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

FEB 16 1994

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

CERTIFIED MAIL

Dear Registrant:

I am pleased to announce that the Environmental Protection Agency has completed its reregistration eligibility review and decisions on the pesticide chemical case Boric Acid And Its Sodium Salts which includes the active ingredients boric acid, sodium tetraborate decahydrate (borax decahydrate), sodium tetraborate pentahydrate (borax pentahydrate), sodium tetraborate (anhydrous borax), disodium octaborate tetrahydrate, disodium octaborate (anhydrous), and sodium metaborate. The enclosed Reregistration Eligibility Decision (RED) contains the Agency's evaluation of the data base of these chemicals, its conclusions of the potential human health and environmental risks of the current product uses, and its decisions and conditions under which these uses and products will be eligible for reregistration. The RED includes the data and labeling requirements for products for reregistration. It also include requirements for additional generic data on the active ingredients to confirm the risk assessments.

To assist you with a proper response, read the enclosed document entitled **"Summary of Instructions for Responding to the RED"**. This summary also refers to other enclosed documents which include further instructions. You must follow all instructions and submit complete and timely responses. **The first set of required responses are due 90 days from the date of this letter. The second set of required responses are due 8 months from the date of this letter.** Complete and timely responses will avoid the Agency taking the enforcement action of suspension against your products.

If you have questions on the product specific data requirements or wish to meet with the Agency, please contact the Special Review and Reregistration Division representative Franklin Gee at (703) 308-8008. Address any questions on required generic data to the Special Review and Reregistration Division representative Mario F. Fiol at 703-308-8049.

Sincerely yours,

Daniel M. Barolo, Director
Special Review and
Reregistration Division

Enclosures

SUMMARY OF INSTRUCTIONS FOR RESPONDING TO THE REREGISTRATION ELIGIBILITY DECISION (RED)

1. **DATA CALL-IN (DCI) OR "90-DAY RESPONSE"**--If generic data are required for reregistration, a DCI letter will be enclosed describing such data. If product specific data are required, another DCI letter will be enclosed listing such requirements. If both (generic and product specific) data are required, a combined Generic and Product Specific letter will be enclosed describing such data. Complete the two response forms provided with each DCI letter (or four forms for the combined) by following the instructions contained. **You must submit the response forms for each product and for each DCI within 90 days of the date of this letter (RED issuance date); otherwise, your product may be suspended.**

2. **TIME EXTENSIONS AND DATA WAIVER REQUESTS**--No time extension requests will be granted for the 90-day response. Time extension requests may be submitted only with respect to actual data submissions. Requests for data waivers must be submitted as part of the 90-day response. Requests for time extensions should be submitted in the 90-day response, but certainly no later than the 8-month response date. All data waiver and time extension requests must be accompanied by a full justification. All waivers and time extensions must be granted by EPA in order to go into effect.

3. **APPLICATION FOR REREGISTRATION OR "8-MONTH RESPONSE"--You must submit the following items for each product within eight months of the date of this letter (RED issuance date).**

a. **Application for Reregistration** (EPA Form 8570-1). Use only an original application form. Mark it "Application for Reregistration." Send your Application for Reregistration (along with the other forms listed in b-e below) to the address listed in item 5.

b. **Five copies of draft labeling** which complies with the RED and current regulations and requirements. Only make labeling changes which are required by the RED and current regulations (40 CFR 156.10) and policies. Submit any other amendments (such as formulation changes, or labeling changes not related to reregistration) separately. You may delete uses which the RED says are ineligible for reregistration. For further labeling guidance, refer the labeling section of the EPA publication "General Information on Applying for Registration in the U.S., Second Edition, August 1992" (available from the National Technical Information Service, publication #PB92-221811; telephone number 703-487-4650).

c. **Generic or Product Specific Data**. Submit all data in a format which complies with PR Notice 86-5, and/or submit citations of data already submitted and give the EPA identifier (MRID) numbers. Before citing these studies, you must **make sure**

that they meet the Agency's acceptance criteria (attached to the DCI).

d. Two copies of the Confidential Statement of Formula (CSF) for each basic and each alternate formulation. The labeling and CSF which you submit for each product must comply with P.R. Notice 91-2 by declaring the active ingredient as the **nominal concentration.** 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). A copy of the CSF is enclosed; follow the instructions on its back.

e. Certification With Respect to Citation of Data. Complete and sign this form (EPA form 8570-29) for each product. **Cite-all is not a valid option for reregistration.**

4. COMMENTS IN RESPONSE TO FEDERAL REGISTER NOTICE--Comments pertaining to the content of the RED may be submitted to the address shown in the Federal Register Notice which announces the availability of this RED.

