United States
Environmental Protection
Agency

Office of Prevention, Pesticides
And Toxic Substances
(H-7508W)

EPA

Reregistration Eligibility Document (RED)

Streptomycin and Streptomycin Sulfate

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

SEP 30 1992

CERTIFIED MAIL

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

Dear Registrant:

I am pleased to announce that the Environmental Protection Agency (the "Agency") has completed its reregistration eligibility decision on the pesticide active ingredients streptomycin and streptomycin sulfate.

Enclosed is a Reregistration Eligibility Document (RED) for the pesticide active ingredients streptomycin and streptomycin sulfate, hereafter referred to as streptomycin. The RED is the Agency's evaluation of streptomycin's and streptomycin sulfate's data base, its conclusions regarding human and environmental risks associated with the current product uses, and its decisions and conditions under which uses and products will be eligible for reregistration. Also enclosed is the EPA RED facts and the Pesticide Reregistration Handbook which provides instructions to registrants on how to respond to any labeling and data requirements specified in the RED and how to reregister products.

The RED identifies outstanding product specific data requirements for end-use products and manufacturing-use products. These requirements are listed on the Requirements Status and Registrant's Response Form, which, along with the Data Call-In Response Form listing all of your company's products subject to the RED, is included as an Attachment. Instructions for completing both forms are contained in the RED package. All product specific data must be submitted and found acceptable by the Agency before a product can be reregistered.

Generic data requirements usually will have been fulfilled prior to making a reregistration eligibility decision. However, there may be some instances where additional generic data are required. If generic data requirements need to be fulfilled, all registrants must complete the appropriate Data Call-In Response Form and Requirements Status and Registrant's Response Form. These forms are in the appendices to the RED.

The RED identifies any specific labeling requirements such as restricted use classification, groundwater hazard statements, endangered species precautions, etc., necessary for reregistration based on a review of the generic data for the active ingredient. In addition, in order to

be reregistered, all product labeling must be in compliance with format and content labeling as described in 40 CFR §156.10 and all labeling changes imposed by Pesticide Regulation (PR) Notices, and any label changes imposed by this RED.

The Pesticide Reregistration Handbook contains detailed instructions for compliance with the RED and must be followed carefully. There are several key points to remember in preparing your response to the RED:

Within 90 Days of Your Receipt of this Letter

1. For each product which is subject to this RED, **you must complete, sign and submit the data call-in (DCI) response forms attached to the RED** [Appendix G, Attachments B and C, has forms for product specific data]. Follow the instructions in Attachments B and C for completing those forms and submit the forms to the appropriate address specified in the Data Call-Ins. **Note that the DCI forms for generic data are to be sent to the Special Review and Reregistration Division (use the mailing distribution code RED-SRRD-0169 for your generic response). The DCI forms for product specific data are to be sent to the Registration Division (use the mailing distribution code RED-RD-PM21 for your product specific response).**

2. **No time extensions will be granted for submitting the 90-day responses.** If the Agency does not receive a response for a product, it may issue a Notice of Intent to Suspend (NOIS) for that product.

3. **Any requests for data waivers or time extensions to the 8-month deadline must be submitted as part of your 90-day response.** Such requests will generally not be considered if submitted later than the 90-day response.

Within 8 Months of the Date of this Letter

1. For **each product**, you must submit a completed **Application for Reregistration** (EPA Form 8570-1), **five copies of the label and labeling** revised as specified by the RED and in accordance with current requirements, **two completed copies of the Confidential Statement of Formula** (CSF) (EPA Form 8570-4), a completed **Certification with Respect to Citation of Data** (EPA Form 8570-31), and **data or references to data** (see item 2 below).

2. You must **submit or cite the required product specific data** as part of your commitment for reregistration. For most products, you will probably be citing data which have already been submitted to the Agency. In these cases, you must **submit a list of the studies and the corresponding EPA identifier numbers** (i.e., ACCESSION or MRID numbers). Before citing these studies, you must **make sure that they meet the Agency's current acceptance criteria** (Appendix F, Attachment E). Be sure to **follow**

data formatting requirements in P.R. Notice 86-5. Failure to adequately comply with the data requirements specified in this RED may result in the Notice of Intent to Suspend your product.

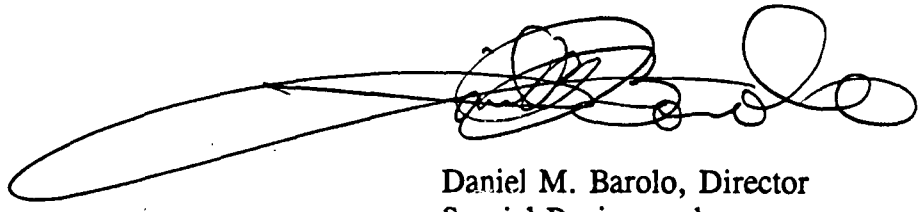
3. The labeling and CSF which you submit for **each** product must **comply with P.R. Notice 91-2** (Appendix D). That Notice requires that the amount of active ingredient declared in the ingredient statement must be stated as the **nominal concentration** rather than the lower certified limit. You have two options for submitting a CSF: (1) accept the standard certified limits (see 40 CFR §158.175) or (2) provide certified limits that are supported by the analysis of five batches. If you choose the second option, you must submit or cite the data for the five batches along with a certification statement as described in 40 CFR §158.175(e).

4. Send your Application for Registration to the **Registration Division Product Manager 21 (PM 21) who is assigned to the product, Susan T. Lewis.** Use the correct address shown on page 6 of the enclosed Product Reregistration Handbook (Appendix E). Note that the mailing distribution code for your response is RED-RD-PM21.

Questions on **product specific data requirements and labeling** (for both End-use and Manufacturing-use products) should be directed to the **Registration Division Product Manager 21 Team member** for streptomycin and streptomycin sulfate, **Benjamin C. Chambliss at (703) 305 - 7382.** Questions on the **generic data requirements** should be directed to **Theresa A. Stowe, the Chemical Review Manager** in the **Special Review and Reregistration Division at (703) 308 - 8043.**

The Agency is prepared to meet with any registrants who have questions about responding to the streptomycin RED. **If you wish to meet with the Agency, you must contact Mr. Chambliss within two weeks of your receipt of the RED.** The Agency intends to have one combined meeting with interested registrants. If there are any requests for such a meeting, the Agency will notify all registrants who requested a meeting of the date, location and time. Requests for a meeting will not extend the 90-day or 8-month response deadlines.

Sincerely yours,



Daniel M. Barolo, Director
Special Review and
Reregistration Division

Enclosures

REREGISTRATION ELIGIBILITY DOCUMENT

STREPTOMYCIN AND STREPTOMYCIN SULFATE

LIST A

CASE 0169

September, 1992

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAMS
SPECIAL REVIEW AND REREGISTRATION DIVISION
WASHINGTON, D.C.

GLOSSARY OF TERMS AND ABBREVIATIONS

ADI	Acceptable Daily Intake. Also known as Reference Dose or RfD.
a.i.	Active Ingredient
ARC	Anticipated Residue Contribution
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
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FFDCA	Federal Food, Drug, and Cosmetic Act
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 or feed, e.g., mg/l 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.
LDT	Lowest Dose Tested
LEL	Lowest Effect Level
MP	Manufacturing-Use Product

GLOSSARY OF TERMS AND ABBREVIATIONS (cont.)

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
RfD	Reference Dose
RS	Registration Standard
TMRC	Theoretical Maximum Residue Contribution

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EXECUTIVE SUMMARY

Streptomycin is a human antibiotic drug which is also currently registered in the United States for use as an antibiotic bactericide/bacteriostat, fungicide, and algicide. The registrations containing streptomycin as an active ingredient control bacterial and fungal diseases of selected fruit, vegetables, seed, specialized field crops, and ornamental crops, and algae in ornamental ponds and aquaria. This Reregistration Eligibility Document (RED) addresses the eligibility for reregistration of products containing streptomycin for control of bacteria, fungi and algae. The formulations of streptomycin are dust, wettable powder, wettable powder/dust, and pelleted/ tableted.

A Registration Standard for streptomycin and streptomycin sulfate, hereafter referred to as streptomycin, was issued in September, 1988 (NTIS PB89-129738). The Registration Standard summarized the available data supporting the reregistration of products containing streptomycin used for the control of bacteria, fungi and algae. The Registration Standard required additional data to assure that the proper use of the pesticide posed no potential adverse effects to man or the environment. The Agency has completed its review of the streptomycin data base including the data submitted in response to the 1988 Registration Standard.

The Agency has determined that the use of streptomycin to control bacteria, fungi and algae will not cause unreasonable risk to man or the environment and all uses are eligible for reregistration. However, the Agency is requiring certain other generic data to be submitted. These data include product chemistry on the technical formulation, a hydrolysis study, and an invertebrate toxicity study. The Agency regards these data as necessary to confirm the reregistration eligibility decision put forth in this document. Reregistration of all products will proceed in the absence of the confirmatory data noted above. Although the Agency does not anticipate any changes in its regulatory position based on these confirmatory data, if the product chemistry, hydrolysis, and invertebrate toxicity data identify a risk that requires modification of the reregistration eligibility decision, the Agency will publish its rationale in the Federal Register (FR) and notify all affected registrants of its decision.

Before reregistering the applicable products, the Agency is requiring that product specific data, revised Confidential Statements of Formula (CSF), and labeling be submitted within 8 months of the issuance of this document. These data include product chemistry for each registration and acute toxicology testing. After reviewing these data and the revised labels, the Agency will reregister a product based on whether or not that product meets the requirements in Section 3(c)(5) of FIFRA. 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.

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 of streptomycin. The document consists of six sections. Section I is the introduction. Section II describes streptomycin, its 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 discusses the reregistration decision for streptomycin. Section V discusses the reregistration requirements for streptomycin. Section VI is the Appendices which support this Reregistration Eligibility Document. Additional details concerning the Agency's review of applicable data are available on request.[1]

[1] EPA's reviews of data on the set of registered uses considered for EPA's analysis may be obtained from the OPP Public Docket, Field Operations Division (H7506C), Office of Pesticide Programs, EPA, Washington, D.C. 20460

II. CASE OVERVIEW

A. Chemical Overview

The following active ingredients are covered by this Reregistration Eligibility Document:

Common Name:	Streptomycin and Streptomycin Sulfate
Chemical Name:	O-2-Deoxy-2-(methylamino)-δ-L-glucopyranosyl-(1->2)-O-5-deoxy-3-C-formyl-δ-L-lyxofuranosyl-(1->4)-N,N'-bis(aminoiminomethyl)-D-streptamine
Chemical Family:	Aminoglycoside antibiotic isolated from the bacterium Streptomyces griseus
CAS Registry Number:	57-92-1 and 3810-74-0 (streptomycin sulfate)
OPP Chemical Code:	006306 and 006310 (streptomycin sulfate)
Empirical Formula:	$C_{21}H_{39}N_7O_{12}$ and $C_{42}H_{84}N_{14}O_{36}S_3$ (streptomycin sulfate)
Trade and Other Names:	Agri-Mycin 17®, Agri-Strep®, Plantomycin® and Streptomycin 3000 Dust®
Basic Manufacturer:	Pfizer, Inc.

B. Use Profile

The following is information on the active registered uses with specific use sites and application methods. A detailed table of both eligible and ineligible uses of streptomycin is included in Appendix A. In addition, a detailed table of the methods, application rates and limited use restrictions is included in Appendix A.

Type of Pesticide:	Antibiotic bactericide/bacteriostat, fungicide, algicide
Use Sites:	Terrestrial food crop use on celery, crabapples, pears, peppers, and quince; Terrestrial food and feed crop use on apples, beans, potatoes, and tomatoes; Terrestrial non-food crop use on sugar beets (grown for seed), tobacco, ornamental herbaceous plants, ornamental woody shrubs and vines;

Terrestrial outdoor residential use on ornamental herbaceous plants, ornamental woody shrubs and vines;

Aquatic non-food residential use on ornamental ponds and aquaria.

Pests:

Aquariums	-	Algae
Apples and Pears	-	Fireblight
Beans	-	Halo blight
Celery	-	Bacterial blight
Chrysanthemums	-	Bacterial wilt
Cotoneaster	-	Fireblight
Dieffenbachia	-	Bacterial stem rot
Flowering Crabapple	-	Fireblight
Flowering Quince	-	Fireblight
Hawthorne	-	Fireblight
Peppers	-	Bacterial spot
Philodendron	-	Bacterial leaf spot
Pyracantha	-	Fireblight
Potato	-	Soft rot, Black leg
Roses	-	Crown gall
Sugar beets	-	Bacterial blight
Tobacco	-	Blue mold, Wildfire
Tomato	-	Bacterial spot

Formulation Types Registered:

For streptomycin: 0.15% and 0.30% dust

For streptomycin sulfate: 0.01% dust, 15.00% pelleted/tableted, 21.20% wettable powder, 21.1% and 62.6% wettable powder/dust

C. Estimated Usage of the Pesticide Streptomycin

This section summarizes the best estimates available for the pesticide uses of streptomycin. These estimates are derived from a variety of published and proprietary sources available to the Agency. The data are reported on an aggregate and site (crop) basis and reflect annual fluctuations in use patterns and variability in data from information sources. The quantity of pesticides used on crops that are grown on relatively few acres and the quantity of infrequently used pesticides are both difficult to ascertain. Non-agricultural uses of pesticides may also be difficult to quantify. Quantitative data are not available for all sites of streptomycin application.

