
63-3	Physical State	ALL	DATAGAP
63-4	Odor	ALL	DATAGAP
63-5	Melting Point	ALL	DATAGAP
63-6	Boiling Point	ALL	DATAGAP
63-7	Density	ALL	DATAGAP
63-8	Solubility	ALL	DATAGAP
63-9	Vapor Pressure	ALL	DATAGAP
63-10	Dissociation Constant	ALL	DATAGAP
63-11	Octanol/Water Partition	ALL	DATAGAP
63-12	pH	ALL	DATAGAP
63-13	Stability	ALL	DATAGAP
ECOLOGICAL EFFECTS			

Data Supporting Guideline Requirements for the Reregistration of Soybean Oil

REQUIREMENT		USE PATTERN	CITATION(S)
71-1A	Acute Avian Oral - Quail/Duck	ALL	WAIVED
71-2A	Avian Dietary - Quail	ALL	WAIVED
72-1A	Fish Toxicity Bluegill	ALL	WAIVED
72-1C	Fish Toxicity Rainbow Trout	ALL	WAIVED
72-2A	Invertebrate Toxicity	ALL	WAIVED
TOXICOLOGY			
81-1	Acute Oral Toxicity - Rat	ALL	WAIVED
81-2	Acute Dermal Toxicity - Rabbit/Rat	ALL	WAIVED
81-3	Acute Inhalation Toxicity - Rat	ALL	WAIVED
81-4	Primary Eye Irritation - Rabbit	ALL	WAIVED
81-5	Primary Dermal Irritation - Rabbit	ALL	WAIVED
81-6	Dermal Sensitization - Guinea Pig	ALL	WAIVED
84-2A	Gene Mutation (Ames Test)	ALL	WAIVED
84-2B	Structural Chromosomal Aberration	ALL	WAIVED
84-4	Other Genotoxic Effects	ALL	WAIVED
ENVIRONMENTAL FATE			
161-1	Hydrolysis	ALL	WAIVED

APPENDIX B

Data Supporting Guideline Requirements for the Reregistration of Oil of Mustard (Allyl isothiocyanate)

REQUIREMENT		USE PATTERN	CITATION(S)
PRODUCT CHEMISTRY			
61-1	Chemical Identity	ALL	DATAGAP
61-2A	Start. Mat. & Mnfg. Process	ALL	DATAGAP
61-2B	Formation of Impurities	ALL	DATAGAP
62-1	Preliminary Analysis	ALL	DATAGAP
62-2	Certification of limits	ALL	DATAGAP
62-3	Analytical Method	ALL	DATAGAP
63-2	Color	ALL	DATAGAP
63-3	Physical State	ALL	DATAGAP
63-4	Odor	ALL	DATAGAP
63-5	Melting Point	ALL	DATAGAP
63-6	Boiling Point	ALL	DATAGAP
63-7	Density	ALL	DATAGAP
63-8	Solubility	ALL	DATAGAP
63-9	Vapor Pressure	ALL	DATAGAP
63-10	Dissociation Constant	ALL	DATAGAP
63-11	Octanol/Water Partition	ALL	DATAGAP
63-12	pH	ALL	DATAGAP
63-13	Stability	ALL	DATAGAP

Data Supporting Guideline Requirements for the Reregistration of Oil of Mustard (Allyl isothiocyanate)

REQUIREMENT		USE PATTERN	CITATION(S)
ECOLOGICAL EFFECTS			
71-1A	Acute Avian Oral - Quail/Duck	ALL	WAIVED
71-2A	Avian Dietary - Quail	ALL	WAIVED
72-1A	Fish Toxicity Bluegill	ALL	WAIVED
72-1C	Fish Toxicity Rainbow Trout	ALL	WAIVED
72-2A	Invertebrate Toxicity	ALL	WAIVED
TOXICOLOGY			
81-1	Acute Oral Toxicity - Rat	ALL	WAIVED
81-2	Acute Dermal Toxicity - Rabbit/Rat	ALL	WAIVED
81-3	Acute Inhalation Toxicity - Rat	ALL	WAIVED
81-4	Primary Eye Irritation - Rabbit	ALL	WAIVED
81-5	Primary Dermal Irritation - Rabbit	ALL	WAIVED
81-6	Dermal Sensitization - Guinea Pig	ALL	WAIVED
84-2A	Gene Mutation (Ames Test)	ALL	WAIVED
84-2B	Structural Chromosomal Aberration	ALL	WAIVED
84-4	Other Genotoxic Effects	ALL	WAIVED
ENVIRONMENTAL FATE			
161-1	Hydrolysis	ALL	WAIVED

APPENDIX B

Data Supporting Guideline Requirements for the Reregistration of Oil of Anise

REQUIREMENT		USE PATTERN	CITATION(S)
PRODUCT CHEMISTRY			
61-1	Chemical Identity	ALL	DATAGAP
61-2A	Start. Mat. & Mnfg. Process	ALL	DATAGAP
61-2B	Formation of Impurities	ALL	DATAGAP
62-1	Preliminary Analysis	ALL	DATAGAP
62-2	Certification of limits	ALL	DATAGAP
62-3	Analytical Method	ALL	DATAGAP
63-2	Color	ALL	DATAGAP
63-3	Physical State	ALL	DATAGAP
63-4	Odor	ALL	DATAGAP
63-5	Melting Point	ALL	DATAGAP
63-6	Boiling Point	ALL	DATAGAP
63-7	Density	ALL	DATAGAP
63-8	Solubility	ALL	DATAGAP
63-9	Vapor Pressure	ALL	DATAGAP
63-10	Dissociation Constant	ALL	DATAGAP
63-11	Octanol/Water Partition	ALL	DATAGAP
63-12	pH	ALL	DATAGAP
63-13	Stability	ALL	DATAGAP
ECOLOGICAL EFFECTS			

Data Supporting Guideline Requirements for the Reregistration of Oil of Anise

REQUIREMENT		USE PATTERN	CITATION(S)
71-1A	Acute Avian Oral - Quail/Duck	ALL	WAIVED
71-2A	Avian Dietary - Quail	ALL	WAIVED
72-1A	Fish Toxicity Bluegill	ALL	WAIVED
72-1C	Fish Toxicity Rainbow Trout	ALL	WAIVED
72-2A	Invertebrate Toxicity	ALL	WAIVED
TOXICOLOGY			
81-1	Acute Oral Toxicity - Rat	ALL	WAIVED
81-2	Acute Dermal Toxicity - Rabbit/Rat	ALL	WAIVED
81-3	Acute Inhalation Toxicity - Rat	ALL	WAIVED
81-4	Primary Eye Irritation - Rabbit	ALL	WAIVED
81-5	Primary Dermal Irritation - Rabbit	ALL	WAIVED
81-6	Dermal Sensitization - Guinea Pig	ALL	WAIVED
84-2A	Gene Mutation (Ames Test)	ALL	WAIVED
84-2B	Structural Chromosomal Aberration	ALL	WAIVED
84-4	Other Genotoxic Effects	ALL	WAIVED
ENVIRONMENTAL FATE			
161-1	Hydrolysis	ALL	WAIVED

APPENDIX C. Citations Considered to be Part of the Data Base Supporting the Reregistration of Flower and Vegetable Oils

GUIDE TO APPENDIX C

1. CONTENTS OF BIBLIOGRAPHY. This bibliography contains citations of all studies considered relevant by EPA in arriving at the positions and conclusions stated elsewhere in the Reregistration Eligibility Document. Primary sources for studies in this bibliography have been the body of data submitted to EPA and its predecessor agencies in support of past regulatory decisions. Selections from other sources including the published literature, in those instances where they have been considered, are included.

2. UNITS OF ENTRY. The unit of entry in this bibliography is called a "study". In the case of published materials, this corresponds closely to an article. In the case of unpublished materials submitted to the Agency, the Agency has sought to identify documents at a level parallel to the published article from within the typically larger volumes in which they were submitted. The resulting "studies" generally have a distinct title (or at least a single subject), can stand alone for purposes of review and can be described with a conventional bibliographic citation. The Agency has also attempted to unite basic documents and commentaries upon them, treating them as a single study.

3. IDENTIFICATION OF ENTRIES. The entries in this bibliography are sorted numerically by Master Record Identifier, or "MRID number". This number is unique to the citation, and should be used whenever a specific reference is required. It is not related to the six-digit "Accession Number" which has been used to identify volumes of submitted studies (see paragraph 4(d)(4) below for further explanation). In a few cases, entries added to the bibliography late in the review may be preceded by a nine character temporary identifier. These entries are listed after all MRID entries. This temporary identifying number is also to be used whenever specific reference is needed.

4. FORM OF ENTRY. In addition to the Master Record Identifier (MRID), each entry consists of a citation containing standard elements followed, in the case of material submitted to EPA, by a description of the earliest known submission. Bibliographic conventions used reflect the standard of the American National Standards Institute (ANSI), expanded to provide for certain special needs.

   a Author. Whenever the author could confidently be identified, the Agency has chosen to show a personal author. When no individual was identified, the Agency has shown an identifiable laboratory or testing facility as the author. When no author or laboratory could be identified, the Agency has shown the first submitter as the author.

   b. Document date. The date of the study is taken directly from the document. When the date is followed by a question mark, the bibliographer has deduced

the date from the evidence contained in the document. When the date appears as (19??), the Agency was unable to determine or estimate the date of the document.

c. Title. In some cases, it has been necessary for the Agency bibliographers to create or enhance a document title. Any such editorial insertions are contained between square brackets.

d. Trailing parentheses. For studies submitted to the Agency in the past, the trailing parentheses include (in addition to any self-explanatory text) the following elements describing the earliest known submission:

(1) Submission date. The date of the earliest known submission appears immediately following the word "received."

(2) Administrative number. The next element immediately following the word "under" is the registration number, experimental use permit number, petition number, or other administrative number associated with the earliest known submission.

(3) Submitter. The third element is the submitter. When authorship is defaulted to the submitter, this element is omitted.

(4) Volume Identification (Accession Numbers). The final element in the trailing parentheses identifies the EPA accession number of the volume in which the original submission of the study appears. The six-digit accession number follows the symbol "CDL," which stands for "Company Data Library." This accession number is in turn followed by an alphabetic suffix which shows the relative position of the study within the volume.

BIBLIOGRAPHY

MRID	CITATION
--------	1. Code of Federal Regulations, Title 40, part 158, revised as of July 1, 1992. Published by the Office of the Federal Register National Archives and Records Administration, Washington, D.C., U.S.A.
--------	2. Code of Federal Regulations, Title 21, part 172, section 515, part 182, section 186 revised as of July 1, 1992. Published by the Office of the Federal Register National Archives and Records Administration, Washington, D.C., U.S.A.
--------	3. The Merck Index; An Encyclopedia of Chemicals, Drugs, and Biologicals. Windholz, Martha, editor, et. al. Tenth Edition. Published in 1983 by Merck and Company, Rahway New Jersey, U.S.A.
--------	4. Registry of Toxic Effects of Chemical Substances, 1980.
--------	5. Registry of Toxic Effects of Chemical Substances: bChembank CD ROM, 1991.
00104087	Luy, T.; Peterson, A. (1976) Report on Dietary LC50 in Bobwhite Quail: Scent-off Twist-ons: Laboratory Nos. G-1065-66. (Unpublished study received Aug 24, 1979 under 5332-8; prepared by Wells Laboratories, Inc., submitted by Plantabbs Corp., Timonium, MD; CDL:241053-A)

APPENDIX D. List of Available Related Documents

The following is a list of available documents related to Flower and Vegetable Oils. It's purpose is to provide a path to more detailed information if it is needed. These accompanying documents are part of the Administrative Record for Flower and Vegetable Oils and are included in the EPA's Office of Pesticide Programs Public Docket.

1. Health and Environmental Effects Science Chapters

2. Detailed Label Usage Information System (LUIS) Report

3. Flower and Vegetable Oils RED Fact Sheet

4. PR Notice 86-5 (included in this appendix)

5. PR Notice 91-2 (included in this appendix) pertains to the Label Ingredient Statement

APPENDIX E. PR Notices 86-5 and 91-2

PR Notice 86-5

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

July 29, 1986

PR NOTICE 86-5

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

NOTICE TO PRODUCERS, FORMULATORS, DISTRIBUTORS AND REGISTRANTS

Attention: Persons responsible for Federal registration of pesticides.

Subject: Standard format for data submitted under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and certain provisions of the Federal Food, Drug, and Cosmetic Act (FFDCA).

I. Purpose

To require data to be submitted to the Environmental Protection Agency (EPA) in a standard format. This Notice also provides additional guidance about, and illustrations of, the required formats.

II. Applicability

This PR Notice applies to all data that are submitted to EPA to satisfy data requirements for granting or maintaining pesticide registrations, experimental use permits, tolerances, and related approvals under certain provisions of FIFRA and FFDCA. These data are defined in FIFRA §10(d)(1). This Notice does not apply to commercial, financial, or production information, which are, and must continue to be, submitted differently under separate cover.

III. Effective Date

This notice is effective on November 1, 1986. Data formatted according to this notice may be submitted prior to the effective date. As of the effective date, submitted data packages that do not conform to these requirements may be returned to the submitter for necessary revision.

IV. Background

On September 26, 1984, EPA published proposed regulations in the Federal Register (49 FR 37956) which include Requirements for Data Submission (40 CFR §158.32), and Procedures for Claims of Confidentiality of Data (40 CFR §158.33). These regulations

specify the format for data submitted to EPA under Section 3 of FIFRA and Sections 408 and 409 of FFDCA, and procedures which must be followed to make and substantiate claims of confidentiality. No entitlements to data confidentiality are changed, either by the proposed regulation or by this notice.

OPP is making these requirements mandatory through this Notice to gain resource-saving benefits from their use before the entire proposed regulation becomes final. Adequate lead time is being provided for submitters to comply with the new requirements.

V. Relationship of this Notice to Other OPP Policy and Guidance

While this Notice contains requirements for organizing and formatting submittals of supporting data, it does not address the substance of test reports themselves. "Data reporting" guidance is now under development in OPP, and will specify how the study objectives, protocol, observations, findings, and conclusions are organized and presented within the study report. The data reporting guidance will be compatible with submittal format requirements described in this Notice.

OPP has also promulgated a policy (PR Notice 86-4 dated April 15, 1986) that provides for early screening of certain applications for registration under FIFRA §3. The objective of the screen is to avoid the additional costs and prolonged delays associated with handling significantly incomplete application packages. As of the effective date of this Notice, the screen will include in its criteria for acceptance of application packages the data formatting requirements described herein.

OPP has also established a public docket which imposes deadlines for inserting into the docket documents submitted in connection with Special Reviews and Registration Standards (see 40 CFR §154.15 and §155.32). To meet these deadlines, OPP is requiring an additional copy of any data submitted to the docket. Please refer to Page 10 for more information about this requirement.

For several years, OPP has required that each application for registration or other action include a list of all applicable data requirements and an indication of how each is satisfied--the statement of the method of support for the application. Typically, many requirements are satisfied by reference to data previously submitted--either by the applicant or by another party. That requirement is not altered by this notice, which applies only to data submitted with an application.

VI. Format Requirements

A more detailed discussion of these format requirements follows the index on the next page, and samples of some of the requirements are attached. Except for the language of the two alternative forms of the Statement of Data Confidentiality Claims (shown in Attachment 3) which cannot be altered, these samples are illustrative. As long as the required information is included and clearly identifiable, the form of the samples may be altered to reflect the submitter's preference.

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A. Organization of Submittal Package

A "submittal package" consists of all studies submitted at the same time for review in support of a single regulatory action, along with a transmittal document and other related administrative material (e.g. the method of support statement, EPA Forms 8570-1, 8570-4, 8570-20, etc.) as appropriate.

Data submitters must organize each submittal package as described in this Notice. The transmittal and any other administrative material must be grouped together in the first physical volume. Each study included in the submittal package must then be bound separately.

Submitters sometimes provide additional materials that are intended to clarify, emphasize, or otherwise comment to help Product Managers and reviewers better understand the submittal.

- If such materials relate to one study, they should be included as an appendix to that study.

- If such materials relate to more than one study (as for example a summary of all studies in a discipline) or to the submittal in general, they must be included in the submittal package as a separate study (with title page and statement of confidentiality claims).

B. Transmittal Document

The first item in each submittal package must be a transmittal document. This document identifies the submitter or all joint submitters; the regulatory action in support of which the package is being submitted--i.e., a registration application, petition, experimental use permit (EUP), §3(c)(2)(B) data call-in, §6(a)(2) submittal, or a special review; the transmittal date; and a list of all individual studies included in the package in the order of their appearance, showing (usually by Guideline reference number) the data requirement(s) addressed by each one. The EPA-assigned number for the regulatory action (e.g. the registration, EUP, or tolerance petition number) should be included in the transmittal document as well, if it is known to the submitter. See Attachment 1 for an example of an acceptable transmittal document.

The list of included studies in the transmittal of a data submittal package supporting a registration application should be subdivided by discipline, reflecting the order in which data requirements appear in 40 CFR 158.

The list of included studies in the transmittal of a data submittal package supporting a petition for tolerance or an application for an EUP should be subdivided into sections A, B, C,.... of the petition or application, as defined in 40 CFR 180.7 and 158.125, (petitions) or Pesticide Assessment Guidelines, Subdivision I (EUPs) as appropriate.

When a submittal package supports a tolerance petition and an application for a registration or an EUP, list the petition studies first, then the balance of the studies. Within these two groups of studies follow the instructions above.

C. Individual Studies

A study is the report of a single scientific investigation, including all supporting analyses required for logical completeness. A study should be identifiable and distinguishable by a conventional bibliographic citation including author, date, and title. Studies generally correspond in scope to a single Guideline requirement for supporting data, with some exceptions discussed in section C.1. Each study included in a submittal package must be bound as a separate entity. (See comments on binding studies on page 9.)

Each study must be consecutively paginated, beginning from the title page as page 1. The total number of pages in the complete study must be shown on the study title page. In addition (to ensure that inadvertently separated pages can be reassociated with the proper study during handling or review) use either of the following:

- Include the total number of pages in the complete study on each page (i.e., 1 of 250, 2 of 250, ...250 of 250).

- Include a company name or mark and study number on each page of the study, e g , Company Name-1986-23. Never reuse a study number for marking the pages of subsequent studies.

When a single study is extremely long, binding it in multiple volumes is permissible so long as the entire study is paginated in a single series, and each volume is plainly identified by the study title and its position in the multi-volume sequence.

C.1 Special Considerations for Identifying Studies

Some studies raise special problems in study identification, because they address Guidelines of broader than normal scope or for other reasons.

a. Safety Studies. Several Guidelines require testing for safety in more than one species. In these cases each species tested should be reported as a separate study, and bound separately.

Extensive supplemental reports of pathology reviews, feed analyses, historical control data, and the like are often associated with safety studies. Whenever possible these should be submitted with primary reports of the study, and bound with the primary study as appendices. When such supplemental reports are submitted independently of the primary report, take care to fully identify the primary report to which they pertain.