5. WHERE TO SEND PRODUCT SPECIFIC DCI RESPONSES (90-DAY) AND APPLICATIONS FOR REREGISTRATION (8-MONTH RESPONSES)

By U.S. Mail:

Document Processing Desk **(RED-SRRD-PRB-0024)**
Office of Pesticide Programs (7504C)
EPA, 401 M St. S.W.
Washington, D.C. 20460-0001

By express:

Document Processing Desk **(RED-SRRD-PRB-0024)**
Office of Pesticide Programs (7504C)
Room 266A, Crystal Mall 2
1921 Jefferson Davis Hwy.
Arlington, VA 22202

6. EPA'S REVIEWS--EPA will screen all submissions for completeness; those which are not complete will be returned with a request for corrections. EPA will try to respond to data waiver and time extension requests within 60 days. EPA will also try to respond to all 8-month submissions with a final reregistration determination within 14 months after the RED has been issued.

United States Environmental Protection Agency
Prevention, Pesticides And Toxic Substances (7508W)
EPA-738-F-93-006
September 1993

EPA R.E.D. FACTS

Boric Acid

Pesticide Reregistration

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

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

When a pesticide is eligible for reregistration, EPA announces this and explains why in a Reregistration Eligibility Decision (RED) document. This fact sheet summarizes the information in the RED document for boric acid and its sodium salts, which includes the seven active ingredients boric acid, sodium tetraborate decahydrate (borax decahydrate), sodium tetraborate pentahydrate (borax pentahydrate), sodium tetraborate (anhydrous borax), disodium octaborate tetrahydrate, disodium octaborate (anhydrous), and sodium metaborate.

Use Profile

Pesticide products containing boric acid and its sodium salts are registered in the U.S. for use as insecticides, fungicides and herbicides. As insecticides, some act as stomach poisons in ants, cockroaches, silverfish and termites, while others abrade the exoskeletons of insects. As herbicides, some cause desiccation or interrupt photosynthesis in plants, while others suppress algae in swimming pools and sewage systems. As fungicides, several are wood preservatives which control decay-producing fungi in lumber and timber products.

Boric acid and its sodium salts are used on several agricultural and many non-agricultural sites including residential, commercial, medical, veterinary, industrial, forestry and food/feed handling areas. They are marketed in many formulations including liquids, soluble and emulsifiable concentrates, granulars, powders, dusts, pellets, tablets, solids, paste, baits, and crystalline rods.

The quantities of boric acid and its sodium salts applied as pesticides are modest compared to amounts used for other, non-pesticidal purposes. Further, boric acid, borax and boron-containing salts are ubiquitous in the environment. Boron occurs naturally in water, fruits, vegetables and forage crops, and is an essential nutrient for plants as well as an essential element for many organisms.

Regulatory History

Boric acid was first registered as a pesticide in the U.S. in 1948. Currently, 189 pesticide products are registered which contain boric acid or one of its sodium salts as an active ingredient.

In February 1986, EPA issued two related documents dated November 1985, the "Boric Acid and Boron Containing Salts Registration Standard" (NTIS #PB87-101903), and a General Registration Standard entitled, "Guidance for the Registration and Reregistration of End-Use Pesticide Products Containing the Insecticidal Uses of Boric Acid." About 43 boric acid products, used indoors for cockroach and silverfish control, were reregistered under the General Registration Standard. Producers of those products need only submit current labels and Confidential Statements of Formula for the products to remain reregistered.

EPA has determined that, because they are of low toxicity and occur naturally, boric acid and its sodium salts should be exempted from the requirement of a tolerance (maximum residue limit) for all raw agricultural commodities. The Agency has established such exemptions and removed the previously established tolerances for residues of boric acid and certain derivatives in cotton seed and citrus fruits (please see 58 FR 44282); two other derivatives will be similarly exempted soon. Because boric acid is registered for crack and crevice use in food and feed handling establishments, the potential exists, though unlikely, for residues to occur in food. EPA therefore is establishing food and feed additive tolerances for boric acid and its sodium salts.

In developing this RED, the active ingredient sodium metaborate was added from another reregistration case. Also, this RED originally was to have included boric oxide as an active ingredient. However, since no registered products currently contain that active ingredient, it is not included.

Human Health Assessment

Human Toxicity

The toxicity of boric acid and its six sodium salts are expected to be similar. Information on the effects of these boron-related compounds in humans, supplemented by data from laboratory animal studies, were used by EPA to evaluate their toxicity.

Boric acid generally is of moderate acute toxicity, and has been placed in Toxicity Category III for most acute effects including oral and

dermal toxicity, and eye and skin irritation. Sodium tetraborate (anhydrous borax) products have been placed in Toxicity Category I indicating a high degree of acute toxicity for eye irritation effects.

A subchronic borax feeding study using dogs resulted in blood and metabolism disorders as well as effects to the testes, endocrine system, brain weight, and size ratios among various organs and glands.