The domestic basic producer of streptomycin is Pfizer, Inc. Data on production, sales and distribution are confidential business information and are protected under Section 7 (d) and Section 10 of FIFRA, as amended, and thus cannot be disseminated.

Streptomycin is a bactericide registered for foliar treatment of: apples, celery, crabapples, pears, peppers, tobacco, tomatoes and ornamentals including anthurium, cotoneaster, flowering crabapple, dieffenbachia, hawthorn, philodendron, pyracantha, flowering quince and roses. Registered sites for seed, seed piece or bed treatment includes: beans, celery, potatoes, sugar beets, tobacco, and tomatoes. Other sites include chrysanthemum (cuttings) and aquaria water.

The table below summarizes streptomycin use by site, this usage represents a moderate increase from the previous usage estimate (the 1987 high-end estimate was 57,000 lbs. active ingredient). Most sites have a very small percentage of acreage treated with streptomycin, so small that these figures remain consistent over time. It is important to note that streptomycin usage may vary greatly from year to year, depending on weather conditions.

Streptomycin is used primarily on pome fruit (although resistance to streptomycin has been reported, the total use of streptomycin on pome fruit has increased), ornamentals and tobacco. Based upon the available data, apples and pears account for 58%, nursery and landscape uses for 17%, tobacco use for 7%, and other uses (including celery, potatoes, sugar beets, and ornamentals not included in landscape and nursery stock) for 15% of the total use of streptomycin. Each remaining site accounts for no more than 1% of the total use of streptomycin (pounds a.i.).

On the major crop, pears, up to 80% of acreage is treated with streptomycin. Among the other crops, less than 5% of tobacco and pepper acreage are treated, with each remaining site having less than 1% of its acreage treated with streptomycin. Usage estimates of seed, seed piece or bed treatments may be under reported because of sampling methods.

DOMESTIC USAGE OF STREPTOMYCIN AS A PESTICIDE TYPICAL RECENT YEARS (1987 - 1991)

SITE	LBS. A.I. (1,000)	% OF TOTAL USE	% OF SITE TREATED	STATE USAGE
Pears[1]	18 - 60	39	<80	Western US
Apples[1]	8 - 30	19	<1	East, N. Central
Nursery Stock	5 - 15	10	NA	CA data 1990, FL
Tobacco	3 - 10	7	<5	KY, WV data 1990
Landscape Maintenance	<7	<7	NA	CA data, 1990
Tomatoes	<1	<1	<1	CA, N. East
Dried Beans and Peas	<1	<1	<1	CA only 1988 - 1990
Peppers	<1	<1	<5	OH data, 1990
OTHER[2]	<15	15	NA	
TOTAL	<60 - <140	100		

NA - Not Available

[1] Includes bearing and non-bearing acres.

[2] Including celery, potatoes, sugar beets, ornamentals (not included in nursery stock and landscape maintenance).

D. Data Requirements

Data required in the September 1988 Registration Standard for streptomycin included studies on product chemistry, ecological effects, environmental fate, and residue chemistry. These data were required to support the uses listed in the 1988 Registration Standard for streptomycin. Please refer to **Appendix B** for details of the complete data base for streptomycin. Appendix B includes all data requirements identified by the Agency for current use groups that are needed to support reregistration plus data requirements being imposed as a result of the Agency's review.

E. Regulatory History

Streptomycin has been used in the United States since the 1940s to treat bacterial infections in humans and was first registered as a pesticide in the United States in 1955. At that time, it was used primarily as a bactericide/fungicide on selected agricultural and non-agricultural crops. Other uses included seed treatment, residential, and as an algicide for aquaria.

A Registration Standard for streptomycin was issued in September, 1988. This document required data to support the uses identified in the 1988 Registration Standard. The Reregistration Eligibility Document reflects a reassessment of all data submitted in response to the Registration Standard.

There are currently sixteen end-use products containing streptomycin registered in the United States. No technical or manufacturing-use product is currently registered.

III. SCIENCE ASSESSMENT OF STREPTOMYCIN

The Agency has conducted a thorough review of the scientific data base for streptomycin for the purposes of determining the reregistration eligibility of this pesticide. These findings are summarized below.

A. Product Chemistry Assessment

Streptomycin, produced by the soil bacterium, Streptomyces griseus, is an aminoglycoside antibiotic. It may be produced on an industrial scale by aerobic fermentation, followed by isolation and purification by ion exchange.

There are several product chemistry requirements which are not fully satisfied for technical streptomycin sulfate. They include the following: Chemical Identity (GLN 61-1), Formation of Impurities (GLN 61-2b), Preliminary Analysis (GLN 62-1), and Dissociation Constant (GLN 63-10). The Agency regards these data as necessary to confirm the reregistration eligibility decision put forth in this document. The physical and chemical properties of the streptomycin sulfate technical grade of the active ingredient (TGAI) are summarized below:

TGAI	Streptomycin sulfate
Molecular Weight	1467.48
Color	Light tan
Physical State	Solid (STP)
Odor	Odorless
Melting Point	168°C
Boiling Point	N/A (TGAI is a solid)
Bulk Density	1.78 g/ml
Solubility	>200 g/100ml in water
Vapor Pressure	Waived
Dissociation Constant	**Data Gap**
Oct./Water Part. Coeff.	Waived
pH	5.5 (1g sample/5ml water)
Stability	Not photosensitive; not sensitive to metal or metal ions. Slightly decreased potency following 24 months at 37°C.

B. Human Health Assessment

1. Toxicology Assessment

Much of the data available to support the reregistration of streptomycin are reviews conducted by the Food and Drug Administration on dihydrostreptomycin (FDA, 1986). Streptomycin is similar in action to dihydrostreptomycin and its toxicity would not be expected to significantly differ from that of dihydrostreptomycin. All generic toxicological data requirements for streptomycin have been waived based on extensive information available from studies conducted in animals in support of its use as a human drug.

a. Acute Toxicity

The oral LD50 for streptomycin in rats has been reported to be 9,000 mg/kg (Thompson, 1977). The oral LD50 in mice has also been reported to be 9,000 mg/kg (BCPC, 1972). This is low toxicity and is classified as Toxicity Category IV.

b. Subchronic Toxicity

FDA concluded that a NOEL of 40 mg/kg/day was obtained in a 90-day study with cats in which the animals were dosed orally with 40 mg/kg/day dihydrostreptomycin, or in some cases, injected intramuscularly with 75 - 200 mg/kg/day dihydrostreptomycin. The cats receiving dihydrostreptomycin intramuscularly lost the righting reflex in 3 weeks whereas those treated orally did not. Gross pathology and histopathology were unremarkable.

A 90-day study was conducted in guinea pigs. It was concluded that 40 mg/kg/day dihydrostreptomycin administered orally produced no hearing loss.

c. Chronic Toxicity

A 2-year feeding study in rats was conducted employing doses of 0, 1, 5 and 10 mg/kg/day dihydrostreptomycin. Based on the data, dihydrostreptomycin does not appear to have carcinogenic potential. The only adverse effect noted was reduced body weight gain in males in the 10 mg/kg/day group. The NOEL was determined to be 5 mg/kg/day.

d. Developmental Toxicity

In a developmental toxicity study in rabbits, the animals were dosed with 5 and 10 mg/kg/day of dihydrostreptomycin from days 6 - 19 of gestation. The FDA review concluded that there were no teratogenic effects at either dose. The NOEL for teratogenic effects in the rabbit was 10 mg/kg/day.

e. Reference Dose (RfD) for Chronic Oral Exposure

A provisional ADI (PADI) or RfD for streptomycin of 0.05 mg/kg bwt/day can be established based on a NOEL of 5.0 mg/kg bwt/day from a two year feeding study in rats, which demonstrated as an effect reduced body weight gain, and utilizing an uncertainty factor of 100. The Joint FAO/WHO Expert Committee on Food Additives has not established an ADI for streptomycin.

f. Antibiotic Resistance

In a study conducted for FDA, beagle dogs were fed a diet of 0, 2, or 10 μg/g of dihydrostreptomycin per gram of feed. The 2 μg/g level was selected to represent a residue level of the antibiotic. In both treatment groups, administration of the medicated feed resulted in a shift from a predominantly dihydrostreptomycin-susceptible coliform fecal population to a resistant population. An increase in the prevalence of dihydrostreptomycin resistance was observed after 15 days of dihydrostreptomycin-supplemented feeding and persisted during the post-treatment phase of the study. Although it has not been tested for, the same potential may exist for the development of chemical resistance in the respiratory flora.

g. Human Data

Streptomycin has been available for use in humans as an antibiotic for urinary infections since the late 1940s. The usual route of administration is through intramuscular injection since only minor quantities are absorbed through the gastrointestinal tract. The total daily dose varies from 1 to 2 g or 0.5 to 1 g every 12 hours with treatment usually lasting 7 to 10 days. A variety of allergic reactions have been observed in sensitive patients treated with

streptomycin. These reactions include: erythema, rashes, urticaria, purpura, drop in blood pressure, headache, nausea and vomiting. The following effects have been observed after prolonged therapy for tuberculosis: vertigo, tinnitus, diplopia after rapid movement of the head, and deafness.

2. **Exposure Assessment**

a. Dietary

The nature of streptomycin residues in plants and animals is adequately understood; the residue of concern is streptomycin. In view of the long use of streptomycin as a drug, and to the low residues expected in or on RACs, no metabolism data have been required. No residues were detected in the commodities for which tolerances have been established when these commodities were treated according to registered uses.

Currently, tolerances of 0.25 ppm are established in 40 CFR 180.245 for negligible residues of streptomycin (the residue of concern) in or on the raw agricultural commodities listed below. The tolerance of 0.25 ppm was based on the limit of detection of the enforcement method submitted to the Agency.

Commodity

1. Celery, peppers, and tomatoes (treatment of seedling plants before transplanting)

2. Potatoes (treatment of seed pieces)

3. Pome fruits (apples, crabapples, pears and quince; foliar application)

Although the Agency finds these tolerances to be acceptable, the Agency considers the expression "negligible residues" as obsolete and will revise 40 CFR 180.245 to delete the reference to "negligible residues."

In addition, the Agency required bean data depicting streptomycin residues in or on beans, bean vines, and bean hay following seed treatment according to registered labels. The Agency is requesting that the registrant propose an appropriate tolerance for streptomycin in or on beans (succulent and dried), based on the

results of the field trials. The available bean data indicate that tolerances of 0.25 ppm for dry beans, bean forage, bean hay and bean straw grown from treated seed and at 0.50 ppm for succulent beans grown from treated seed are needed. No tolerances or data depicting streptomycin residues in bean cannery waste are required.

The current SLN (State Local Need) registration, OR850037, calls for foliar treatment of sugar beets grown for seed. Use restrictions prevent any livestock/human exposure to treated plants/seeds. The foliar application rate is 50 to 200 ppm, 250 times less than the labeled seed treatment rate for beans. Based on the bean data, the difference in application rates, the interval between seed crop treatment and root crop harvest, dilution effects, and label restrictions, no tolerances or supporting residue data are required to support the SLN registration for streptomycin on sugar beets grown for seed which the Agency considers to be a nonfood use.

The Agency has adequate data to support registered uses on all the above RACs and tobacco. There are no proposed or established CODEX (international) tolerances for streptomycin. There are no Canadian tolerances, and the Mexican tolerances for streptomycin are currently harmonized with U.S. tolerances. No other harmonization issues remain to be resolved. Because streptomycin is used in veterinary medicine, tolerances for streptomycin residues have also been established by FDA and USDA.

b. Occupational and Residential Exposure

Streptomycin, as one of the early antibiotic drugs (developed in the 1940s) possesses an accumulation of toxicological data and knowledge regarding its use as a bactericide for humans. The totality of this data indicates that streptomycin does not meet the Agency's toxicity criteria which would trigger the requirement for occupational/residential exposure monitoring data. Streptomycin, however, has produced various allergic reactions in some human patients. Therefore, label statements are required restricting the reentry into treated fields and specifying the use of certain protective clothing and equipment (PPE) while handling and applying end-use products for commercial use on agricultural crops and ornamentals. For the specific label language, refer to Section V, Labeling Requirements.

3. Risk Assessment

From the late 1940s, streptomycin has been available as an aminoglycoside antibiotic for humans. The drug continues today as part of the arsenal for endocarditis, tularemia, bubonic plague, and tuberculosis. On account of its low oral absorptivity, the drug is usually administered by intramuscular injection. Streptomycin is still used in veterinary medicine to help prevent infections in fowl, calves, and swine. Estimation of dietary risk by the Dietary Risk Evaluation System (DRES) utilized a Reference Dose (RfD) of 0.05 mg/kg bwt/day, based on a no-observed-effect level (NOEL) of 5.0 mg/kg bwt/day and an uncertainty factor of 100. The NOEL is taken from a two-year rat feeding study which demonstrated reduced body-weight gain as the most toxicologically significant effect. This RfD has been approved by the EPA Health Effects Division RfD Peer Review Committee (06/18/92).