Batteries of acute toxicity tests, performed on the same end use product and covered by a single title page, may be bound together and reported as a single study.

b. Product Chemistry Studies. All product chemistry data within a submittal package submitted in support of an end-use product produced from registered manufacturing-use products should be bound as a single study under a single title page.

Product chemistry data submitted in support of a technical product, other manufacturing-use product, an experimental use permit, an import tolerance petition, or an end-use product produced from unregistered source ingredients, should be bound as a single study for each Guideline series (61, 62, and 63) for conventional pesticides, or for the equivalent subject range for biorational pesticides. The first of the three studies in a complete product chemistry submittal for a biochemical pesticide would cover Guidelines 151-10, 151-11, and 151-12; the second would cover Guidelines 151-13, 151-15, and 151-16; the third would cover Guideline 151-17. The first study for a microbial pesticide would cover Guidelines 151-20, 151-21, and 151-22; the second would cover Guidelines 151-23 and 151-25; the third would cover Guideline 151-26.

Note particularly that product chemistry studies are likely to contain Confidential Business Information as defined in FIFRA §10(d)(1)(A), (B), or (C), and if so must be handled as described in section D.3. of this notice.

c. Residue Chemistry Studies. Guidelines 171-4, 153-3, and 153-4 are extremely broad in scope; studies addressing residue chemistry requirements must thus be defined at a level below that of the Guideline code. The general principle, however, of limiting a study to the report of a single investigation still applies fully. Data should be treated as a single study and bound separately for each analytical method, each report of the nature of the residue in a single crop or animal species, and for each report of the magnitude of residues resulting from treatment of a single crop or from processing a single crop. When more than one commodity is derived from a single crop (such as beet tops and beet roots) residue data on all such commodities should be reported as a single study. When multiple field trials are associated with a single crop, all such trials should be reported as a single study.

D. Organization of Each Study Volume

Each complete study must include all applicable elements in the list below, in the order indicated. (Also see Page 17.) Several of these elements are further explained in the following paragraphs. Entries in the column headed "example" cite the page number of this notice where the element is illustrated.

Element	When Required	Example
Study Title Page	Always	Page 12
Statement of Data Confidentiality Claims	One of the two alternative forms of this statement is always required	Page 13
Certification of Good Laboratory Practice	If study reports laboratory work subject to GLP requirements	Page 16
Flagging statements	For certain toxicology studies (When flagging requirements are finalized.)	
Body of Study	Always - with an English language translation if required.	
Study Appendices	At submitter's option	
Cover Sheet to Confidential Attachment	If CBI is claimed under FIFRA §10(d)(1)(A), (B), or (C)	
CBI Attachment	If CBI is claimed under FIFRA §10(d)(1)(A), (B), or (C)	Page 15
Supplemental Statement of Data Confidentiality Claims	Only if confidentiality is claimed on a basis other than FIFRA §10(d)(1)(A), (B), or (C)	Page 14

D.1. Title Page

A title page is always required for each submitted study, published or unpublished. The title page must always be freely releasable to requestors; **DO NOT INCLUDE CBI ON THE TITLE PAGE.** An example of an acceptable title page is on page 12 of this notice. The following information must appear on the title page:

a. Study title. The study title should be as descriptive as possible It must clearly identify the substance(s) tested and correspond to the name of the data requirement as it appears in the Guidelines.

b. Data requirement addressed. Include on the title page the Guideline number(s) of the specific requirement(s) addressed by the study.

c. Author(s). Cite only individuals with primary intellectual responsibility for the content of the study. Identify them plainly as authors, to distinguish them from the performing laboratory, study sponsor, or other names that may also appear on the title page.

d. Study Date. The title page must include a single date for the study. If parts of the study were performed at different times, use only the date of the latest element in the study.

e. Performing Laboratory Identification. If the study reports work done by one or more laboratories, include on the title page the name and address of the performing laboratory or laboratories, and the laboratory's internal project number(s) for the work. Clearly distinguish the laboratory's project identifier from any other reference numbers provided by the study sponsor or submitter.

f. Supplemental Submissions. If the study is a commentary on or supplement to another previously submitted study, or if it responds to EPA questions raised with respect to an earlier study, include on the title page elements a. through d. for the previously submitted study, along with the EPA Master Record Identifier (MRID) or Accession number of the earlier study if you know these numbers. (Supplements submitted in the same submittal package as the primary study should be appended to and bound with the primary study. Do not include supplements to more than one study under a single title page).

g. Facts of Publication. If the study is a reprint of a published document, identity on the title page all relevant facts of publication, such as the journal title, volume, issue, inclusive page numbers, and publication date.

D.2. Statements of Data Confidentiality Claims Under FIFRA §10(d)(1).

Each submitted study must be accompanied by one of the two alternative forms of the statement of Data Confidentiality Claims specified in the proposed regulation in §158.33 (b) and (c) (See Attachment 3). These statements apply only to claims of data confidentiality based on FIFRA §10(d)(1)(A), (B), or (C). Use the appropriate alternative form of the statement either to assert a claim of §10(d)(1) data confidentiality (§158.33(b)) or to waive such a claim (§158.33(c)). In either case, the statement must be signed and dated, and must include the typed name and title of the official who signs it. Do not make CBI claims with respect to analytical methods associated with petitions for tolerances or emergency exemptions (see NOTE Pg 13).

D.3. Confidential Attachment

If the claim is made that a study includes confidential business information as defined by the criteria of FIFRA §10(D)(1)(A), (B), or (C) (as described in D.2. above) all such information must be excised from the body of the study and confined to a separate study-specific Confidential Attachment. Each passage of CBI so isolated must be identified by a reference number cited within the body of the study at the point from which the passage was excised (See Attachment 5).

The Confidential Attachment to a study must be identified by a cover sheet fully identifying the parent study, and must be clearly marked "Confidential Attachment." An appropriately annotated photocopy of the parent study title page may be used as this cover sheet. Paginate the Confidential Attachment separately from the body of the study, beginning with page 1 of X on the title page. Each passage confined to the Confidential Attachment must be associated with a specific cross reference to the page(s) in the main body of the study on which it is cited, and with a reference to the applicable passage(s) of FIFRA §10(d)(1) on which the confidentiality claim is based.

D.4. Supplemental Statement of Data Confidentiality Claims (See Attachment 4)

If you wish to make a claim of confidentiality for any portion of a submitted study other than described by FIFRA §10(d)(1)(A), (B), or (C), the following provisions apply:

- The specific information to which the claim applies must be clearly marked in the body of the study as subject to a claim of confidentiality.

- A Supplemental Statement of Data Confidentiality Claims must be submitted, identifying each passage claimed confidential and describing in detail the basis for the claim. A list of the points to address in such a statement is included in Attachment 4 on Pg 14.

- The Supplemental Statement of Data Confidentiality Claims must be signed and dated and must include the typed name and title of the official who signed it.

D.5. Good Laboratory Practice Compliance Statement

This statement is required if the study contains laboratory work subject to GLP requirements specified in 40 CFR 160. Samples of these statements are shown in Attachment 6.

E. Reference to Previously Submitted Data

DO NOT RESUBMIT A STUDY THAT HAS PREVIOUSLY BEEN SUBMITTED FOR ANOTHER PURPOSE unless EPA specifically requests it. A copy of the title page plus the MRID number (if known) is sufficient to allow us to retrieve the study immediately for review. This prevents duplicate entries in the Agency files, and saves you the cost of sending more copies of the study. References to previously submitted studies should not be included in the transmittal document, but should be incorporated into the statement of the method of support for the application.

F. Physical Format Requirements

All elements in the data submittal package must be on uniform 8 1/2 by 11 inch white paper, printed on one side only in black ink, with high contrast and good resolution. Bindings for individual studies must be secure, but easily removable to permit disassembly for microfilming. Check with EPA for special instructions before submitting data in any medium other than paper, such as film or magnetic media.

Please be particularly attentive to the following points:

- Do not include frayed or torn pages.
- Do not include carbon copies, or copies in other than black ink.
- Make sure that photocopies are clear, complete, and fully readable.
- Do not include oversize computer printouts or fold-out pages.
- Do not bind any documents with glue or binding tapes.
- Make sure that all pages of each study, including any attachments or appendices, are present and in correct sequence.

Number of Copies Required - All submittal packages except those associated with a Registration Standard or Special Review (See Part G below) must be provided In three complete, identical copies. (The proposed regulations specified two copies; three are now being required to expedite and reduce the cost of processing data into the OPP Pesticide Document Management System and getting it into review.)

G. Special Requirements for Submitting Data to the Docket

Data submittal packages associated with a Registration Standard or Special Review must be provided in four copies, from one of which all material claimed as CBI has been excised. This fourth copy will become part of the public docket for the RS or SR case. If no claims of confidentiality are made for the study, the fourth copy should be identical to the other three. When portions of a study submitted in support of an RS or SR are claimed as CBI, the first three copies will include the CBI material as provided in section D of this notice. The following special preparation is required for the fourth copy.

- Remove the "Supplemental Statement of Data Confidentiality Claims".
- Remove the "Confidential Attachment".
- Excise from the body of the study any information you claim as confidential, even if it does not fall within the scope of FIFRA §10(d)(1)(A), (B), or (C). Do not close up or paraphrase text remaining after this excision.
- Mark the fourth copy plainly on both its cover and its title page with the phrase "Public Docket Material - contains no information claimed as confidential".

V. For Further Information

For further information contact John Carley, Chief, Information Services Branch, Program Management and Support Division, (703) 305-5240.

James W. Akerman
Acting Director,
Registration Division

Attachment 1. Sample Transmittal Document
Attachment 2. Sample Title Page for a Newly Submitted Study
Attachment 3. Statements of Data Confidentiality Claims
Attachment 4. Supplemental Statement of Data Confidentiality Claims
Attachment 5. Samples of Confidential Attachments
Attachment 6. Sample Good Laboratory Practice Statements
Attachment 7. Format Diagrams for Submittal Packages and Studies

ATTACHMENT 1

ELEMENTS TO BE INCLUDED IN THE TRANSMITTAL DOCUMENT*

1. Name and address of submitter (or all joint submitters**)

+Smith Chemical Corporation
1234 West Smith Street
Cincinnati, OH 98765

-and-

Jones Chemical Company
5678 Wilson Blvd
Covington, KY 56789

+Smith Chemical Corp will act as sole agent for all submitters.

2. Regulatory action in support of which this package is submitted

Use the EPA identification number (e.g. 359-EUP-67) if you know it. Otherwise describe the type of request (e.g. experimental use permit, data call-in - of xx-xx-xx date).

3. Transmittal date

4. List of submitted studies

Vol 1. Administrative materials - forms, previous correspondence with Project Managers, and so forth.

Vol 2. Title of first study in the submittal (Guideline No.)

Vol n Title of nth study in the submittal (Guideline No.)

* Applicants commonly provide this information in a transmittal letter. This remains an acceptable practice so long as all four elements are included.

* Indicate which of the joint submitters is empowered to act on behalf of all joint submitters in any matter concerning data compensation or subsequent use or release of the data.

Company Official: _____
Name Signature

Company Name: _____

Company Contact: _____ _____
Name Phone

ATTACHMENT 2

SAMPLE STUDY TITLE PAGE FOR A NEWLY SUBMITTED STUDY

Study Title

(Chemical name) - Magnitude of Residue on Corn

Data Requirement

Guideline 171-4

Author

John C. Davis

Study Completed On

January 5, 1979

Performing Laboratory

ABC Agricultural Laboratories
940 West Bay Drive
Wilmington, CA 39897

Laboratory Project ID

ABC 47-79

ATTACHMENT 3

STATEMENTS OF DATA CONFIDENTIALITY CLAIMS

1. No claim of confidentiality under FIFRA §10(d)(1)(A),(B), or (C).

STATEMENT OF NO 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 6§10(d)(1)(A), (B), or (C).

Company _____

Company Agent: _____ Typed Name _____ Date: _____

_____ Title _____ _____ Signature _____

2. Claim of confidentiality under FIFRA §10(d)(1)(A), (B), or (C).

STATEMENT OF DATA CONFIDENTIALITY CLAIMS

Information claimed confidential on the basis of its falling within the scope of FIFRA §10(d)(1)(A), (B), or (C) has been removed to a confidential appendix, and is cited by cross-reference number in the body of the study.

Company: _____

Company Agent: _____ Typed Name _____ Date: _____

_____ Title _____ _____ Signature _____

NOTE: Applicants for permanent or temporary tolerances should note that it is OPP policy that no permanent tolerance, temporary tolerance, or request for an emergency exemption incorporating an analytical method, can be approved unless the applicant waives all claims of confidentiality for the analytical method. These analytical methods are published in the FDA Pesticide Analytical Methods Manual, and therefore cannot be claimed as confidential. OPP implements this policy by returning submitted analytical methods, for which confidentiality claims have been made, to the submitter, to obtain the confidentiality waiver before they can be processed.

ATTACHMENT 4

SUPPLEMENTAL STATEMENT OF DATA CONFIDENTIALITY CLAIMS

For any portion of a submitted study that is not described by FIFRA §10(d)(1)(A), (B), or (C), but for which you claim confidential treatment on another basis, the following information must be included within a Supplemental Statement of Data Confidentiality Claims:

- Identify specifically by page and line number(s) each portion of the study for which you claim confidentiality.
- Cite the reasons why the cited passage qualifies for confidential treatment.
- Indicate the length of time--until a specific date or event, or permanently--for which the information should be treated as confidential.
- Identify the measures taken to guard against undesired disclosure of this information.
- Describe the extent to which the information has been disclosed, and what precautions have been taken in connection with those disclosures.
- Enclose copies of any pertinent determinations of confidentiality made by EPA, other Federal agencies, of courts concerning this information.
- If you assert that disclosure of this information would be likely to result in substantial harmful effects to you, describe those harmful effects and explain why they should be viewed as substantial.
- If you assert that the information in voluntarily submitted, indicate whether you believe disclosure of this information might tend to lessen the availability to EPA of similar information in the future, and if so, how.

ATTACHMENT 5

EXAMPLES OF SEVERAL CONFIDENTIAL ATTACHMENTS

Example 1. (Confidential word or phrase that has been deleted from the study)

CROSS REFERENCE NUMBER 1 This cross reference number is used in the study in place of the following words or phrase at the indicated volume and page references.

DELETED WORDS OR PHRASE: Ethylene Glycol

PAGE	LINE	REASON FOR THE DELETION	FIFRA REFERENCE
6	14	Identity of Inert Ingredient	§10(d)(1)(C)
12	25	"	"
100	19	"	"

Example 2. (Confidential paragraph(s) that have been deleted from the study)

CROSS REFERENCE NUMBER 5 This cross reference number is used in the study in place of the following paragraph(s) at the indicated volume and page references.

DELETED PARAGRAPH(S):

(Reproduce the deleted paragraph(s) here)

PAGE	LINES	REASON FOR THE DELETION	FIFRA REFERENCE
20.	2-17	Description of the quality control process	§10(d)(1)(C)

Example 3. (Confidential pages that have been deleted from the study)

CROSS REFERENCE NUMBER 7 This cross reference number noted on a place-holder page is used in place of the following whole pages at the indicated volume and page references.

DELETED PAGE(S): are attached immediately behind this page.

PAGE	LINES	REASON FOR THE DELETION	FIFRA REFERENCE
20.	2-17	Description of the product manufacturing process	§10(d)(1)(A)

ATTACHMENT 6.

SAMPLE GOOD LABORATORY PRACTICE STATEMENTS

Example 1.

This study meets the requirements for 40 CFR Part 160

Submitter _____

Sponsor _____

Study Director _____

Example 2.

This study does not meet the requirements of 40 CFR Part 160, and differs in the following ways:

1._____

2._____

3._____

Submitter_____

Sponsor_____

Study Director_____

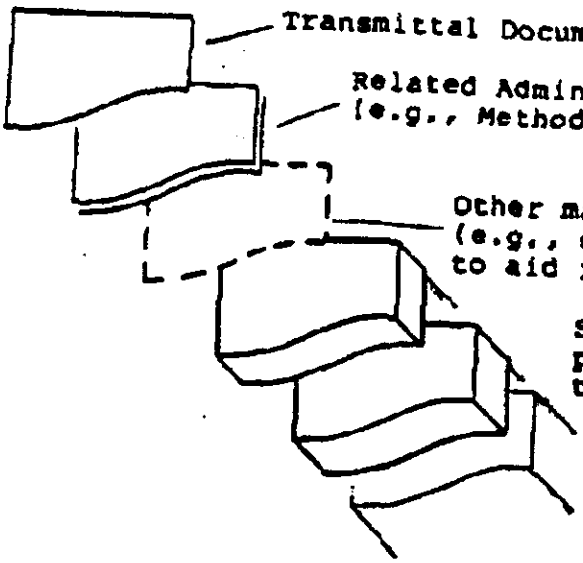
Example 3.

The submitter of this study was neither the sponsor of this study nor conducted it, and does not know whether it has been conducted in accordance with 40 CFR Part 160.

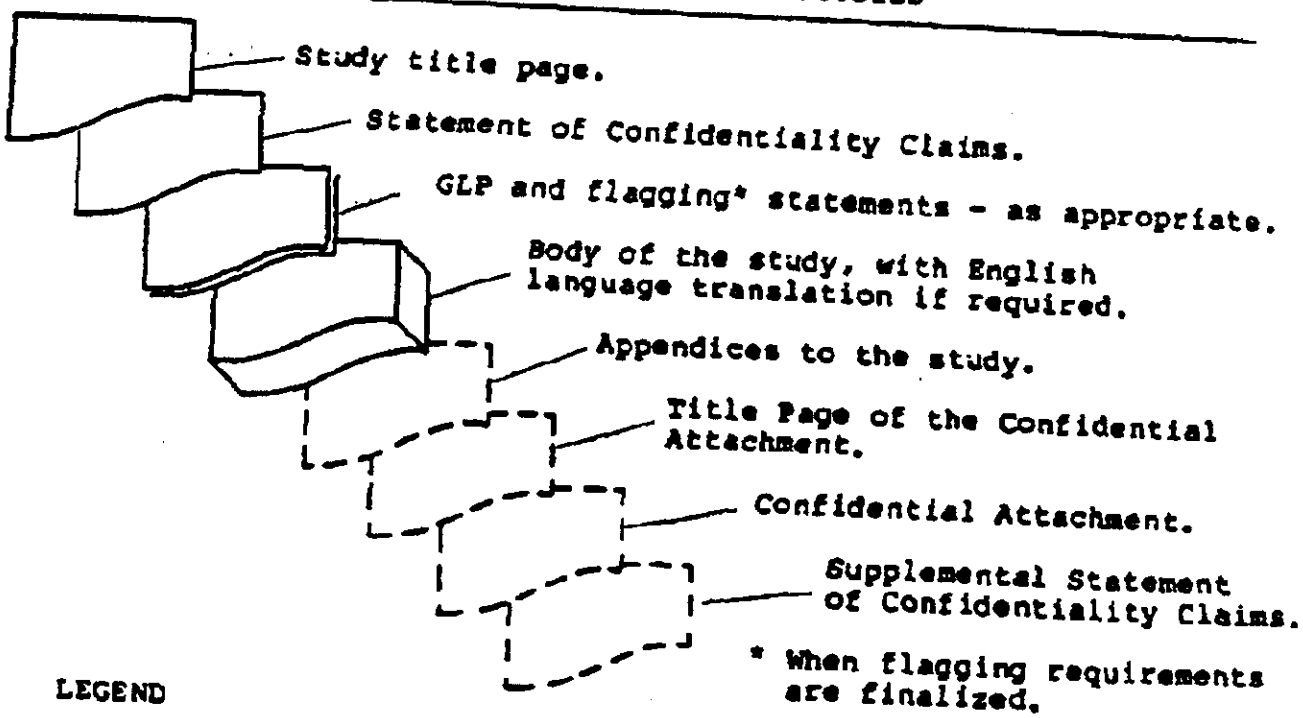
Submitter_____

ATTACHMENT 7.

