

GUIDANCE FOR THE REREGISTRATION  
OF MANUFACTURING-USE  
AND CERTAIN END-USE PESTICIDE PRODUCTS  
CONTAINING BARIUM METABORATE (011101)  
AS THE ACTIVE INGREDIENT

ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF PESTICIDE PROGRAMS  
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## I. INTRODUCTION

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 3(g), as amended in 1978, directs the Environmental Protection Agency (EPA) to reregister all currently registered products as expeditiously as possible. Each registrant of a currently registered product who wishes to continue to sell or distribute that product in commerce must apply for reregistration.

This guidance document sets forth certain of the requirements for registration and reregistration of all manufacturing-use products (MPs) containing the subject chemical as the sole active ingredient. These requirements include: that certain scientific data be submitted and that certain standards of toxicity, composition, labeling, and packaging be met. Registrants of MPs are referred to all Sections and Tables for specific information regarding their responsibilities under this guidance document.

This guidance document also sets forth the data requirements for those end-use products which contain the subject active ingredient and for which the source of that active ingredient is (1) not registered with EPA or (2) produced by the registrant's firm, or a firm which has ownership in common with the registrant's firm, or (3) both (1) and (2). Registrants of such end-use products can exempt themselves from these requirements if they change their source of supply to a registered source, provided the source (i.e., registered active ingredient product) is obtained from a firm that does not share ownership in common with the registrant's firm. (If the end-use product registrant decides to switch sources, a new confidential statement of formula, EPA Form 8570-4, must be submitted to the appropriate Product Manager within 90 days of receipt of this guidance document.) Registrants of affected end-use products are referred to only Sections II, III, and VI and Table A for specific information regarding their responsibilities under this guidance document.

It should be noted that end-use products containing the subject active ingredient will not be reregistered at this time. Any necessary labeling changes will be implemented under the Agency's Label Improvement Program at a future time.

EPA will issue a notice of intent to cancel or suspend the registration of any currently registered product if the registrant fails to comply with the requirements set forth in this guidance document and with the requirements contained in subsequent information from EPA about compliance with certain data support requirements.

This guidance document has been prepared to provide registrants with specific information on how they may reregister their manufacturing-use products or maintain their end-use products' registration. (Refer to the cover letter's attachment for a listing of your affected products.) If for any reason you decide to request that the Agency discontinue the registration of any of your products subject to the registration requirements in this document, please notify the Product Manager named in the cover letter, within 90 days from the receipt of this document, that you wish to voluntarily cancel the registration(s). If you decide to maintain your product registration(s), you must provide the information described in the following pages within the timeframes outlined.

Registrants are reminded that Section 6(a)(2) of FIFRA requires you at any time to submit factual information raising concerns of possible unreasonable adverse effects of a pesticide. You should notify the Agency of interim results of studies in progress if those results show possible adverse effects.

This guidance document will be supplemented by EPA with additional information about compliance with data support requirements. In Monsanto v. Administrator, EPA was recently enjoined by the District Court for the Eastern District of Missouri from implementing in any way the "mandatory data licensing" aspects of §3(c)(1)(D) of FIFRA. EPA is assessing the implications of the injunction for the reregistration process. Because this situation is currently unresolved, EPA has decided to proceed with the requirements in this guidance package which do not relate to the "data licensing" issue and to supplement the package with additional guidance when circumstances permit.

## II. REGULATORY POSITION AND RATIONALE

### A. INTRODUCTION

This chapter describes the regulatory position of the Environmental Protection Agency ("the Agency") on barium metaborate, based on an evaluation of all registered manufacturing-use products (MUPs) containing barium metaborate as the sole active ingredient. Future requests for registrations of substantially similar products will be covered by this standard. This document provides the rationale for the Agency's position and the criteria for registration. It also discusses labeling requirements.

### B. USE PROFILE

Barium metaborate is registered with the Agency in only one Manufacturing Use Product, BUSAN-11-M1. The Office of Pesticide Programs' Internal Control Number (EPA Shaughnessy Number) for barium metaborate is 011101, while its CAS number is 1370-59-2.

Barium metaborate is a broad spectrum killer of bacteria, fungi, and other micro-organisms. It is used as a preservative in paper coating formulations to protect paper products from microbiological degradation during storage. It is also used in paints and coatings. At higher concentrations it is used to impart mold resistance to coated paper and paper board. It has been allowed for use in the manufacture of paper and paperboard under U.S. Food and Drug Administration Regulations 21 CFR 176.180, "components of paper and paperboard in contact with dry food."

There are many nonpesticidal uses on the BUSAN 11-M1 labels which are not regulated by the Agency, such as fire retardants, antioxidants, and others.

### C. REGULATORY POSITION

Based on a review and evaluation of all available data and other relevant information on barium metaborate the Agency has made the following determinations:

1. Manufacturing-use pesticide products containing barium metaborate as a sole active ingredient may be registered for sale, distribution, formulation, and use in the United States, subject to the terms and conditions specified in this standard. Applicants having products not conforming to this standard must apply to amend the document so those products containing barium metaborate may be registered and reregistered. Mixtures and end-use products containing barium metaborate may not be registered or reregistered under this standard. However, the use patterns of the end-use products are considered for purposes of determining generic data requirements for barium metaborate.

2. Available data do not show that any of the risk criteria listed in Section 162.11(a) of Title 40 of the U.S. Code of Federal Regulations have been met or exceeded for the uses of barium metaborate specified in this standard.
3. Registrants must provide or agree to develop additional data, as specified in the tables attached to this standard, in order to maintain existing registrations or to permit new barium metaborate registrations.
4. The potential for barium metaborate to affect dry foods is adequately regulated by the U.S. Food and Drug Administration under Regulation 21 CFR 176.180, "components of paper and paper board in contact with dry food." There is no need for EPA regulation in this area.

#### D. REGULATORY RATIONALE

The Agency has determined that it should allow the registration of barium metaborate to continue for existing use patterns for the following reasons:

1. While little data is available concerning barium metaborate, the Agency believes it is reasonable to infer that the likely human hazards arising from the use of barium metaborate are probably minimal. This decision is based upon the following points:
  - a. We do not believe the use of barium metaborate on paint will result in significant human exposure. All end uses of barium metaborate are incorporated into coatings used on surfaces, i.e., paints or coatings on paper or paper board, which minimizes human exposure. Several indoor use sites which might expose young children (schools, public buildings, hospitals, and domestic housing) are in the process of being voluntarily removed from the label by the registrant. Any application for registration of an indoor use site which might expose children must be accompanied by sufficient justification and/or data to demonstrate that human exposure is insignificant.
  - b. While minimal information is available concerning barium--in the form of its salts--there is no evidence to indicate that barium salts present any chronic hazard.
  - c. Considering the chemical nature of barium metaborate, it is reasonable to conclude that the probable vapor pressure is slight and thus any exposure due to inhalation is likely to be minimal.
2. The Agency has adequate acute toxicity data on barium metaborate for regulatory purposes. However, one acute study, an acute inhalation LC<sub>50</sub>, is outstanding and constitutes a data gap to be filled. Long term toxicology studies have been waived because significant or repeated exposure is not expected due to the registered use patterns.