The Agency has conducted a dietary risk analyses (DRES) for streptomycin. Food uses included in the analysis were the established tolerances (40 CFR 180.245) supported in the reregistration of streptomycin. All EPA-published food uses for this chemical are being supported through reregistration. Tolerances on celery, peppers, pome fruits, potatoes, and tomatoes are established at 0.25 ppm, the limit of detection of the enforcement method submitted. Residues considered in the analysis were the published uses previously mentioned and the proposed tolerances from the use of streptomycin as a seed treatment on beans (0.25 ppm for dry beans, 0.5 ppm for succulent beans). These tolerances reflect the limit of detection of the method and actual residue levels of streptomycin on beans are probably lower.

The DRES chronic exposure analysis used tolerance level residues and 100% crop treated to estimate the Theoretical Maximum Residue Contribution (TMRC) for the overall U.S. population and 22 population subgroups. The TMRC for the overall population from the EPA-published uses of streptomycin is 0.000899 mg/kg bwt/day, which represents 1.8% of the RfD. The proposed use on beans contributes an additional 0.000167 mg/kg bwt/day of exposure, raising the TMRC for the general population to 0.001066 mg/kg bwt/day, or 2.1% of the RfD. The DRES subgroup most highly exposed (non-nursing infants less than one year old) has a TMRC of 0.003006 mg/kg bwt/day, or 6% of the RfD. The proposed use on beans raises the exposure to 0.003476 mg/kg bwt/day, or 7% of the RfD. Because of the assumptions of tolerance level residues and 100 percent crop treated, it is likely that these values overestimate the exposure and risk. Even so, the chronic dietary risk posed by these uses of streptomycin are well below the level at which the Agency would have concern. Summaries of the residue data used in this analysis and the analysis itself are included in the streptomycin public docket.

Given the assumptions of tolerance-level residues and 100% crop treated, as well as the fact that tolerances are set at the limit of detection because no residues were actually found, these exposure values are most likely overestimates of exposure. In summary, the dietary risk from streptomycin appears minimal.

The Agency is aware of data exhibiting the induction by streptomycin of drug-resistant microflora in the intestine [Sec. III.B.1.f.]. A recent assessment of the impact of drug residues (in food) on the generation of "drug resistance" in humans has focused on the relative significance of (1) the potency of ingested antibiotic residues in food for producing drug-resistant microflora, and (2) the quantity of drug-resistant microflora already on or in the food ingested. More research has been suggested in order to ascertain the relative magnitudes of these two contributions to a drug-resistant population of microflora in the mammalian intestine. At present, the Agency has no data showing that food residues of streptomycin possess a significant or even measurable potential for developing in the human intestine streptomycin-resistant strains of microorganisms at levels above background levels acquired from the drug-resistant microorganisms ingested with food.

Workers may be exposed to streptomycin during use. There is a potential for an allergic response from individuals that are streptomycin-sensitive. Specific label requirements limiting inhalation exposure would mitigate this potential risk. These label requirements would also address concerns for the potential development of streptomycin-resistant microorganisms in the respiratory tract.

C. Environmental Assessment

1. Environmental Fate

Since there are no ecological or health effects concerns from this naturally occurring antibiotic, all environmental fate requirements, except for hydrolysis data (Guideline Reference No. 161-1), are waived. The hydrolysis study is being called in but the data are considered confirmatory. The unavailability of the hydrolysis data at this time will not delay reregistration of eligible products.

Hydrolysis is the only environmental fate data requirement that will be imposed for streptomycin. All other data requirements were waived based on the information found in a literature search conducted by the Agency which led to the following conclusions. Pseudomonas fluorescens

degrades streptomycin in water in the pH range of 6-8.1, but not at pH 5. Also, streptomycin is stable in sterilized soil and degrades in 2-3 weeks in non-sterilized soil with active P. fluorescens cultures. The lag time for degradation of streptomycin in soil decreases with later applications, indicating an inducible response. The major degradate of streptomycin in both soil and water was methylamine. Another degradation study in water found that 90% of the labeled streptomycin was found as CO_2 and cell materials while 10% was found as urea. Streptomycin (500-1,000 μg/ml) did not move beyond 0.5 cm of depth when applied to saturated sandy soil and exhibited activity at 9 and 32 days when applied at 1,000 and 2,500 μg/g soil, respectively. Adsorption and consequent immobilization of streptomycin appears to increase with increasing clay and organic matter content. Streptomycin was also detected at concentrations of 2.4 - 4.6 and 7.4 - 38 μg/ml of tomato plant sap when a sandy clay soil was treated with 1,000 and 2,500 μg/g soil, respectively.

2. Ecological Effects

The Agency has reviewed the available information for streptomycin and has determined that all ecological effects data requirements, except for an Aquatic Invertebrate EC_{50} study, are satisfied. The Aquatic Invertebrate EC_{50} study is being called in but the data are considered confirmatory. The unavailability of these data at this time will not delay reregistration of eligible products.

a. Ecological Hazard

1. Effects on Birds

An acute avian oral toxicity study on bobwhite quail showed that streptomycin has an $LD_{50} \geq 2,000$ mg/kg. These data indicate that streptomycin is practically non-toxic to upland bird species on an acute oral basis. In two subacute avian dietary studies on bobwhite quail and mallard duck, the $LC_{50} \geq 5,620$ and 4640 ppm, respectively. These data also indicate that streptomycin is practically non-toxic to birds on a dietary and acute oral basis. These studies fulfill Agency minimum data requirements to establish the toxicity of streptomycin in birds.

2. **Effects on Freshwater Invertebrates**

No studies were received on the effects of streptomycin on freshwater invertebrates, however, a literature search conducted by the Agency resulted in finding one study that can be used as supplemental data. This study was considered supplemental because information on the study methods was not reported. This study was acceptable for use in the hazard assessment, but does not fulfill the guideline requirements for an aquatic invertebrate toxicity study. These data suggest that streptomycin is practically non-toxic to freshwater invertebrates. To establish the toxicity of streptomycin to aquatic invertebrates, a 48-hour acute study using the technical grade of streptomycin is required. The test organisms should be first instar Daphnia magna.

3. **Effects on Freshwater Fish**

Two 96-hour freshwater fish toxicity studies on rainbow trout (coldwater species) and bluegill (warmwater species) were submitted to establish the acute toxicity of streptomycin to freshwater fish. The LC_{50} is $\geq$ 180 ppm for both studies. These data indicate that streptomycin is slightly toxic to both cold water and warm water species of fish. The guideline requirements are fulfilled for acute toxicity testing on freshwater fish.

4. **Effects on Non-Target Insects**

An acute honey bee study was submitted to establish the toxicity to honey bees. These data indicate that streptomycin is practically non-toxic to honey bees and fulfills the Agency's requirements for this study.

5. **Effects on Non-Target Plants**

No studies have been required for the effects of streptomycin on non-target plants. However, a literature search conducted by the Agency resulted in two scientific articles that demonstrated phytotoxic effects. Although these studies would not satisfy guideline requirements, they are sufficient for the purpose of assessing hazard to non-target plants and no additional data are required.

b. Ecological Effects Risk Assessment

Streptomycin is currently registered for use on Terrestrial Food and Feed Crops; Terrestrial Non-Food Crops; Ornamental and/or Shade Trees; Ornamental Herbaceous Plants; Ornamental Woody Shrubs and Vines; and Ornamental Ponds/Aquaria. It is registered as an algicide, bacteriocide/bacteriostat and a fungicide. The most common method for foliar application is by ground equipment such as airblast. Other methods of application include aircraft, duster attachments or hand-held sprayers.

1. **Terrestrial Species**

Streptomycin is applied to apple and pear orchards at the maximum rate of 0.3 lb ai/A in West Coast States and at 0.50 lb ai/A in other areas of the United States. Residues are found on both the crop and surrounding vegetation. Based on the maximum application rates, the following maximum residues could occur immediately after a single application:

Substrate	Residues at 0.5 lb ai/A
Leaves & leafy crops	63
Forage (alfalfa & clover)	29
Fruit	3.5

Streptomycin is applied several times throughout the growing season. No information is available concerning the persistence of streptomycin on plant surfaces, therefore, the potential for residue accumulation, if any, cannot be determined. The acute LD_{50} for bobwhite quail is greater than 2,000 mg/kg and the dietary LC_{50} for bobwhite quail and mallard duck is 5,620 ppm and 4,640 ppm, respectively. Based on the maximum expected residues when compared to the LC_{50}'s, streptomycin should not have an acute effect on birds.

2. **Freshwater Organisms**

The available data on streptomycin indicates that it is practically non-toxic to freshwater organisms including Daphnia, bluegill sunfish and rainbow trout. The EC_{50} determined for Daphnia is 650 ppm. The LC_{50} for both bluegill and rainbow trout is greater than 180 ppm.

Following a direct application to water, the following residues would result in 6 inches and 6 feet of water.

Application Rate (lb ai/A)	Aquatic Residues (ppb) 6 inches	6 feet
0.5	367	31

Based on the expected residues when compared to the aquatic LC_{50} for fish and the EC_{50} for Daphnia, streptomycin poses minimal risks to aquatic fauna.

3. **Non-Target Insects**

An LD_{50} greater than 100 micrograms was determined for honey bees. These data indicate that streptomycin is practically non-toxic to honey bees and adverse effects are not likely to occur.

4. **Non-Target Plants**

The studies with species of algae indicate that streptomycin is toxic to algae. The EC_{50} was determined to be 0.86 mg/l for the most sensitive species. Based on the maximum label application rates and the expected residues for use on apples and pears, significant adverse impact on algae could occur if direct application occurred. Streptomycin is also labeled at lower application rates for use in ornamental ponds, fountains and aquaria to control algae. Dose levels for the tablet (slow release) form of streptomycin used in aquatic environments could not be determined.

5. **Endangered Species**

The use of streptomycin as described, is not expected to pose significant risk to threatened and endangered species.

In summary, data indicate that streptomycin is practically non-toxic to bobwhite quail on an acute oral basis; to bobwhite quail and mallard ducks on a dietary basis; to coldwater and warmwater fish species; and to honey bees. No data were submitted for an aquatic invertebrate acute toxicity study. Scientific literature was used to support the hazard assessment. This study was deficient for the

purposes of an aquatic invertebrate study; however, it did provide supplemental data that was adequate to support a hazard assessment. A valid aquatic invertebrate study will be necessary to confirm the hazard assessment. Because of the demonstrated effects on aquatic plants, precautionary labeling for all non-aquatic uses is required. For specific precautionary labeling language, refer to Section V, Labeling Requirements.

IV. RISK MANAGEMENT

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 ingredient 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 streptomycin as an active ingredient. 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 streptomycin. Appendix B identifies the generic data requirements that the Agency reviewed as part of its determination of reregistration eligibility of streptomycin, 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 streptomycin and to determine that these uses of streptomycin can be used without resulting in unreasonable adverse effects to man and the environment. The Agency therefore finds that all products containing streptomycin/streptomycin sulfate as the active ingredients 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 streptomycin 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 streptomycin, if new information comes to the Agency's attention or if the data requirements for reregistration (or the guidelines for generating such data) change.

1. Eligibility Decision

The Agency has sufficient information on the health effects of streptomycin and on its potential for causing adverse effects in fish and wildlife and the environment. The Agency therefore concludes that products containing streptomycin for all uses are eligible for reregistration. The Agency has determined that additional data for product chemistry, ecological effects, and environmental fate are required for confirmatory purposes.

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

2. Eligible and Ineligible Uses

The Agency has determined that the uses of streptomycin for beans (seed treatment); celery, peppers, and tomatoes (treatment of the seedling plants before transplanting); potatoes (seed piece treatment); pome fruit (foliar treatment); sugar beets (grown for seed only); selected ornamental shrubs and trees; and ornamental ponds and aquaria are eligible for reregistration at this time.

Regulatory Position

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

1. Tolerance Reassessment

The term "negligible residues" is considered by the Agency to be obsolete and will be deleted from 40 CFR 180.245. Adequate data exist to support the existing tolerances of 0.25 ppm for residues of streptomycin in or on the raw agricultural commodities celery, peppers, and tomatoes from treatment of the seedling plants, before transplanting; potatoes from treatment of seed pieces; and pome fruits.

Tolerances of 0.25 ppm should be established for streptomycin residues in or on dry beans, bean forage, and bean hay grown from treated seed and 0.50 ppm in or on succulent beans grown from treated seed. No tolerances or data depicting streptomycin residues in bean cannery waste are required. No residue data are required to support the SLN registration for streptomycin on sugar beets grown for seed, which is considered by the Agency to be a nonfood use.

There are no proposed or established CODEX (international) tolerances for streptomycin. There are no Canadian tolerances, and the Mexican tolerances for streptomycin are currently harmonized with U.S. tolerances. No other harmonization issues remain to be resolved. Because streptomycin is used in veterinary medicine, tolerances for streptomycin residues have also been established by FDA and USDA.

2. Labeling Rationale

a. Because streptomycin has produced various allergic reactions in some human patients and there may be some potential for the development of streptomycin resistant microorganisms in the respiratory tract, the Agency is requiring label statements restricting the reentry into treated fields and specifying the use of certain protective clothing and equipment (PPE) while handling and applying end-use products for commercial use on agricultural crops and ornamentals. The specific label language is in Section V, Labeling Requirements.

b. Because streptomycin is used to control algae, products that are not used as an algicide in ornamental ponds and aquaria must have appropriate aquatic plant hazard labeling. The specific label language is in Section V, Labeling Requirements.