In chronic oncogenicity studies using mice, rats and beagle dogs, boric acid and borax were found not to be carcinogenic; however, testicular effects and decreases in body weight resulted at high dose levels. EPA has classified boric acid as a "Group E" carcinogen, indicating that it shows "evidence of noncarcinogenicity" for humans.

In reproductive and developmental toxicity studies using rats, mice and rabbits, maternal liver and kidney effects and decreased weight gain as well as decreased fetal body weights were observed. In two studies, at the highest dose levels, no litters were produced. Prenatal mortality occurred at the highest dose levels in the rabbit study. Boric acid does not cause mutagenicity.

Dietary Exposure

Tolerances were established for residues of boron resulting from the use of boric acid and its sodium salts on cottonseed (30 ppm) and citrus fruits, postharvest (8 ppm) (please see 40 CFR 180.271.) EPA's review of new toxicology studies raised no concerns. Further, boron occurs naturally in fruits and vegetables at much higher levels (200 to 300 ppm in red cabbage). Therefore, the Agency is exempting these compounds from the requirement of a tolerance and revoking the existing tolerances. EPA is establishing food/feed additive regulations to cover the use of boric acid salts for crack and crevice treatments at food and feed handling establishments (please see 58 FR 44282, and a soon-to-be-issued Federal Register notice).

Occupational and Residential Exposure

Boric acid and its sodium salts are applied both indoors and outdoors, in residential, commercial, medical, veterinary and industrial areas, in food handling establishments, in swimming pools and sewage systems, in lakes, ponds and reservoirs, and in treating wood. Depending on the use site, boric acid may be applied using aircraft, a spreader, airblower, power duster, squeeze applicator, aerosol can or knife/spatula. The potential for dermal and inhalation exposure exists among applicators and people reentering treated areas.

As a prudent measure to reduce any potential risks to handlers, EPA is requiring that all products containing boric acid and its sodium salts (except products for residential use) bear personal protective equipment (PPE) requirements. These must consist of <u>at least</u> the use of a long-sleeved shirt, long pants, shoes, socks and chemical-resistant gloves. If

end-use product labeling already bears PPE requirements that are more protective than these items, the more protective requirements must be retained.

The Worker Protection Standard (WPS) for Agricultural Pesticides (40 CFR 156 and 170) established an interim restricted-entry interval (REI) of 12 hours for boric acid and its sodium salts. EPA is retaining this REI for uses within the scope of the WPS, as a prudent risk mitigation measure to protect workers. During the REI, workers may enter treated areas only under the few narrow exceptions allowed in the WPS.

Human Risk Assessment

Dietary risk is not a concern with boric acid and its sodium salts since no direct food uses are registered and tolerances have been revoked. Applicators and others in treatment areas may be exposed to boric acid and its sodium salts during or after application. However, there is no reasonable expectation that these pesticide uses may constitute a hazard or risk to people involved in, or near to, handling or application activities. Proper care and adhering to label directions and precautions should reduce exposure and any associated risk.

Environmental Assessment

Environmental Fate

No new environmental fate data are required for reregistration of boric acid and its sodium salts because only relatively small amounts of boric acid are used as pesticides, and significant amounts of boron are present naturally in soil and water. Surface soil contains relatively high levels of boron. Boron salts occur naturally in low concentrations in most unpolluted waterways (both surface water and seawater). In some areas, boron occurs in surface waters in concentrations that have been shown to be toxic to commercially important plants.

Ecological Effects

Available studies indicate that technical boric acid is practically nontoxic to birds, fish and aquatic invertebrates, and relatively nontoxic to beneficial insects. The boric acid rights-of-way herbicide use pattern poses a potential risk to aquatic invertebrates, including some that are endangered. However, risk probably is mitigated by the practice of limiting treatment to small strips of land, thereby limiting the amount of contaminated runoff into adjacent aquatic environments.

Boric acid's noncrop herbicidal use also may harm endangered or threatened plants. EPA is requiring three phytotoxicity studies (seed germination, seedling emergence and vegetative vigor) to assess these risks. EPA is deferring endangered species labeling requirements until the Agency publishes the Endangered Species Protection Program plan and guidance for registrants. Labeling will refer users to county bulletins for area-specific use limitations.

Ecological Effects Risk Assessment

EPA's concerns regarding risks to birds, fish and wildlife species are minimal. Boric acid's limited outdoor use patterns, low toxicity, and natural presence in terrestrial and aquatic environments are mitigating factors for any potential risk to nontarget organisms.

Additional Data Required

EPA is requiring three phytotoxicity studies to further assess the risks of boric acid and its sodium salts to non-target plants and endangered plant species. However, these studies are not part of the target data base and do not affect the reregistration eligibility of boric acid and related active ingredients. The Agency also is requiring product-specific data including product chemistry, acute toxicity and efficacy studies, revised Confidential Statements of Formula, and revised product labeling for reregistration.