3. The available data on the environmental fate and ecological effects of barium metaborate used in coatings is minimal. However, due to the minimal potential for exposure to the aquatic environment from barium metaborate sealed in paint coatings, data requirements in these areas have been waived.
4. It is not the Agency's policy to cancel or to withhold registration merely because data are missing or inadequate (see sections 3(c)(2)(B) and 3(c)(7) of the FIFRA). Rather, publication of this standard provides a mechanism for identifying data needs, and registration under the standard allows for the upgrading of labels during the period in which the required data are being developed. These data will be reviewed and evaluated when they are received and the Agency will determine at that time whether they will affect the registration(s) of barium metaborate.

#### E. CRITERIA FOR REGISTRATION UNDER THIS STANDARD

All products which contain barium metaborate as the sole active ingredient are subject to this standard and must either comply with the acute toxicity limits, product composition, and use patterns requirements listed in Section F of this document or submit data and a justification to amend the standard to encompass such products.

The applicant for registration or reregistration of products subject to this standard must comply with all terms and conditions described in it, including committing to fill data gaps on a schedule agreed to by both this Agency and the applicant, and when applicable, offering to pay compensation for data to the extent required by section 3(c)(1)(D) of the FIFRA. Applicants for registration under this standard must follow the instructions contained in this guidance package and complete and submit the appropriate forms within the time specified.

#### F. ACCEPTABLE RANGES AND LIMITS

##### 1. Product Composition Standard

Technical grade products must contain at least 90 percent barium metaborate as the sole active ingredient (calculated as  $\text{BaB}_2\text{O}_4 \cdot \text{H}_2\text{O}$ ). Each manufacturing-use product must be fully described with an appropriate certification of limits. In addition, the active ingredient found in the manufacturing-use barium metaborate products must be substantially similar to that in currently registered technical products. Any manufacturing-use product not meeting these requirements will be considered a new product and will require an amendment to the standard.



## 2. Acute Toxicity Limits

The Agency will consider registration of technical grade and manufacturing-use products containing barium metaborate for acute toxicity category II, provided that the labeling of those products bears appropriate precautionary statements.

## 3. Use Patterns

To be registered under this standard, manufacturing-use products containing barium metaborate may be labeled for formulation only into end-use products for use as a modified barium metaborate pigment that inhibits the growth of bacteria, fungi, and other micro-organisms in paper coatings, paper board, and in paint. The attached index entry lists currently registered uses for end-use products, which have been formulated from the manufacturing-use products covered by this standard.

## G. REQUIRED LABELING

All technical grade and manufacturing-use products containing barium metaborate must bear appropriate labeling as specified in 40 CFR 162.10. Other portions of this guidance package contain specific information regarding label requirements.

In addition, the following specific labeling requirement applies to technical and manufacturing-use products.

### Use Pattern Statement

"Barium metaborate may only be used for formulation into products intended for the preservation of paint and other coatings, or to preserve coatings or sizing for paper or paper board intended for contact with dry food products."

### III. REQUIREMENT FOR SUBMISSION OF GENERIC DATA

- A. This portion of the guidance document is a Notice issued under the authority of FIFRA Section 3(c)(2)(B) and describes, in table format, the data required for maintaining the registrability of each product. Additionally, a bibliography (Appendix III-1) is included that identifies that data considered as part of the data base supporting this standard. EPA has determined that additional generic data described in this Notice must be submitted to EPA for evaluation in order to maintain in effect the registration(s) of your product(s) identified as an attachment to the cover letter accompanying this guidance document. As required by FIFRA Section 3(c)(2)(B), you are required to take appropriate steps to comply with this Notice.

EPA may suspend the registration of each of those products unless, within the specified time, you have informed EPA how you will satisfy the requirements of this Notice. Any such suspension will remain in effect until you have complied with the terms of this Notice.

- B. What Generic Data <sup>1/</sup>Must Be Submitted. You may ascertain which generic data you must submit by consulting Table A at the end of this section. That table shows all the generic data needed to evaluate the continued registrability of all products, and the dates by which the data must be submitted. The required data must be submitted and any necessary studies must be conducted in accordance with EPA-approved protocols, the Pesticide Registration Guidelines <sup>2/</sup>, or data collected under the approved protocols of the Organization for Economic Cooperation and Development (OECD). If you wish not to develop data which are necessary to support the registration or reregistration of certain uses appearing in your labeling, you may delete those uses at the time you submit your revised labeling.

Also for certain kinds of testing (generally ecological effects), EPA requires the test substance to be a "typical formulation," and in those cases EPA needs data of that

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<sup>1/</sup> Generic data pertain to the properties or effects of a particular ingredient, and thus are relevant to an evaluation of the risks of all products containing that ingredient (or all such products having a certain use pattern), regardless of any such product's unique composition or use. Product-specific data relate only to the properties or effects of a product with a particular composition (or a group of products with closely similar composition).

<sup>2/</sup> The Pesticide Registration Guidelines were repropoed on November 24, 1982 in 47 Federal Register 53192.

type for each major formulation category (e.g., emulsifiable concentrates, wettable powders, granulars, etc.) These are classified as generic data and when needed are specified in Table A. EPA may possess data on certain "typical formulations" but not others. Note: The "typical formulation" data should not be confused with product-specific data (Table B) which are required on each formulation. Product-specific data are further explained in Section IV of this document.

C. Options Available for Complying With Requirements to Submit Data

Within 90 days of your receipt of this Notice you must submit to EPA a completed copy of the form entitled "FIFRA Section 3(c)(2)(B) Summary Sheet" [EPA Form 8580-1, Appendix III-2] for each of your products. On that form you must state which of the following methods you will use to comply with the requirements of this Notice:

1. (a) Notify EPA that you will submit the data, and  
(b) either submit the existing data you believe will satisfy the requirement, or state that you will generate the data by conducting testing. If the test procedures you will use deviate from (or are not specified in) the Registration Guidelines or protocols contained in the Reports of Expert Groups to the Chemicals Group, Organization for Economic Cooperation and Development (OECD) Chemicals Testing Programme, you must enclose the protocols you will use.
2. Notify EPA that you have entered into an agreement with one or more other registrants to jointly develop (or share in the cost of developing) the data. If you elect this option, you must notify EPA which registrant(s) are parties to the agreement.
3. File with EPA a completed "Certification of Attempt to Enter Into an Agreement With Other Registrants for Development of Data" (EPA Form 8580-6, Appendix III-3)\*/  
4. Request that EPA amend your registration by deleting the uses for which the data are needed. (This option is not available to applicants for new products.)

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\*/ FIFRA Section 3(c)(2)(B) authorizes joint development of data by two or more registrants, and provides a mechanism by which parties can obtain an arbitrator's decision if they agree to jointly develop data but fail to agree on all the terms of the agreement. The statute does not compel any registrant to agree to develop data jointly.

(Footnote continued at bottom of next page)

5. Request voluntary cancellation of the registration(s) of your products for which the data are needed. (This option is not available to applicants for new products.)

D. Procedures for Requesting Changes in Testing Methodology and Extensions of Time

EPA recognizes that you may disagree with our conclusions regarding the appropriate ways to develop the required data or how quickly the data must be submitted. If the test procedures you plan to use deviate from (or are not specified in) the registration guidelines or protocols contained in the reports of the Expert Groups to the Chemical Groups, Organization for Economic Cooperation and Development (OECD) Chemicals Testing Programme, you must submit the protocol for Agency review prior to the initiation of the test.

If you think that you will need more time to generate the required data than is allowed by EPA's schedule, you may submit a request for an extension of time. The extension request must be submitted in writing to the Product Manager. The extension request should state the reasons why you conclude that an extension is appropriate. While EPA considers your request, you must strive to meet the deadline for submitting the required data.