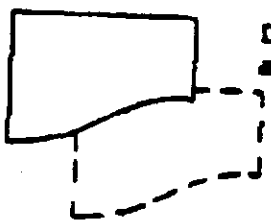
FORMAT OF THE SUBMITTAL PACKAGE



FORMAT OF SUBMITTED STUDIES



LEGEND



PR Notice 91-2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

PR NOTICE 91-2

NOTICE TO MANUFACTURERS, PRODUCERS, FORMULATORS, AND REGISTRANTS OF PESTICIDES

ATTENTION: Persons Responsible for Federal Registration of Pesticide Products.

SUBJECT: Accuracy of Stated Percentages for Ingredients Statement

I. PURPOSE:

The purpose of this notice is to clarify the Office of Pesticide Program's policy with respect to the statement of percentages in a pesticide's label's ingredient statement. Specifically, the amount (percent by weight) of ingredient(s) specified in the ingredient statement on the label must be stated as the nominal concentration of such ingredient(s), as that term is defined in 40 CFR 158.153(i). Accordingly, the Agency has established the nominal concentration as the only acceptable label claim for the amount of active ingredient in the product.

II. BACKGROUND

For some time the Agency has accepted two different methods of identifying on the label what percentage is claimed for the ingredient(s) contained in a pesticide. Some applicants claimed a percentage which represented a level between the upper and the lower certified limits. This was referred to as the nominal concentration. Other applicants claimed the lower limit as the percentage of the ingredient(s) that would be expected to be present in their product at the end of the product's shelf-life. Unfortunately, this led to a great deal of confusion among the regulated industry, the regulators, and the consumers as to exactly how much of a given ingredient was in a given product. The Agency has established the nominal concentration as the only acceptable label claim for the amount of active ingredient in the product.

Current regulations require that the percentage listed in the active ingredient statement be as precise as possible reflecting good manufacturing practices 40 CFR 156.10(g)(5). The certified limits required for each active ingredient are intended to encompass any such "good manufacturing practice" variations 40

CFR 158.175(c)(3).

The upper and lower certified limits, which must be proposed in connection with a product's registration, represent the amounts of an ingredient that may legally be present 40 CFR 158.175. The lower certified limit is used as the enforceable lower limit for the product composition according to FIFRA section 12(a)(1)(C), while the nominal concentration appearing on the label would be the routinely achieved concentration used for calculation of dosages and dilutions.

The nominal concentration would in fact state the greatest degree of accuracy that is warranted with respect to actual product composition because the nominal concentration would be the amount of active ingredient typically found in the product.

It is important for registrants to note that certified limits for active ingredients are not considered to be trade secret information under FIFRA section 10(b). In this respect the certified limits will be routinely provided by EPA to States for enforcement purposes, since the nominal concentration appearing on the label may not represent the enforceable composition for purposes of section 12(a)(1)(C).

III. REQUIREMENTS

As described below under Unit V. " **COMPLIANCE SCHEDULE,**" all currently registered products as well as all applications for new registration must comply with this Notice by specifying the nominal concentration expressed as a percentage by weight as the label claim in the ingredient(s) statement and equivalence statements if applicable (e.g., elemental arsenic, metallic zinc, salt of an acid). In addition, the requirement for performing sample analyses of five or more representative samples must be fulfilled. Copies of the raw analytical data must be submitted with the nominal ingredient label claim. Further information about the analysis requirement may be found in the 40 CFR 158.170. All products are required to provide certified limits for each active, inert ingredient, impurities of toxicological significance(i.e., upper limit(s) only) and on a case by case basis as specified by EPA. These limits are to be **set based on representative sampling** and chemical analysis(i.e., quality control) of the product.

The format of the ingredient statement must conform to 40 CFR 156-Labeling Requirements For Pesticides and Devices.

After July 1, 1997, all pesticide ingredient StatementS must be changed to nominal concentration.

IV. PRODUCTS THAT REQUIRE EFFICACY DATA

All pesticides are required to be efficacious. Therefore, the certified lower limits may not be lower then the minimum level to achieve efficacy. This is extremely important for products which are intended to control pests which threaten the public health, e.g., certain antimicrobial and rodenticide products. Refer to 40 CFR 153.640.

In those cases where efficacy limits have been established, the Agency will not accept certified lower limits which are below that level for the shelf life of the product.

V. COMPLIANCE SCHEDULE

As described earlier, the purpose of this Notice is to make the registration process more uniform and more manageable for both the agency and the regulated community. It is the Agency's intention to implement the requirements of this notice as smoothly as possible so as not to disrupt or delay the Agency's high priority programs, i.e., reregistration, new chemical, or fast track (FIFRA section 3(c)(3)(B). Therefore, applicants/registrants are expected to comply with the requirements of this Notice as follows:

(1) Beginning July 1, 1991, all new product registrations submitted to the Agency are to comply with the requirements of this Notice.

(2) Registrants having products subject to reregistration under FIFRA section 4(a) are to comply with the requirements of this Notice when specific products are called in by the Agency under Phase V of the Reregistration Program.

(3) All other products/applications that are not subject to (1) and (2) above will have until July 1, 1997, to comply with this Notice. Such applications should note "Conversion to Nominal Concentrations on the application form. These types Or amendments will not be handled as "Fast Track" applications but will be handled as routine requests.

VI. FOR FURTHER INFORMATION

Contact Tyrone Aiken for information or questions concerning this notice on (703) 308-7031.

Anne E. Lindsay

Anne E. Lindsay, Director
Registration Division (H-7505

APPENDIX F. Generic Data Call-In

GENERIC DATA CALL-IN NOTICE

CERTIFIED MAIL

Dear Sir or Madam:

This Notice requires you and other registrants of pesticide products containing the active ingredient(s) identified in Attachment 1 of this Notice, the Data Call-In Chemical Status Sheet, to submit certain data as noted herein to the U.S. Environmental Protection Agency (EPA, the Agency). These data are necessary to maintain the continued registration of your product(s) containing this active ingredient(s). Within 90 days after you receive this Notice you must respond as set forth in Section III below. Your response must state:

1. how you will comply with the requirements set forth in this Notice and its Attachments 1 through 4; or,

2. why you believe you are exempt from the requirements listed in this Notice and in Attachment 3, Requirements Status and Registrant's Response Form, (see section III-B); or,

3. why you believe EPA should not require your submission of data in the manner specified by this Notice (see section III-D).

If you do not respond to this Notice, or if you do not satisfy EPA that you will comply with its requirements or should be exempt or excused from doing so, then the registration of your product(s) subject to this Notice will be subject to suspension. We have provided a list of all of your products subject to this Notice in Attachment 2, Data Call-In Response Form, as well as a list of all registrants who were sent this Notice (Attachment 4).

The authority for this Notice is section 3(c)(2)(B) of the Federal Insecticide, Fungicide and Rodenticide Act as amended (FIFRA), 7 U.S.C. section 136a(c)(2)(B). Collection of this information is authorized under the Paperwork Reduction Act by OMB Approval No. 2070-0107

(expiration date 12-31-92).

This Notice is divided into six sections and five Attachments. The Notice itself contains information and instructions applicable to all Data Call-In Notices. The Attachments contain specific chemical information and instructions. The six sections of the Notice are:

Section I	-	Why You Are Receiving This Notice
Section II	-	Data Required By This Notice
Section III	-	Compliance With Requirements Of This Notice
Section IV	-	Consequences Of Failure To Comply With This Notice
Section V	-	Registrants' Obligation To Report Possible Unreasonable Adverse Effects
Section VI	-	Inquiries And Responses To This Notice

The Attachments to this Notice are:

Attachment 1	-	Data Call-In Chemical Status Sheet
Attachment 2	-	Data Call-In Response Form
Attachment 3	-	Requirements Status And Registrant's Response Form
Attachment 4	-	List Of All Registrants Sent This Data Call-In Notice

SECTION I. WHY YOU ARE RECEIVING THIS NOTICE

The Agency has reviewed existing data for this active ingredient(s) and reevaluated the data needed to support continued registration of the subject active ingredient(s). This reevaluation identified additional data necessary to assess the health and safety of the continued use of products containing this active ingredient(s). You have been sent this Notice because you have product(s) containing the subject active ingredient(s).

SECTION II. DATA REQUIRED BY THIS NOTICE

A. DATA REQUIRED

The data required by this Notice are specified in Attachment 3, Requirements Status and Registrant's Response Form. Depending on the results of the studies required in this Notice, additional testing may be required.

B. SCHEDULE FOR SUBMISSION OF DATA

You are required to submit the data or otherwise satisfy the data requirements specified in Attachment 3, Requirements Status and Registrant's Response Form, within the time frames provided.

C. TESTING PROTOCOL

All studies required under this Notice must be conducted in accordance with test standards outlined in the Pesticide Assessment Guidelines for those studies for which guidelines have been established.

These EPA Guidelines are available from the National Technical Information Service (NTIS), Attn: Order Desk, 5285 Port Royal Road, Springfield, Va 22161 (tel: 703-487-4650).

Protocols approved by the Organization for Economic Cooperation and Development (OECD) are also acceptable if the OECD-recommended test standards conform to those specified in the Pesticide Data Requirements regulation (40 CFR § 158.70). When using the OECD protocols, they should be modified as appropriate so that the data generated by the study will satisfy the requirements of 40 CFR § 158. Normally, the Agency will not extend deadlines for complying with data requirements when the studies were not conducted in accordance with acceptable standards. The OECD protocols are available from OECD, 1750 Pennsylvania Avenue N.W., Washington, D.C. 20006.

All new studies and proposed protocols submitted in response to this Data Call-In Notice must be in accordance with Good Laboratory Practices [40 CFR Part 160.3(a)(6)].

D. REGISTRANTS RECEIVING PREVIOUS SECTION 3(c)(2)(B) NOTICES ISSUED BY THE AGENCY

Unless otherwise noted herein, this Data Call-In does not in any way supersede or change the requirements of any previous Data Call-In(s), or any other agreements entered into with the Agency pertaining to such prior Notice. Registrants must comply with the requirements of all Notices to avoid issuance of a Notice of Intent to Suspend their affected products.

SECTION III. COMPLIANCE WITH REQUIREMENTS OF THIS NOTICE

A. SCHEDULE FOR RESPONDING TO THE AGENCY

The appropriate responses initially required by this Notice must be submitted to the Agency within 90 days after your receipt of this Notice. Failure to adequately respond to this Notice within 90 days of your receipt will be a basis for issuing a Notice of Intent to Suspend (NOIS) affecting your products. This and other bases for issuance

of NOIS due to failure to comply with this Notice are presented in Section IV-A and IV-B.

B. OPTIONS FOR RESPONDING TO THE AGENCY

The options for responding to this Notice are: 1) voluntary cancellation, 2) delete use(s), (3) claim generic data exemption, (4) agree to satisfy the data requirements imposed by this Notice or (5) request a data waiver(s).

A discussion of how to respond if you chose the Voluntary Cancellation option, the Delete Use(s) option or the Generic Data Exemption option is presented below. A discussion of the various options available for satisfying the data requirements of this Notice is contained in Section III-C. A discussion of options relating to requests for data waivers is contained in Section III-D.

There are two forms that accompany this Notice of which, depending upon your response, one or both must be used in your response to the Agency. These forms are the Data-Call-In Response Form (Attachment 2) and the Requirements Status and Registrant's Response Form (Attachment 3). The Data Call-In Response Form must be submitted as part of every response to this Notice. Please note that the company's authorized representative is required to sign the first page of the Data Call-In Response Form and Requirements Status and Registrant's Response Form (if this form is required) and initial any subsequent pages. The forms contain separate detailed instructions on the response options. Do not alter the printed material. If you have questions or need assistance in preparing your response, call or write the contact person identified in Attachment 1.

1. Voluntary Cancellation - You may avoid the requirements of this Notice by requesting voluntary cancellation of your product(s) containing the active ingredient(s) that is the subject of this Notice. If you wish to voluntarily cancel your product, you must submit a completed Data Call-In Response Form, indicating your election of this option. Voluntary cancellation is item number 5 on the Data Call-In Response Form. If you choose this option, this is the only form that you are required to complete.

If you choose to voluntarily cancel your product, further sale and distribution of your product after the effective date of cancellation must be in accordance with the Existing Stocks provisions of this Notice which are contained in Section IV-C.

2. Use Deletion - You may avoid the requirements of this Notice by eliminating the uses of your product to which the requirements apply. If you wish to amend your registration to delete uses, you must submit the Requirements Status and Registrant's Response Form, a completed application for amendment,

a copy of your proposed amended labeling, and all other information required for processing the application. Use deletion is option number 7 on the Requirements Status and Registrant's Response Form. You must also complete a Data Call-In Response Form by signing the certification, item number 8. Application forms for amending registrations may be obtained from the Registration Support and Emergency Response Branch, Registration Division, (703) 308-8358.

If you choose to delete the use(s) subject to this Notice or uses subject to specific data requirements, further sale, distribution, or use of your product after one year from the due date of your 90 day response, must bear an amended label.

3. Generic Data Exemption - Under section 3(c)(2)(D) of FIFRA, an applicant for registration of a product is exempt from the requirement to submit or cite generic data concerning an active ingredient(s) if the active ingredient(s) in the product is derived exclusively from purchased, registered pesticide products containing the active ingredient(s). EPA has concluded, as an exercise of its discretion, that it normally will not suspend the registration of a product which would qualify and continue to qualify for the generic data exemption in section 3(c)(2)(D) of FIFRA. To qualify, all of the following requirements must be met:

a. The active ingredient(s) in your registered product must be present solely because of incorporation of another registered product which contains the subject active ingredient(s) and is purchased from a source not connected with you; and,

b. every registrant who is the ultimate source of the active ingredient(s) in your product subject to this DCI must be in compliance with the requirements of this Notice and must remain in compliance; and

c. you must have provided to EPA an accurate and current "Confidential Statement of Formula" for each of your products to which this Notice applies.

To apply for the Generic Data Exemption you must submit a completed Data Call-In Response Form, Attachment 2 and all supporting documentation. The Generic Data Exemption is item number 6a on the Data Call-In Response Form. If you claim a generic data exemption you are not required to complete the Requirements Status and Registrant's Response Form. Generic Data Exemption cannot be selected as an option for product specific data.

If you are granted a Generic Data Exemption, you rely on the efforts of other persons to provide the Agency with the required data. If the registrant(s) who have committed to generate and submit the required data fail to take

appropriate steps to meet the requirements or are no longer in compliance with this Data Call-In Notice, the Agency will consider that both they and you are not in compliance and will normally initiate proceedings to suspend the registrations of both your and their product(s), unless you commit to submit and do submit the required data within the specified time. In such cases the Agency generally will not grant a time extension for submitting the data.

4. Satisfying the Data Requirements of this Notice - There are various options available to satisfy the data requirements of this Notice. These options are discussed in Section III-C of this Notice and comprise options 1 through 6 on the Requirements Status and Registrant's Response Form and option 6b and 7 on the Data Call-In Response Form. If you choose option 6b or 7, you must submit both forms as well as any other information/data pertaining to the option chosen to address the data requirement.

5. Request for Data Waivers. Data waivers are discussed in Section III-D of this Notice and are covered by options 8 and 9 on the Requirements Status and Registrant's Response Form. If you choose one of these options, you must submit both forms as well as any other information/data pertaining to the option chosen to address the data requirement.

C. SATISFYING THE DATA REQUIREMENTS OF THIS NOTICE

If you acknowledge on the Data Call-In Response Form that you agree to satisfy the data requirements (i.e. you select option 6b and/or 7), then you must select one of the six options on the Requirements Status and Registrant's Response Form related to data production for each data requirement. Your option selection should be entered under item number 9, "Registrant Response." The six options related to data production are the first six options discussed under item 9 in the instructions for completing the Requirements Status and Registrant's Response Form. These six options are listed immediately below with information in parentheses to guide registrants to additional instructions provided in this Section. The options are:

1. I will generate and submit data within the specified time frame (Developing Data),

2. I have entered into an agreement with one or more registrants to develop data jointly (Cost Sharing),

3. I have made offers to cost-share (Offers to Cost Share),

4. I am submitting an existing study that has not been submitted previously to the Agency by anyone (Submitting an Existing Study),

5. I am submitting or citing data to upgrade a study classified by EPA as partially acceptable and upgradeable (Upgrading a Study),

6. I am citing an existing study that EPA has classified as acceptable or an existing study that has been submitted but not reviewed by the Agency (Citing an Existing Study).

Option 1, Developing Data --

If you choose to develop the required data it must be in conformance with Agency deadlines and with other Agency requirements as referenced herein and in the attachments. All data generated and submitted must comply with the Good Laboratory Practice (GLP) rule (40 CFR Part 160), be conducted according to the Pesticide Assessment Guidelines (PAG), and be in conformance with the requirements of PR Notice 86-5. In addition, certain studies require Agency approval of test protocols in advance of study initiation. Those studies for which a protocol must be submitted have been identified in the Requirements Status and Registrant's Response Form and/or footnotes to the form. If you wish to use a protocol which differs from the options discussed in Section II-C of this Notice, you must submit a detailed description of the proposed protocol and your reason for wishing to use it. The Agency may choose to reject a protocol not specified in Section II-C. If the Agency rejects your protocol you will be notified in writing, however, you should be aware that rejection of a proposed protocol will not be a basis for extending the deadline for submission of data.

A progress report must be submitted for each study within 90 days from the date you are required to commit to generate or undertake some other means to address that study requirement, such as making an offer to cost-share or agreeing to share in the cost of developing that study. A 90-day progress report must be submitted for all studies. This 90-day progress report must include the date the study was or will be initiated and, for studies to be started within 12 months of commitment, the name and address of the laboratory(ies) or individuals who are or will be conducting the study.

In addition, if the time frame for submission of a final report is more than 1 year, interim reports must be submitted at 12 month intervals from the date you are required to commit to generate or otherwise address the requirement for the study. In addition to the other information specified in the preceding paragraph, at a minimum, a brief description of current activity on and the status of the study must be included as well as a full description of any problems encountered since the last progress report.

The time frames in the Requirements Status and Registrant's Response Form are the time frames that the Agency is allowing for the submission of

completed study reports or protocols. The noted deadlines run from the date of the receipt of this Notice by the registrant. If the data are not submitted by the deadline, each registrant is subject to receipt of a Notice of Intent to Suspend the affected registration(s).