V. ACTIONS REQUIRED BY REGISTRANTS

This section is designed to assist the registrant by listing all of 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

The generic data base supporting the reregistration of streptomycin products for the above eligible uses has been reviewed and determined to be substantially complete. However, some of the product chemistry guidelines have not been completely fulfilled. All of the product chemistry data were originally required in the Registration Standard and are therefore not included in the generic Data Call-In for the RED. Further, registrants are reminded that any changes, since the Registration Standard was issued in 1988, in the manufacturing process for the technical grade of streptomycin, and any detection of new impurities since that time, must be reported to the Agency.

In addition to product chemistry, the Agency has determined that confirmatory data are required for the Invertebrate Toxicity (GLN 72-2a), and Hydrolysis (GLN 161-1) studies. These new generic data requirements are being called in and are listed in Appendix F.

2. **Labeling Requirements for Manufacturing-Use Products**

No technical or manufacturing-use products are currently registered. However, if any are registered, they will be required to meet the requirements of 40 CFR 156.10, this RED, and other current policies.

B. End-Use Products

1. **Additional Product-Specific Data Requirements**

Based on the reviews of the generic data for the active ingredient streptomycin, the products containing streptomycin with uses for beans (seed treatment); celery, peppers, and tomatoes (treatment of the seedling plants before transplanting); potatoes (seed piece treatment); pome fruit (foliar treatment); sugar beets (grown for seed only); selected ornamental shrubs and trees; tobacco (seedling; foliar treatment) and ornamental aquaria are eligible for reregistration. 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.

The product specific data were called in with the issuance of the 1988 Registration Standard. 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. Please follow the instructions in the Pesticide Reregistration Handbook with respect to labels and labeling.

The Agency has determined that the current label precautions are still applicable and are required for product reregistration. The following additional (or revised) label statements are required in the human hazards section:

a. The labels of products registered for commercial use on agricultural crops and ornamentals must include the following restricted entry statement: "Entry into treated fields is prohibited for 12 hours following application."

b. The labels of products registered for commercial use on agricultural crops and ornamentals must include the following protective clothing statement: "Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not breathe dust or spray mist. Wear a MSHA/NIOSH approved TC-21C dust/mist filtering respirator, long sleeved shirt, pants, shoes, and chemical-resistant gloves while handling or applying this product. Wash thoroughly after handling or applying."

c. In the environmental hazards section, all products, except for those used as an algicide in ornamental aquaria and ponds, must have the following label statement: "This product may be hazardous to aquatic plants. Do not apply directly to water, areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of wastes."

APPENDIX A

Table of Streptomycin Use Patterns Subject to Reregistration

The following table shows the eligible and ineligible uses of streptomycin. It does not show any changes resulting from the RED review itself. Changes that result from the RED review, e.g. PHI, application rates, etc. are specified in Section IV.

APPENDIX A - Case 0169 Chemical 006306 (Streptomycin)

	Use group	Site	Application timing	Form	Application type and Application Equipment	Minimum Application Rate	Maximum Application Rate	Max. # Appe.	Max. # Appe. @ Max. Rate	Min. Interval Between Appe. @ Max. Rate (Days)	Restricted Entry Interval (Days)	Geographic Limitations: Allowed	Geographic Limitations: Disallowed	Use Limitations also see Abbreviations
USES ELIGIBLE FOR REREG.														
FOOD/ FEED USES														
	A	Pear	bloom and petal fall	dust	dust by aircraft or ground equipment	20 lb/ac for 0.15 percent formulation and 40 lb/ac for 0.30 percent formulation	20 lb/ac for 0.15 percent formulation and 40 lb/ac for 0.30 percent formulation	Not specified	Not specified	Five days	Not specified	West Coast is identified	Not specified	Do not apply within 30 days of harvest. Final application should not exceed 10 weeks after bloom.
	A, B	Apple	bloom and petal fall	dust	dust by aircraft or ground equipment	20 lb/ac for 0.15 percent formulation and 40 lb/ac for 0.30 percent formulation	20 lb/ac for 0.15 percent formulation and 40 lb/ac for 0.30 percent formulation	Not specified	Not specified	Not specified	Not specified	West coast is identified	Not specified	Do not apply within 50 days of harvest
USES IN-ELIGIBLE FOR REREG.	**NONE**													

APPENDIX A - Case 0169 Chemical 006310 (Streptomycin Sulfate)

	USE GROUP	SITE	Application timing	Form	Application type and Application Equipment	Minimum Application Rate (ppm refers to strepto-mycin content)	Maximum Application Rate (ppm refers to strepto-mycin content)	Max. # Appe.	Max. # Appe. @ Max. Rate	Min. Interval Between Appe. @ Max. Rate (Days)	Restricted Entry Interval (Days)	Geographic Limitations		Use Limitations
												Allowed	Disallowed	
USES ELIGIBLE FOR REREG														
FOOD/ FEED USES														
	A	Celery	seedling stage	wettable powder and wettable powder/ dust	spray with sprayer	50 ppm	50 ppm	None specified	None specified	3.5	None specified	None specified	None specified	None specified
	A	Crabapple	bloom foliar	wettable powder/ dust	spray with sprayer	100 ppm	100 ppm	None specified	None specified	3	None specified	None specified	None specified	Do not apply after fruit is visible
	A	Pear	bloom foliar	wettable powder and wettable powder/ dust	spray with sprayer	.26 lb ai/ac (.31 lb ai/ac for West Coast)	.51 lb ai/ac	None specified	None specified	3 to 10	None specified	West coast is identified	None specified	30 day preharvest interval. Final application should not exceed 10 weeks after bloom.

APPENDIX A - Case 0169 Chemical 006310 (Streptomycin Sulfate)

	USE GROUP	SITE	Application timing	Form	Application type and Application Equipment	Minimum Application Rate (ppm refers to strepto-mycin content)	Maximum Application Rate (ppm refers to strepto-mycin content)	Max. # Appe.	Max. # Appe. @ Max. Rate	Min. Interval Between Appe. @ Max. Rate (Days)	Restricted Entry Interval (Days)	Geographic Limitations		Use Limitations
												Allowed	Disallowed	
	A	Pear	bloom foliar	wettable powder/ dust	dust (equipment not on label)	20 lb ai/ac	20 lb ai/ac	None specified	None specified	5	None specified	West Coast is identified	None specified	30 day preharvest interval. Final application should not exceed 10 weeks after bloom.
	A	Pepper	seedling stage	wettable powder/ dust	spray with sprayer	200 ppm	200 ppm	None specified	None specified	4	None specified	None specified	None specified	None specified
	A, B	Apple	bloom, foliar petal fall	wettable powder and wettable powder/ dust	spray with sprayer	.26 lb ai/ac (.31 lb ai/ac in West Coast)	.51 lb ai/ac	None specified	None specified	3 to 10	None specified	West Coast is identified	None specified	50 day preharvest interval
	A, B	Apple	bloom, petal fall foliar	wettable powder/ dust	dust (equipment not on label)	20 lb ai/ac	20 lb ai/ac	None specified	None specified	3 to 5	None specified	West Coast is identified	None specified	50 day preharvest interval
	A, B	Bean	seed	wettable powder/ dust	seed treatment with slurry-type seed treater	50,000 ppm	50,000 ppm	None specified	None specified	None specified	None specified	None specified	None specified	Do not use treated seed for feed or food

APPENDIX A - Case 0169 Chemical 006310 (Streptomycin Sulfate)

	USE GROUP	SITE	Application timing	Form	Application type and Application Equipment	Minimum Application Rate (ppm refers to strepto-mycin content)	Maximum Application Rate (ppm refers to strepto-mycin content)	Max. # Appe.	Max. # Appe. @ Max. Rate	Min. Interval Between Appe. @ Max. Rate (Days)	Restricted Entry Interval (Days)	Geographic Limitations		Use Limitations
												Allowed	Disallowed	
	A, B	Potato	seed piece	dust	seed piece treatment with duster	1 lb/100 lbs seed (ppm not specified)	1 lb/100 lbs seed (ppm not specified)	None specified	None specified	None specified	None specified	None specified	None specified	Do not use treated seed pieces for food or feed purposes
	A, B	Potato	seed piece	wettable powder and wettable powder/ dust	soak (equipment not on label)	100 ppm	100 ppm	None specified	None specified	None specified	None specified	Maine and adjacent areas are identified	None specified	Do not use treated seed pieces for food or feed purposes
	A, B	Tomato	seedling stage	wettable powder and wettable powder/ dust	spray with sprayer	200 ppm	200 ppm	None specified	None specified	4	None specified	None specified	None specified	None specified
NONFOOD/ NONFEED USES														
	C	Sugarbeet	foliar	wettable powder	spray with sprayer	200 ppm	200 ppm	None specified	None specified	None specified	None specified	None specified	None specified	Do not graze or cut green forage for livestock feed. Do not feed aftermath or screening to livestock.

APPENDIX A - Case 0169 Chemical 006310 (Streptomycin Sulfate)

	USE GROUP	SITE	Application timing	Form	Application type and Application Equipment	Minimum Application Rate (ppm refers to strepto-mycin content)	Maximum Application Rate (ppm refers to strepto-mycin content)	Max. # Appe.	Max. # Appe. @ Max. Rate	Min. Interval Between Appe. @ Max. Rate (Days)	Restricted Entry Interval (Days)	Geographic Limitations		Use Limitations
												Allowed	Disallowed	
	C	Ornamental and/or shade trees	bloom foliar	wettable powder/ dust	spray with sprayer	100 ppm	100 ppm	None specified	None specified	7	None specified	None specified	None specified	None specified
	C	Ornamental herbaceous plants	cutting	wettable powder	soak (equipment not on label)	50 ppm	50 ppm	None specified	None specified	None specified	None specified	None specified	None specified	None specified
	C	Ornamental herbaceous plants	cutting	wettable powder/ dust	soak (equipment not on label)	200 ppm	200 ppm	None specified	None specified	None specified	None specified	None specified	None specified	None specified
	C	Ornamental herbaceous plants	foliar	wettable powder	spray with hand held sprayer or motor driven sprayer	2 lb/A	None specified	None specified	None specified	5 days	None specified	Hawaii is identified	None specified	None specified
	C	Ornamental herbaceous plants	foliar	wettable powder/ dust	spray with sprayer	200 ppm	200 ppm	None specified	specified	4	None specified	None specified	None specified	None specified
	C	Ornamental woody shrubs and vines	bloom foliar	wettable powder	spray with spray	100 ppm	None specified	None specified	None specified	3 to 5	None specified	None specified	None specified	None specified
	C	Ornamental woody shrubs and vines	foliar	wettable powder/ dust	spray with sprayer	50 ppm	100 ppm	None specified	None specified	5	None specified	None specified	None specified	None specified

APPENDIX A - Case 0169 Chemical 006310 (Streptomycin Sulfate)

	USE GROUP	SITE	Application timing	Form	Application type and Application Equipment	Minimum Application Rate (ppm refers to strepto-mycin content)	Maximum Application Rate (ppm refers to strepto-mycin content)	Max. # Appe.	Max. # Appe. @ Max. Rate	Min. Interval Between Appe. @ Max. Rate (Days)	Restricted Entry Interval (Days)	Geographic Limitations		Use Limitations
												Allowed	Disallowed	
	C	Ornamental woody shrubs and vines	transplant	wettable powder and wettable powder/ dust	soak (equipment not on label)	200 ppm	None specified	None specified	None specified	Not specified	None specified	None specified	None specified	None specified
	C	Tobacco	seedling stage	wettable powder and wettable powder/ dust	drench (equipment not on label); spray with sprayer	100 ppm	200 ppm	None specified	None specified	5	None specified	None specified	None specified	None specified
	C	Tobacco	seedling stage	wettable powder	spray with sprayer	100 ppm	200 ppm	None specified	None specified	5	None specified	None specified	None specified	None specified
	C	Tobacco	seedling stage foliar	wettable powder/ dust	spray with sprayer	100 ppm	200 ppm	None specified	None specified	5 to 7	None specified	None specified	None specified	None specified
	C, K	Ornamental herbaceous plants	cutting	wettable powder	soak (equipment not on label)	50 ppm	200 ppm	None specified	None specified	None specified	None specified	None specified	None specified	None specified
	C, K	Ornamental herbaceous plants	foliar	wettable powder	spray with sprayer	200 ppm	200 ppm	None specified	None specified	4	None specified	None specified	None specified	None specified
	C, K	Ornamental woody shrubs and vines	bloom and foliar	wettable powder	spray with sprayer	100 ppm	200 ppm	None specified	None specified	3 to 5	None specified	None specified	None specified	None specified

APPENDIX A - Case 0169 Chemical 006310 (Streptomycin Sulfate)														
	USE GROUP	SITE	Application timing	Form	Application type and Application Equipment	Minimum Application Rate (ppm refers to strepto-mycin content)	Maximum Application Rate (ppm refers to strepto-mycin content)	Max. # Appe.	Max. # Appe. @ Max. Rate	Min. Interval Between Appe. @ Max. Rate (Days)	Restricted Entry Interval (Days)	Geographic Limitations		Use Limitations
												Allowed	Disallowed	
	C, K	Ornamental woody shrubs and vines	transplant	wettable powder	spray with sprayer	200 ppm	200 ppm	200 ppm	None specified	None specified	None specified	None specified	None specified	None specified
	G	Ornamental pond/ aquaria	when needed	pelleted/ tableted	water treatment by hand	1 tablet/5 gal water	None specified	None specified	None specified	30 days	None specified	None specified	None specified	None specified
USES IN-ELIGIBLE FOR REREG	**NONE**													