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(Footnote continued from previous page)

In EPA's opinion, joint data development by all registrants who are subject to the requirements to submit a pertinent item of data or a cost-sharing agreement among all such registrants is clearly in the public interest. Duplication of testing could increase costs, tie up testing facilities, and subject an unnecessarily large number of animals to testing.

As noted earlier, EPA has discretion not to suspend the registration of a product when a registrant fails to submit data required under FIFRA Section 3(c)(2)(B). EPA has concluded that it is appropriate to exercise its discretion not to suspend in ways which will discourage duplicative testing. Accordingly, if (1) a registrant has informed us of his intent to develop and submit data required by this Notice; and (2) a second registrant informs EPA that it has made a bona fide offer to the first registrant to share in the expenses of the testing [on terms to be agreed upon or determined by arbitration under FIFRA Section 3(c)(2)(B)(iii)]; and (3) the first registrant has declined to agree to enter into a cost-sharing agreement, EPA will not suspend the second firm's registration. While the first firm is not required to agree to jointly develop data, EPA is not required to force the second firm to engage in economically inefficient duplicative testing in order to maintain its registration.

TABLE A  
GENERIC DATA REQUIREMENTS FOR BARIUM METABORATE

Data Requirement	<sup>1/</sup> Composition	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)? <sup>2/</sup>
<u>\$158.120 Product Chemistry</u>				
<u>Product Identity:</u>				
61-2 Statement of Composition	TGAI	Partially	GS-0024-009	Yes
61-3 Discussion of Formation of	TGAI	Partially	05012282	Yes
<u>Analysis and Certification of Product Ingredients</u>				
62-1 Preliminary Analysis	TGAI	No	----	Yes
<u>Physical and Chemical Characteristics</u>				
63-2 Color	TGAI	Yes	GS-0024-009	No
63-3 Physical State	TGAI	Yes	GS-0024-009	No
63-4 Odor	TGAI	Yes	GS-0024-009	No

<sup>1/</sup> Composition - TGAI = technical grade of the active ingredient. PAI = pure active ingredient.

<sup>2/</sup> Data must be submitted no later than 6 months.

TABLE A  
GENERIC DATA REQUIREMENTS FOR BARIUM METABORATE

Data Requirement	Composition 1/	Use Patterns 2/	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)? 3/
<u>158.135 Toxicology</u>					
<u>ACUTE TESTING:</u>					
81-1 Oral LD <sub>50</sub> - Rat	TGAI	H	Yes	GS-0024-006	No
81-2 Dermal LD <sub>50</sub>	TGAI	H	Yes	GS-0024-007	No
81-3 Inhalation LC <sub>50</sub>	TGAI	H	No	----	Yes
81-4 Primary Eye Irritation	TGAI	H	Yes	GS-0024-008	No
<u>SUBCHRONIC TESTING</u>					
82-2 21-Day Dermal	TGAI	H	No	----	No <u>4/</u>
82-3 90-Day Dermal	TGAI	H	No	----	No <u>4/</u>
82-4 90-Day Inhalation/ Rat	TGAI	H	No	----	No <u>4/</u>

1/ Composition - TGAI = technical grade of the active ingredient.

2/ The use patterns are coded as follows: A = terrestrial, food crop; B = terrestrial, non-food; C = aquatic, food crop; D = aquatic, non-food; E = greenhouse, food crop; F = greenhouse, non-food; G = forestry; H = domestic outdoor; I = indoor.

3/ Data must be submitted no later than 6 months.

4/ Data are not required since use patterns associate with barium metaborate are not likely to result in significant repeated human exposure.

TABLE A  
GENERIC DATA REQUIREMENTS FOR BARIUM METABORATE

Data Requirement	Composition 1/	Use Patterns 2/	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)? 3/
<u>158.135 Toxicology</u> (continued)					
<u>CHRONIC TESTING</u>					
83-1 Chronic toxicity - 2 species: rodent and non-rodent	TGAI	H	No	----	No <u>4/</u>
83-2 Oncogenicity study - 2 species: rat and mouse preferred	TGAI	H	No	----	No <u>4/</u>
83-3 Teratogenicity -	TGAI	H	No	----	No <u>4/</u>
83-4 Reproduction - 2-generation	TGAI	H	No	----	No <u>4/</u>
<u>MUTAGENICITY TESTING</u>					
84-2 Gene mutation	TGAI	H	No	----	No <u>4/</u>
84-2 Chromosomal aberration	TGAI	H	No	----	No <u>4/</u>
84-2 Other mechanisms of mutagenicity	TGAI	H	No	----	No <u>4/</u>

1/ Composition - TGAI = technical grade of the active ingredient.

2/ The use patterns are coded as follows: A = terrestrial, food crop; B = terrestrial, non-food; C = aquatic, food crop; D = aquatic, non-food; E = greenhouse, food crop; F = greenhouse, non-food; G = forestry; H = domestic outdoor; I = indoor.

3/ Data are not required since use patterns associated with barium metaborate are not likely to result in significant repeated human exposure.

4/ Data are not required since use patterns associated with barium metaborate are not likely to result in significant

#### IV. REQUIREMENT FOR SUBMISSION OF PRODUCT-SPECIFIC DATA

Note: This section applies only to manufacturing-use products, not end-use products.

A necessary first step in determining which statements must appear on your product's label is the completion and submission to EPA of product-specific data\* listed on the form entitled "Product Specific Data Report" (EPA Form 8580-4, Appendix IV-1) to fill "gaps" identified by EPA concerning your product. Under the authority of FIFRA Section 3(c)(2)(B), EPA has determined that you must submit these data to EPA in order to register or reregister your product(s). All of these data must be submitted not later than six months after you receive this guidance document.

"Product-Specific Data Requirements for Manufacturing-Use Products" appearing in Table B permit you to determine which product-specific data you must submit. This can be done by examining the entries in the column of those tables entitled "Must Data Be Submitted Under §3(c)(2)(B)."

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\* / Product specific data pertains to data that support the formulation which is marketed; it usually includes product chemistry data and acute toxicology data.



TABLE B  
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING BARIUM METABORATE

Data Requirement	<sup>1/</sup> Composition	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)? <sup>2/</sup>
<u>§158.120 Product Chemistry</u>				
<u>Product Identity</u>				
61-1 Identity of Ingredients	MP	Partially	GS-0024-009	Yes
61-2 Statement of Composition	MP	Partially	GS-0024-009	Yes
61-3 Discussion of Formation of Ingredients	MP	Partially	05012282	Yes
<u>Analysis and Certification of Product Ingredients</u>				
62-1 Preliminary Analysis	MP	No	----	Yes
62-2 Certification of Limits	MP	No	----	Yes
62-3 Analytical Methods for Enforcement of Limits	MP	No	----	Yes
<u>Physical and Chemical Characteristics</u>				
63-2 Color	MP	Yes	GS-0024-009	No
63-3 Physical State	MP	Yes	GS-0024-009	No
63-4 Odor	MP	Yes	GS-0024-009	No
63-12 pH	MP	Yes	GS-0024-009	No
63-20 Corrosion characteristics	MP	Yes	GS-0024-009	No

<sup>1/</sup> Composition: MP = Manufacturing-use product.

<sup>2/</sup> Data must be submitted no later 6 months of receipt of this guidance package.