EPA already has reregistered all 43 boric acid products covered by the General Registration Standard. For these products, only current labeling and Confidential Statement of Formulas must be submitted to ensure that they still meet the criteria set forth in that document.

Product Labeling Changes Required

The labeling of all end-use products containing boric acid and its sodium salts must comply with EPA's current pesticide labeling requirements. In addition:

- **Compliance with Worker Protection Standard (WPS)** - Any product whose labeling permits use in the production of an agricultural plant on any farm, forest, nursery or greenhouse must comply with the labeling requirements of:
  - PR Notice 93-7, "Labeling Revisions Required by the Worker Protection Standard (WPS)," and
  - PR Notice 93-11, "Supplemental Guidance for PR Notice 93-7."

Unless specifically directed in the RED, all statements required by these two PR Notices must appear on product labeling exactly as instructed in the Notices. Labels must be revised by April 21, 1994, for products distributed or sold by the primary registrant or supplementally registered distributors, and by October 23, 1995, for products distributed or sold by anyone.

- **Personal Protective Equipment (PPE) Requirements**

  Products NOT Primarily Intended for Home Use

  The PPE requirement for handlers of all end-use products except those intended primarily for home use is:

  "Applicators and other handlers must wear:

  --Long-sleeved shirt and long pants

  --Chemical-resistant or waterproof gloves*

  --Shoes plus socks

* The glove statement is that established through the instructions in Supplement Three of PR Notice 93-7."

Registrants must compare the PPE requirements in this section with those on their product labeling, and retain the more protective PPE.

Products Primarily Intended for Home Use

No new PPE requirements need to be added. However, any PPE requirements on current product labeling must be retained.

- **Entry Restrictions**

Products NOT Primarily Intended for Home Use

○ Uses Within the Scope of the WPS: A 12-hour restricted entry interval (REI) is required for all uses within the scope of the WPS, except on products intended primarily for home use. The PPE for early entry should be that required for applicators of boric acid and its sodium salts, except that the requirement for an apron or respirator is waived. Registrants should insert this REI and PPE into the standardized statements required by PR Notice 93-7.

- Sole Active Ingredient Products: Must be revised to adopt the entry restrictions set forth in this section, and any conflicting entry restrictions on current labeling must be removed.

- Multiple Active Ingredient Products: Registrants must compare the entry restrictions set forth in this section to the entry restrictions on their current labeling and retain those which are more protective. A specific time period in hours or days is considered more protective than "until sprays have dried" or "dusts have settled."

○ Uses Not Within the Scope of the WPS: No new entry restrictions must be added. However, any entry restrictions on current product labeling must be retained.

Products Primarily Intended for Home Use

No new entry restrictions need to be added. However, any entry restrictions on current product labeling must be retained.

- **Products Under the General Boric Acid Registration Standard**

Labels must comply with the format labels issued with the Standard. Five copies of current labeling must be submitted.

- **Products Not Under the General Registration Standard**

Labels must bear the following Environmental Hazards statements, if appropriate:

○ Terrestrial Food and Feed Use and Non-Crop Products

"Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high-

water mark. Do not contaminate water when disposing of equipment washwaters or rinsate."

- Indoor Use Products with Effluent

  "Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA."

Labels with uses on carpets and floors to combat fleas, cockroaches, ants and silverfish must bear the following under Directions for Use:

- Use Restrictions

  "Children and pets should not be in treatment area until after application is completed. Do not treat pets with this product. Avoid contamination of feed and foodstuff. Avoid contamination of ornamental plants."

- Carpets

  "Apply to dry surfaces only. Apply directly on carpets where pets frequently traffic or sleep. Work powder deeply into fibers and mat with a broom or rug rake. Any powder visible after application must be brushed into carpet fibers or removed."

- Upholstery

  "Remove loose cushions. Apply along creases and into corners and furniture wells. Do not apply product to exposed fabric. Any product visible after application must be removed."

Regulatory Conclusion

The use of currently registered pesticide products containing boric acid and its sodium salts in accordance with approved labeling will not pose unreasonable risks or adverse effects to humans or the environment. Therefore, all uses of these products are eligible for reregistration. These products will be reregistered once the required product-specific data, Confidential Statements of Formula and revised labeling are received and accepted by EPA.

Boric acid products that already have been reregistered under the General Registration Standard will remain reregistered as long as current labeling and Confidential Statements of Formula are submitted, and demonstrate that these products still meet the criteria set forth in the Standard.

Boric acid products which also contain other active ingredients will be reregistered only after the other active ingredients are determined to be eligible for reregistration.