If you cannot submit the data/reports to the Agency in the time required by this Notice and intend to seek additional time to meet the requirement(s), you must submit a request to the Agency which includes: (1) a detailed description of the expected difficulty and (2) a proposed schedule including alternative dates for meeting such requirements on a step-by-step basis. You must explain any technical or laboratory difficulties and provide documentation from the laboratory performing the testing. While EPA is considering your request, the original deadline remains. The Agency will respond to your request in writing. If EPA does not grant your request, the original deadline remains. Normally, extensions can be requested only in cases of extraordinary testing problems beyond the expectation or control of the registrant. Extensions will not be given in submitting the 90-day responses. Extensions will not be considered if the request for extension is not made in a timely fashion; in no event shall an extension request be considered if it is submitted at or after the lapse of the subject deadline.

Option 2, Agreement to Share in Cost to Develop Data --

If you choose to enter into an agreement to share in the cost of producing the required data but will not be submitting the data yourself, you must provide the name of the registrant who will be submitting the data. You must also provide EPA with documentary evidence that an agreement has been formed. Such evidence may be your letter offering to join in an agreement and the other registrant's acceptance of your offer, or a written statement by the parties that an agreement exists. The agreement to produce the data need not specify all of the terms of the final arrangement between the parties or the mechanism to resolve the terms. Section 3(c)(2)(B) provides that if the parties cannot resolve the terms of the agreement they may resolve their differences through binding arbitration.

Option 3, Offer to Share in the Cost of Data Development --

If you have made an offer to pay in an attempt to enter into an agreement or amend an existing agreement to meet the requirements of this Notice and have been unsuccessful, you may request EPA (by selecting this option) to exercise its discretion not to suspend your registration(s), although you do not comply with the data submission requirements of this Notice. EPA has determined that as a general policy, absent other relevant considerations, it will not suspend the registration of a product of a registrant who has in good faith sought and continues to seek to enter into a joint data development/cost sharing program, but

the other registrant(s) developing the data has refused to accept your offer. To qualify for this option, you must submit documentation to the Agency proving that you have made an offer to another registrant (who has an obligation to submit data) to share in the burden of developing that data. You must also submit to the Agency a completed EPA Form 8570-32, Certification of Offer to Cost Share in the Development of Data. In addition, you must demonstrate that the other registrant to whom the offer was made has not accepted your offer to enter into a cost sharing agreement by including a copy of your offer and proof of the other registrant's receipt of that offer (such as a certified mail receipt). Your offer must, in addition to anything else, offer to share in the burden of producing the data upon terms to be agreed or failing agreement to be bound by binding arbitration as provided by FIFRA section 3(c)(2)(B)(iii) and must not qualify this offer. The other registrant must also inform EPA of its election of an option to develop and submit the data required by this Notice by submitting a Data Call-In Response Form and a Requirements Status and Registrant's Response Form committing to develop and submit the data required by this Notice.

In order for you to avoid suspension under this option, you may not withdraw your offer to share in the burdens of developing the data. In addition, the other registrant must fulfill its commitment to develop and submit the data as required by this Notice. If the other registrant fails to develop the data or for some other reason is subject to suspension, your registration as well as that of the other registrant will normally be subject to initiation of suspension proceedings, unless you commit to submit, and do submit the required data in the specified time frame. In such cases, the Agency generally will not grant a time extension for submitting the data.

Option 4, Submitting an Existing Study --

If you choose to submit an existing study in response to this Notice, you must determine that the study satisfies the requirements imposed by this Notice. You may only submit a study that has not been previously submitted to the Agency or previously cited by anyone. Existing studies are studies which predate issuance of this Notice. Do not use this option if you are submitting data to upgrade a study. (See Option 5).

You should be aware that if the Agency determines that the study is not acceptable, the Agency will require you to comply with this Notice, normally without an extension of the required date of submission. The Agency may determine at any time that a study is not valid and needs to be repeated.

To meet the requirements of the DCI Notice for submitting an existing study, all of the following three criteria must be clearly met:

a. You must certify at the time that the existing study is submitted that the raw data and specimens from the study are available for audit and review and you must identify where they are available. This must be done in accordance with the requirements of the Good Laboratory Practice (GLP) regulation, 40 CFR Part 160. As stated in 40 CFR 160.3(7) " *raw data* means any laboratory worksheets, records, memoranda, notes, or exact copies thereof, that are the result of original observations and activities of a study and are necessary for the reconstruction and evaluation of the report of that study. In the event that exact transcripts of raw data have been prepared (e.g., tapes which have been transcribed verbatim, dated, and verified accurate by signature), the exact copy or exact transcript may be substituted for the original source as raw data. *Raw data* may include photographs, microfilm or microfiche copies, computer printouts, magnetic media, including dictated observations, and recorded data from automated instruments." The term "specimens", according to 40 CFR 160.3(7), means "any material derived from a test system for examination or analysis."

b. Health and safety studies completed after May 1984 must also contain all GLP-required quality assurance and quality control information, pursuant to the requirements of 40 CFR Part 160. Registrants must also certify at the time of submitting the existing study that such GLP information is available for post-May 1984 studies by including an appropriate statement on or attached to the study signed by an authorized official or representative of the registrant.

c. You must certify that each study fulfills the acceptance criteria for the Guideline relevant to the study provided in the FIFRA Accelerated Reregistration Phase 3 Technical Guidance and that the study has been conducted according to the Pesticide Assessment Guidelines (PAG) or meets the purpose of the PAG (both available from NTIS). A study not conducted according to the PAG may be submitted to the Agency for consideration if the registrant believes that the study clearly meets the purpose of the PAG. The registrant is referred to 40 CFR 158.70 which states the Agency's policy regarding acceptable protocols. If you wish to submit the study, you must, in addition to certifying that the purposes of the PAG are met by the study, clearly articulate the rationale why you believe the study meets the purpose of the PAG, including copies of any supporting information or data. It has been the Agency's experience that studies completed prior to January 1970 rarely satisfied the purpose of the PAG and that necessary raw data are usually not available for such studies.

If you submit an existing study, you must certify that the study meets all requirements of the criteria outlined above.

If EPA has previously reviewed a protocol for a study you are submitting, you must identify any action taken by the Agency on the protocol and must indicate, as part of your certification, the manner in which all Agency comments, concerns, or issues were addressed in the final protocol and study.

If you know of a study pertaining to any requirement in this Notice which does not meet the criteria outlined above but does contain factual information regarding unreasonable adverse effects, you must notify the Agency of such a study. If such a study is in the Agency's files, you need only cite it along with the notification. If not in the Agency's files, you must submit a summary and copies as required by PR Notice 86-5.

Option 5, Upgrading a Study --

If a study has been classified as partially acceptable and upgradeable, you may submit data to upgrade that study. The Agency will review the data submitted and determine if the requirement is satisfied. If the Agency decides the requirement is not satisfied, you may still be required to submit new data normally without any time extension. Deficient, but upgradeable studies will normally be classified as supplemental. However, it is important to note that not all studies classified as supplemental are upgradeable. If you have questions regarding the classification of a study or whether a study may be upgraded, call or write the contact person listed in Attachment 1. If you submit data to upgrade an existing study you must satisfy or supply information to correct all deficiencies in the study identified by EPA. You must provide a clearly articulated rationale of how the deficiencies have been remedied or corrected and why the study should be rated as acceptable to EPA. Your submission must also specify the MRID number(s) of the study which you are attempting to upgrade and must be in conformance with PR Notice 86-5.

Do not submit additional data for the purpose of upgrading a study classified as unacceptable and determined by the Agency as not capable of being upgraded.

This option should also be used to cite data that has been previously submitted to upgrade a study, but has not yet been reviewed by the Agency. You must provide the MRID number of the data submission as well as the MRID number of the study being upgraded.

The criteria for submitting an existing study, as specified in Option 4

above, apply to all data submissions intended to upgrade studies. Additionally your submission of data intended to upgrade studies must be accompanied by a certification that you comply with each of those criteria as well as a certification regarding protocol compliance with Agency requirements.

Option 6, Citing Existing Studies --

If you choose to cite a study that has been previously submitted to EPA, that study must have been previously classified by EPA as acceptable or it must be a study which has not yet been reviewed by the Agency. Acceptable toxicology studies generally will have been classified as "core-guideline" or "core minimum." For ecological effects studies, the classification generally would be a rating of "core." For all other disciplines the classification would be "acceptable." With respect to any studies for which you wish to select this option you must provide the MRID number of the study you are citing and, if the study has been reviewed by the Agency, you must provide the Agency's classification of the study.

If you are citing a study of which you are not the original data submitter, you must submit a completed copy of EPA Form 8570-31, Certification with Respect to Data Compensation Requirements.

D. REQUESTS FOR DATA WAIVERS

There are two types of data waiver responses to this Notice. The first is a request for a low volume/minor use waiver and the second is a waiver request based on your belief that the data requirement(s) are inapplicable and do not apply to your product.

1. Low Volume/Minor Use Waiver -- Option 8 on the Requirements Status and Registrant's Response Form. Section 3(c)(2)(A) of FIFRA requires EPA to consider the appropriateness of requiring data for low volume, minor use pesticides. In implementing this provision EPA considers as low volume pesticides only those active ingredient(s) whose total production volume for all pesticide registrants is small. In determining whether to grant a low volume, minor use waiver the Agency will consider the extent, pattern and volume of use, the economic incentive to conduct the testing, the importance of the pesticide, and the exposure and risk from use of the pesticide. If an active ingredient(s) is used for both high volume and low volume uses, a low volume exemption will not be approved. If all uses of an active ingredient(s) are low volume and the combined volumes for all uses are also low, then an exemption may be granted, depending on review of other information outlined below. An exemption will not be granted if any registrant of the active ingredient(s) elects to conduct the testing. Any registrant receiving a low volume minor use waiver must remain within the sales figures in their forecast supporting the waiver request in order to remain qualified

for such waiver. If granted a waiver, a registrant will be required, as a condition of the waiver, to submit annual sales reports. The Agency will respond to requests for waivers in writing.

To apply for a low volume, minor use waiver, you must submit the following information, as applicable to your product(s), as part of your 90-day response to this Notice:

a. Total company sales (pounds and dollars) of all registered product(s) containing the active ingredient(s). If applicable to the active ingredient(s), include foreign sales for those products that are not registered in this country but are applied to sugar (cane or beet), coffee, bananas, cocoa, and other such crops. Present the above information by year for each of the past five years.

b. Provide an estimate of the sales (pounds and dollars) of the active ingredient(s) for each major use site. Present the above information by year for each of the past five years.

c. Total direct production cost of product(s) containing the active ingredient(s) by year for the past five years. Include information on raw material cost, direct labor cost, advertising, sales and marketing, and any other significant costs listed separately.

d. Total indirect production cost (e.g. plant overhead, amortized plant and equipment) charged to product(s) containing the active ingredient(s) by year for the past five years. Exclude all non-recurring costs that were directly related to the active ingredient(s), such as costs of initial registration and any data development.

e. A list of each data requirement for which you seek a waiver. Indicate the type of waiver sought and the estimated cost to you (listed separately for each data requirement and associated test) of conducting the testing needed to fulfill each of these data requirements.

f. A list of each data requirement for which you are not seeking any waiver and the estimated cost to you (listed separately for each data requirement and associated test) of conducting the testing needed to fulfill each of these data requirements.

g. For each of the next ten years, a year-by-year forecast of company sales (pounds and dollars) of the active ingredient(s), direct production costs of product(s) containing the active ingredient(s) (following the parameters in item c above), indirect production costs of product(s)

containing the active ingredient(s) (following the parameters in item d above), and costs of data development pertaining to the active ingredient(s).

h. A description of the importance and unique benefits of the active ingredient(s) to users. Discuss the use patterns and the effectiveness of the active ingredient(s) relative to registered alternative chemicals and non-chemical control strategies. Focus on benefits unique to the active ingredient(s), providing information that is as quantitative as possible. If you do not have quantitative data upon which to base your estimates, then present the reasoning used to derive your estimates. To assist the Agency in determining the degree of importance of the active ingredient(s) in terms of its benefits, you should provide information on any of the following factors, as applicable to your product(s):

(1) documentation of the usefulness of the active ingredient(s) in Integrated Pest Management, (b) description of the beneficial impacts on the environment of use of the active ingredient(s), as opposed to its registered alternatives, (c) information on the breakdown of the active ingredient(s) after use and on its persistence in the environment, and (d) description of its usefulness against a pest(s) of public health significance.

Failure to submit sufficient information for the Agency to make a determination regarding a request for a low volume minor use waiver will result in denial of the request for a waiver.

2. Request for Waiver of Data --Option 9 on the Requirements Status and Registrant's Response Form. This option may be used if you believe that a particular data requirement should not apply because the corresponding use is no longer registered or the requirement is inappropriate. You must submit a rationale explaining why you believe the data requirements should not apply. You must also submit the current label(s) of your product(s) and, if a current copy of your Confidential Statement of Formula is not already on file you must submit a current copy.

You will be informed of the Agency's decision in writing. If the Agency determines that the data requirements of this Notice do not apply to your product(s), you will not be required to supply the data pursuant to section 3(c)(2)(B). If EPA determines that the data are required for your product(s), you must choose a method of meeting the requirements of this Notice within the time frame provided by this Notice. Within 30 days of your receipt of the Agency's written decision, you must submit a revised Requirements Status and Registrant's Response Form indicating the option chosen.

IV. CONSEQUENCES OF FAILURE TO COMPLY WITH THIS NOTICE

A. NOTICE OF INTENT TO SUSPEND

The Agency may issue a Notice of Intent to Suspend products subject to this Notice due to failure by a registrant to comply with the requirements of this Data Call-In Notice, pursuant to FIFRA section 3(c)(2)(B). Events which may be the basis for issuance of a Notice of Intent to Suspend include, but are not limited to, the following:

1. Failure to respond as required by this Notice within 90 days of your receipt of this Notice.

2. Failure to submit on the required schedule an acceptable proposed or final protocol when such is required to be submitted to the Agency for review.

3. Failure to submit on the required schedule an adequate progress report on a study as required by this Notice.

4. Failure to submit on the required schedule acceptable data as required by this Notice.

5. Failure to take a required action or submit adequate information pertaining to any option chosen to address the data requirements (e.g., any required action or information pertaining to submission or citation of existing studies or offers, arrangements, or arbitration on the sharing of costs or the formation of Task Forces, failure to comply with the terms of an agreement or arbitration concerning joint data development or failure to comply with any terms of a data waiver).

6. Failure to submit supportable certifications as to the conditions of submitted studies, as required by Section III-C of this Notice.

7. Withdrawal of an offer to share in the cost of developing required data.

8. Failure of the registrant to whom you have tendered an offer to share in the cost of developing data and provided proof of the registrant's receipt of such offer, or failure of a registrant on whom you rely for a generic data exemption either to:

   a. inform EPA of intent to develop and submit the data required by this Notice on a Data Call-In Response Form and a Requirements Status and Registrant's Response Form; or,

   b. fulfill the commitment to develop and submit the data as required

by this Notice; or,

c. otherwise take appropriate steps to meet the requirements stated in this Notice, unless you commit to submit and do submit the required data in the specified time frame.

9. Failure to take any required or appropriate steps, not mentioned above, at any time following the issuance of this Notice.

B. BASIS FOR DETERMINATION THAT SUBMITTED STUDY IS UNACCEPTABLE

The Agency may determine that a study (even if submitted within the required time) is unacceptable and constitutes a basis for issuance of a Notice of Intent to Suspend. The grounds for suspension include, but are not limited to, failure to meet any of the following:

1. EPA requirements specified in the Data Call-In Notice or other documents incorporated by reference (including, as applicable, EPA Pesticide Assessment Guidelines, Data Reporting Guidelines, and GeneTox Health Effects Test Guidelines) regarding the design, conduct, and reporting of required studies. Such requirements include, but are not limited to, those relating to test material, test procedures, selection of species, number of animals, sex and distribution of animals, dose and effect levels to be tested or attained, duration of test, and, as applicable, Good Laboratory Practices.

2. EPA requirements regarding the submission of protocols, including the incorporation of any changes required by the Agency following review.

3. EPA requirements regarding the reporting of data, including the manner of reporting, the completeness of results, and the adequacy of any required supporting (or raw) data, including, but not limited to, requirements referenced or included in this Notice or contained in PR 86-5. All studies must be submitted in the form of a final report; a preliminary report will not be considered to fulfill the submission requirement.

C. EXISTING STOCKS OF SUSPENDED OR CANCELLED PRODUCTS

EPA has statutory authority to permit continued sale, distribution and use of existing stocks of a pesticide product which has been suspended or cancelled if doing so would be consistent with the purposes of the Federal Insecticide, Fungicide, and Rodenticide Act.

The Agency has determined that such disposition by registrants of existing stocks for a suspended registration when a section 3(c)(2)(B) data request is outstanding would generally not be consistent with the Act's purposes. Accordingly, the Agency anticipates granting registrants permission to sell, distribute, or use existing stocks of suspended product(s) only in exceptional circumstances. If you believe such disposition of existing stocks of your product(s) which may be suspended for failure to comply with this Notice should be permitted, you have the burden of clearly demonstrating to EPA that granting such permission would be consistent with the Act. You must also explain why an "existing stocks" provision is necessary, including a statement of the quantity of existing stocks and your estimate of the time required for their sale, distribution, and use. Unless you meet this burden the Agency will not consider any request pertaining to the continued sale, distribution, or use of your existing stocks after suspension.

If you request a voluntary cancellation of your product(s) as a response to this Notice and your product is in full compliance with all Agency requirements, you will have, under most circumstances, one year from the date your 90 day response to this Notice is due, to sell, distribute, or use existing stocks. Normally, the Agency will allow persons other than the registrant such as independent distributors, retailers and end users to sell, distribute or use such existing stocks until the stocks are exhausted. Any sale, distribution or use of stocks of voluntarily cancelled products containing an active ingredient(s) for which the Agency has particular risk concerns will be determined on case-by-case basis.

Requests for voluntary cancellation received <u>after</u> the 90 day response period required by this Notice will not result in the Agency granting any additional time to sell, distribute, or use existing stocks beyond a year from the date the 90 day response was due <u>unless</u> you demonstrate to the Agency that you are in full compliance with all Agency requirements, including the requirements of this Notice. For example, if you decide to voluntarily cancel your registration six months before a 3 year study is scheduled to be submitted, all progress reports and other information necessary to establish that you have been conducting the study in an acceptable and good faith manner must have been submitted to the Agency, before EPA will consider granting an existing stocks provision.

SECTION V. <u>REGISTRANTS' OBLIGATION TO REPORT POSSIBLE UNREASONABLE ADVERSE EFFECTS</u>

Registrants are reminded that FIFRA section 6(a)(2) states that if at any time after a pesticide is registered a registrant has additional factual information regarding unreasonable adverse effects on the environment by the pesticide, the registrant shall submit the information to the Agency. Registrants must notify the Agency of any factual information they have, from whatever source, including but not limited to interim or preliminary results of studies, regarding unreasonable adverse effects on man or the environment. This requirement continues as long as the products are registered by the Agency.