TABLE B  
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING BARIUM METABORATE

Data Requirement	Composition <sup>1/</sup>	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)? <sup>2/</sup>
<u>§158.135 Toxicology</u>				
<u>ACUTE TESTING</u>				
81-1 Oral LD <sub>50</sub> - rat	MP	Yes	GS-0024-006	No
81-2 Dermal LD <sub>50</sub>	MP	Yes	GS-0024-007	No
81-3 Inhalation LC <sub>50</sub>	MP	No	----	Yes
81-4 Primary eye irritation	MP	Yes	GS-0024-008	No
81-6 Dermal Sensitization	MP	No	----	No <sup>3/</sup>

<sup>1/</sup> Composition: MP = Manufacturing-use product.

<sup>2/</sup> Data must be submitted no later than 6 months.

<sup>3/</sup> Data are not required since use patterns associated with barium metaborate are not likely to result in significant repeated human exposure.

## V. SUBMISSION OF REVISED LABELING AND PACKAGING INFORMATION

Note: This section applies only to manufacturing-use products, not end-use products.

The Agency requires applicants for registration or reregistration to ensure that each label (1) contains accurate, complete, and sufficient instructions and precautions, reflecting the results of data concerning the product and its ingredients, and (2) incorporates labeling format and terminology which are sufficiently standardized to avoid user confusion.

As part of your application, you will be required to submit draft labeling consistent with: applicable product-specific data; the precautionary statements and use directions; and the regulations concerning classification [40 CFR §162.11(c)], packaging [40 CFR §162.16], and labeling [40 CFR §162.10, Appendix V-1 and V-2], as indicated by the following paragraphs of this section of the guidance document.

You will be informed later when you must submit the revised labeling set forth in this guidance package.

### A. Label Contents

40 CFR §162.10 (Appendix V-1) requires that certain specific labeling statements must appear at certain locations on the label. This is referred to as format labeling. Specific label items listed below are keyed to Tables D, E, and F (Appendix VI-2).

Item 1. PRODUCT NAME - The name, brand, or trademark is required to be located on the front panel, preferably centered in the upper part of the panel. The name of a product will not be accepted if it is false or misleading. See Appendix V-1. [40 CFR §162.10(b)]

Item 2. COMPANY NAME AND ADDRESS - The name and address of the registrant or distributor is required on the label. The name and address should preferably be located at the bottom of the front panel or at the end of the label text. See Appendix V-1. [40 CFR §162.10(c)]

Item 3. NET CONTENTS - A net content statement is required on all labels. The preferred location is the bottom of the front panel immediately above the company name and address, or at the end of the label text. The net contents must be stated in terms of weight, expressed as avoirdupois pounds

and ounces, and stated in terms of the largest suitable unit, i.e., "1 pound 10 ounces" rather than "26 ounces." In addition to the required units specified, net contents may be expressed in metric units. See Appendix V-1. [40 CFR §162.10(d)]

Item 4. EPA REGISTRATION NUMBER - The registration number assigned to the pesticide product must appear on the label, preceded by the phrase "EPA Registration No.," or "EPA Reg. No." The registration number must be set in type of a size and style similar to other print on that part of the label on which it appears and must run parallel to it. The registration number and the required identifying phrase must not appear in such a manner as to suggest or imply recommendation or endorsement of the product by the Agency. See Appendix V-1. [40 CFR §162.10(e)]

Item 5. EPA ESTABLISHMENT NUMBER - The EPA establishment number, preceded by the phrase "EPA Est." is the final establishment at which the product was produced, and may appear in any suitable location on the label or immediate container. It must also appear on the wrapper or outside container of the package if the EPA establishment registration number on the immediate container cannot be clearly read through such wrapper or container. See Appendix V-1. [40 CFR §162.10(f)]

Item 6. INGREDIENT STATEMENT - An ingredient statement is required on the front panel and must contain the name and percentage by weight of each active ingredient and the total percentage by weight of all inert ingredients. The preferred location is immediately below the product name. The ingredient statement must run parallel with, and be clearly distinguished from, other text on the panel. It must not be placed in the body of other text. See Appendix V-1. [40 CFR §162.10(g)]

Item 6A. POUNDS PER GALLON STATEMENT - For liquid agricultural formulations, the pounds per gallon of active ingredient must be indicated on the label.

Item 7. FRONT LABEL PRECAUTIONARY STATEMENTS - All labels are required to have precautionary statements grouped together on the front panel, preferably within a block outline. The table below shows the minimum type size requirements on various size labels, as set forth in the Regulations.

<u>Size of Label on Front Panel in Square Inches</u>	<u>Signal Word as Re- quired Minimum Type Size All Capitals</u>	<u>"Keep Out of Reach of Children" as Required</u>
5 and under	6 point	6 point
above 5 to 10	10 point	6 point
above 10 to 15	12 point	8 point
above 15 to 30	14 point	10 point
over 30	18 point	12 point

Item 7A. CHILD HAZARD WARNING STATEMENT - All labels are required to have the statement "Keep Out of Reach of Children" located on the front panel above the signal word except where contact with children during distribution or use is unlikely. See Appendix V-1. [40 CFR §162.10(h)(1)(ii)]

Item 7B. SIGNAL WORD - The signal word (Caution, Warning, or Danger) is required on the front panel immediately below the child hazard warning statement. See Appendix V-1. [40 CFR §162.10 (h)(1)(i)]

Item 7C. SKULL & CROSSBONES AND WORD "POISON" - On products assigned a toxicity Category I on the basis of oral, inhalation, or dermal toxicity, the word "Poison" shall appear on the label in red on a background of distinctly contrasting color and the skull and crossbones shall appear in immediate proximity to the word poison. See Appendix V-1. [40 CFR §162.10(h)(1)(i)]

Item 7D. STATEMENT OF PRACTICAL TREATMENT - A statement of practical treatment (first aid or other) shall appear on the label of pesticide products in toxicity Categories I, II, and III. See Appendix V-1. [40 CFR §162.10(h)(1)(iii)]

Item 7E. REFERRAL STATEMENT - The statement "See Side (or Back) Panel for Additional Precautionary Statements" is required on the front panel for all products, unless all required precautionary statements appear on the front panel. See Appendix V-1. [40 CFR §162.10(h)(1)(iii)]

Item 8. SIDE/BACK PANEL PRECAUTIONARY LABELING - The precautionary statements as listed below must appear together on the label under the heading "PRECAUTIONARY STATEMENTS." The preferred location is at the top of the side or back panel preceding the directions for use, and it is preferred that these statements be surrounded by a block outline. Each of the three hazard warning statements must be headed by the appropriate hazard title. See Appendix V-1. [40 CFR §162.10 (h)(2)]

Item 8A. HAZARD TO HUMANS AND DOMESTIC ANIMALS - Where a hazard exists to humans or domestic animals, precautionary statements are required indicating the particular hazard, the route(s) of exposure and the precautions taken to avoid accident, injury or damage. See Appendix V-1. [40 CFR §162.10(h)(2)(i)]

Item 8B. ENVIRONMENTAL HAZARD - Where a hazard exists to non-target organisms excluding humans and domestic animals, precautionary statements are required stating the nature of the hazard and the appropriate precautions to avoid potential accident, injury, or damage. See Appendix V-1. [40 CFR §162.10(h)(2)(ii)]

Item 8C. PHYSICAL OR CHEMICAL HAZARD

1. Flammability statement. Precautionary statements relating to flammability of a product are required to appear on the label if it meets the criteria in Appendix V-3. The requirement is based on the results of the flashpoint determinations and flame extension tests required to be submitted for all products. These statements are to be located in the side/back panel precautionary statements section, preceded by the heading "Physical/Chemical Hazards." Note that no signal word is used in conjunction with the flammability statements.
2. Criteria for declaration of non-flammability. The following criteria will be used to determine if a product is non-flammable:
  - a. A "non-flammable gas" is a gas (or mixture of gases) that will not ignite when a lighted match is placed against the open cylinder valve.
  - b. A "non-flammable liquid" is one having a flashpoint greater than 350°F (177°C) as determined by the method specified in 40 CFR §163.61-8(c)(13)(ii) of Subpart D.
  - c. A "non-flammable aerosol" is one which meets the following criteria:
    - i. The flame extension is zero inches, using the method specified in 40 CFR §163.61-8(c)(13)(ii);
    - ii. There is no flash back; and
    - iii. The flashpoint of the non-volatile liquid component is greater than 350°F (177°C), determined by the method specified in 40 CFR §163.61-8(c)(13)(i).