A Terrestrial Food
B Terrestrial Feed
C Terrestrial Non-Food
G Aquatic Non-Food Residential
K Residential

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 the pesticide streptomycin covered by this Reregistration Eligibility Document. It contains generic data requirements that apply to streptomycin 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 Streptomycin

REQUIREMENT		USE PATTERN	CITATION
PRODUCT CHEMISTRY			
61-1	**Chemical Identity**	ABCGK	41445401 - **DATA GAP**
61-2	**Start. Mat. & Mnfg. Process**	ABCGK	41445401, 42044701, Pfizer letter (SEE BIBLIOGRAPHY)
61-3	**Formation of Impurities**	ABCGK	41445401, 42044701 - **DATA GAP**
62-1	**Preliminary Analysis**	ABCGK	41445401 - **DATA GAP**
63-2	**Color**	ABCGK	41445401
63-3	**Physical State**	ABCGK	41445401
63-4	**Odor**	ABCGK	41445401
63-5	**Melting Point**	ABCGK	41445401
63-6	**Boiling Point**	ABCGK	N/A - TGAI is a solid at room temperature
63-7	**Density**	ABCGK	41445401
63-8	**Solubility**	ABCGK	41445401
63-9	**Vapor Pressure**	ABCGK	N/A - TGAI is a solid
63-10	**Dissociation Constant**	ABCGK	**DATA GAP**
63-11	**Octanol/Water Partition**	ABCGK	N/A - TGAI is polar and water soluble
63-12	**pH**	ABCGK	41445401
63-13	**Stability**	ABCGK	41445401, 42044701
64-1	**Submittal of Samples**	ABCGK	**RESERVED** - If samples are required, the Agency will request them

APPENDIX B

Data Supporting Guideline Requirements for the Reregistration of Streptomycin

REQUIREMENT		USE PATTERN	CITATION
ECOLOGICAL EFFECTS			
71-1A	**Acute Avian Oral - Quail/Duck**	ABCK	41777701
71-2A	**Avian Dietary (LC_{50}) - Quail**	ABCK	41777702
71-2B	**Avian Dietary (LC_{50}) - Duck**	ABCK	107412
72-1A	**Fish Acute (LC_{50}) - Bluegill**	ABCK	103395
72-1C	**Fish Acute (LC_{50}) - Trout**	ABCK	103394
72-2A	**Aquatic Invertebrate (EC_{50})**	ABCK	**DATA GAP**
72-6	**Aquatic Organism Accumulation**	ABCK	**WAIVED**
123-2	**Aquatic Plant Growth**	ABCK	Articles (SEE BIBLIOGRAPHY)
141-1	**Honey Bee Acute Contact**	ABCK	41777703
TOXICOLOGY			
All toxicological data requirements were waived based on existing animal and human data. Toxicological references are listed in the Bibliography (Appendix C).			
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**

APPENDIX B

Data Supporting Guideline Requirements for the Reregistration of Streptomycin

REQUIREMENT		USE PATTERN	CITATION
TOXICOLOGY			
81-5	Primary Dermal Irritation - Rabbit	ALL	WAIVED
81-6	Dermal Sensitization - Guinea Pig	ALL	WAIVED
81-7	Acute Delayed Neurotoxicity - Hen	ALL	WAIVED
82-1A	90-Day Feeding - Rodent	ALL	WAIVED
82-1B	90-Day Feeding - Non-rodent	ALL	WAIVED
82-2	21-Day Dermal - Rabbit/Rat	ALL	WAIVED
82-3	90-Day Dermal - Rodent	ALL	WAIVED
82-4	90-Day Inhalation - Rat	ALL	WAIVED
82-5A	90-Day Neurotoxicity - Hen	ALL	WAIVED
82-5B	90-Day Neurotoxicity - Mammal	ALL	WAIVED
83-1A	Chronic Feeding Toxicity - Rodent	ALL	WAIVED
83-1B	Chronic Feeding Toxicity - Non-Rodent	ALL	WAIVED
83-2A	Oncogenicity - Rat	ALL	WAIVED
83-2B	Oncogenicity - Mouse	ALL	WAIVED

APPENDIX B

Data Supporting Guideline Requirements for the Reregistration of Streptomycin

REQUIREMENT		USE PATTERN	CITATION
TOXICOLOGY			
83-2B	Oncogenicity - Mouse	ALL	WAIVED
83-3A	Developmental Toxicity - Rat	ALL	WAIVED
83-3B	Developmental Toxicity - Rabbit	ALL	WAIVED
83-4	2-Generation Reproduction - Rat	ALL	WAIVED
84-2A	Gene Mutation (Ames Test)	ALL	WAIVED
84-2B	Structural Chromosomal Aberration	ALL	WAIVED
84-4	Other Genotoxic Effects	ALL	WAIVED
85-1	General Metabolism	ALL	WAIVED
ENVIRONMENTAL FATE			
161-1	Hydrolysis	ABCK	DATA GAP
161-2	Photodegradation - Water	ABCK	WAIVED
161-3	Photodegradation - Soil	ABCK	WAIVED
162-1	Aerobic Soil Metabolism	ABCK	WAIVED
162-2	Anaerobic Soil Metabolism	ABCK	WAIVED
163-1	Leaching/Adsorption/Desorption	ABCK	WAIVED

APPENDIX B

Data Supporting Guideline Requirements for the Reregistration of Streptomycin

REQUIREMENT		USE PATTERN	CITATION
ENVIRONMENTAL FATE			
165-1	**Confined Rotational Crop**	ABCK	**WAIVED**
165-4	**Bioaccumulation in Fish**	ABCK	**WAIVED**
RESIDUE CHEMISTRY			
171-4C	**Residue Analytical Method - Plants**	AB	00103383, 00103386, 00103390, 00108026
171-4K	**Crop Field Trials**	AB	
	Beans (succulent and dry)		Gustafson Analytical Report (SEE BIBLIOGRAPHY)
	Celery		00103384, 00108022
	Peppers		00065578, 00103384
	Pome fruits		00103377, 00103386, 00103390
	Potatoes		00103384
	Tomatoes		00103384, 00108022

APPENDIX C

STREPTOMYCIN BIBLIOGRAPHY

Citations Considered to be Part of the Data Base Supporting the Reregistration of Streptomycin

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 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 submittted. 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 uses 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 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 a 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.

APPENDIX C

Streptomycin Bibliography

MRID	Citation
00065578	Pfipharmecs (1958) [Efficacy of Streptomycin on Peppers, Tomatoes, Pears, Apples, Tobacco and Chrysanthemums]. (Compilation; unpublished study, including published data, received May 26, 1954?; November 7, 1955?; January 22, 1954?; February 20, 1958 under 1007-6; CDL: 229886-A).
00103377	Pfipharmecs (1968) [Streptomycin Residue Analyses - Pears]. (Compilation; unpublished study received January 21, 1969 under 1007-24; CDL: 005381-B).
00103383	Chas. Pfizer & Co., Inc. (1964) Streptomycin Residue Determination on Apples. (Unpublished study received September 24, 1967 under 8F0693; CDL: 091202-G).
00103384	Interregional Research Project No. 4 (1972) [Streptomycin Residue Determination in Various Crops, Dairy Products and Animal Tissues]. (Compilation; unpublished study received on unknown date under 1E1095; CDL: 093407-A).
00103386	Carroll, V. (1966) Streptomycin Residue Determination on Apples. (Unpublished study received March 14, 1966 under 1007-24; submitted by Pfipharmecs, Div. of Pfizer, Inc., New York, NY; CDL: 101536-A).
00103390	Pfipharmecs (1960) Agri-mycin 100 Spray and Dust Field Trials on Pears, Apples and Walnuts. (Unpublished study received December 21, 1960 under 1007-24; prepared by Univ. of California - Davis, Agricultural Experiment Station; CDL: 119407-B).
00103394	Pitcher, F. (1974) Agri-Strep: Rainbow Trout (Salmo gairdneri): Test No. 678. (U.S. Environmental Protection Agency, Pesticides Regulation Div., Animal Biology Laboratory; Unpublished study; CDL: 129168-A).
00103395	Pitcher, F.; McCann, J. (1974) Agri-Strep: Bluegill (L. macrochirus). (U.S. Environmental Protection Agency, Chemical & Biological Investigations Branch, Technical Services Div.; Unpublished study; CDL: 131068-A).

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Streptomycin Bibliography

MRID	Citation
00107412	Fink, R. (1974) Final Report: Eight-Day Dietary LC50 - Mallard Ducks: Streptomycin Sulfate: Project No. 105-107. (Unpublished study received March 18, 1974 under 618-28; prepared by Truslow Farms, Inc., submitted by Merck & Co., Inc., Rahway, NJ; CDL: 128709-B).
00108022	Interregional Research Project No. 4 (1972) Summary of Merck Streptomycin Trials on Celery, Pepper, Potato and Tomato. (Compilation; unpublished study received October 20, 1972 under 1E1095; CDL: 090855-A).
41445401	Dowd, N.; Defoe, J. (1990) Streptomycin Sulfate Technical - Product Chemistry Data. Unpublished study prepared by Pfizer, Inc., Quality Control Division. 157 p.
41777701	Campbell, S.; Hoxter, K.; Smith, G. (1991) Streptomycin Sulfate Technical: An Acute Oral Toxicity Study with the Northern Bobwhite: Lab Project Number: 260-105. Unpublished study prepared by Wildlife International Ltd. 19 p.
41777702	Long, R.; Hoxter, K.; Smith, G. (1991) Streptomycin Sulfate Technical: A Dietary LC50 Study with the Northern Bobwhite: Lab Project Number: 260-104. Unpublished study prepared by Wildlife International Ltd. 17 p.
41777703	Winter, P.; Hoxter, K.; Smith, G. (1991) Streptomycin Sulfate Technical: An Acute Contact Toxicity Study with the Honey Bee: Lab Project Number: 260-106. Unpublished study prepared by Wildlife International Ltd. 14 p.
42044701	DeFoe, J.; Dowd, N. (1991) Streptomycin Sulfate Technical: Product Chemistry Data. Unpublished study prepared by Pfizer, Inc. 37 p.
	British Crop Protection Council (1968) Pesticide Manual, 3rd ed., Worcestershire, England.
	Brock, T.D. (1979) Biology of Microorganisms, 3rd ed., Prentice-Hall Inc., New Jersey.

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Streptomycin Bibliography

MRID	Citation

EPA (1988) Guidance for the Reregistration of Pesticide Products Containing Streptomycin and Streptomycin Sulfate as the Active Ingredient. Case No. 0169, 540/RS-88-097, Washington, D. C. 20460.

FDA (1986) Memorandum of R. L. Gillespie to P. Cushing on Dihydrostreptomycin, dated January 9, 1986.

Fenton, J.; Klein, D. Studies on the Bacterial Degradation of Streptomycin Using Radioactively-Labeled Compounds. University of Minnesota, St. Paul.

Gustafson, Inc. (1992) Analytical Reports of Streptomycin Residue in Beans dated August 20, 1992. (CBRS No. 10453). Gustafson, Inc., Dallas, Texas.

Harrass, M.; Kindig, A.; Taub, F. (1985) "Responses of Blue-green and Green Algae to Streptomycin in Unialgal and Paired Culture". Aquatic Toxicology, 6, p. 1-11.

Kruger, W. (1961) The Activity of Antibiotics in Soils II. Movement, Stability, and Biological Activity of Antibiotics in Soils and Their Uptake by Tomato Plan 301-313.ts. South African Journal of Agricultural Science, 4(3):

Lehninger, A. L. (1975) Biochemistry. 2nd ed., Worth Publishers, New York.

Merck Index (1983) 10th ed., Merck and Co., New Jersey.

Muller, Hans-Gunther. (1982) "Sensitivity of *Daphnia magna Strauss* Against Eight Chemotherapeutic Agents and Two Dyes". Bulletin of Environmental Contamination Toxicology, 28, p. 1-2.

Physicians Desk Reference (1988) 42nd ed.

Pfizer, Inc. (1992) Letter from S. Bigelow to S. Lewis (EPA) dated 06/30/92.

Pramer, D.; Starkey, R. L. (1961) Determination of Streptomycin in Soil and the Effect of Soil colloidal Material on its Activity. New Jersey Agricultural Research Station, Rutgers University.

APPENDIX C

Streptomycin Bibliography

MRID	Citation

Pramer, D.; Starkey, R. L. (1972) Decomposition of Streptomycin in Soil & by an Isolated Bacterium. Soil Science, 114(6): 451-455.

Symposium: Microbiological Significance of Drug Residues in Food, Animal Health Institute and FDA-Center for Veterinary Medicine, Rockville, MD, June 8-9, 1992.

Thompson, W. T. (1970) Agricultural Chemicals, Book IV., Thompson Publications, Fresno, California, p. 35.

World Health Organization (1968) Twelfth Report of the Joint FAO/WHO Expert Committee on Food Additives, Geneva, 1-8 July, 1968, Technical Report Series No. 430.

APPENDIX D

List of Available Related Documents

APPENDIX D

The following is a list of available documents related to streptomycin. Its purpose is to provide a path to more detailed information if it is needed. These accompanying documents are part of the Administrative Record for streptomycin 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. Streptomycin RED Fact Sheet

4. PR Notice 91-2 (Included in this RED) Pertains to the Label Ingredient Statement

5. Summary of the Residue Data Used in the DRES Analysis and the DRES Analysis Tables

Federal publications on streptomycin are available and may be purchased from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161.