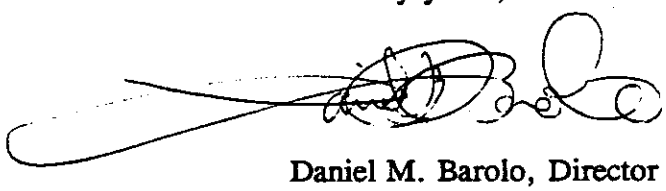
SECTION VI. INQUIRIES AND RESPONSES TO THIS NOTICE

If you have any questions regarding the requirements and procedures established by this Notice, call the contact person listed in Attachment 1, the Data Call-In Chemical Status Sheet.

All responses to this Notice (other than voluntary cancellation requests and generic data exemption claims) must include a completed Data Call-In Response Form (Attachment 2) and a completed Requirements Status and Registrant's Response Form (Attachment 3) and any other documents required by this Notice, and should be submitted to the contact person identified in Attachment 1. If the voluntary cancellation or generic data exemption option is chosen, only the Data Call-In Response Form need be submitted.

The Office of Compliance Monitoring (OCM) of the Office of Pesticides and Toxic Substances (OPTS), EPA, will be monitoring the data being generated in response to this Notice.

Sincerely yours,



Daniel M. Barolo, Director
Special Review
and Reregistration Division

Attachment 1. Chemical Status Sheet

FLOWER AND VEGETABLE OILS DATA CALL-IN CHEMICAL STATUS SHEET

INTRODUCTION

You have been sent this Generic Data CallIn Notice because you have product(s) containing flower and vegetable oils.

This Generic Data Call-In Chemical Status Sheet, contains an overview of data required by this notice, and point of contact for inquiries pertaining to the reregistration of flower and vegetable oils. This attachment is to be used in conjunction with (1) the Generic Data Call-In Notice, (2) the Generic Data Call-In Response Form (Attachment 2), (3) the Requirements Status and Registrant's Form (Attachment 3), (4) a list of registrants receiving this DCI (Attachment 4), (5) the EPA Acceptance Criteria (Attachment 6), and (6) the Cost Share and Data Compensation Forms in replying to this flower and vegetable oils Generic Data Call-In (Attachment 6). Instructions and guidance accompany each form.

DATA REQUIRED BY THIS NOTICE

The additional data requirements needed to complete the generic database for Flower and Vegetable Oils are contained in the Requirements Status and Registrant's Response, Attachment 3. The Agency has concluded that additional product chemistry data on Flower and Vegetable Oils are needed. These data are needed to fully complete the reregistration of all eligible flower and vegetable oils products.

INQUIRIES AND RESPONSES TO THIS NOTICE

If you have any questions regarding the generic data requirements and procedures established by this Notice, please contact Virginia Dietrich at (703) 308-8157.

All responses to this Notice for the generic data requirements should be submitted to:

Virginia Dietrich, Chemical Review Manager
Accelerated Reregistration Branch
Special Review and Registration Division (H7508W)
Office of Pesticide Programs
U.S. Environmental Protection Agency
Washington, D.C. 20460
RE: Flower and Vegetable Oils

Attachment 2. Generic DCI Response Forms Inserts (Form A) plus Instructions

SPECIFIC INSTRUCTIONS FOR THE GENERIC DATA CALL-IN RESPONSE FORM

This Form is designed to be used to respond to call-ins for generic and product specific data for the purpose of reregistering pesticides under the Federal Insecticide Fungicide and Rodenticide Act. Fill out this form each time you are responding to a data call-in for which EPA has sent you the form entitled "Requirements Status and Registrant's Response."

Items 1-4 will have been preprinted on the form Items 5 through 7 must be completed by the registrant as appropriate Items 8 through 11 must be completed by the registrant before submitting a response to the Agency.

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggesting for reducing this burden, to Chief, Information Policy Branch, PM-223, U S Environmental Protection Agency, 401 M St , S W , Washington, D C 20460; and to the Office of Management and Budget, Paperwork Reduction Project 2070-0107, Washington, D C 20503.

INSTRUCTIONS

Item 1. This item identifies your company name, number and address.

Item 2. This item identifies the ease number, ease name, EPA chemical number and chemical name.

Item 3. This item identifies the date and type of data call-in.

Item 4. This item identifies the EPA product registrations relevant to the data call-in. Please note that you are also responsible for informing the Agency of your response regarding any product that you believe may be covered by this data call-in but that is not listed by the Agency in Item 4. You must bring any such apparent omission to the Agency's attention within the period required for submission of this response form.

Item 5. Cheek this item for each product registration you wish to cancel voluntarily. If a registration number is listed for a product for which you previously requested voluntary cancellation, indicate in Item 5 the date of that request. You do not need to complete any item on the Requirements Status and Registrant's Response Form for any product that is voluntarily cancelled.

Item 6a. Check this item if this data call-in is for generic data as indicated in Item 3 and if you are eligible for a Generic Data Exemption for the chemical listed in Item 2 and used in the subject product. By electing this exemption, you agree to the terms and conditions of a Generic Data Exemption as explained in the Data Call-In Notice.

If you are eligible for or claim a Generic Data Exemption, enter the EPA registration Number of each registered source of that active ingredient that you use in your product.

Typically, if you purchase an EPA-registered product from one or more other producers (who, with respect to the incorporated product, are in compliance with this and-any other outstanding Data Call-In Notice), and incorporate that product into all your products, you may complete this item for all products listed on this form If, however, you produce the active ingredient yourself, or use any unregistered product (regardless of the fact that some of your sources are registered), you may not claim a Generic Data Exemption and you may not select this item.

Item 6b. Check this Item if the data call-in is a generic data call-in as indicated in Item 3 and if you are agreeing to satisfy the generic data requirements of this data call-in. Attach the Requirements Status and Registrant's Response Form that indicates how you will satisfy those requirements.

Item 7a. Check this item if this call-in if a data call-in as indicated in Item 3 for a manufacturing use product (MUP), and if your product is a manufacturing use product for which you agree to supply product-specific data. Attach the Requirements Status and Registrants' Response Form that indicates how you will satisfy those requirements.

Item 7b. Check this item if this call-in is a data call-in for an end use product (EUP) as indicated in Item 3 and if your product is an end use product for which you agree to supply product-specific data. Attach the Requirements Status and Registrant's Response Form that indicates how you will satisfy those requirements.

Item 8. This certification statement must be signed by an authorized representative of your company and the person signing must include his/her title. Additional pages used in your response must be initialled and dated in the space provided for the certification.

Item 9. Enter the date of signature.

Item 10. Enter the name of the person EPA should contact with questions regarding your response.

Item 11. Enter the phone number of your company contact.

Attachment 3. Requirements Status and Registrants' Response Forms Inserts (Form B) plus Instructions

SPECIFIC INSTRUCTIONS FOR COMPLETING THE REQUIREMENTS STATUS AND REGISTRANTS RESPONSE FORM

Generic Data

This form is designed to be used for registrants to respond to call-in- for generic and product-specific data as part of EPA's reregistration program under the Federal Insecticide Fungicide and Rodenticide Act. Although the form is the same for both product specific and generic data, instructions for completing the forms differ slightly. Specifically, options for satisfying product specific data requirements do not include (1) deletion of uses or (2) request for a low volume/minor use waiver. These instructions are for completion of generic data requirements.

EPA has developed this form individually for each data call-in addressed to each registrant, and has preprinted this form with a number of items. DO NOT use this form for any other active ingredient.

Items 1 through 8 (inclusive) will have been preprinted on the form. You must complete all other items on this form by typing or printing legibly.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggesting for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, D.C. 20460; and to the Office of Management and Budget, Paperwork Reduction Project 2070-0107, Washington, D.C. 20503.

INSTRUCTIONS

Item 1. This item identifies your company name, number, and address.

Item 2. This item identifies the case number, case name, EPA chemical number and chemical name.

Item 3. This item identifies the date and type of data call-in.

Item 4. This item identifies the guideline reference numbers of studies required to support the product(s) being reregistered. These guidelines, in addition to requirements specified in the Data Call-In Notice, govern the conduct of the required studies.

Item 5. This item identifies the study title associated with the guideline reference number and whether protocols and 1, 2, or 3-year progress reports are required to be

submitted in connection with the study. As noted in Section III of the Data Call-In Notice, 90-day progress reports are required for all studies.

If an asterisk appears in Item 5, EPA has attached information relevant to this guideline reference number to the Requirements Status and Registrant's Response Form.

Item 6. This item identifies the code associated with the use pattern of the pesticide. A brief description of each code follows:

A.	Terrestrial food
B.	Terrestrial feed
C.	Terrestrial non-food
D.	Aquatic food
E.	Aquatic non-food outdoor
F.	Aquatic non-food industrial
G.	Aquatic non-food residential
H.	Greenhouse food
I.	Greenhouse non-food crop
J.	Forestry
K.	Residential
L.	Indoor food
M.	Indoor non-food
N.	Indoor medical
O.	Indoor residential

Item 7. This item identifies the code assigned to the substance that must be used for testing. A brief description of each code follows.

EP	End-Use Product
MP	Manufacturing-Use Product
MP/TGAI	Manufacturing-Use Product and Technical Grade Active Ingredient
PAI	Pure Active Ingredient
PAI/M	Pure Active Ingredient and Metabolites
PAI/PAIRA	Pure Active Ingredient or Pure Active Ingredient Radiolabelled
PAIRA	Pure Active Ingredient Radiolabelled
PAIRA/M	Pure Active Ingredient Radiolabelled and Metabolites
PAIRA/PM	Pure Active Ingredient Radiolabelled and Plant Metabolites
TEP	Typical End-Use Product
TEP _ *	Typical End-Use Product, Percent Active Ingredient Specified

TEP/MET	Typical End-Use Product and Metabolites
TEP/PAI/M	Typical End-Use Product or Pure Active Ingredient and Metabolites
TGAI/PAIRA	Technical Grade Active Ingredient or Pure Active Ingredient Radiolabelled
TGAI	Technical Grade Active Ingredient
TGAI/TEP	Technical Grade Active Ingredient or Typical End-Use Product
TGAI/PAI	Technical Grade Active Ingredient or Pure Active Ingredient
MET	Metabolites
IMP	Impurities
DEGR	Degradates

*See: guideline comment

Item 8. This item identifies the time frame allowed for submission of the study or protocol identified in item 2. The time frame runs from the date **of your** receipt of the Data Call-In Notice.

Item 9. Enter the appropriate Response Code or Codes to show how you intend to comply with each data requirement. Brief descriptions of each code follow. The Data Call-In Notice contains a fuller description of each of these options.

1. (Developing Data) I will conduct a new study and submit it within the time frames specified in item 8 above. By indicating that I have chosen this option, I certify that I will comply with all the requirements pertaining to the conditions for submittal of this study as outlined in the Data Call-In Notice and that I will provide the protocol and progress reports required in item 5 above.

2. (Agreement to Cost Share) I have entered into an agreement with one or more registrants to develop data jointly. By indicating that I have chosen this option, I certify that I will comply with all the requirements pertaining to sharing in the cost of developing data as outlined in the Data Call-In Notice.

3. (Offer to Cost Share) I have made an offer to enter into an agreement with one or more registrants to develop data jointly. I am submitting a copy of the form "Certification of Offer to Cost Share in the Development of Data" that describes this offer/agreement. By indicating that I have chosen this option, I certify that I will comply with all the requirements pertaining to making an offer to share in the cost of developing data as outlined in the Data Call-In Notice.

4. (Submitting Existing Data) I am submitting an existing study that has never before been submitted to EPA. By indicating that I have chosen this option, I certify that this study meets all the requirements pertaining to the conditions for submittal of existing data outlined in the Data Call-In Notice and I have attached the needed supporting information along with this response.

5. (Upgrading a Study) I am submitting or citing data to upgrade a study that EPA has classified as partially acceptable and potentially upgradeable. By indicating that I have chosen this option, I certify that I have met all the requirements pertaining to the conditions for submitting or citing existing data to upgrade a study described in the Data Call-In Notice. I am indicating on attached correspondence the Master Record Identification Number (MRID) that EPA has assigned to the data that I am citing as well as the MRID of the study I am attempting to upgrade.

6. (Citing a Study) I am citing an existing study that has been previously classified by EPA as acceptable, core, core minimum, or a study that has not yet been reviewed by the Agency. I am providing the Agency's classification of the study.

7. (Deleting Uses) I am attaching an application for amendment to my registration deleting the uses for which the data are required.

8. (Low Volume/Minor Use Waiver Request) I have read the statements concerning low volume-minor use data waivers in the Data Call-In Notice and I request a low-volume minor use waiver of the data requirement. I am attaching a detailed justification to support this waiver request including, among other things, all information required to support the request. I understand that, unless modified by the Agency in writing, the data requirement as stated in the Notice governs.

9. (Request for Waiver of Data) I have read the statements concerning data waivers other than low volume minor-use data waivers in the Data Call-In Notice and I request a waiver of the data requirement. I am attaching an identification of the basis for this waiver and a detailed justification to support this waiver request. The justification includes, among other things, all information required to support the request. I understand that, unless modified by the Agency in writing, the data requirement as stated in the Notice governs.

Item 10. This item must be signed by an authorized representative of your company. The person signing must include his/her title, and must initial and date all other pages of this form.

Item 11. Enter the date of signature.

Item 12. Enter the name of the person EPA should contact with questions regarding your response.

Item 13. Enter the phone number of your company contact.

Attachment 4. List of Registrant(s) sent this DCI (Insert)

APPENDIX G. Product Specific Data Call-In

DATA CALL-IN NOTICE

CERTIFIED MAIL

Dear Sir or Madam:

This Notice requires you and other registrants of pesticide products containing the active ingredient identified in Attachment 1 of this Notice, the Data Call-In Chemical Status Sheet, to submit certain product specific data as noted herein to the U.S. Environmental Protection Agency (EPA, the Agency). These data are necessary to maintain the continued registration of your product(s) containing this active ingredient. Within 90 days after you receive this Notice you must respond as set forth in Section III below. Your response must state:

1. How you will comply with the requirements set forth in this Notice and its Attachments A through G; or

2. Why you believe you are exempt from the requirements listed in this Notice and in Attachment 3, Requirements Status and Registrant's Response Form, (see section III-B); or

3. Why you believe EPA should not require your submission of product specific data in the manner specified by this Notice (see section III-D).

If you do not respond to this Notice, or if you do not satisfy EPA that you will comply with its requirements or should be exempt or excused from doing so, then the registration of your product(s) subject to this Notice will be subject to suspension. We have provided a list of all of your products subject to this Notice in Attachment 2, Data Call-In Response Form, as well as a list of all registrants who were sent this Notice (Attachment 6).

The authority for this Notice is section 3(c)(2)(B) of the Federal Insecticide, Fungicide and Rodenticide Act as amended (FIFRA), 7 U.S.C. section 136a(c)(2)(B). Collection of this information is authorized under the Paperwork Reduction Act by OMB Approval No. 2070-0107 (expiration date 12-31-92).

This Notice is divided into six sections and seven Attachments. The Notice itself contains information and instructions applicable to all Data Call-In Notices. The Attachments contain specific chemical information and instructions. The six sections of the Notice are:

Section I - Why You Are Receiving This Notice
Section II - Data Required By This Notice
Section III- Compliance With Requirements Of This Notice
Section IV - Consequences Of Failure To Comply With This Notice
Section V - Registrants' Obligation To Report Possible Unreasonable Adverse Effects
Section VI - Inquiries And Responses To This Notice

The Attachments to this Notice are:

1 - Data Call-In Chemical Status Sheet
2 - Product-Specific Data Call-In Response Form
3 - Requirements Status and Registrant's Response Form
4 - EPA Grouping of End-Use Products for Meeting Acute Toxicology Data Requirements for Reregistration
5 - EPA Acceptance Criteria
6 - List of Registrants Receiving This Notice
7 - Cost Share and Data Compensation Forms, and Product Specific Data Report Form

SECTION I. WHY YOU ARE RECEIVING THIS NOTICE

The Agency has reviewed existing data for this active ingredient and reevaluated the data needed to support continued registration of the subject active ingredient. The Agency has concluded that the only additional data necessary are product specific data. No additional generic data requirements are being imposed. You have been sent this Notice because you have product(s) containing the subject active ingredient.

SECTION II. DATA REQUIRED BY THIS NOTICE

II-A. DATA REQUIRED

The product specific data required by this Notice are specified in Attachment 3, Requirements Status and Registrant's Response Form. Depending on the results of the studies required in this Notice, additional testing may be required.

II-B. SCHEDULE FOR SUBMISSION OF DATA

You are required to submit the data or otherwise satisfy the data requirements specified in Attachment 3, Requirements Status and Registrant's Response Form, within the time frames provided.

II-C. TESTING PROTOCOL

All studies required under this Notice must be conducted in accordance with test standards outlined in the Pesticide Assessment Guidelines for those studies for which guidelines have been established.

These EPA Guidelines are available from the National Technical Information Service (NTIS), Attn: Order Desk, 5285 Port Royal Road, Springfield, Va 22161 (tel: 703-487-4650).

Protocols approved by the Organization for Economic Cooperation and Development (OECD) are also acceptable if the OECD-recommended test standards conform to those specified in the Pesticide Data Requirements regulation (40 CFR § 158.70). When using the OECD protocols, they should be modified as appropriate so that the data generated by the study will satisfy the requirements of 40 CFR § 158. Normally, the Agency will not extend deadlines for complying with data requirements when the studies were not conducted in accordance with acceptable standards. The OECD protocols are available from OECD, 1750 Pennsylvania Avenue N.W., Washington, D.C. 20006.

All new studies and proposed protocols submitted in response to this Data Call-In Notice must be in accordance with Good Laboratory Practices [40 CFR Part 160.3(a)(6)].

II-D. REGISTRANTS RECEIVING PREVIOUS SECTION 3(c)(2)(B) NOTICES ISSUED BY THE AGENCY

Unless otherwise noted herein, this Data Call-In does not in any way supersede or change the requirements of any previous Data Call-In(s), or any other agreements entered into with the Agency pertaining to such prior Notice. Registrants must comply with the requirements of all Notices to avoid issuance of a Notice of Intent to Suspend their affected products.

SECTION III. COMPLIANCE WITH REQUIREMENTS OF THIS NOTICE

III-A. SCHEDULE FOR RESPONDING TO THE AGENCY

The appropriate responses initially required by this Notice for product specific data must be submitted to the Agency within 90 days after your receipt of this Notice. Failure to adequately respond to this Notice within 90 days of your receipt will be a basis for issuing a Notice of Intent to Suspend (NOIS) affecting your products. This and other bases for issuance of NOIS due to failure to comply with this Notice are presented in Section IV-A and IV-B.

III-B. OPTIONS FOR RESPONDING TO THE AGENCY

The options for responding to this Notice for product specific data are: (a) voluntary cancellation, (b) agree to satisfy the product specific data requirements imposed by this notice or (c) request a data waiver(s).