3. Declaration of non-flammability. Products which meet the criteria for non-flammability specified above may bear the notation "non-flammable" or "nonflammable (gas, liquid, etc.)" on the label.

It may appear as a substatement to the ingredients statement, or on a back or side panel, but shall not be highlighted or emphasized (as with an inordinately large type size) in any way that may detract from precaution.

4. Other physical/chemical hazard statements. When chemistry data submitted in accordance with 40 CFR §163.61-10(c) demonstrate hazards of a physical or chemical nature other than flammability, appropriate statements of hazard will be prescribed. Such statements may address hazards of explosivity, oxidizing or reducing capability, or mixing with other substances to produce toxic fumes.

Item 9. MISUSE STATEMENT - The following statement is required on your label: "It is a violation of Federal law to use this product in a manner inconsistent with its labeling." See Appendix V-1. [40 CFR §162.10(1)(2)(ii)]

Item 10A. STORAGE AND DISPOSAL BLOCK - All labels are required to bear storage and disposal statements. These statements are developed for specific containers, sizes, and chemical content. Make certain that the statement you use pertains specifically to your product. These instructions must be grouped and appear under the heading "Storage and Disposal" in the directions for use. This heading must be set in the same type sizes as required for the child hazard warning. Refer to Appendix V-5 for the latest specific storage and disposal product label statements.

Item 10B. DIRECTIONS FOR USE - Directions for use must be stated in terms which can be easily read and understood by the average person likely to use or to supervise the use of the pesticide. When followed, directions must be adequate to protect the public from fraud and from personal injury and to prevent unreasonable adverse effects on the environment. See Appendix V-1. [40 CFR §162.10]

#### B. Collateral Information

Bulletins, leaflets, circulars, brochures, data sheets, flyers, and other graphic printed matter which is referred to on the label or which is to accompany the product are termed collateral labeling. Such labeling may not bear claims or representations that differ in substance from those accepted in connection with registration of the product. It should be made part of the response to this notice and submitted for review.

V. INSTRUCTIONS FOR SUBMISSION

All applications prepared in response to this Notice should be addressed as follows:

Henry M. Jacoby, Product Manager 21  
Phone No. 703/557-1900  
Registration Division (TS-767)  
Office of Pesticide Programs  
Environmental Protection Agency  
Washington, D.C. 20460

For each product for which continued registration is desired:

1. Within 90 days from receipt of this document, you must submit the "FIFRA Section 3(c)(2)(B) Summary Sheet" EPA Form 8580-1. Refer to Appendix II-2 with appropriate attachments.
2. Within 6 months from receipt of this document registrants must submit:
  - a. Confidential Statement of Formula, EPA Form 8570-4.
  - b. Product Specific Data Report, EPA Form 8580-4 (Appendix III-1).
  - c. Two copies of any required product-specific data.
3. Within the time set forth in Table A, all generic data must be submitted by the affected registrant(s).

Note: If for any reason any required test is delayed or aborted so that meeting the agreed submission time will be delayed, notify the Product Manager listed above.

You will be informed at a later date when you must submit your Application for Amended Pesticide Registration (EPA Form 8570-1) and the revised labeling set forth in this guidance package.



## Guide to Use of This Bibliography

1. **CONTENT OF BIBLIOGRAPHY.** This bibliography contains citations of all studies considered relevant by EPA in arriving at the positions and conclusions stated elsewhere in the Standard. Primary sources for studies in this bibliography have been the body of data submitted to EPA and its predecessor agencies in support of past regulatory decisions. Selections from other sources including the published literature, in those instances where they have been considered, will be included.
2. **UNITS OF ENTRY.** The unit of entry in this bibliography is called a "study." In the case of published materials, this corresponds closely to an article. In the case of unpublished materials submitted to the Agency, the Agency has sought to identify documents at a level parallel to the published article from within the typically larger volumes in which they were submitted. The resulting "studies" generally have a distinct title (or at least a single subject), can stand alone for purposes of review, and can be described with a conventional bibliographic citation. The Agency has attempted also to unite basic documents and commentaries upon them, treating them as a single study.
3. **IDENTIFICATION OF ENTRIES.** The entries in this bibliography are sorted numerically by "Master Record Identifier," or MRID, number. This number is unique to the citation, and should be used at any time 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 a further explanation. In a few cases, entries added to the bibliography late in the review may be preceded by a nine-character temporary identifier. These entries are listed after all MRID entries. This temporary identifier 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 standards of the American National Standards Institute (ANSI), expanded to provide for certain special needs.
  - a. **Author.** Whenever the Agency could confidently identify one, the Agency has chosen to show a personal author. When no individual was identified, the Agency has

shown an identifiable laboratory or testing facility as author. As a last resort, the Agency has shown the first submitter as author.

- b. Document Date. When the date appears as four digits with no question marks, the Agency took it directly from the document. When a four-digit date is followed by a question mark, the bibliographer deduced the date from evidence 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 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, following the phrase "submitted by." 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," standing 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. For example, within accession number 123456, the first study would be 123456-A; the second, 123456-B; the 26th, 123456-Z; and the 27th, 123456-AA.

OFFICE OF PESTICIDE PROGRAMS  
 REGISTRATION STANDARD BIBLIOGRAPHY  
 Citations Considered to be Part of the Data Base  
 Supporting Registrations Under the Standard

- MRID 005012282 Kelly, A.; Walker, R.B.R., inventors; (1922)  
 Process for the manufacture of borax and  
 boric acid. British patent specification  
 175,201. Feb. 16. 2p.
- GS-0024-006 Buckman Laboratories, Inc., Memphis, Tenn.;  
 Study by Raltech Scientific Services, Inc.,  
 Madison, Wisconsin; (1978) Acute Oral LD<sub>50</sub>  
 Toxicity Study Using Sprague Dawley Albino Rats.
- GS-0024-007 Buckman Laboratories, Inc., Memphis, Tenn.;  
 Study by Raltech Scientific Services, Inc.,  
 Madison, Wisconsin; (1978) Acute Dermal  
 Toxicity Study Using Sprague Dawley Albino Rats.
- GS-0024-008 Buckman Laboratories, Inc., Memphis, Tenn.:  
 Study by Raltech Scientific Services, Madison,  
 Wisconsin; (1978) Acute Eye Irritation  
 Toxicity Study Using Sprague Dawley Albino Rats.
- GS-0024-009 Buckman Laboratories, Inc., Memphis, Tenn.;  
 (1974) Product Data Bulletin No. Al, Busan  
 11-M.