1. Pesticide Fact Sheet (No. 186) for Streptomycin: NTIS Stock No. PB89-129720.

2. Guidance for the Reregistration of Pesticide Products Containing Streptomycin and Streptomycin Sulfate as the Active Ingredient (The 1988 Registration Standard): NTIS Stock No. PB89-129738.

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

MAY 2

PR NOTICE 91-2

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

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 158.640.

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 Concentration" on the application form. These types of 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) 557-5024.

Anne E. Lindsay

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

APPENDIX E

Pesticide Reregistration Handbook

APPENDIX F

Generic Data Call-In

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

DATA CALL-IN NOTICE

CERTIFIED MAIL

SEP 30 1992

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

Dear Sir or Madam:

This Notice requires you and other registrants of pesticide products containing the active ingredient identified in Attachment A 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. 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 E; or

2. why you believe you are exempt from the requirements listed in this Notice and in Attachment C, 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 B, Data Call-In Response Form, as well as a list of all registrants who were sent this Notice (Attachment D).

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 A - Data Call-In Chemical Status Sheet
Attachment B - Data Call-In Response Form
Attachment C - Requirements Status And Registrant's Response Form
Attachment D - List Of All Registrants Sent This Data Call-In Notice
Attachment E - Cost Share And Data Compensation Forms

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. This reevaluation identified additional data necessary to assess the health and safety of the continued use of products containing this active ingredient. 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 data required by this Notice are specified in Attachment C, 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 C, Requirements Status and Registrant's Response Form, within the timeframes 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 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 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 B and the Requirements Status and Registrant's Response Form, Attachment C. 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 A.

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. 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) 557-2126.

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 if the active ingredient in the product is derived exclusively from purchased, registered pesticide products containing the active ingredient. 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 in your registered product must be present solely because of incorporation of another registered product which contains the subject active ingredient and is purchased from a source not connected with you;

b. Every registrant who is the ultimate source of the active ingredient 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 B 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.

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 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 timeframe (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 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 -- 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, Attachment E. In addition, you must demonstrate that the other registrant to whom the offer was made has not accepted your offer to enter into a costsharing 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) " '[r]aw 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 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 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 A. 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.

III-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 ingredients 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 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 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 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(i). Total company sales (pounds and dollars) of all registered product(s) containing the active ingredient. If applicable to the active ingredient, 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.

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

b. Total direct production cost of product(s) containing the active ingredient 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.

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

d(i). 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.

ii. 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.

e. For each of the next ten years, a year-by-year forecast of company sales (pounds and dollars) of the active ingredient, direct production costs of product(s) containing the active ingredient (following the parameters in item 2 above), indirect production costs of product(s) containing the active ingredient (following the parameters in item 3 above), and costs of data development pertaining to the active ingredient.

f. A description of the importance and unique benefits of the active ingredient to users. Discuss the use patterns and the effectiveness of the active ingredient relative to registered alternative chemicals and non-chemical control strategies. Focus on benefits unique to the active ingredient, 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 in terms of its benefits, you should provide information on any of the following factors, as applicable to your product(s): (a) documentation of the usefulness of the active ingredient in Integrated Pest Management, (b) description of the beneficial impacts on the environment of use of the active ingredient, as opposed to its registered

alternatives, (c) information on the breakdown of the active ingredient 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

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 listed in Attachment A, 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 B) and a completed Requirements Status and Registrant's Response Form (Attachment C) and any other documents required by this Notice, and should be submitted to the contact person identified in Attachment A. 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,

Daniel M. Barolo, Director
Special Review and
Reregistration Division

Attachments

A - Data Call-In Chemical Status Sheet
B - Data Call-In Response Form
C - Requirements Status and Registrants Response Form
D - List of Registrants Receiving This Notice
E - Cost Share and Data Compensation Forms

ATTACHMENT A

Generic Data Call-In Chemical Status Sheet

ATTACHMENT A

STREPTOMYCIN: GENERIC DATA CALL-IN CHEMICAL STATUS SHEET

INTRODUCTION

You have been sent this Generic Data Call-In Notice because you have products containing streptomycin.

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 streptomycin. 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 B), (3) the Requirements Status and Registrant's Form (Attachment C), (4) a list of registrants receiving this DCI (Attachment D), (5) the EPA Acceptance Criteria (Attachment E), and (6) the Cost Share and Data Compensation Forms in replying to this Streptomycin Generic Data Call-In (Attachment F). Instructions and guidance accompany each form.

DATA REQUIRED BY THIS NOTICE

The additional data requirements needed to complete the generic database for streptomycin are contained in the Requirements Status and Registrant's Response (Attachment C). The Agency has concluded that new ecological effects and environmental fate data on technical streptomycin sulfate are needed. In addition, some of the product chemistry guidelines have not been completely fulfilled. All of the product chemistry data were originally required in the Registration Standard and are therefore not included in the generic Data Call-In for the RED.

INQUIRIES AND RESPONSES TO THIS NOTICE

If you have any questions regarding the generic data requirements and procedures established by this Notice, please contact Theresa A. Stowe at (703) 308 - 8043.

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

Theresa A. Stowe, Chemical Review Manager
Reregistration Branch, Section I
Special Review and Reregistration Division (H7508W)
Office of Pesticide Programs
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

RE: STREPTOMYCIN

ATTACHMENT B

Generic Data Call-In Response Forms (Form A) plus Instructions

SPECIFIC INSTRUCTIONS FOR THE 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.

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 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. Check 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 is 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 a 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.

United States Environmental Protection Agency
Washington, D.C. 20460
DATA CALL-IN RESPONSE

Form Approved
OMB No. 2070-0107
Approval Expires 12-31-92

INSTRUCTIONS: Please type or print in ink. Please read carefully the attached instructions and supply the information requested on this form. Use additional sheet(s) if necessary

1. Company name and Address	2. Case # and Name	3. Date and Type of DCI
SAMPLE COMPANY NO STREET ADDRESS NO CITY, XX 00000	0169 Streptomycin Chemical # and Name 006310 Streptomycin sulfate	GENERIC SEP 30 1992

4. EPA Product Registration	5. I wish to cancel this product registration voluntarily	6. Generic Data		7. Product Specific Data	
		6a. I am claiming a Generic Data Exemption because I obtain the active ingredient from the source EPA registration number listed below.	6b. I agree to satisfy Generic Data requirements as indicated on the attached form entitled "Requirements Status and Registrant's Response."	7a. My product is an MUP and I agree to satisfy the MUP requirements on the attached form entitled "Requirements Status and Registrant's Response."	7b. My product is an EUP and I agree to satisfy the EUP requirements on the attached form entitled "Requirements Status and Registrant's Response."
NNNNNN-NNNNN					

8. Certification

I certify that the statements made on this form and all attachments are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine, imprisonment or both under applicable law.

Signature and Title of Company's Authorized Representative_____

9. Date

10. Name of Company Contact

11. Phone Number

ATTACHMENT C

Generic Data Call-In Requirements Status and Registrant's Response Forms (Form B) plus Instructions

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

Generic Data

This form is designed to be used for registrants to respond to call-ins 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.

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	Technical Grade Active Ingredient
TGAI/PAI	Technical Grade Active Ingredient or Pure Active Ingredient
TGAI/PAIRA	Technical Grade Active Ingredient or Pure Active Ingredient Radiolabelled
TGAI/TEP	Technical Grade Active Ingredient or Typical End-Use Product
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 protocols 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.

United States Environmental Protection Agency
Washington, D.C. 20460

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved
OMB No. 2070-0107
Approval Expires 12-31-92

INSTRUCTIONS: Please type or print in ink. Please read carefully the attached instructions and supply the information requested on this form. Use additional sheet(s) if necessary

1. Company name and Address
SAMPLE COMPANY
NO STREET ADDRESS
NO CITY, XX 00000

2. Case # and Name
0169 Streptomycin
Chemical # and Name 006310
Streptomycin sulfate

3. Date and Type of DCI
GENERIC
SEP 30 1992

4. Guideline Requirement Number	5. Study Title	PROTOCOL	Progress Reports 1	2	3	6. Use Pattern	7. Test Substance	8. Time Frame	9. Registrant Response
72-2(a) *	Invertebrate toxicity					ABCGK	TGAI	12 mos.	
161-1 *	Hydrolysis					ABCGK	TGAI	12 mos.	

10. Certification
I certify that the statements made on this form and all attachments are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine, imprisonment or both under applicable law.

Signature and Title of Company's Authorized Representative_____

11. Date

12. Name of Company Contact

13. Phone Number

United States Environmental Protection Agency
Washington, D.C. 20460

*** COMMENTS FOR GUIDELINE REQUIREMENTS**

Case # and Name
0169 Streptomycin
Chemical # and Name
006310 Streptomycin sulfate

GUIDELINE	COMMENT
72-2(a)	Sufficient non-guideline information is available to perform a preliminary ecological hazard assessment. However, the data are insufficient to confirm the reported findings. A new study will be needed to confirm the freshwater invertebrate hazard assessment.
161-1	All environmental fate data requirements, except for hydrolysis, are waived. Hydrolysis data at pH's of 5, 7, and 9 are required.

ATTACHMENT D

List of Registrants Receiving the Generic and Product Specific Data Call-In

List of All Registrants Sent This Data Call-In Notice

Case # and Name
0169 Streptomycin
Chemical # and Name
006310 Streptomycin sulfate

Company Number	Company Name	Additional Name	Address	City & State	Zip
000070	WILBUR-ELLIS COMPANY		BOX 16458	FRESNO CA	93755
000554	AGSCO INC		BOX 458	GRANDFORKS ND	58201
000618	MERCK & CO INC	AGENT FOR: MERCK & CO INC	HILLSBOROUGH RD	THREE BRIDGES NJ	08887
001007	PFIZER INC. - SPECIALTY CHEMICALS		235 EAST 42ND ST	NEW YORK NY	10017
002596	HARTZ MOUNTAIN CORP		700 FRANK E. RODGERS BLVD. SO	HARRISON NJ	07029
007401	VOLUNTARY PURCHASING GROUP, INC.		P. O. BOX 460	BONHAM TX	75418
010107	CORN BELT CHEMICAL COMPANY		BOX 410	MCCOOK NE	69001
034704	WILLIAM M. MAHLBURG	AGENT FOR: PLATTE CHEMICAL CO., IN	_____- BOX 667	GREELEY CO	80632
056644	SECURITY PRODUCTS COMPANY OF DELAW		7801 METRO PARKWAY BOX 59084	MINNEAPOLIS MN	55420
060258	MONROVIA NURSERY COMPANY		18331 EAST FOOTHILL BOULEVARD	AZUSA CA	91702

ATTACHMENT E

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

8. (continued)

____ 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)

61 Product Identity and Composition

GUIDANCE FOR SUMMARIZING STUDIES

The following criteria apply to the technical grade of the active ingredient being reregistered. Items 1, 2, 3, and 5 can be satisfied for most registered products by submission of the Certified Statement of Formula Ingredients Page (EPA Form 8570-4). Items 7 and 8 can be satisfied for most technical grade active ingredients (TGAIs) by submission of a flow chart with chemical equations for each intended chemical reaction. The flow chart should include complete chemical structures and names for each reactant and product of all the reactions.

1. Name of technical material (include product name and trade name, if appropriate).
2. Description of each active and intentionally-added inert ingredient, including name, concentration, and certified limits.
3. Name and upper limit for all impurities present at $\geq$ 0.1% and those toxicologically significant impurities present at <0.1%.
4. The purpose of each active and intentionally-added inert ingredient.
5. Chemical name and Registry Number for each active and intentionally-added inert ingredient (if available).
6. Molecular, structural, and empirical formulas, molecular weight, and any experimental or internal code number for each active ingredient.
7. Description of each beginning material in the manufacturing process.
8. Description of manufacturing process.
9. Discussion of formation of impurities based on established chemical theory.

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 ≥ 0.1%
2.___ Degree of accountability or closure ≥ 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 ≥ 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

62 Analysis and Certification of Product Ingredients

GUIDANCE FOR SUMMARIZING STUDIES

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

1. Number of representative samples analyzed for all active ingredients and all impurities at $\geq$ 0.1%.

2. Degree of accountability or closure in analyses in item #1.

3. Chemical names of toxic impurities which were analyzed for levels <0.1%.

4. Brief description(s) of analytical method(s) used to measure active ingredients and impurities in items #1 and #3.

5. Statement of precision and accuracy of method(s) in item #4.

6. Chemical name and quantities observed (range, mean, standard deviation) for each ingredient (actives and impurities) analyzed in item #1.

7. Proposed upper and lower certified limits for each active ingredient and intentionally added inert with brief explanation of how limits were determined.

8. Proposed upper certified limit for each impurity present at >=0.1% and certain toxicologically significant impurities at <0.1% with brief explanation of how limits were determined.

9. Brief description of analytical method(s) used to verify certified limits (if same methods as item #4, may reference latter).

10. Statement of precision and accuracy of method(s) in item #9 (may reference item #5 if applicable).

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

63 Physical and Chemical Characteristics

GUIDANCE FOR SUMMARIZING STUDIES

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

1. Description of color.
2. Description of physical state.
3. Description of odor.
4. Indication of melting point (in C°).
5. Indication of boiling point (in C°).
6. Indication of density, bulk density, and specific gravity.
7. Indication of solubility.
8. Indication of vapor pressure.
9. Indication of dissociation constant.
10. Indication of octanol/water partition coefficient.
11. Indication of PH.
12. Description of stability.