A discussion of how to respond if you chose the Voluntary Cancellation option is presented below. A discussion of the various options available for satisfying the product specific data requirements of this Notice is contained in Section III-C. A discussion of options relating to requests for data waivers is contained in Section III-D.

There are two forms that accompany this Notice of which, depending upon your response, one or both must be used in your response to the Agency. These forms are the Data-Call-In Response Form, and the Requirements Status and Registrant's Response Form, Attachment 2 and Attachment 3. The Data Call-In Response Form must be submitted as part of every response to this Notice. In addition, one copy of the Requirements Status and Registrant's Response Form must be submitted for each product listed on the Data Call-In Response Form unless the voluntary cancellation option is selected or unless the product is identical to another (refer to the instructions for completing the Data Call-In Response Form in Attachment 2). Please note that the company's authorized representative is required to sign the first page of the Data Call-In Response Form and Requirements Status and Registrant's Response Form (if this form is required) and initial any subsequent pages. The forms contain separate detailed instructions on the response options. Do not alter the printed material. If you have questions or need assistance in preparing your response, call or write the contact person(s) identified in Attachment 1.

1. Voluntary Cancellation - You may avoid the requirements of this Notice by requesting voluntary cancellation of your product(s) containing the active ingredient that is the subject of this Notice. If you wish to voluntarily cancel your product, you must submit a completed Data Call-In Response Form, indicating your election of this option. Voluntary cancellation is item number 5 on the Data Call-In Response Form. If you choose this option, this is the only form that you are required to complete.

If you chose to voluntarily cancel your product, further sale and distribution of your product after the effective date of cancellation must be in accordance with the Existing Stocks provisions of this Notice which are contained in Section IV-C.

2. Satisfying the Product Specific Data Requirements of this Notice There are various options available to satisfy the product specific data requirements of this Notice. These options are discussed in Section III-C of this Notice and comprise options 1 through 6 on the Requirements Status and Registrant's Response Form and item numbers 7a and 7b on the Data Call-In Response Form. Deletion of a use(s) and the low volume/minor use option are not valid options for fulfilling product specific data requirements.

3. Request for Product Specific Data Waivers. Waivers for product specific data are discussed in Section III-D of this Notice and are covered by option 7 on the Requirements Status and Registrant's Response Form. If you choose one of these options, you must submit both forms as well as any other information/data pertaining to the option chosen to address the data requirement.

III-C SATISFYING THE DATA REQUIREMENTS OF THIS NOTICE

If you acknowledge on the Data Call-In Response Form that you agree to satisfy the product specific data requirements (i.e. you select item number 7a or 7b), then you must select one of the six options on the Requirements Status and Registrant's Response Form related to data production for each data requirement. Your option selection should be entered under item number 9, "Registrant Response." The six options related to data production are the first six options discussed under item 9 in the instructions for completing the Requirements Status and Registrant's Response Form. These six options are listed immediately below with information in parentheses to guide registrants to additional instructions provided in this Section. The options are:

(1) I will generate and submit data within the specified time frame (Developing Data)
(2) I have entered into an agreement with one or more registrants to develop data jointly (Cost Sharing)
(3) I have made offers to cost-share (Offers to Cost Share)
(4) I am submitting an existing study that has not been submitted previously to the Agency by anyone (Submitting an Existing Study)
(5) I am submitting or citing data to upgrade a study classified by EPA as partially acceptable and upgradeable (Upgrading a Study)
(6) I am citing an existing study that EPA has classified as acceptable or an existing study that has been submitted but not reviewed by the Agency (Citing an Existing Study)

Option 1, Developing Data -- If you choose to develop the required data it must be in conformance with Agency deadlines and with other Agency requirements as referenced herein and in the attachments. All data generated and submitted must comply with the Good Laboratory Practice (GLP) rule (40 CFR Part 160), be conducted according to the Pesticide Assessment Guidelines (PAG), and be in conformance with the requirements of PR Notice 86-5.

The time frames in the Requirements Status and Registrant's Response Form are the time frames that the Agency is allowing for the submission of completed study reports. The noted deadlines run from the date of the receipt of this Notice by the registrant. If the data are not submitted by the deadline, each registrant is subject to receipt of a Notice of Intent to Suspend the affected registration(s).

If you cannot submit the data/reports to the Agency in the time required by this Notice and intend to seek additional time to meet the requirements(s), you must submit a request to the Agency which includes: (1) a detailed description of the expected difficulty and (2) a proposed schedule

including alternative dates for meeting such requirements on a step-by-step basis. You must explain any technical or laboratory difficulties and provide documentation from the laboratory performing the testing. While EPA is considering your request, the original deadline remains. The Agency will respond to your request in writing. If EPA does not grant your request, the original deadline remains. Normally, extensions can be requested only in cases of extraordinary testing problems beyond the expectation or control of the registrant. Extensions will not be given in submitting the 90-day responses. Extensions will not be considered if the request for extension is not made in a timely fashion; in no event shall an extension request be considered if it is submitted at or after the lapse of the subject deadline.

Option 2, Agreement to Share in Cost to Develop Data -- Registrants may only choose this option for acute toxicity data and certain efficacy data and only if EPA has indicated in the attached data tables that your product and at least one other product are similar for purposes of depending on the same data. If this is the case, data may be generated for just one of the products in the group. The registration number of the product for which data will be submitted must be noted in the agreement to cost share by the registrant selecting this option. If you choose to enter into an agreement to share in the cost of producing the required data but will not be submitting the data yourself, you must provide the name of the registrant who will be submitting the data. You must also provide EPA with documentary evidence that an agreement has been formed. Such evidence may be your letter offering to join in an agreement and the other registrant's acceptance of your offer, or a written statement by the parties that an agreement exists. The agreement to produce the data need not specify all of the terms of the final arrangement between the parties or the mechanism to resolve the terms. Section 3(c)(2)(B) provides that if the parties cannot resolve the terms of the agreement they may resolve their differences through binding arbitration.

Option 3, Offer to Share in the Cost of Data Development -- This option only applies to acute toxicity and certain efficacy data as described in option 2 above. If you have made an offer to pay in an attempt to enter into an agreement or amend an existing agreement to meet the requirements of this Notice and have been unsuccessful, you may request EPA (by selecting this option) to exercise its discretion not to suspend your registration(s), although you do not comply with the data submission requirements of this Notice. EPA has determined that as a general policy, absent other relevant considerations, it will not suspend the registration of a product of a registrant who has in good faith sought and continues to seek to enter into a joint data development/cost sharing program, but the other registrant(s) developing the data has refused to accept your offer. To qualify for this option, you must submit documentation to the Agency proving that you have made an offer to another registrant (who has an obligation to submit data) to share in the burden of developing that data. You must also submit to the Agency a completed EPA Form 8570-32, Certification of Offer to Cost Share in the Development of Data, Attachment 7. In addition, you must demonstrate that the other registrant to whom the offer was made has not accepted your offer to enter into a cost sharing agreement by including a copy of your offer and proof of the other registrant's receipt of that offer (such as a certified mail receipt). Your offer must, in addition to anything else, offer to share in the burden of producing the data upon terms to be agreed or failing agreement to be bound by binding arbitration as provided by FIFRA section 3(c)(2)(B)(iii) and must not qualify this offer. The other registrant must also inform EPA of its election of an option to

develop and submit the data required by this Notice by submitting a Data Call-In Response Form and a Requirements Status and Registrant's Response Form committing to develop and submit the data required by this Notice.

In order for you to avoid suspension under this option, you may not withdraw your offer to share in the burdens of developing the data. In addition, the other registrant must fulfill its commitment to develop and submit the data as required by this Notice. If the other registrant fails to develop the data or for some other reason is subject to suspension, your registration as well as that of the other registrant will normally be subject to initiation of suspension proceedings, unless you commit to submit, and do submit the required data in the specified time frame. In such cases, the Agency generally will not grant a time extension for submitting the data.

Option 4, Submitting an Existing Study -- If you choose to submit an existing study in response to this Notice, you must determine that the study satisfies the requirements imposed by this Notice. You may only submit a study that has not been previously submitted to the Agency or previously cited by anyone. Existing studies are studies which predate issuance of this Notice. Do not use this option if you are submitting data to upgrade a study. (See Option 5).

You should be aware that if the Agency determines that the study is not acceptable, the Agency will require you to comply with this Notice, normally without an extension of the required date of submission. The Agency may determine at any time that a study is not valid and needs to be repeated.

To meet the requirements of the DCI Notice for submitting an existing study, all of the following three criteria must be clearly met:

a. You must certify at the time that the existing study is submitted that the raw data and specimens from the study are available for audit and review and you must identify where they are available. This must be done in accordance with the requirements of the Good Laboratory Practice (GLP) regulation, 40 CFR Part 160. As stated in 40 CFR 160.3(j) " 'raw data' means any laboratory worksheets, records, memoranda, notes, or exact copies thereof, that are the result of original observations and activities of a study and are necessary for the reconstruction and evaluation of the report of that study. In the event that exact transcripts of raw data have been prepared (e.g., tapes which have been transcribed verbatim, dated, and verified accurate by signature), the exact copy or exact transcript may be substituted for the original source as raw data. 'Raw data' may include photographs, microfilm or microfiche copies, computer printouts, magnetic media, including dictated observations, and recorded data from automated instruments." The term "specimens", according to 40 CFR 160.3(k), means "any material derived from a test system for examination or analysis."

b. Health and safety studies completed after May 1984 must also contain all GLP-required quality assurance and quality control information, pursuant to the

requirements of 40 CFR Part 160. Registrants must also certify at the time of submitting the existing study that such GLP information is available for post-May 1984 studies by including an appropriate statement on or attached to the study signed by an authorized official or representative of the registrant.

c. You must certify that each study fulfills the acceptance criteria for the Guideline relevant to the study provided in the FIFRA Accelerated Reregistration Phase 3 Technical Guidance and that the study has been conducted according to the Pesticide Assessment Guidelines (PAG) or meets the purpose of the PAG (both available from NTIS). A study not conducted according to the PAG may be submitted to the Agency for consideration if the registrant believes that the study clearly meets the purpose of the PAG. The registrant is referred to 40 CFR 158.70 which states the Agency's policy regarding acceptable protocols. If you wish to submit the study, you must, in addition to certifying that the purposes of the PAG are met by the study, clearly articulate the rationale why you believe the study meets the purpose of the PAG, including copies of any supporting information or data. It has been the Agency's experience that studies completed prior to January 1970 rarely satisfied the purpose of the PAG and that necessary raw data are usually not available for such studies.

If you submit an existing study, you must certify that the study meets all requirements of the criteria outlined above.

If you know of a study pertaining to any requirement in this Notice which does not meet the criteria outlined above but does contain factual information regarding unreasonable adverse effects, you must notify the Agency of such a study. If such study is in the Agency's files, you need only cite it along with the notification. If not in the Agency's files, you must submit a summary and copies as required by PR Notice 86-5.

Option 5, Upgrading a Study -- If a study has been classified as partially acceptable and upgradeable, you may submit data to upgrade that study. The Agency will review the data submitted and determine if the requirement is satisfied. If the Agency decides the requirement is not satisfied, you may still be required to submit new data normally without any time extension. Deficient, but upgradeable studies will normally be classified as supplemental. However, it is important to note that not all studies classified as supplemental are upgradeable. If you have questions regarding the classification of a study or whether a study may be upgraded, call or write the contact person listed in Attachment 1. If you submit data to upgrade an existing study you must satisfy or supply information to correct all deficiencies in the study identified by EPA. You must provide a clearly articulated rationale of how the deficiencies have been remedied or corrected and why the study should be rated as acceptable to EPA. Your submission must also specify the MRID number(s) of the study which you are attempting to upgrade and must be in conformance with PR Notice 86-5.

Do not submit additional data for the purpose of upgrading a study classified as unacceptable and determined by the Agency as not capable of being upgraded.

This option should also be used to cite data that has been previously submitted to upgrade a study, but has not yet been reviewed by the Agency. You must provide the MRID number of the data submission as well as the MRID number of the study being upgraded.

The criteria for submitting an existing study, as specified in Option 4 above, apply to all data submissions intended to upgrade studies. Additionally your submission of data intended to upgrade studies must be accompanied by a certification that you comply with each of those criteria as well as a certification regarding protocol compliance with Agency requirements.

Option 6, Citing Existing Studies -- If you choose to cite a study that has been previously submitted to EPA, that study must have been previously classified by EPA as acceptable or it must be a study which has not yet been reviewed by the Agency. Acceptable toxicology studies generally will have been classified as "core-guideline" or "core minimum." For all other disciplines the classification would be "acceptable." With respect to any studies for which you wish to select this option you must provide the MRID number of the study you are citing and, if the study has been reviewed by the Agency, you must provide the Agency's classification of the study.

If you are citing a study of which you are not the original data submitter, you must submit a completed copy of EPA Form 8570-31, Certification with Respect to Data Compensation Requirements.

Registrants who select one of the above 6 options must meet all of the requirements described in the instructions for completing the Data Call-In Response Form and the Requirements Status and Registrant's Response Form, as appropriate.

III-D REQUESTS FOR DATA WAIVERS

If you request a waiver for product specific data because you believe it is inappropriate, you must attach a complete justification for the request, including technical reasons, data and references to relevant EPA regulations, guidelines or policies. (Note: any supplemental data must be submitted in the format required by PR Notice 86-5). This will be the only opportunity to state the reasons or provide information in support of your request. If the Agency approves your waiver request, you will not be required to supply the data pursuant to section 3(c)(2)(B) of FIFRA. If the Agency denies your waiver request, you must choose an option for meeting the data requirements of this Notice within 30 days of the receipt of the Agency's decision. You must indicate and submit the option chosen on the Requirements Status and Registrant's Response Form. Product specific data requirements for product chemistry, acute toxicity and efficacy (where appropriate) are required for all products and the Agency would grant a waiver only under extraordinary circumstances. You should also be aware that submitting a waiver request will not automatically extend the due date for the study in question. Waiver requests submitted without adequate supporting rationale will be denied and the original due date will remain in force.

IV. CONSEQUENCES OF FAILURE TO COMPLY WITH THIS NOTICE

IV-A NOTICE OF INTENT TO SUSPEND

The Agency may issue a Notice of Intent to Suspend products subject to this Notice due to failure by a registrant to comply with the requirements of this Data Call-In Notice, pursuant to FIFRA section 3(c)(2)(B). Events which may be the basis for issuance of a Notice of Intent to Suspend include, but are not limited to, the following:

1. Failure to respond as required by this Notice within 90 days of your receipt of this Notice.

2. Failure to submit on the required schedule an acceptable proposed or final protocol when such is required to be submitted to the Agency for review.

3. Failure to submit on the required schedule an adequate progress report on a study as required by this Notice.

4. Failure to submit on the required schedule acceptable data as required by this Notice.

5. Failure to take a required action or submit adequate information pertaining to any option chosen to address the data requirements (e.g., any required action or information pertaining to submission or citation of existing studies or offers, arrangements, or arbitration on the sharing of costs or the formation of Task Forces, failure to comply with the terms of an agreement or arbitration concerning joint data development or failure to comply with any terms of a data waiver).

6. Failure to submit supportable certifications as to the conditions of submitted studies, as required by Section III-C of this Notice.

7. Withdrawal of an offer to share in the cost of developing required data.

8. Failure of the registrant to whom you have tendered an offer to share in the cost of developing data and provided proof of the registrant's receipt of such offer or failure of a registrant on whom you rely for a generic data exemption either to:

   a. inform EPA of intent to develop and submit the data required by this Notice on a Data Call-In Response Form and a Requirements Status and Registrant's Response Form;

   b. fulfill the commitment to develop and submit the data as required by this Notice; or

   c. otherwise take appropriate steps to meet the requirements stated in this

Notice, unless you commit to submit and do submit the required data in the specified time frame.

9. Failure to take any required or appropriate steps, not mentioned above, at any time following the issuance of this Notice.

IV-B. BASIS FOR DETERMINATION THAT SUBMITTED STUDY IS UNACCEPTABLE

The Agency may determine that a study (even if submitted within the required time) is unacceptable and constitutes a basis for issuance of a Notice of Intent to Suspend. The grounds for suspension include, but are not limited to, failure to meet any of the following:

1. EPA requirements specified in the Data Call-In Notice or other documents incorporated by reference (including, as applicable, EPA Pesticide Assessment Guidelines, Data Reporting Guidelines, and GeneTox Health Effects Test Guidelines) regarding the design, conduct, and reporting of required studies. Such requirements include, but are not limited to, those relating to test material, test procedures, selection of species, number of animals, sex and distribution of animals, dose and effect levels to be tested or attained, duration of test, and, as applicable, Good Laboratory Practices.

2. EPA requirements regarding the submission of protocols, including the incorporation of any changes required by the Agency following review.

3. EPA requirements regarding the reporting of data, including the manner of reporting, the completeness of results, and the adequacy of any required supporting (or raw) data, including, but not limited to, requirements referenced or included in this Notice or contained in PR 86-5. All studies must be submitted in the form of a final report; a preliminary report will not be considered to fulfill the submission requirement.

IV-C EXISTING STOCKS OF SUSPENDED OR CANCELLED PRODUCTS

EPA has statutory authority to permit continued sale, distribution and use of existing stocks of a pesticide product which has been suspended or cancelled if doing so would be consistent with the purposes of the Act.

The Agency has determined that such disposition by registrants of existing stocks for a suspended registration when a section 3(c)(2)(B) data request is outstanding would generally not be consistent with the Act's purposes. Accordingly, the Agency anticipates granting registrants permission to sell, distribute, or use existing stocks of suspended product(s) only in exceptional circumstances. If you believe such disposition of existing stocks of your product(s) which may be suspended for failure to comply with this Notice should be permitted, you have the burden of clearly demonstrating to EPA that granting such permission would be consistent with the Act. You must also explain why an "existing stocks" provision is necessary, including a statement of the

quantity of existing stocks and your estimate of the time required for their sale, distribution, and use. Unless you meet this burden the Agency will not consider any request pertaining to the continued sale, distribution, or use of your existing stocks after suspension.

If you request a voluntary cancellation of your product(s) as a response to this Notice and your product is in full compliance with all Agency requirements, you will have, under most circumstances, one year from the date your 90 day response to this Notice is due, to sell, distribute, or use existing stocks. Normally, the Agency will allow persons other than the registrant such as independent distributors, retailers and end users to sell, distribute or use such existing stocks until the stocks are exhausted. Any sale, distribution or use of stocks of voluntarily cancelled products containing an active ingredient for which the Agency has particular risk concerns will be determined on case-by-case basis.

Requests for voluntary cancellation received after the 90 day response period required by this Notice will not result in the Agency granting any additional time to sell, distribute, or use existing stocks beyond a year from the date the 90 day response was due unless you demonstrate to the Agency that you are in full compliance with all Agency requirements, including the requirements of this Notice. For example, if you decide to voluntarily cancel your registration six months before a 3 year study is scheduled to be submitted, all progress reports and other information necessary to establish that you have been conducting the study in an acceptable and good faith manner must have been submitted to the Agency, before EPA will consider granting an existing stocks provision.