<b>FIFRA SECTION 3(C)(2)(B) SUMMARY SHEET</b>		EPA REGISTRATION NO.
PRODUCT NAME		
APPLICANT'S NAME		DATE GUIDANCE DOCUMENT ISSUED
<p>With respect to the requirement to submit "generic" data imposed by the FIFRA section 3(C)(2)(B) notice contained in the referenced Guidance Document, I am responding in the following manner:</p>		
<p><input type="checkbox"/> 1. I will submit data in a timely manner to satisfy the following requirements. If the test procedures I will use deviate from (or are not specified in) the Registration Guidelines or the Protocols contained in the Reports of Expert Groups to the Chemicals Group, OECD Chemicals Testing Programme, I enclose the protocols that I will use:</p>		
<p><input type="checkbox"/> 2. I have entered into an agreement with one or more other registrants under FIFRA section 3(C)(2)(B)(ii) to satisfy the following data requirements. The tests, and any required protocols, will be submitted to EPA by:</p>		
NAME OF OTHER REGISTRANT		
<p><input type="checkbox"/> 3. I enclose a completed "Certification of Attempt to Enter Into an Agreement with Other Registrants for Development of Data" with respect to the following data requirements:</p>		
<p><input type="checkbox"/> 4. I request that you amend my registration by deleting the following uses (this option is not available to applicants for new products):</p>		
<p><input type="checkbox"/> 5. I request voluntary cancellation of the registration of this product. (This option is not available to applicants for new products.)</p>		
REGISTRANT'S AUTHORIZED REPRESENTATIVE	SIGNATURE	DATE

**CERTIFICATION OF ATTEMPT TO ENTER  
INTO AN AGREEMENT WITH OTHER REGISTRANTS  
FOR DEVELOPMENT OF DATA**

(To qualify, certify ALL four items)

1. I am duly authorized to represent the following firm(s) who are subject to the requirements of a Notice under FIFRA Section 3(c)(2)(B) contained in a Guidance Document to submit data concerning the active ingredient:	GUIDANCE DOCUMENT DATE
	ACTIVE INGREDIENT
NAME OF FIRM	EPA COMPANY NUMBER

(This firm or group of firms is referred to below as "my firm".)

2. My firm is willing to develop and submit the data as required by that Notice, if necessary. However, my firm would prefer to enter into an agreement with one or more other registrants to develop jointly, or to share in the cost of developing, the following required items or data:

3. My firm has offered in writing to enter into such an agreement. Copies of the offers are attached. That offer was irrevocable and included an offer to be bound by an arbitration decision under FIFRA Section 3(c)(2)(B)(iii) 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	DATE OF OFFER

However, none of those firm(s) accepted my offer.

4. My firm requests that EPA not suspend the registration(s) of my firm's product(s), if any of the firms named in paragraph (3) above have agreed to submit the data listed in paragraph (2) above in accordance with the Notice. I understand EPA will promptly inform me whether my firm must submit data to avoid suspension of its registration(s) under FIFRA Section 3(c)(2)(B). (This statement does not apply to applicants for new products.) I give EPA permission to disclose this statement upon request.

TYPED NAME	SIGNATURE	DATE

## PRODUCT SPECIFIC DATA REPORT

EPA Registration No. \_\_\_\_\_ Guidance Document for \_\_\_\_\_

Date \_\_\_\_\_

Registration Guideline No.	Name of Test	Test not required for my product listed above (check below)	I am complying with data requirements by		(For EPA Use Only) Accession Numbers Assigned
			Citing MRID#	Submit- ting Data (At- tached)	
\$158.20 PRODUCT CHEMISTRY					
61-1	Identity of ingredients				
61-2	Statement of composition				
61-3	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				

Registration Guideline No.	Name of Test	Test not required for my product listed above (check below)	I am complying with data requirements by		(For EPA Use Only) Accession Numbers Assigned
			Citing MRID#	Submit- ting Data (At- tached)	
63-13	Stability				
63-14	Oxidizing/reducing reaction				
63-15	Flammability				
63-16	Explosability				
63-17	Storage stability				
63-18	Viscosity				
63-19	Miscibility				
63-20	Corrosion characteristics				
63-21	Dielectric break- down voltage				
§158.135 TOXICOLOGY					
81-1	Acute oral LD-50, rat				
81-2	Acute dermal LD-50				
81-3	Acute inhalation, LC-50 rat				
81-4	Primary eye irritation, rabbit				
81-5	Primary dermal irritation				
81-6	Dermal sensitiza- tion				

## LABELING REQUIREMENTS OF THE FIFRA, AS AMENDED

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
1	Product name	All products	Front panel	Center front panel	
2	Company name and address	All products	None	Bottom front panel or end of label text	If registrant is not the producer, must be qualified by "Packed for . . .," "Distributed by. . .," etc.
3	Net contents	All products	None	Bottom front panel or end of label text	May be in metric units in addition to U.S. units
4	EPA Est. No.	All products	None	Front panel	Must be in similar type size and run parallel to other type.
5	EPA Reg. No.	All products	None	Front panel, immediately before or following Reg. No.	May appear on the container instead of the label.
6A	Ingredients statement	All products	Front panel	Immediately following product name	Text must run parallel with other text on the panel.
6B	Pounds/gallon statement	Liquid products where dosage given as lbs. ai/unit area	Front panel	Directly below the main ingredients statement	
7	Front panel precautionary statements	All products	Front panel		All front panel precautionary statements must be grouped together, preferably blocked.
7A	Keep Out of Reach of Children (Child hazard warning)	All products	Front panel	Above signal word	Note type size requirements.
7B	Signal word	All products	Front panel	Immediately below child hazard warning	Note type size requirements.



## APPENDIX IV-2 (continued)

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
7C	Skull & cross-bones and word POISON (in red)	All products which are Category I based on oral, dermal, or inhalation toxicity	Front panel	Both in close proximity to signal word	
7D	Statement of practical treatment	All products in Categories I, II, and III	Category I: Front panel unless referral statement is used. Others: Grouped with side panel precautionary statements.	Front panel for all.	
7E	Referral statement	All products where precautionary labeling appears on other than front panel.	Front panel		
8	Side/back panel precautionary statements	All products	None	Top or side of back panel preceding directions for use	Must be grouped under the headings in 8A, 8B, and 8C; preferably blocked.
8A	Hazards to humans and domestic animals	All products in Categories I, II, and III	None	Same as above	Must be preceded by appropriate signal word.
8B	Environmental hazards	All products	None	Same as above	Environmental hazards include bee caution where applicable.

## APPENDIX IV-2 (continued)

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
8C	Physical or chemical hazards	All pressurized products, others with flash points under 150°F	None	Same as above	
9A	Restricted block	All restricted products	Top center of front panel	Preferably blocked	Includes a statement of the terms of restriction. The words "RESTRICTED USE PESTICIDE" must be same type size as signal word.
9C	Misuse statement	All products	Immediately following statement of classification or ahead of directions for use		
10A	Re-entry statement	All cholinesterase inhibitors	In the directions for use	Immediately after misuse statement	
10C	Storage and disposal block	All products	In the directions for use	Immediately before specific directions for use or at the end of directions for use	Must be set apart and clearly distinguishable from other directions for use.
10D U.S.	Directions for use	All products	None	None	May be in metric as well as U.S. units

PHYSICAL-CHEMICAL HAZARDS

<u>Criteria</u>	<u>Required Label Statement</u>
<b>I. Pressurized Containers</b>	
A. Flashpoint at or below 20°F; or if there is a flashback at any valve opening.	Extremely flammable. Contents under pressure. Keep away from fire, sparks, and heated surfaces. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
B. Flashpoint above 20°F and not over 80°F; or if the flame extension is more than 18 inches long at a distance of 6 inches from the valve opening.	Flammable. Contents under pressure. Keep away from heat, sparks, and flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
C. <u>ALL OTHER PRESSURIZED CONTAINERS</u>	Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
<b>II. Non-Pressurized Containers</b>	
A. Flashpoint at or below 20°F.	Extremely flammable. Keep away from fire, sparks, and heated surfaces.
B. Flashpoint above 20°F and over 80°F.	Flammable. Keep away from heat and open flame.
C. Flashpoint over 80°F and not over 150°F.	Do not use or store near heat and open flame.
D. Flashpoint above 150°F.	None required.