For More Information

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

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

For more information about EPA's pesticide reregistration program, the boric acid and its sodium salts RED, or reregistration of individual products containing these active ingredients, please contact the Special Review and Reregistration Division (7508W), OPP, US EPA, Washington, DC 20460, telephone 703-308-8000.

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

REREGISTRATION ELIGIBILITY DOCUMENT

BORIC ACID AND ITS SODIUM SALTS

BORIC ACID
SODIUM TETRABORATE DECAHYDRATE (BORAX DECAHYDRATE)
SODIUM TETRABORATE PENTAHYDRATE (BORAX PENTAHYDRATE)
SODIUM TETRABORATE (ANHYDROUS BORAX)
DISODIUM OCTABORATE TETRAHYDRATE
DISODIUM OCTABORATE (ANHYDROUS)
SODIUM METABORATE

LIST A

CASE 0024

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

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VI. **APPENDICES**

Appendix A- Use Patterns Subject to Reregistration

Appendix B- Table of the Generic Data Requirements and Studies Used to Make the Reregistration Decision

Appendix C- Citations Considered to be Part of the Data Base Supporting the Reregistration of Boric Acid and its Sodium Salts

Appendix D- List of Available Related Documents

Appendix E- Combined Generic and Product Specific Data Call-In Notice

Attachment 1 - Data Call-In Chemical Status Sheet
Attachment 2 - Generic Data Call-In and Product Specific Data Call-In Response Forms with Instructions
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Attachment 4 - EPA Grouping of End-Use products for Meeting Acute Toxicology Data Requirements for Reregistration
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Attachment 6 - List of Registrants Receiving this Notice
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BORIC ACID REREGISTRATION ELIGIBILITY TEAM

Office of Pesticide Programs:

Biological and Economic Analysis Division

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Special Review and Reregistration Division

Linda Propst	Reregistration Branch
Mario Fiol	Reregistration Branch

GLOSSARY OF TERMS AND ABBREVIATIONS

a.i.	Active Ingredient
CAS	Chemical Abstracts Service
COMMODITY CHEMICAL	Is a chemical that may have many uses such as a feedstock used in the production process for other chemicals and/or final non-pesticidal uses. Some of these chemicals may have pesticidal uses.
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). It is expressed as a weight of substance per unit weight of animal, e.g., mg/kg.
LD_{lo}	Lethal Dose-low. Lowest Dose at which lethality occurs
LEL	Lowest Effect Level
LOEL	Lowest Observed Effect Level
MATC	Maximum Allowable Toxicant Concentration

GLOSSARY OF TERMS AND ABBREVIATIONS (cont.)

MICRONUTRIENT A nutrient that plants require in only small or trace amounts.

MP	Manufacturing-Use Product
MPI	Maximum Permissible Intake
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
RAC	Raw Agricultural Commodity
RED	Reregistration Eligibility Decision Document
RfD	Reference Dose
RS	Registration Standard
TD	Toxic Dose. The dose at which a substance produces a toxic effect.
TC	Toxic Concentration. The dose at which a substance produces a toxic effect.
TMRC	Theoretical Maximum Residue Contribution

EXECUTIVE SUMMARY

This Reregistration Eligibility Decision document (RED) addresses the eligibility for reregistration of pesticide products containing boric acid and its sodium salts; specifically it includes products containing boric acid, sodium tetraborate decahydrate (borax decahydrate), sodium tetraborate pentahydrate (borax pentahydrate), sodium tetraborate (anhydrous borax), disodium octaborate tetrahydrate, disodium octaborate (anhydrous), and sodium metaborate. Hereafter, in this document, this group of chemical compounds will be referred to as "boric acid and its sodium salts."

Boric acid and its sodium salts are acaricides, algaecides, fungicides, herbicides, and insecticides used on a variety of agricultural, non-agricultural, residential, commercial, medical, industrial, and food/feed handling sites. Boric acid and its sodium salts are formulated in a number of ways. Uses for boric acid include those for direct application to food and feed.

The first boric acid pesticide product was registered in 1948. Currently, there are 189 products containing boric acid or related compounds that are subject to this RED. In February 1986, the Agency issued two registration standards, the Boric Acid and Boron Containing Salts Registration Standard (NTIS PB87-101903) and a General Registration Standard, entitled Guidance for the Registration and Reregistration of End-Use Pesticide Products Containing the Insecticidal Uses of Boric Acid. Both documents were dated November 1985, but not issued until February 1986. The Agency issued minor revisions to both documents in April 1986.

This RED includes in the reregistration case sodium metaborate which was initially grouped in a different registration standard but it is included here because this chemical is a sodium salt of boric acid. Originally, this RED was to have included boric oxide as an active ingredient. However, since there currently are no registered products with this active, boric oxide will not be included in this document.