SECTION V. REGISTRANTS' OBLIGATION TO REPORT POSSIBLE UNREASONABLE ADVERSE EFFECTS

Registrants are reminded that FIFRA section 6(a)(2) states that if at any time after a pesticide is registered a registrant has additional factual information regarding unreasonable adverse effects on the environment by the pesticide, the registrant shall submit the information to the Agency. Registrants must notify the Agency of any factual information they have, from whatever source, including but not limited to interim or preliminary results of studies, regarding unreasonable adverse effects on man or the environment. This requirement continues as long as the products are registered by the Agency.

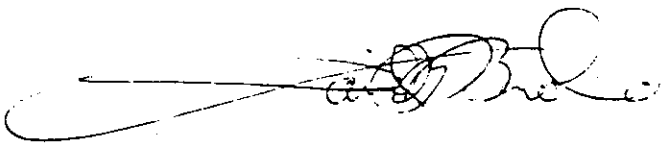
SECTION VI. INQUIRIES AND RESPONSES TO THIS NOTICE

If you have any questions regarding the requirements and procedures established by this Notice, call the contact person(s) listed in Attachment 1, the Data Call-In Chemical Status Sheet.

All responses to this Notice (other than voluntary cancellation requests and generic data exemption claims) must include a completed Data Call-In Response Form and a completed Requirements Status and Registrant's Response Form (Attachment 2 and Attachment 3 for product specific data) and any other documents required by this Notice, and should be submitted to the contact person(s) identified in Attachment 1. If the voluntary cancellation or generic data exemption option is chosen, only the Data Call-In Response Form need be submitted.

The Office of Compliance Monitoring (OCM) of the Office of Pesticides and Toxic Substances (OPTS), EPA, will be monitoring the data being generated in response to this Notice.

Sincerely yours,



Daniel M. Barolo, Director
Special Review and
Reregistration Division

Attachments

1 - Data Call-In Chemical Status Sheet
2 - Product-Specific Data Call-In Response Form
3 - Requirements Status and Registrant's Response Form
4 - EPA Grouping of End-Use Products for Meeting Acute Toxicology Data Requirements for Reregistration
5 - EPA Acceptance Criteria
6 - List of Registrants Receiving This Notice
7 - Cost Share and Data Compensation Forms, and Product Specific Data Report Form

Attachment 1. Chemical Status Sheet

FLOWER AND VEGETABLE OILS DATA CALL-IN CHEMICAL STATUS SHEET

INTRODUCTION

You have been sent this Product Specific Data Call-In Notice because you have product(s) containing Flower and Vegetable Oils.

This Product Specific Data Call-In Chemical Status Sheet, contains an overview of data required by this notice, and point of contact for inquiries pertaining to the reregistration of flower and vegetable oils. This attachment is to be used in conjunction with (1) the Product Specific Data Call-In Notice, (2) the Product Specific Data Call-In Response Form (Attachment 2), (3) the Requirements Status and Registrant's Form (Attachment 3), (4) EPA's Grouping of End-Use Products for Meeting Acute Toxicology Data Requirement (Attachment 4), (5) the EPA Acceptance Criteria (Attachment 5), (6) a list of registrants receiving this DCI (Attachment 6) and (7) the Cost Share and Data Compensation Forms in replying to this flower and vegetable oils Product Specific Data Call-In (Attachment 7). Instructions and guidance accompany each form.

DATA REQUIRED BY THIS NOTICE

The additional data requirements needed to complete the database for flower and vegetable oils are contained in the Requirements Status and Registrant's Response, Attachment 3. The Agency has concluded that additional data on flower and vegetable oils are needed for specific products. These data are required to be submitted to the Agency within the time frame listed. These data are needed to fully complete the reregistration of all eligible flower and vegetable oils products.

INQUIRIES AND RESPONSES TO THIS NOTICE

If you have any questions regarding the generic database of flower and vegetable oils, please contact Virginia Dietrich at (703) 308-8157.

If you have any questions regarding the product specific data requirements and procedures established by this Notice, please contact Frank Rubis (703) 308-8184.

All responses to this Notice for the Product Specific data requirements should be submitted to:

Accelerated Reregistration Branch, Chemical Review Manager Team 81
Product Reregistration Branch
Special Review and Reregistration Branch 7508W
Office of Pesticide Programs
U.S. Environmental Protection Agency
Washington, D.C. 20460

RE: **Flower and Vegetable Oils**

Attachment 2. Product Specific Data Call-In Response Forms (Form A inserts) Plus Instructions

INSTRUCTIONS FOR COMPLETING THE "DATA CALL-IN RESPONSE" FORM FOR PRODUCT SPECIFIC DATA

Item 1-4. Already completed by EPA.

Item 5. If you wish to voluntarily cancel your product, answer "yes". If you choose this option, you will not have to provide the data required by the Data Call-In Notice and you will not have to complete any other forms. Further sale and distribution of your product after the effective date of cancellation must be in accordance with the Existing Stocks provision of the Data Call-In Notice (Section IV-C).

Item 6. Not applicable since this form calls in product specific data only. However, if your product is identical to another product and you qualify for a data exemption, you must respond with "yes" to Item 7a (MUP) or 7B (EUP) on this form, provide the EPA reregistration numbers of your source (s); you would not complete the requirements status and registrant's response" form. Examples of such products include repackaged products and Special Local Needs (Section 24c) products which are identical to federally registered products.

Item 7a. For each manufacturing use product (MUP) for which you wish to maintain registration, you must agree to satisfy the data requirements by responding "yes."

Item 7b. For each end use product (EUP) for which you wish to maintain registration, you must agree to satisfy the data requirements by responding "yes." if you are requesting a data waiver, answer "yes" here; in addition, on the "Requirements Status and Registrant's Response" form under Item 9, you must respond with option 7 (Waiver Request) for each study for which you are requesting a waiver. See item 6 with regard to identical products and data exemptions.

Items 8-11. Self-explanatory.

Note: You may provide additional information that does not fit on this form in a signed letter that accompanies this form. For example, you may wish to report that your product has already been transferred to another that you have already voluntarily cancelled this product. For these cases, please supply all relevant details so that EPA can ensure that its records are correct.

Attachment 3. Product Specific Requirement Status and Registrant's Response Forms (Form B inserts) and Instructions

INSTRUCTIONS FOR COMPLETING THE "REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE" FORM FOR PRODUCT SPECIFIC DATA

Item 1-3. Completed by EPA. Note the unique identifier number assigned by EPA in item 3. This number must be used in the transmittal document for any data submissions in response to this Data Call-In Notice.

Item 4. The guidelines reference numbers of studies required to support the product's continued registration are identified. These guidelines, in addition to the requirements specified in the Notice, govern the conduct of the required studies. Note that series 61 and 62 in product chemistry are now listed under 40 CFR 158.155 through 158.180, Subpart c.

Item 5. The study title associated with the guideline reference number is identified.

Item 6. The use patters (s) of the pesticide associated with the product specific requirements is (are) identified. For most product specific data requirements, all use patterns are covered by the data requirements. In the case of efficacy data, the required studies only pertain to products which have the use sites and/ or pests indicated.

Item 7. The substance to be tested is identified by EPA. For product specific data, the product as formulated for sale and distribution is the test substance, except in rare cases.

Item 8. The due date for submission of each study is identified. lt is normally based on 8 months after issuance of the Reregistration Eligibility Documents unless EPA determines that a longer time period is necessary.

Item 9. Enter Only one of the following response codes for each data requirement to show how you intend to comply with the data requirements listed in this table. Fuller descriptions of each option are contained in the Data Call-In Notice.

1. I will generate and submit data by the specified due date (Developing Data). By indicating that I have chosen this option, I certify that I will comply with all the requirements pertaining to the conditions for submittal of this study as outlined in the Data Call-In Notice.

2. I have entered into an agreement with one or more registrants to develop data jointly (Cost Sharing). I am submitting a copy of this agreement. I understand that this option is available on for acute toxicity or certain efficacy data and only if EPA indicates in an attachment to this notice that my product is similar. Enough to another product to qualify for this option. I certify that another party in the agreement is committing to submit or provide the required data; if the required study is not submitted on time, my product my be subject to suspension.

3. I have made offers to share in the cost to develop data (Offers to Cost Share).

I understand that this option is available only for acute toxicity or certain efficacy data and only if EPA indicates in an attachment to this Data Call-In Notice that my product is similar enough to another product to qualify for this option. I am submitting evidence that I have made an offer to another registrant (who has an obligation to submit data) to share in the cost of that data. I am also submitting a completed " Certification of offer to Cost Share in the Development Data" form. I am including a copy of my offer and proof of the other registrant's receipt of that offer. I am identifying the party which is committing to submit or provide the require data; if the required study is not submitted on time, my product may be subject to suspension. I understand that other terms under Option 3 in the Data Call-In Notice (Section III-C.1.) apply as well.

4. By the specified due date, I will submit an existing study that has not been submitted previously to the Agency by anyone (submitting an Existing Study). I certify that this study will meet all the requirements for submittal of existing data outlined in option 4 in the Data Call-In Notice (Section III-C.1.) and will meet the attached acceptance criteria (for acute toxicity and product chemistry data). I will attach the needed supporting information along with this response. I also certify that I have determined that this study will fill the data requirement for which I have indicated this choice.

5. By the specified due date, I will submit or cite data to upgrade a study classified by the Agency as partially acceptable and upgrade (upgrading a study). I will submit evidence of the Agency's review indicating that the study may be upgraded and what information is required to do so. I will provide the MRID or Accession number of the study at the due date. I understand that the conditions for this Option outlined Option 5 in the Data Call-In Notice (Section III-C.1.) apply.

6. By the specified due date, I will cite an existing study that the Agency has classified as acceptable or an existing study that has been submitted but not reviewed by the Agency (Citing an Existing Study). If I am citing another registrant's study, I understand that this option is available only for acute toxicity or certain efficacy data and only if the cited study was conducted on my product, an identical product or a product which EPA has "grouped" with one or more other products for purposes of depending on the same data. I may also choose this option if I am citing my own data. In either case, I will provide the MRID or Accession number (s) number (s) for the cited data on a "Product Specific Data Report" form or in a similar format. If I cite another registratrant's data, I will submit a completed "Certification With Respect To Data Compensation Requirements" form.

7. I request a waiver for this study because it is inappropriate for my product (Waiver Request). I am attaching a complete justification for this request, including technical reasons, data and references to relevant EPA regulations, guidelines or policies. [Note: any supplemental data must be submitted in the format required by P.R. Notice 86-5]. I understand that this is my only opportunity to state the reasons or provide information in support of my request. If the Agency approves my waiver

request, I will not be require to supply the data pursuant to Section 3(c) (2) (B) of FIFRA. If the Agency denies my waiver request, I must choose a method of meeting the data requirements of this Notice by the due date stated by this Notice. In this case, I must, within 30 days of my receipt of the Agency's written decision, submit a revised "Requirements Status chosen. I also understand that the deadline for submission of data as specified by the original data cal-in notice will not change.

Items 10-13. Self-explanatory.

NOTE: You may provide additional information that does not fit on this form in a signed letter that accompanies this form. For example, you may wish to report that your product has already been transferred to another company or that you have already voluntarily cancelled this product. For these cases, please supply all relevant details so that EPA can ensure that its records are correct.

Attachment 4. EPA Batching of End-Use Products for Meeting Data Requirements for Reregistration

EPA'S BATCHING OF PRODUCTS CONTAINING FLOWER AND VEGETABLE OILS FOR MEETING ACUTE TOXICITY DATA REQUIREMENTS FOR REREGISTRATION

In an effort to reduce the time, resources and number of animals needed to fulfill the acute toxicity data requirements for reregistration of products containing flower and vegetable oils, the Agency has batched products which can be considered similar for purposes of acute toxicity. Factors considered in the sorting process include each product's active and inert ingredients (identity, percent composition and biological activity), type of formulation (e.g., emulsifiable concentrate, aerosol, wettable powder, granular, etc.), and labeling (e.g., signal word, use classification, precautionary labeling, etc.). Note that the Agency is not describing batched products as "substantially similar" since some products within a batch may not be considered chemically similar or have identical use patterns.

Using available information, batching has been accomplished by the process described in the preceding paragraph. Frequently acute toxicity data on individual products has been found to be incomplete. Notwithstanding the batching process, the Agency reserves the right to require, at any time, acute toxicity data for an individual product should the need arise.

Registrants of products within a batch may choose to cooperatively generate, submit, or cite a single battery of six acute toxicological studies to represent all the products within that batch. It is the registrants' option to participate in the process with all other registrants, only some of the other registrants, or only their own products within a batch, or to generate all the required acute toxicological studies for each of their own products. If a registrant chooses to generate the data for a batch, he/she must use one of the products within the batch as the test material. If a registrant chooses to rely upon previously submitted acute toxicity data, he/she may do so provided that the data base is complete and valid by today's standards (see acceptance criteria attached), the formulation tested is considered by EPA to be similar for acute toxicity, and the formulation has not been significantly altered since submission and acceptance of the acute toxicity data. Regardless of whether new data is generated or existing data is cited, the registrant must clearly identify the material tested by its EPA registration number. If more than one Confidential Statement Of Formula (CSF) exists for a product registration, the registrant must indicate the formulation actually tested by identifying the corresponding CSF.

In deciding how to meet the product specific data require- ments, registrants must follow the directions given in the Data Call-In Notice and its attachments appended to the RED. The DCI Notice contains two response forms which are to be completed and submitted to the Agency within 90 days of receipt. The first form, "Data Call-In Response," asks whether the registrant will meet the data requirements for each product. The second form, "Requirements Status and Registrant's Response," lists the product specific data required for each product, including the standard six acute toxicity tests. A registrant who wishes to participate in a batch must decide whether he/she will provide the data or depend on someone else to do so. If a registrant supplies the data to support a batch of products, he/she must select one of the following options: Developing Data (Option 1), Submitting an Existing Study (Option 4), Upgrading an Existing Study (Option 5) or Citing an Existing Study (Option 6). If a registrant depends on another's data, he/she must choose among: Cost Sharing (Option 2), Offers to Cost Share (Option 3) or Citing an Existing Study (Option 6). If a registrant does not want to participate in a batch, the

choices are Options 1, 4, 5 or 6. However, a registrant should know that choosing not to participate in a batch does not preclude other registrants in the batch from citing his/her studies and offering to cost share (Option 3) those studies.

Table I indicates five batches including eleven products containing flower and/or vegetable oils.

Table I.

Batch No.	EPA Reg. No.	% Active Ingredient(s); (from label)	Formulation
1	1475-30	Paradichlorobenzene (99.75%) & perfume (.25%)	Crystalline
	1475-67	Paradichlorobenzene (99.75%) & perfume (.25%)	Crystalline
	1475-90	Paradichlorobenzene (99.75%) & perfume (.25%)	Crystalline
2	61966-1	Allyl isothiocyanate (.216%); capsaicin and related compounds (.625%)	Ready-to-use-solution
	61966-3	Allyl isothiocyanate (.216%); capsaicin and related compounds (.625%)	Ready-to-use-solution
3	769-842	Pyrethrin (.28%); rotenone (1%); other cube resins (2%); piperonyl butoxide (2%); pine oil (20%); soybean oil (40%); aromatic petroleum solvent (29.72%)	Emulsifiable concentrate
	6720-429	Pyrethrin (.28%); rotenone (1%); other cube resins (2%); piperonyl butoxide (2%); pine oil (20%); soybean oil (40%); aromatic petroleum solvent (29.72%)	Emulsifiable concentrate
4	10807-94	N-alkyl dimethyl benzyl ammonium chlorides (1.25%); n-alkyl dimethyl ethylbenzyl ammonium chlorides (1.25%); essential oil (0.2%); yellow dye (.001%)	Soluble concentrate
	10807-104	N-alkyl dimethyl benzyl ammonium chlorides (1.25%); n-alkyl dimethyl ethylbenzyl ammonium chlorides (1.25%); essential oil (.2%)	Soluble concentrate

Batch No.	EPA Reg. No.	% Active Ingredient(s); (from label)	Formulation
5	5332-7	Oil of lemon grass (2.0%); oil of citronella (1.2%); allylisothiocyanate (.2%); oil of orange (.02%); methyl salicylate (.02%); geraniol (.04%); ionone alpha (.01%); oil of bergamot (.11%)	Impregnated material
	5332-8	Oil of lemon grass (2.0%); oil of citronella (1.2%); allylisothiocyanate (.2%); oil of orange (.02%); methyl salicylate (.02%); geraniol (.04%); ionone alpha (.01%); oil of bergamot (.11%)	Pelleted tablet

Table II lists 23 products containing flower and/or vegetable oils, and other ingredients from the label which were not considered to be similar for purposes of acute toxicity or the Agency lack- ed sufficient information for decision making and were not placed in any batch. Registrants of these products are responsible for meeting the acute toxicity data requirements for each product.

Table II.