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
81-7	Acute Neurotoxicity in the Hen

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 a * are supplemental and may not be required for every study.

81-1 Acute Oral Toxicity in the Rat

GUIDANCE FOR SUMMARIZING STUDIES

1. The form of pesticide tested, e.g. solid, liquid, percent AI in technical, end-use product, etc.
2. The number of animals/dose/sex tested.
3. Dosing route and regimen.
4. Vehicle used
5. Doses tested and results
6. Individual observations on day of dosing and for at least 14 days.
7. Summarization of body weights
8. Summarization of gross necropsy
9. Significance of changes from the Acceptance Criteria

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 a * are supplemental and may not be required for every study.

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

GUIDANCE FOR SUMMARIZING STUDIES

1. The form of pesticide tested, e.g., solid, liquid, percent AI in technical, end-use product, etc.
2. The number of animals/sex/dose
3. Weight range of animals
4. Verification of single, dermal exposure
5. Duration of dermal exposure
6. Statement of vehicle control
7. Doses tested and results
8. Preparation of application site
9. Area of application site (percent body surface)
10. Occlusion of test material on application site
11. Individual observations on day of dosing and for at least 14 days or until all animals appear normal (whichever is longer).
12. Summarization of body weights
13. Summarization of gross necropsy
14. Significance of changes from Acceptance Criteria

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 um 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 (±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.

81-3 Acute Inhalation Toxicity in the Rat

GUIDANCE FOR SUMMARIZING STUDIES

1. The form of pesticide tested, e.g., solid, liquid, percent AI in technical, end-use product, etc.
2. Statement of the inhalability of test substance
3. The number of animals/sex/dose
4. Duration of inhalation exposure
5. Number of chamber air changes/hour and the percent oxygen content of chamber air
6. Ranges for chamber air temperature and relative humidity
7. Air flow rate
8. Analytical concentrations of test material in breathing zone
9. Results of aerosol particle-size determination
10. Doses tested (or limit dose of 5mg/L or highest attainable)
11. Individual observations on day of dosing and for at least 14 days.
12. Summarization of body weights
13. Summarization of gross necropsy
14. Significance of changes from Acceptance Criteria

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 a * are supplemental and may not be required for every study.

81-4 Primary Eye Irritation in the Rabbit

GUIDANCE FOR SUMMARIZING STUDIES

1. The form of pesticide tested, e.g., solid, liquid, percent AI in technical, end-use product, etc.
2. State if material is corrosive, cause severe dermal irritation or has a pH of <2 or >11.5
3. Number of adult rabbits tested
4. State method of dosing, i.e., instillation into the conjunctival sac of one eye per animal
5. Dose administered
6. Note whether solid or granular test material has been ground to a fine dust
7. State whether eyes were washed and at what time post instillation (not less than 24 hours)
8. State whether eyes were examined and graded for irritation before dosing and at what periods after dosing
9. Individual daily observations afterwards, until eyes are normal or for 21 days
10. Significance of changes from Acceptance Criteria

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 ≤ 2 or ≥ 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.
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 a * are supplemental and may not be required for every study.

81-5 Primary Dermal Irritation Study

GUIDANCE FOR SUMMARIZING STUDIES

1. The form of pesticide tested, e.g., solid, liquid, percent AI in technical, end-use product, etc.
2. State if material is corrosive, has a pH <2 or >11.5, or has a dermal LD 50 <200 mg/kg
3. Number of adult animals tested
4. Amount applied
5. Duration of dermal exposure
6. Preparation of application site (shaved or clipped at specified time before dosing)
7. Area of application site
8. Method for occlusion of application site
9. Note removal of test material and if skin was washed with water
10. State times post application when site was graded for irritation
11. Individual observations for day of dosing and individual daily observations thereafter
12. Significance of changes from Acceptance Criteria.

81-6 Dermal Sensitization in the Guinea Pig

ACCEPTANCE CRITERIA

dose 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 a * are supplemental and may not be required for every study.

81-6 Dermal Sensitization in the Guinea Pig

GUIDANCE FOR SUMMARIZING STUDIES

1. The form of pesticide tested, e.g., solid, liquid, percent AI in technical, end-use product, etc.
2. State if material is corrosive or has pH <2 or >11.5.
3. State specific method utilized
4. Complete description of specific method
5. Reference for the specific method employed
6. Note adherence of the protocol to that in the reference for the specific method utilized
7. State the positive control tested
8. Significance of changes from Acceptance Criteria

81-7 Acute Neurotoxicity in the Hen

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1.____ Study performed on an organophosphate cholinesterase inhibiting compound.
2.____ Technical form of the active ingredient tested.
3.*___ Positive control utilized.
4.____ Species utilized, domestic laying hen 8-14 months of age.
5.____ Dosing oral by gavage or capsule (dermal or inhalation may be used).
6.____ An acute oral LD is determined.
7.____ Dose tested equal to an acute oral LD or a limit test of 5000 mg/kg.
8.*___ Dosed animals may be protected with atropine and/or 2-PAM.
9.____ Sufficient test animals so that at least 6 survive.
10.____ Negative (vehicle) control group of at least 6 hens
11.*___ Positive control of at least 4 hens. (if used)
12.____ Test dose repeated if no signs of delayed neurotoxicity observed by 21 days after dosing.
13.____ Observation period 21 days after each dose.
14.____ Individual daily observations.
15.____ Individual body weights.
16.____ Individual necropsy not required.
17.____ Histopathology performed on all animals. Tissue to be fixed in sin preferably using whole animal perfusion techniques. At least three sections of each of the following tissues:
_____brain, including medulla oblongata
_____spinal cord; upper cervical, mid-thoracic and lumbro-sacral regions
_____tibial nerve; proximal regions and branches
_____sciatic nerve

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

ATTACHMENT F

Generic Data Call-In Cost Share and Data Compensation Forms

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
Approval Expires 12-31-92

Please fill in blanks below.

Company Name	Company Number
Chemical Name	**EPA Chemical Number**

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)	

United States Environmental Protection Agency
Washington, DC 20460

CERTIFICATION WITH RESPECT TO DATA COMPENSATION REQUIREMENTS

Form Approved
OMB No. 2070-0106
Approval Expires 12-31-92

Please fill in blanks below.

Company Name	Company Number
Chemical Name	**EPA Chemical Number**

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)

   [ ] All companies on the data submitters' list for the active ingredient listed on this form (Cite-All Method or Cite-All Option under the Selective Method). (Also sign the General Offer to Pay below.)

   [ ] 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)	

ATTACHMENT F

Generic Data Call-In Cost Share and Data Compensation Forms

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
Approval Expires 12-31-92

Please fill in blanks below.

Company Name	Company Number

Chemical Name	EPA Chemical Number

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 da[redacted]

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

Nam[redacted]d Title (Please Type or Print)

United States Environmental Protection Agency
Washington, DC 20460

CERTIFICATION WITH RESPECT TO DATA COMPENSATION REQUIREMENTS

Form Approved
OMB No. 2070-0106
Approval Expires 12-31-92

Please fill in blanks below.

Company Name	Company Number
Chemical Name	**EPA Chemical Number**

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. 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)

   [ ] All companies on the data submitters' list for the active ingredient listed on this form (Cite-All Method or Cite-All Option under the Selective Method). (Also sign the General Offer to Pay below.)

   [ ] 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)	

APPENDIX G

Product Specific Data Call-In

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

DATA CALL-IN NOTICE

CERTIFIED MAIL

SEP 30 1992

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

Dear Sir or Madam:

This Notice requires you and other registrants of pesticide products containing the active ingredient identified in Attachment A 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 C, 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 B, Data Call-In Response Form, as well as a list of all registrants who were sent this Notice (Attachment F).

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:

A - Data Call-In Chemical Status Sheet
B - Data Call-In Response Form
C - Requirements Status and Registrant's Response Form
D - EPA Grouping of End-Use Products for Meeting Acute Toxicology Data Requirements for Reregistration
E - EPA Acceptance Criteria
F - List of Registrants Receiving This Notice
G - 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 C, 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 C, Requirements Status and Registrant's Response Form, within the timeframes 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 choose 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 B and Attachment C. 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 B). 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 A.

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 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. 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 this option, 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 option 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 timeframe (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, Agree 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 G. In addition, you must demonstrate that the other registrant to whom the offer was made has not accepted your offer to enter into a costsharing 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) " '[r]aw 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 A. 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 will 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 if 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 if 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 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.

V-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 (if applicable), 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 a 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.

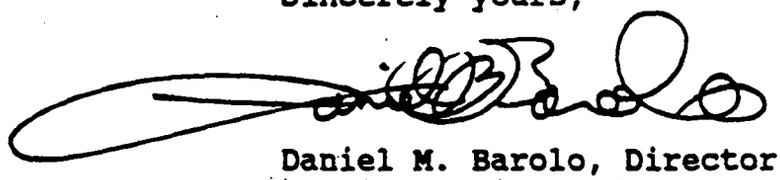
SECTION VI. INQUIRIES AND RESPONSES TO THIS NOTICE

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

All responses to this Notice (other than voluntary cancellation requests) must include a completed Data Call-In Response Form and a completed Requirements Status and Registrant's Response Form (Attachment B and Attachment C) and any other documents required by this Notice, and should be submitted to the contact person(s) identified in Attachment A. If the voluntary cancellation 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

A - Data Call-In Chemical Status Sheet
B - Data Call-In Response Form
C - Requirements Status and Registrant's Response Form
D - EPA Grouping of End-Use Products for Meeting Acute Toxicology Data Requirements for Reregistration
E - EPA Acceptance Criteria
F - List of Registrants Receiving This Notice
G - Cost Share and Data Compensation Forms, and Product Specific Data Report Form

ATTACHMENT A

Product Specific Chemical Status Sheet

ATTACHMENT A

STREPTOMYCIN: PRODUCT SPECIFIC DATA CALL-IN CHEMICAL STATUS SHEET

INTRODUCTION

You have been sent this Product Specific Data Call-In Notice because you have products containing streptomycin.

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 streptomycin. 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 B), (3) the Requirements Status and Registrant's Form (Attachment C), (4) EPA's Grouping of End-Use Products for Meeting Acute Toxicology Data Requirements for Reregistration (Attachment D) (5) a list of registrants receiving this DCI (Attachment E), (6) the Cost Share and Data Compensation Forms in replying to this Streptomycin Product Specific Data Call-In (Attachment F). Instructions and guidance accompany each form.

DATA REQUIRED BY THIS NOTICE

The additional data requirements needed to complete the product specific database for streptomycin are contained in the Requirements Status and Registrant's Response (Attachment C). The Agency has concluded that additional data on streptomycin are needed for specific products. While product specific data requirements were imposed in the 1988 Registration Standard, a complete listing is provided in Attachment C. If you, as a registrant of a streptomycin product, responded to the 1988 Registration Standard and submitted the data relating to your specific product, simply choose response number 6 and cite the MRID number that was assigned to your study. Otherwise, these data are required to be submitted to the Agency within the timeframe listed. These data are needed to fully complete the reregistration of all eligible streptomycin products.

INQUIRIES AND RESPONSES TO THIS NOTICE

If you have any questions regarding the **generic** data requirements of streptomycin, please contact Theresa A. Stowe at (703) 308 - 8043.

If you have any questions regarding the **product specific** data requirements and procedures established by this Notice, please contact Benjamin C. Chambliss (703) 305 - 7382.

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

Susan J. Lewis, Product Manager 21
Herbicide and Fungicide Branch
Registration Division (H7505C)
Office of Pesticide Programs
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

RE: STREPTOMYCIN

ATTACHMENT B

Product Specific Data Call-In Response Forms (Form A) 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 registration 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 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.

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 guideline 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 pattern(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. It is normally based on **8 months after issuance of the Reregistration Eligibility Document** unless EPA determines that a longer time period is necessary.

Item 9. **Enter <u>only one</u> of the following response codes <u>for each data requirement</u> 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 **only** 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 may 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 required 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 upgradable (**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)** for the cited data on a "Product Specific Data Report" form or in a similar format. If I cite another registrant'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 required 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 and Registrant's Response" Form indicating the option chosen. I also understand that the deadline for submission of data as specified by the original data call-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.

United States Environmental Protection Agency
Washington, D. C. 20460

DATA CALL-IN RESPONSE

Form Approved
OMB No. 2070-0107
Approval Expires 12-31-92

INSTRUCTIONS: Please type or print in ink. Please read carefully the attached instructions and supply the information requested on this form. Use additional sheet(s) if necessary.

1. Company name and Address	2. Case # and Name	3. Date and Type of DCI
SAMPLE COMPANY NO STREET ADDRESS NO CITY, XX 00000	0169 Streptomycin	PRODUCT SPECIFIC SEP 30 1992

4. EPA Product Registration	5. I wish to cancel this product registration voluntarily.	6. Generic Data		7. Product Specific Data	
		6a. I am claiming a Generic Data Exemption because I obtain the active ingredient from the source EPA registration number listed below.	6b. I agree to satisfy Generic Data requirements as indicated on the attached form entitled "Requirements Status and Registrant's Response."	7a. My product is a MUP and I agree to satisfy the MUP requirements on the attached form entitled "Requirements Status and Registrant's Response."	7b. My product is an EUP ar I agree to satisfy the EUP requirements on the attachc form entitled "Requirements Status and Registrant's Response."
NNNNNN-NNNNN		N.A.	N.A.		