The Agency has classified boric acid and its sodium salts as a Group E carcinogen (evidence of non-carcinogenicity for humans). A reference dose for the boron equivalents of boric acid and borax was calculated to be 0.09 mg/kg/day based on a no observable effect level (NOEL) of 8.80 mg/kg/day in a combined sub-chronic (38 weeks) and chronic (two years) study in dogs. An uncertainty factor of 100 accounts for inter-species extrapolation and intra-species variability.

Boron occurs naturally in water, fruits, vegetables, and forage crops, and is an essential nutrient for plants. Based on the review of the toxicological data base and because boric acid occurs naturally, with little if any residues of boron expected above endogenous levels, the Agency determined that boric acid and its sodium salts should be exempted from the requirement of a tolerance on all raw agricultural commodities. Therefore, on August 20, 1993 the Agency established exemptions from the requirement of a tolerance for residues

of boric acid and certain derivatives on all raw agricultural commodities and removed previously established tolerances in cotton seed and citrus fruits (58 FR 44282). The Agency will issue a federal register notice proposing to amend the exemption from tolerances to include the two derivatives, sodium tetraborate pentahydrate (borax pentahydrate) and disodium octaborate (anhydrous), omitted in the original notice. Also, because products containing boric acid salts are registered for crack and crevice use in food and feed handling establishments, the potential exists, even though unlikely, for residues to occur in food. Therefore, the Agency is establishing food and feed additive regulations for boric acid and its sodium salts in food and feed handling establishments.

There is minimal concern for risk to fish and wildlife based on the limited outdoor use patterns, low toxicity, and boron's natural occurrence in terrestrial and aquatic environments. However, in order to further assess the potential risks to non-target plants and to endangered plant species, the Agency is requiring three phytotoxicity studies. These requirements are not part of the target data base and do not affect the reregistration eligibility of boric acid and its sodium salts.

The Agency has determined that the uses of boric acid and its sodium salts will not cause unreasonable risk to humans or the environment and all of the uses are eligible for reregistration.

Unlike products covered by the Boric Acid and Boron Containing Salts Registration Standard, the Agency has already reregistered all boric acid products used only for domestic and nondomestic indoor use for cockroach and silverfish control which were covered by the General Boric Acid Standard. For these products, the only requirement imposed by this RED is the submission of a current label and CSF to insure that each product is still in compliance with its special certification form submitted earlier.

Before reregistering the products containing boric acid and its sodium salts, the Agency is requiring the submittal or citation of product specific data: product chemistry, acute toxicity, and efficacy (if needed), a revised Confidential Statement of Formula (CSF), and revised labeling within eight months of the issuance of this document. After these data and revised labels have been reviewed and determined to be acceptable, the Agency will reregister a product based on whether or not it meets the requirements in Section 3(c)(5) of FIFRA. Those products containing more than one active ingredient 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 eligibility of the registered uses of boric acid and its sodium salts. The document consists of six sections. Section I is the introduction. Section II describes boric acid and its sodium salts, their uses, data requirements and regulatory history. Section III discusses the human health and environmental assessment based on the data available to the Agency. Section IV presents the reregistration decision for boric acid and its sodium salts. Section V discusses the reregistration requirements. Finally, Section VI is the Appendices which support this RED. Additional details concerning the Agency's review of applicable data are available on request.[1]

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[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, DC 20460.

II. CASE OVERVIEW

A. CHEMICAL OVERVIEW[2]

The following active ingredient(s) are covered by this Reregistration Eligibility Decision:

(1) boric acid

Chemical Name: boric acid
CAS Registry Number: 10043-35-3
OPP Chemical Code: 011001
Empirical Formula: H_3BO_3
Basic Manufacturer: U. S. Borax

(2) sodium tetraborate decahydrate (borax decahydrate)

Chemical Name: sodium tetraborate decahydrate (Borax 10 Mol)
CAS Registry Number: 1303-96-4
OPP Chemical Code: 011102
Empirical Formula: $Na_2B_4O_7 . 10H_2O$
Basic manufacturer: U.S. Borax

(3) sodium tetraborate pentahydrate (borax pentahydrate)

Chemical Name: Sodium tetraborate pentahydrate (Borax 5 Mol)
CAS Registry Number: 11130-12-4 or 12179-04-3
OPP Chemical Code: 011110
Empirical Formula: $Na_2B_4O_7 . 5H_2O$
Basic Manufacturer: U.S. Borax

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[2] The November 1985 Registration Standard reviewed the data requirements for registered products containing boric acid and boron containing salts (borax and disodium octaborate tetrahydrate). Since there are no longer active products containing boric oxide, this document will not assess the data requirements for boric oxide.