EPA Registration Number	Active ingredient(s) [from label]	Formulation
52-215	2-(1-methylethoxy) phenol methyl-carbamate (1.0%)	Ready-to-use-solution
323-25	N-alkyl dimethyl benzyl ammonium chloride (4.5%); sodium carbonate (3.0%); essential oils (0.5%)	Soluble concentrate
402-113	O-benzyl para-chlorophenol (3.0%); orthophenylphenol (2.0%); p-tert. amylphenol (2.0%).	Emulsifiable concentrate
421-16	O-benzyl-p-chlorophenol (4.9%); o-phenylphenol (0.75%)	Soluble concentrate
655-650	Pyrethrin (0.28%); rotenone (0.75%); other cube resins (1.5%); piperonyl butoxide (2.0%)	Emulsifiable concentrate
1026-4	P-diisobutylphenoxyethoxyethyl dimethyl benzyl ammonium chloride (3.33%); essential oils (.69%)	Emulsifiable concentrate
1270-192	N-alkyl dimethyl benzyl ammonium chlorides (0.1%); n-alkyl dimethyl ethylbenzyl ammonium chlorides (0.1%); ethanol (53.0%).	Pressurized liquid
2021-28	N-alkyl dimethyl benzyl ammonium chlorides (2.25%); n-alkyl dimethyl ethylbenzyl ammonium chlorides (2.25%); sodium carbonate (3.0%); essential oils (1.38%)	Soluble concentrate
3862-97	Quaternary ammonium chlorides (.15%)	Pressurized liquid

EPA Registration Number	Active ingredient(s) [from label]	Formulation
4785-51	Bitter apple essential oils (5.0%); mineral oil (10.1%)	Pressurized liquid
5813-14	Tetrasodium ethylenediamine tetraacetate (1.06%); alkyl dimethyl benzyl ammonium chloride (.09%); dimethyl ethyl benzyl ammonium chloride (.09%); essential oils (.19%)	Pressurized liquid
5813-16	Alkyl tetrasodium ethylenediamine tetraacetate (1.9%); dimethyl benzyl ammonium chloride (1.87%); alkyl dimethyl ethyl benzyl ammonium chloride (1.87%); essential oils (.4%)	Soluble concentrate
8047-22	Alkyl dimethyl benzyl ammonium chloride (2.0%); isopropanol (1.0%); essential oils (.25%)	Soluble concentrate
1077-10	Diisobutyphenoxyethoxyethyl dimethyl benzyl ammonium chloride (.25%); isopropanol (15.3%)	Ready-to-use-solution
11715-29	N-alkyl dimethyl benzyl ammonium chlorides (.1%); n-alkyl dimethyl ethyl-benzyl ammonium chlorides (.1%); tetrasodium ethylenediamine tetraacetate (1.6%); essential oils (.2%); sodium metasilicate (.25%)	Pressurized liquid
11715-30	N-alkyl dimethyl benzyl ammonium chlorides (.1%); n-alkyl dimethyl ethylbenzyl ammonium chloride (.1%); isopropanol (53.0%); essential oil (.5%)	Pressurized liquid
11715-116	Triethylene glycol (15.36%); dipropylene glycol (3.84%); alkyl dimethyl benzyl ammonium chloride (.192%); essential oils (.96%); ethyl alcohol (30.148%)	Pressurized liquid
11715-211	Benzyldiethyl [(2,6-xylylcarbamoyl) methyl ammonium benzoate (.065%); thymol (1.3%); essential oils (1.3%)	Ready-to-use-solution
12192-2	N-alkyl dimethyl benzyl ammonium chlorides (6%); n-alkyl dimethyl ethylbenzyl ammonium chlorides (6%); 2-propanol (5%); essential oils (.32%)	Ready-to-use-solution
42443-1	Oil of citronella (.5%); oil of eucalyptus (1%); cedarwood oil (.5%); oil of pennyroyal (2%); rue oils (.125%)	Impregnated material
49407-1	Oil of anise (1.6%)	Ready-to-use-solution
57538-11	Soybean oil (93%)	Emulsifiable concentrate
61966-2	Allyl isothiocyanate (.216%); capsaicin (.625%)	Dust

Attachment 5. EPA Acceptance Criteria

SUBDIVISION D

Guideline	Study Title
Series 61	Product Identity and Composition
Series 62	Analysis and Certification of Product Ingredients
Series 63	Physical and Chemical Characteristics

61 Product Identity and Composition

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1.____ Name of technical material tested (include product name and trade name, if appropriate).

2.____ Name, nominal concentration, and certified limits (upper and lower) for each active ingredient and each intentionally-added inert ingredient.

3.____ Name and upper certified limit for each impurity or each group of impurities present at $\geq$ 0.1% by weight and for certain toxicologically significant impurities (e.g., dioxins, nitrosamines) present at <0.1%.

4.____ Purpose of each active ingredient and each intentionally-added inert.

5.____ Chemical name from Chemical Abstracts index of Nomenclature and Chemical Abstracts Service (CAS) Registry Number for each active ingredient and, if available, for each intentionally-added inert.

6.____ Molecular, structural, and empirical formulas, molecular weight or weight range, and any company assigned experimental or internal code numbers for each active ingredient.

7.____ Description of each beginning material in the manufacturing process.
- ____ EPA Registration Number if registered;
  for other beginning materials, the following:
- ____ Name and address of manufacturer or supplier.
- ____ Brand name, trade name or commercial designation.
- ____ Technical specifications or data sheets by which manufacturer or supplier describes composition, properties or toxicity.

8.____Description of manufacturing process.
- ____ Statement of whether batch or continuous process.
- ____ Relative amounts of beginning materials and order in which they are added.
- ____ Description of equipment.
- ____ Description of physical conditions (temperature, pressure, humidity) controlled in each step and the parameters that are maintained.
- ____ Statement of whether process involves intended chemical reactions.
- ____ Flow chart with chemical equations for each intended chemical reaction.
- ____ Duration of each step of process.
- ____ Description of purification procedures.
- ____ Description of measures taken to assure quality of final product.

9.____ Discussion of formation of impurities based on established chemical theory addressing (1) each impurity which may be present at $\geq$ 0.1% or was found at $\geq$ 0.1% by product analyses and (2) certain toxicologically significant impurities (see #3).

62 Analysis and Certification of Product Ingredients

ACCEPTANCE CRITERIA

The following criteria apply to the technical grade of the active ingredient being reregistered. Use a table to present the information in items 6, 7, and 8.

Does your study meet the following acceptance criteria?

1.____ Five or more representative samples (batches in case of batch process) analyzed for each active ingredient and all impurities present at $\geq$ 0.1%.
2.____ Degree of accountability or closure $\geq$ ca 98%.
3.____ Analyses conducted for certain trace toxic impurities at lower than 0.1% (examples, nitrosamines in the case of products containing dinitroanilines or containing secondary or tertiary amines/alkanolamines plus nitrites; polyhalogenated dibenzodioxins and dibenzofurans). [Note that in the case of nitrosamines both fresh and stored samples must be analyzed.].
4.____ Complete and detailed description of each step in analytical method used to analyze above samples.
5.____ Statement of precision and accuracy of analytical method used to analyze above samples.
6.____ Identities and quantities (including mean and standard deviation) provided for each analyzed ingredient.
7.____ Upper and lower certified limits proposed for each active ingredient and intentionally added inert along with explanation of how the limits were determined.
8.____ Upper certified limit proposed for each impurity present at $\geq$ 0.1% and for certain toxicologically significant impurities at <0.1% along with explanation of how limit determined.
9.____ Analytical methods to verify certified limits of each active ingredient and impurities (latter not required if exempt from requirement of tolerance or if generally recognized as safe by FDA) are fully described.
10.____ Analytical methods (as discussed in #9) to verify certified limits validated as to their precision and accuracy.

63 Physical and Chemical Characteristics

ACCEPTANCE CRITERIA

The following criteria apply to the technical grade of the active ingredient being reregistered.

Does your study meet the following acceptance criteria?

63-2 Color

____ Verbal description of coloration (or lack of it)
____ Any intentional coloration also reported in terms of Munsell color system

63-3 Physical State

____ Verbal description of physical state provided using terms such as "solid, granular, volatile liquid"
____ Based on visual inspection at about 20-25° C

63-4 Odor

____ Verbal description of odor (or lack of it) using terms such as "garlic-like, characteristic of aromatic compounds"
____ Observed at room temperature

63-5 Melting Point

____ Reported in °C
____ Any observed decomposition reported

63-6 Boiling Point

____ Reported in °C
____ Pressure under which B.P. measured reported
____ Any observed decomposition reported

63-7 Density, Bulk Density, Specific Gravity

____ Measured at about 20-25° C
____ Density of technical grade active ingredient reported in g/ml or the specific gravity of liquids reported with reference to water at 20° C. [Note: Bulk density of registered products may be reported in lbs/ft^3 or lbs/gallon.]

63-8 Solubility

____ Determined in distilled water and representative polar and non-polar solvents, including those used in formulations and analytical methods for the pesticide
____ Measured at about 20-25° C
____ Reported in g/100 ml (other units like ppm acceptable if sparingly soluble)

63-9 Vapor Pressure

____ Measured at 25° C (or calculated by extrapolation from measurements made at higher temperature if pressure too low to measure at 25° C)
____ Experimental procedure described
____ Reported in mm Hg (torr) or other conventional units

63-10 Dissociation Constant

____ Experimental method described
____ Temperature of measurement specified (preferably about 20-25°C)

63-11 Octanol/water Partition Coefficient

____ Measured at about 20-25° C

____ Experimentally determined and description of procedure provided (preferred method-45 Fed. Register 77350)

____ Data supporting reported value provided

63-12 pH

____ Measured at about 20-25° C

____ Measured following dilution or dispersion in distilled water

63-13 Stability

____ Sensitivity to metal ions and metal determined

____ Stability at normal and elevated temperatures

____ Sensitivity to sunlight determined

SUBDIVISION F

Guideline	Study Title
81-1	Acute Oral Toxicity in the Rat
81-2	Acute Dermal Toxicity in the Rat, Rabbit or Guinea Pig
81-3	Acute Inhalation Toxicity in the Rat
81-4	Primary Eye Irritation in the Rabbit
81-5	Primary Dermal Irritation Study
81-6	Dermal Sensitization in the Guinea Pig

81-1 Acute Oral Toxicity in the Rat

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1.____ Identify material tested (technical, end-use product, etc).
2.____ At least 5 young adult rats/sex/group.
3.____ Dosing, single oral may be administered over 24 hrs.
4.*___ Vehicle control if other than water.
5.____ Doses tested, sufficient to determine a toxicity category or a limit dose (5000 mg/kg).
6.____ Individual observations at least once a day.
7.____ Observation period to last at least 14 days, or until all test animals appear normal whichever is longer.
8.____ Individual daily observations.
9.____ Individual body weights.
10.____ Gross necropsy on all animals.

Criteria marked with an * are supplemental and may not be required for every study.

81-2 Acute Dermal toxicity in the Rat, Rabbit or Guinea Pig

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1._____ Identify material tested (technical, end-use product, etc).
2._____ At least 5 animals/sex/group.
3.*____ Rats 200-300 gm, rabbits 2.0-3.0 kg or guinea pigs 350-450 gm.
4._____ Dosing, single dermal.
5._____ Dosing duration at least 24 hours.
6.*____ Vehicle control, only if toxicity of vehicle is unknown.
7._____ Doses tested, sufficient to determine a toxicity category or a limit dose (2000 mg/kg).
8._____ Application site clipped or shaved at least 24 hours before dosing.
9._____ Application site at least 10% of body surface area.
10._____ Application site covered with a porous nonirritating cover to retain test material and to prevent ingestion.
11._____ Individual observations at least once a day.
12._____ Observation period to last at least 14 days.
13._____ Individual body weights.
14._____ Gross necropsy on all animals.

Criteria marked with an * are supplemental and may not be required for every study.

81-3 Acute Inhalation Toxicity in the Rat

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1.____ Identify material tested (technical, end-use product, etc).
2.____ Product is a gas, a solid which may produce a significant vapor hazard based on toxicity and expected use or contains particles of inhalable size for man (aerodynamic diameter 15 μm or less).
3.____ At least 5 young adult rats/sex/group.
4.____ Dosing, at least 4 hours by inhalation.
5.____ Chamber air flow dynamic, at least 10 air changes/hour, at least 19% oxygen content.
6.____ Chamber temperature, 22° C ($\pm$2°), relative humidity 40-60%.
7.____ Monitor rate of air flow.
8.____ Monitor actual concentrations of test material in breathing zone.
9.____ Monitor aerodynamic particle size for aerosols.
10.___ Doses tested, sufficient to determine a toxicity category or a limit dose (5 mg/L actual concentration of respirable substance).
11.___ Individual observations at least once a day.
12.___ Observation period to last at least 14 days.
13.___ Individual body weights.
14.___ Gross necropsy on all animals.

81-4 Primary Eye Irritation in the Rabbit

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1.____ Identify material tested (technical, end-use product, etc).
2.____ Study not required if material is corrosive, causes severe dermal irritation or has a pH of ≤ 2 or ≥ 11.5.
3.____ 6 adult rabbits.
4.____ Dosing, instillation into the conjunctival sac of one eye per animal.
5.____ Dose, 0.1 ml if a liquid; 0.1 ml or not more than 100 mg if a solid, paste or particulate substance.
6.____ Solid or granular test material ground to a fine dust.
7.____ Eyes not washed for at least 24 hours.
8.____ Eyes examined and graded for irritation before dosing and at 1, 24, 48 and 72 hr, then daily until eyes are normal or 21 days (whichever is shorter).
9.*___ Individual daily observations.

Criteria marked with an * are supplemental and may not be required for every study.

81-5 Primary Dermal Irritation Study

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1.____ Identify material tested (technical, end-use product, etc).
2.____ Study not required if material is corrosive or has a pH of $\leq$2 or $\geq$11.5.
3.____ 6 adult animals.
4.____ Dosing, single dermal.
5.____ Dosing duration 4 hours.
6.____ Application site shaved or clipped at least 24 hours prior to dosing.
7.____ Application site approximately 6 cm^2.
8.____ Application site covered with a gauze patch held in place with nonirritating tape.
9.____ Material removed, washed with water, without trauma to application site.
10.___ Application site examined and graded for irritation at 1, 24, 48 and 72 hr, then daily until normal or 14 days (whichever is shorter).
11.*__ Individual daily observations.

Criteria marked with an * are supplemental and may not be required for every study.

81-6 Dermal Sensitization in the Guinea Pig

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1.___ Identify material tested (technical, end-use product, etc).
2.___ Study not required if material is corrosive or has a pH of ≤ 2 or ≥ 11.5.
3.___ One of the following methods is utilized:
   _____ Freund's complete adjuvant test
   _____ Guinea pig maximization test
   _____ Split adjuvant technique
   _____ Buehler test
   _____ Open epicutaneous test
   _____ Mauer optimization test
   _____ Footpad technique in guinea pig.
4.___ Complete description of test.
5.*__ Reference for test.
6.___ Test followed essentially as described in reference document.
7.___ Positive control included (may provide historical data conducted within the last 6 months).

Criteria marked with an * are supplemental and may not be required for every study.

Attachment 6. List of All Registrants Sent This Data Call-In (insert) Notice

Attachment 7. Cost Share Data Compensation Form, and Confidential Statement of Formula Form

Confidential Business Information: Does Not Contain National Security Information (E.O. 12065)

Form Approved. OMB No. 2070-0060. Approval Expires 2/28/94

United States Environmental Protection Agency
Office of Pesticide Programs (TS-767)
Washington, DC 20460

EPA Confidential Statement of Formula

A. ☐ Basic Formulation ☐ Alternate Formulation

B. Page of

See Instructions on Back

1. Name and Address of Applicant/Registrant *(Include ZIP Code)*

2. Name and Address of Producer *(Include ZIP Code)*

3. Product Name

4. Registration No./File Symbol

5. EPA Product Mgr./Team No.

6. Country Where Formulated

7. Pounds/Gal or Bulk Density

8. pH

9. Flash Point/Flame Extension

EPA USE ONLY	10. Components in Formulation *(List as actually introduced into the formulation. Give commonly accepted chemical name, trade name, and CAS number.)*	11. Supplier Name & Address	12. EPA Reg. No.	13. Each Component in Formulation a. Amount	b. % by Weight	14. Certified Limits % by Weight a. Upper Limit	b. Lower Limit	15. Purpose in Formulation
16. Typed Name of Approving Official				17. Total Weight	100%			

18. Signature of Approving Official

19. Title

20. Phone No. *(Include Area Code)*

21. Date

EPA Form 8570-4 (Rev. 12-90) Previous editions are obsolete. If you can photocopy this, please submit an additional copy. White - EPA File Copy (original) Yellow - Applicant copy

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Instructions for Completing the Confidential Statement of Formula

The Confidential Statement of Formula (CSF) Form 8570-4 must be used. Two legible, signed copies of the form are required. Following are basic instructions:

a. All the blocks on the form must be filled in and answered completely.

b. If any block is not applicable, mark it N/A.

c. The CSF must be signed, dated and the telephone number of the responsible party must be provided.

d. All applicable information which is on the product specific data submission must also be reported on the CSF.

e. All weights reported under item 7 must be in pounds per gallon for liquids and pounds per cubic feet for solids.

f. Flashpoint must be in degrees Fahrenheit and flame extension in inches.

g. For all active ingredients, the EPA Registration Numbers for the currently registered source products must be reported under column 12.

h. The Chemical Abstracts Service (CAS) Numbers for all actives and inerts and all common names for the trade names must be reported.

i. For the active ingredients, the percent purity of the source products must be reported under column 10 and must be exactly the same as on the source product's label.

j. All the weights in columns 13.a. and 13.b. must be in pounds, kilograms, or grams. In no case will volumes be accepted. Do not mix English and metric system units (i.e., pounds and kilograms).

k. All the items under column 13.b. must total 100 percent.

1. All items under columns 14.a. and 14.b. for the active ingredients must represent pure active form.

m. The upper and lower certified limits for ail active and inert ingredients must follow the 40 CFR 158.175 instructions. An explanation must be provided if the proposed limits are different than standard certified limits.

n. When new CSFs are submitted and approved, all previously submitted CSFs become obsolete for that specific formulation.

United States Environmental Protection Agency
Washington, DC 20460

CERTIFICATION OF OFFER TO COST SHARE IN THE DEVELOPMENT OF DATA

Form Approved
OMB No. 2070-0106
2070-0057
Approval Expires 3-31-96

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, DC 20460; and to the Office of Management and Budget, Paperwork Reduction Project (2070-0106), Washington, DC 20503.

Please fill in blanks below.

Company Name	Company Number
Product Name	**EPA Reg. No.**

I Certify that:

My company is willing to develop and submit the data required by EPA under the authority of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), if necessary. However, my company would prefer to enter into an agreement with one or more registrants to develop jointly or share in the cost of developing data.

My firm has offered in writing to enter into such an agreement. That offer was irrevocable and included an offer to be bound by arbitration decision under section 3(c)(2)(B)(iii) of FIFRA if final agreement on all terms could not be reached otherwise. This offer was made to the following firm(s) on the following date(s):

Name of Firm(s)	Date of Offer

Certification:

I certify that I am duly authorized to represent the company named above, and that the statements that I have made on this form and all attachments therein are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature of Company's Authorized Representative	Date
Name and Title (Please Type or Print)	

EPA Form 8570-32 (5/91) Replaces EPA Form 8580, which is obsolete

EPA

United States Environmental Protection Agency
Washington, DC 20460

CERTIFICATION WITH RESPECT TO DATA COMPENSATION REQUIREMENTS

Form Approved
OMB No. 2070-0107
2070-0057
Approval Expires 3-31-96

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, DC 20460; and to the Office of Management and Budget, Paperwork Reduction Project (2070-0106), Washington, DC 20503.

Please fill in blanks below.

Company Name	Company Number
Product Name	EPA Reg. No.

I Certify that:

1. For each study cited in support of registration or reregistration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) that is an exclusive use study, I am the original data submitter, or I have obtained the written permission of the original data submitter to cite that study.

2. That for each study cited in support of registration or reregistration under FIFRA that is NOT an exclusive use study, I am the original data submitter, or I have obtained the written permission of the original data submitter, or I have notified in writing the company(ies) that submitted data I have cited and have offered to: (a) Pay compensation for those data in accordance with sections 3(c)(1)(D) and 3(c)(2)(D) of FIFRA; and (b) Commence negotiation to determine which data are subject to the compensation requirement of FIFRA and the amount of compensation due, if any. The companies I have notified are: (check one)

   [ ] The companies who have submitted the studies listed on the back of this form or attached sheets, or indicated on the attached "Requirements Status and Registrants' Response Form."

3. That I have previously complied with section 3(c)(1)(D) of FIFRA for the studies I have cited in support of registration or reregistration under FIFRA.

Signature	Date
Name and Title (Please Type or Print)	

GENERAL OFFER TO PAY: I hereby offer and agree to pay compensation to other persons, with regard to the registration or reregistration of my products, to the extent required by FIFRA sections 3(c)(1)(D) and 3(c)(2)(D).

Signature	Date
Name and Title (Please Type or Print)	

EPA Form 8570-31 (4-90)