8. Certification

I certify that the statements made on this form and all attachments are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine, imprisonment or both under applicable law.

Signature and Title of Company's Authorized Representative_____

9. Date

10. Name of Company Contact

11. Phone Number

ATTACHMENT C

Product Specific Data Call-In Requirements Status and Registrant's Response Forms (Form B) plus Instructions

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

Product Specific Data

This form is designed to be used for registrants to respond to call-ins 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 product specific 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.

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 guideline 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 pattern(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. It is normally based on 8 months after issuance of the Reregistration Eligibility Document unless EPA determines that a longer time period is necessary.

Item 9. Enter <u>only one</u> of the following response codes <u>for each data requirement</u> 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 and a completed "Certification With Respect To Data Compensation Requirements" form. 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 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 may 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 required 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 upgradable (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) for the cited data on a "Product Specific Data Report" form or in a similar format. If I cite another registrant'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 required 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 and Registrant's Response" Form indicating the option chosen. I also understand that the deadline for submission of data as specified by the original data call-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.

United States Environmental Protection Agency
Washington, D. C. 20460

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved
OMB No. 2070-0107
Approval Expires 12-31-92

INSTRUCTIONS: Please type or print in ink. Please read carefully the attached instructions and supply the information requested on this form. Use additional sheet(s) if necessary.

1. Company name and Address	2. Case # and Name	3. Date and Type of DCI
SAMPLE COMPANY NO STREET ADDRESS NO CITY, XX 00000	0169 Streptomycin EPA Reg. No. NNNNNN-NNNNN	PRODUCT SPECIFIC ID# NNNNNN-RD-NNNN SEP 30 1992

4. Guideline Requirement Number	5. Study Title		PROTOCOL	Progress Reports 1	2	3	6. Use Pattern	7. Test Substance	8. Time Frame	9. Registrant Response
	Prod Chem - Regular Chemical									
61-1	Product identity & composition	(1)					ABCDEFGHIJKLMNO	MP/EP	8 mos.	
61-2(a)	Descrip of starting materials, production & formulation proc	(1,2)					ABCDEFGHIJKLMNO	MP/EP	8 mos.	
61-2(b)	Discussion of formation of impurities	(1,3)					ABCDEFGHIJKLMNO	MP/EP	8 mos.	
62-1	Preliminary analysis	(1,4)					ABCDEFGHIJKLMNO	MP/EP	8 mos.	
62-2	Certification of limits	(1,5)					ABCDEFGHIJKLMNO	MP/EP	8 mos.	
62-3	Analytical method	(1)					ABCDEFGHIJKLMNO	EP	8 mos.	
63-3	Physical state						ABCDEFGHIJKLMNO	EP	8 mos.	
63-7	Density						ABCDEFGHIJKLMNO	EP	8 mos.	
63-12	pH	(9)					ABCDEFGHIJKLMNO	EP	8 mos.	
63-14	Oxidizing or reducing action	(10)					ABCDEFGHIJKLMNO	MP/EP	8 mos.	
63-15	Flammability	(11)					ABCDEFGHIJKLMNO	EP	8 mos.	
63-16	Explodability	(12)					ABCDEFGHIJKLMNO	EP	8 mos.	

10. Certification

I certify that the statements made on this form and all attachments are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine, imprisonment or both under applicable law.

Signature and Title of Company's Authorized Representative_____

11. Date

12. Name of Company Contact

13. Phone Number

United States Environmental Protection Agency
Washington, D. C. 20460

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved
OMB No. 2070-0107
Approval Expires 12-31-92

INSTRUCTIONS: Please type or print in ink. Please read carefully the attached instructions and supply the information requested on this form. Use additional sheet(s) if necessary.

1. Company name and Address	2. Case # and Name	3. Date and Type of DCI
SAMPLE COMPANY NO STREET ADDRESS NO CITY, XX 00000	0169 Streptomycin EPA Reg. No. NNNNNN-NNNNN	PRODUCT SPECIFIC ID# NNNNNN-RD-NNNN

4. Guideline Requirement Number	5. Study Title		Protocol	Progress Reports 1	2	3	6. Use Pattern	7. Test Substance	8. Time Frame	9. Registrant Response
63-17	Storage stability	(38)					ABCDEFGHIJKLMNO	EP	8 mos.	
63-18	Viscosity	(13)					ABCDEFGHIJKLMNO	EP	8 mos.	
63-19	Miscibility	(14)					ABCDEFGHIJKLMNO	EP	8 mos.	
63-20	Corrosion characteristics						ABCDEFGHIJKLMNO	MP/EP	8 mos.	
	Acute Toxic - Regular Chemical									
81-1	Acute oral toxicity-rat	(1,36,37)					ABCDEFGHIJKLMNO	MP/EP and TGAI	8 mos.	
81-2	Acute dermal toxicity-rabbit/rat	(1,2,37)					ABCDEFGHIJKLMNO	MP/EP and TGAI	8 mos.	
81-3	Acute inhalation toxicity-rat	(3)					ABCDEFGHIJKLMNO	MP/EP and TGAI	8 mos.	
81-4	Primary eye irritation-rabbit	(2)					ABCDEFGHIJKLMNO	MP/EP	8 mos.	
81-5	Primary dermal irritation	(1,2)					ABCDEFGHIJKLMNO	MP/EP	8 mos.	
81-6	Dermal sensitization	(4)					ABCDEFGHIJKLMNO	MP/EP	8 mos.	

Initial to indicate certification as to information on this page (full text of certification is on page one).

Date

United States Environmental Protection Agency
Washington, D. C. 20460

FOOTNOTES AND KEY DEFINATIONS FOR GUIDELINE REQUIREMENTS

Case # and Name: 0169 Streptomycin

Key: MP = manufacturing-use product; EP = end-use product; provided formulators purchase their active ingredient(s) from a registered source, they need not submit or cite data pertaining to the purchased product. [NOTE: If a product is a 100 percent repackage of another registered product that is purchased, and any use for the product does not differ from those of the purchased and registered source, users are not subject to any data requirements identified in the tables.]; TEP = typical end-use product; TGAI = technical grade of the active ingredient; PAI = "pure" active ingredient; PAIRA = "pure" active ingredient, radiolabeled.

Use Categories Key:

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

Footnotes: [The following notes are referenced in column two (5. Study Title) of the REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE form.]

Prod Chem - Regular Chemical

1 Requirements pertaining to product identity, composition, analysis, and certification of ingredients are detailed further in the following sections: *158.155 for product identity and composition (61-1); *158.160, 158.162, and 158.165 for description of starting materials and manufacturing process (61-2); *158.167 for discussion of formation of impurities (61-3); *158.170 for preliminary analysis (62-1); *158.175 for certification of limits (62-2); and *158.180 for enforcement analytical methods (62-3).
2 A schematic diagram and/or brief description of the production process will suffice if the pesticide is not already under full scale production and an experimental use permit is being sought.
3 If the pesticide is not already under full scale production and an experimental use permit is sought, a discussion of unintentional ingredients shall be submitted to the extent this information is available.
4 Required to support the registration of each manufacturing-use product (including registered TGAIs) as well as end-use products produced by an integrated system. Data on other end-use products will be required on a case-by-case basis. For pesticides in the development state, a rudimentary product analytical method and data will suffice to support an experimental use permit.
5 Certified limits are not required for inert ingredients in products proposed for experimental use.
9 Required if test substances are dispersible with water.
10 Required if product contains an oxidizing or reducing agent.
11 Required if product contains combustible liquids.
12 Required if product is potentially explosive.
13 Required if product is a liquid.
14 Required if product is an emulsifiable liquid and is to be diluted with petroleum solvents.
38 Storage Stability Data required for a minimum of 12 months at 20 degrees or 25 degrees C, and if the package is permeable, at relative humidity of 50% or under warehouse conditions which reflect the expected storage conditions of the commercial product.

Acute Toxic - Regular Chemical

1 Not required if test material is a gas or highly volatile.
2 Not required if test material is corrosive to skin or has pH less than 2 or greater than 11.5; such a product will be classified as Toxicity Category I on the basis of potential eye and dermal irritation effects.
3 Required if the product consists of, or under conditions of use will result in, an inhalable material (e. g., gas, volatile substances, or aerosol/particulate).
4 Required unless repeated dermal exposure does not occur under conditions of use.
36 Special testing (acute, subchronic, and/or chronic) is required for organophospates, and may be required for other cholinesterase inhibitors and other pesticides which have demonstrated a potential to adversely affect the visual system. Registrants should consult with the agency for development of protocols and methodology

United States Environmental Protection Agency
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FOOTNOTES AND KEY DEFINATIONS FOR GUIDELINE REQUIREMENTS

Case # and Name: 0169 Streptomycin

Footnotes (cont.):

prior to initiation of studies.

37 Testing of the EP dilution is required if it can be reasonably anticipated that the results of such testing may meet the criteria for restriction to use by certified applicators specified in 40 CFR 152.170(b) or the criteria for initiation of special review specified in 40 CFR 154.7 (a)(1).

ATTACHMENT D

EPA's Grouping of End-Use Products for Meeting Acute Toxicology Data Requirements for Reregistration

ATTACHMENT D

EPA'S BATCHING OF STREPTOMYCIN AND STREPTOMYCIN SULFATE END-USE PRODUCTS 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 end-use products containing the active ingredients streptomycin and streptomycin sulfate, 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.

Batching has been accomplished using the readily available information described above. Frequently acute toxicity data on individual end-use 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 end-use product should the need arise.

Registrants of end-use 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 registrant's option to participate in the process with all the 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 in Appendix F, Attachment E), 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 referenced, registrants must clearly identify the test material by EPA Registration Number.

In deciding how to meet the product specific data requirements, 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 contains three different batches with each one containing two products.

TABLE I

BATCH#	EPA REG. NO.	% ACTIVE	ACTIVE INGREDIENTS	FORMU-LATION
1	618-101	21.20	Streptomycin sulfate	Powder
	34704-577	21.20	Streptomycin sulfate	Powder
2	618-72	62.60	Streptomycin sulfate	Powder
	34704-425	0.30	Streptomycin	Powder
3	618-28	21.20	Streptomycin sulfate	Powder
	56644-31	21.20	Streptomycin sulfate	Powder

Ten products (Table II) were either considered not to be similar for purposes of acute toxicity or the Agency lacked 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 REG. NO.	% ACTIVE	ACTIVE INGREDIENTS	FORMULATION
70-259	21.20	Streptomycin sulfate	Powder
554-108	8.00 0.01	Maneb Streptomycin sulfate	Powder
618-100	62.50	Streptomycin sulfate	Powder
2596-41	15.00	Streptomycin sulfate	Tablet
7401-311	21.20	Streptomycin sulfate	Powder
10107-94	7.30 0.01	Captan Streptomycin sulfate	Powder
10107-98	7.30 0.01	Captan Streptomycin sulfate	Powder
34704-156	7.33 0.01	Captan Streptomycin	Powder
34704-338	0.15	Streptomycin	Powder
34704-675	7.33 0.01	Captan Streptomycin	Powder

ATTACHMENT E

Product Specific Data Call-In
Cost Share and Data Compensation Forms

United States Environmental Protection Agency
Washington, DC 20460

CERTIFICATION WITH RESPECT TO DATA COMPENSATION REQUIREMENTS

Form Approved
OMB No. 2070-0106
Approval Expires 12-31-92

Please fill in blanks below.

Company Name	
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:

   [ ] 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)	

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
Approval Expires 12-31-92

Please fill in blanks below.

Company Name	
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

EPA	US Environmental Protection Agency Washington, DC 20460 **Product Specific Data Report**	Registration Standard for:	EPA Registration Number		Form Approved OMB #2070-0057 Expires 11-30-89

Registration Guideline No.	Name of Test	Testing not required for my product listed above *(Check below)*	I am complying with Data Requirements by -		(For EPA Use Only) Accession numbers assigned
			Citing MR ID No.	Submitting Data *(Attached)* *(Check below)*	
Sec. 158.120 Product Chemistry					
61-1	Identity of ingredients				
61-2 (a)	Statement of composition				
61-2 (b)	Discussion of formation of ingredients				
62-1	Preliminary analysis				
62-2	Certification of limits				
62-3	Analytical methods for enforcement limits				
63-2	Color				
63-3	Physical state				
63-4	Odor				
63-5	Melting point				
63-6	Boiling point				
63-7	Density, bulk-density, or specific gravity				
63-8	Solubility				
63-9	Vapor pressure				
63-10	Dissociation constant				
63-11	Octanol/water partition coefficient				
63-12	pH				
63-13	Stability				
63-14	Oxidizing/reducing reaction				
63-15	Flammability				
63-16	Explodability				
63-17	Storage stability				
63-18	Viscosity				
63-19	Miscibility				
63-20	Corrosion Characteristics				
63-21	Dielectric breakdown voltage				
Sec. 158.135 Toxicology					
81-1	Acute oral toxicity, rat				
81-2	Acute dermal toxicity, rabbit /rat/g.pig				
81-3	Acute inhalation toxicity, rat				
81-4	Primary eye irritation, rabbit				
81-5	Primary dermal irritation				
81-6	Dermal sensitization				

Certification

I certify that the statements I have made on this form and all attachments thereto 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.

Typed Name and Title	Signature	Date