### STORAGE AND DISPOSAL INSTRUCTIONS FOR PESTICIDES

All products are required to bear specific label instructions about storage and disposal. Storage and disposal instructions must be grouped together in the directions for use portion of the label under the heading STORAGE AND DISPOSAL. Products intended solely for domestic use need not include the heading "STORAGE AND DISPOSAL." The STORAGE AND DISPOSAL heading must appear in the minimum type size listed below:

Size of label front panel in square inches	Required type size for the heading STORAGE AND DISPOSAL (all capitals)
10 and under . . . . .	.6 point
Above 10 to 15 . . . . .	.8 point
Above 15 to 30 . . . . .	10 point
Over 30. . . . .	12 point

Storage and disposal instructions must be set apart and clearly distinguishable from other directions for use. Blocking storage and disposal statements with a solid line is suggested as a means of increasing their prominence.

#### A. Storage Instructions:

All product labels are required to have appropriate storage instructions. Specific storage instructions are not prescribed. Each registrant must develop his own storage instructions, considering, when applicable, the following factors:

1. Conditions of storage that might alter the composition or usefulness of the pesticide. Examples could be temperature extremes, excessive moisture or humidity, heat, sunlight, friction, or contaminating substances or media.
2. Physical requirements of storage which might adversely affect the container of the product and its ability to continue to function properly. Requirements might include positioning of the container in storage, storage or damage due to stacking, penetration of moisture, and ability to withstand shock or friction.

3. Specifications for handling the pesticide container, including movement of container within the storage area, proper opening and closing procedures (particularly for opened containers), and measures to minimize exposure while opening or closing container.
4. Instructions on what to do if the container is damaged in any way, or if the pesticide is leaking or has been spilled, and precautions to minimize exposure if damage occurs.
5. General precautions concerning locked storage, storage in original container only, and separation of pesticides during storage to prevent cross-contamination of other pesticides, fertilizer, food, and feed.
6. General storage instructions for household products should emphasize storage in original container and placement in locked storage areas.

B. Pesticide Disposal Instructions:

The label of all products, except those intended solely for domestic use, must bear explicit instructions about pesticide disposal. The statements listed below contain the exact wording that must appear on the label of these products:

1. The labels of all products, except domestic use, must contain the statement, "Do not contaminate water, food, or feed by storage or disposal."
2. Except those products intended solely for domestic use, the labels of all products that contain active ingredients appearing on the "Acutely Hazardous" Commercial Pesticide Products List (RCRA "E" List) at the end of this appendix or are assigned to Toxicity Category I on the basis of oral or dermal toxicity, skin or eye irritation potential, or Toxicity Category I or II on the basis of acute inhalation toxicity must bear the following pesticide disposal statement:

"Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

The labels of all products, except those intended for domestic use, containing active or inert ingredients that appear on the "Toxic" Commercial Pesticide Products List (RCRA "F" List) at the end of this appendix or presently meet any of the criteria in Subpart C, 40 CFR 261 for a hazardous waste must bear the following pesticide disposal statement:

"Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

Labels for all other products, except those intended for domestic use, must bear the following pesticide disposal statement:

"Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility."

3. Products intended for domestic use only must bear the following disposal statement: "Securely wrap original container in several layers of newspaper and discard in trash."

#### C. Container Disposal Instructions

The label of each product must bear container disposal instructions appropriate to the type of container.

1. All products intended for domestic use must bear one of the following container disposal statements:

Container Type	Statement
Non-aerosol products (bottles, cans, jars)	Do not reuse container (bottle, can, jar). Rinse thoroughly before discarding in trash.
Non-aerosol products (bags)	Do not reuse bag. Discard bag in trash.
Aerosol products	Replace cap and discard containers in trash. Do not incinerate or puncture.

2. The labels for all other products must bear container disposal instructions, based on container type, listed below:

Container Type	Statement
Metal containers (non-aerosol)	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.
Plastic containers	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.
Glass containers	Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other approved state and local procedures.

Container Type	Statement
Fiber drums with liners	Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by state and local authorities. If drum is contaminated and cannot be reused <sup>1</sup> , dispose of in the same manner.
Paper and plastic bags	Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.
Compressed gas cylinders	Return empty cylinder for reuse (or similar wording).

<sup>1</sup>Manufacturer may replace this phrase with one indicating whether and how fiber drum may be reused.

2. The labels for all other products must bear container disposal instructions, based on container type, listed on the first page of this Appendix.

Appendix IV-5 (continued)

Pesticides that are hazardous wastes under 40 CFR 261.33(e) and (f) when discarded.

"Acutely Hazardous" Commercial Pesticides (RCRA "E" List)  
Active Ingredients, (no inerts):

Acrolein  
Aldicarb  
Aldrin  
Allyl alcohol  
Aluminum phosphide  
4-Aminopyridine  
Arsenic acid  
Arsenic pentoxide  
Arsenic trioxide  
Calcium cyanide  
Carbon disulfide  
p-Chloroaniline  
Cyanides (soluble cyanide salts, not specified elsewhere)  
Cyanogen chloride  
2-Cyclohexyl-4,6-dinitrophenol  
Dieldrin  
0,0-Diethyl S-[2-ethylthio)ethyl] phosphorodithioate  
(disulfoton, Di-Syston)  
0,0-Diethyl 0-pyrazinyl phosphorothioate (Zinophos)  
Dimethoate  
0,0-Dimethyl 0-p-nitrophenyl phosphorothioate (methyl parathion)  
4,6-Dinitro-o-cresol and salts  
4,6-Dinitro-o-cyclohexylphenol  
2,4 Dinitrophenol  
Dinoseb  
Endosulfan  
Endothall  
Endrin  
Famphur  
Fluoroacetamide  
Heptachlor  
Hexanethyl tetraphosphate  
Hydrocyanic acid  
Hydrogen cyanide  
Methomyl  
alpha-Naphthylthiourea (ANTU)  
Nicotine and salts  
Octamethylpyrophosphoramidate (OMPA, schradan)  
Parathion



"Acutely Hazardous" Commercial Pesticides (RCRA "E" List)  
Active Ingredients continued:

Phenylmercuric acetate (PMA)  
Phorate  
Potassium cyanide  
Propargyl alcohol  
Sodium azide  
Sodium cyanide  
Sodium fluoroacetate  
Strychnine and salts  
0,0,0,0-Tetraethyl dithiopyrophosphate (sulfotepp)  
Tetraethyl pyrophosphate  
Thallium sulfate  
Thiofanox  
Toxaphene  
Warfarin  
Zinc phosphide

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There are currently no inert ingredients for commercial pesticides  
on the "Acutely Hazardous" List (RCRA "E" List).