(4) <u>sodium tetraborate (anhydrous borax)</u>

Chemical Name: sodium tetraborate (Anhydrous Borax)
CAS Registry Number: 1330-43-4
OPP Chemical Code: 011112
Empirical Formula: $Na_2B_4O_7$
Basic Manufacturer: U.S. Borax

(5) <u>disodium octaborate tetrahydrate</u>

Chemical Name: disodium octaborate tetrahydrate
Trade Name: Polybor[R] 3
CAS Registry No.: 12008-41-2
OPP Chemical Code: 011103
Molecular Formula: $Na_2B_8O_{13}.\ 4H_2O$
Basic Manufacturer: US Borax

(6) <u>disodium octaborate (anhydrous)</u>

Chemical Name: Timbor Rods
CAS Registry Number: 12008-41-2
OPP Chemical Code: 011107
Empirical Formula: $Na_2B_8O_{13}$
Basic Manufacturer: Chemical Specialties

(7) <u>sodium metaborate</u>

Chemical Names: sodium metaborate
CAS Registry No.: 15293-77-3
OPP Chemical Code: 011104
Empirical Formula: $NaBO_2$
Basic Manufacturer: US Borax and J. R. Simplot Co.

The table below lists the active ingredients and additional names by which the chemicals are known.

ACTIVE INGREDIENT AND ADDITIONAL NAMES FOR BORIC ACID AND ITS SALTS

Active Ingredient	Additional Name(s)
boric acid	boracid acid orthoboric acid
sodium tetraborate decahydrate	disodium tetraborate decahydrate sodium borate decahydrate borax decahydrate sodium biborate $10H_2O$ sodium pyroborate $10H_2O$
sodium tetraborate pentahydrate	disodium tetraborate pentahydrate borax pentahydrate sodium borate pentahydrate sodium biborate $5H_2O$ sodium pyroborate $5H_2O$
sodium tetraborate anhydrous	disodium tetraborate (anhydrous) borax (anhydrous) sodium borate (anhydrous) sodium biborate (anhydrous) sodium pyroborate (anhydrous)
disodium octaborate (anhydrous)	none
disodium octaborate tetrahydrate	none
sodium metaborate	none
boric oxide	boric anhydride boron oxide boron trioxide boron sesquioxide

B. USE PROFILE

The following is a general use profile for the registered uses for boric acid and its sodium salts. A detailed table of eligible uses as well as the methods, application rates, limitations, and use restrictions is included in Appendix A.

A) Chemical: boric acid (011001)

Type of Pesticide: Acaricide, Algaecide, Fungicide, Herbicide, Insecticide

Mechanism of Action:

(Plants): At herbicide quantities, boric acid causes plant desiccation.

(Fungi): Inhibits the growth of fungi by preventing the production of conidia or asexual spores.

(Insects): Acts as a stomach poison against ants, cockroaches, silverfish, and termites.

Use Groups And Sites

AQUATIC NON-FOOD INDUSTRIAL
Sewage systems.

TERRESTRIAL FOOD+FEED
Agricultural crops/soils (unspecified), orchards (unspecified).

TERRESTRIAL NON-FOOD CROP
Agricultural uncultivated areas, commercial/institutional/industrial premises/equipment (outdoor), golf course turf, nonagricultural rights-of-way/fencerows/hedgerows, nonagricultural uncultivated areas/soils, ornamental lawns and turf recreational areas, refuse/solid waste sites (outdoor), wood protection treatment to forest products (seasoned).

INDOOR FOOD
Barns, barnyards/auction barns, commercial transportation facilities (feed/food empty), eating establishments, food handling areas (food contact), eating establishments food serving areas (food contact), food processing plant nonfood handling areas, food processing plant premises (nonfood contact), food/grocery/marketing/storage distribution facility premise. household/domestic indoor food handling areas, meat processing plant premises (nonfood contact), poultry (egg/meat), poultry processing plant premises (nonfood contact).

INDOOR NON-FOOD
Eating establishments, animal kennels/sleeping quarters (commercial), commercial storage/warehouses premise (indoor), commercial transportation

facilities (nonfeed/nonfood) commercial/institutional/industrial premises/equipment (indoor), eating establishments nonfood areas (nonfood contact), specialized animals.

INDOOR MEDICAL
Hospitals/medical institutions premises (human/veterinary).

INDOOR RESIDENTIAL
Household/domestic dwellings, household/domestic dwelling contents, household/domestic dwelling indoor premises, pet living/sleeping quarters, refuse/solid waste containers (garbage cans), wood protection to buildings/products (indoor).

OUTDOOR RESIDENTIAL
Household/domestic dwellings outdoor premises, ornamental lawns and turf, pet living/sleeping quarters.

Pests: Ants, cockroaches, silverfish, termites and decay producing fungi.