"Toxic" Commercial Pesticide Products (RCRA "F" List)  
Active Ingredients:

Acetone  
 Acrylonitrile  
 Amitrole  
 Benzene  
 Bis(2-ethylhexyl)phthalate  
 Cacodylic acid  
 Carbon tetrachloride  
 Chloral (hydrate)  
 Chlordane (technical)  
 Chlorobenzene  
 4-Chloro-m-cresol  
 Chloroform  
 o-Chlorophenol  
 4-Chloro-o-toluidine hydrochloride  
 Creosote  
 Cresylic acid  
 Cyclohexane  
 Decachlorooctahydro-1,3,4-metheno-2H-cyclobuta[c,d]-pentalen-2-one  
 (kepone, chlordecone)  
 1,2-Dibromo-3-chloropropane (DBCP)  
 Dibutyl phthalate  
 S-3,3-(Dichloroallyl diisopropylthiocarbamate (diallate, Avadex)  
 o-Dichlorobenzene  
 p-Dichlorobenzene  
 Dichlorodifluoromethane (Freon 12®)  
 3,5-Dichloro-N-(1,1-dimethyl-2-propynyl) benzamide (pronamide, Kerb)  
 Dichloro diphenyl dichloroethane (DDD)  
 Dichloro diphenyl trichloroethane (DDT)  
 Dichlorethyl ether  
 2,4-Dichlorophenoxyacetic, esters and salts (2,4-D)  
 1,2-Dichloropropane  
 1,3-Dichloropropane (Telone)  
 Dimethyl phthalate  
 Ethyl acetate  
 Ethyl 4,4'-dichlorobenzilate (chlorobenzilate)  
 Ethylene dibromide (EDB)  
 Ethylene dichloride  
 Ethylene oxide  
 Formaldehyde  
 Furfural  
 Hexachlorobenzene  
 Hexachlorocyclopentadiene  
 Hexachloroethane  
 Hydrofluoric acid

"Toxic" Commercial Pesticide Products (RCRA "F" List)  
Active Ingredients:

Isobutyl alcohol  
 Lead acetate  
 Lindane  
 Maleic hydrazide  
 Mercury  
 Methyl alcohol  
 Methyl bromide  
 Methyl chloride  
 2,2'-Methylenebis (3,4,6-trichlorophenol) (hexachlorophene)  
 Methylene chloride  
 Methyl ethyl ketone  
 4-Methyl-2-pentanone (methyl isobutyl ketone)  
 Naphthalene  
 Nitrobenzene  
 p-Nitrophenol  
 Pentachloroethane  
 Pentachloronitrobenzene (PCNB)  
 Pentaclorophenol  
 Phenol  
 Phosphorodithioic acid, 0,0-diethyl, methyl ester  
 Propylene dichloride  
 Pyridine  
 Resorcinol  
 Safrole  
 Selenium disulfide  
 Silvex  
 1,2,4,5-Tetrachlorobenzene  
 1,1,2,2-Tetrachloroethane  
 Tetrachloroethylene  
 2,3,4,6-Tetrachlorophenol  
 Thiram  
 Toluene  
 1,1,1-Trichloroethane  
 Trichloroethylene  
 Trichloromonofluoromethane (Freon 11®)  
 2,4,5-Trichlorophenol  
 2,4,6-Trichlorophenol  
 2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)  
 Xylene

"Toxic" Commercial Pesticide Products (RCRA "F" List)  
Inert Ingredients:

Acetone	Formaldehyde
Acetonitrile	Formic acid
Acetophenone	Isobutyl alcohol
Acrylic acid	Maleic anhydride
Aniline	Methyl alcohol (methanol)
Benzene	Methyl ethyl ketone
Chlorobenzene	Methyl methacrylate
Chloroform	Naphthalene
Cyclohexane	Saccharin and salts
Cyclohexanone	Thiourea
Dichlorodifluoromethane (Freon 12®)	Toluene
Diethyl phthalate	1,1,1-Trichloroethane
Dimethylamine	1,1,2-Trichloroethane
Dimethyl phthalate	Trichlorofluoromethane (Freon 11®)
1,4-Dioxane	Vinyl chloride
Ethylene oxide	Xylene



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

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

CERTIFIED MAIL

SUBJECT: Initiation of Reregistration Process for Pesticide  
Products Containing Barium Metaborate as the Single  
Active Ingredient

Dear Registrant:

In accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, EPA's Office of Pesticide Programs has begun the reregistration process for pesticide products containing the subject ingredient. Significant changes to the statute were made in 1972, 1975, and 1978; thus, current requirements may be substantially different from those in effect at the time your product(s) were registered. The first phase of reregistration requires that you (1) make a commitment to the Agency regarding data development and (2) subsequently submit revised product labeling and associated information.

This mailing contains the Guidance Document for preparation of submissions, as well as a listing of your affected product(s) (Attachment A), and a separate list of registrants with products subject to this standard and which contain this active ingredient (Attachment B). The latter list is for the purpose of cooperative data development.

The Guidance Document sets out the Agency's evaluation of all available data pertaining to the subject chemical and its registered uses, and its rationale for the regulatory actions being taken at this time. Additionally, the Guidance Document contains instructions describing certain of the

steps you must take to maintain registration for your product(s). Products not brought into compliance with the Guidance Document as supplemented by subsequent information from EPA about compliance with certain data support requirements will be subject to suspension and/or cancellation.

Specifically, the enclosed Guidance Document does the following:

1. Introduces the purpose of this document.
2. Explains the Agency's policy regarding data submission and identifies, in table format, the data that must be submitted to complete the Agency's evaluation of each product. In addition, a bibliography identifying the data which is considered part of the data base supporting the registration standard is included.
3. Sets out time-frames for submission of required data.
4. Explains how to revise labeling for manufacturing use products. (As the Guidance Document explains, labeling is not required at this time.)
5. Provides submission instructions.

Because of the variety and complexity of the requirements, and the short statutory time-frames available for certain actions, it is essential that you understand the specific requirements and procedures in order that you may respond in a correct and timely manner. Since a part of these requirements is under Section 3(c)(2)(B) of FIFRA, your first response may be required within 90 days from receipt of this letter. Please note that if you do not respond or do not comply fully with the requirements, your application may be rejected or your product registration cancelled or suspended.

If, after reviewing this material, you do not understand what you must do or how or when you must respond, please contact the Product Manager listed below who will assist you in every reasonable way. If you wish to discuss the data requirements or request that certain data be waived, you must write to the Agency and indicate those data requirements with which you take issue and your rationale for doing so. After the Agency has had a chance to review your submission, the Product Manager will contact you to set up a meeting for the purpose of resolving all issues relative to data requirements.

Please note that this guidance document will eventually be supplemented by EPA with additional information about compliance with data support requirements. In Monsanto v. Administrator, EPA was recently enjoined by the District Court for the Eastern District of Missouri from implementing in any way the "mandatory data licensing" aspects of §3(c)(1)(D) of FIFRA. EPA is assessing the implications of the injunction for the reregistration process. Because of this unresolved situation, EPA has decided to proceed with the requirements in this guidance package which do not relate to the "data licensing" issue and to supplement the package with additional guidance when circumstances permit.

If you have any questions concerning this Guidance Document, you may contact the Product Manager listed below:

Mr. Henry M. Jacoby  
Product Manager 21  
Registration Division (TS-767)  
Office of Pesticide Programs  
Environmental Protection Agency  
Washington, D.C. 20460  
Telephone (703) 557-1900

Sincerely,

Douglas D. Campt, Director  
Registration Division (TS-767)

Enclosure