Formulation Types Registered

Single Active Ingredient Products

Wettable Powder
99.0%

Dust
99.0%, 64.0%, and 65.0%

Liquid Concentrate
26.3%

Ready-to-Use Paste
50.0%

Pelleted/Tableted
40.0%

Bait Tube
53.3%

Method and Rates of Applications

Several methods of application are used to apply boric acid including fixed-wing aircraft, aerosol can, knife or spatula, shaker can, spoon, mop, portable line sprayer, pump spray bottle, boat, pressure sprayer, spreader, hand application, bulbous dusters, power duster, wood pressure treating equipment and ready-to-use paste tube applicators.

Limitations

Avoid depositing product onto exposed food and feed processing, preparation and serving surfaces, or introducing material into air. Do not apply when food processing facility is in operation. Any product visible after application must be brushed into cracks and crevices, or removed. Place product in areas that are inaccessible to children and pets.

B) <u>Chemical: sodium tetraborate decahydrate (011102)</u>

Type of Pesticide: Fungicide, Insecticide, Herbicide,

Mechanism of Action: Acts as an abrasive on the exoskeleton of insects, and as a stomach poison. It is also used as a herbicide to control weeds; used as a preservative on wood products against decay fungi, and as an algae suppressant in swimming pools and sewage systems.

Use Groups And Sites

FORESTRY
Forest tree management/forest pest management (conifer stump treatment)

TERRESTRIAL NONFOOD CROP
Ornamental lawns and turf, industrial areas (outdoor), paved areas (private roads/sidewalks), wood pressure treatment to forest products, wood protection treatment to forest products (unseasoned and seasoned).

AQUATIC NONFOOD INDUSTRIAL
Sewage systems.

AQUATIC NONFOOD OUTDOOR
Wood protection treatment to aquatic structures/items.

INDOOR FOOD
Household domestic dwelling indoor food handling areas (crack and crevice), food processing plant premises feed/food empty, food processing plant nonfood handling areas, eating establishments food handling areas (food contact), eating establishments food serving areas (food contact), food/grocery/marketing/storage/ distribution facility premises, commercial transportation facilities feed/food empty.

INDOOR NONFOOD
Specialized animal housing, animal kennels/sleeping quarters (commercial), specialized animals, commercial transportation facilities nonfeed/nonfood,

eating establishments non-food areas (nonfood contact), commercial/ institutional/industrial premises/equipment (indoor).

INDOOR MEDICAL
Hospitals/medical institutions premises (human/veterinary)

INDOOR RESIDENTIAL
Household/domestic dwelling indoor premises/contents, wood protection treatment to buildings/products indoor.

OUTDOOR RESIDENTIAL
Ornamental lawns and turf, household/domestic dwelling outdoor premises, wood protection treatment to buildings/products outdoor

Pests: decay and soft rot fungi, sapstain, molds; wood boring beetles (including powderpost beetles, furniture beetles, old house borers and longhorn beetles), subterranean termites, dampwood termites, drywood termites, cockroaches, sweet-eating ants, grease eating ants, pavement ants, little black ants, black carpenter ants, odorous ants, silverfish, palmettobugs; algae, klamath weed, weeds (unspecified).

Formulation Types:

Single Active Ingredient Products

Water Soluble Powder
100%

Granular
99.5%

Liquid
5.4% and a 4%

Multiple Active Ingredient Products

Paste
40% + 1 other active ingredient (AI)

Solid Bait
5% + 1 other active ingredient (AI)

Liquid
2% + 2 other active ingredients (AI's)

Method and Rates of Application

The wood preservatives paste is applied by hand using trowel/brush, caulking gun, or bandage. Liquid wood preservative is applied using pressure treating plants, spray box flow coaters, dip tanks, sprayers or brushes.

The liquid ant bait is dispensed by hand to a cardboard tray and the solid bait is marketed in a RTU child resistant bait station.

The granular herbicide is broadcast by hand using a suitable distribution device (preferably a mechanical spreader) at a rate of 10 to 15 lb/100 sq ft, for klamath weed the rate may be reduced to 3 to 4 lb/100 sq ft.

The granules may also be dissolved in water and applied by power sprayer at the same rate.

The granular fungicide is applied to stumps within two days of cutting using a granular shaker, one pound will treat 50 sq ft of stump surface.

The dust/powder is applied using pressurized duster/blower, bulbous duster or other suitable dusting equipment. For exterior use the dust is applied at 8 lb/3,000 sq ft.

The rates of borax applied to some sites are unclear and not identified. Therefore, they cannot be accurately reported in this profile.

Use Limitations

Wood Preservative Paste - do not drill holes in utility poles closer than two feet.

Ant Baits - avoid contamination of feed and foodstuffs.

Dust/Powder - not to be used in food areas of food handling establishments other than as crack and crevice treatment and after treatment any surface powder must be brushed into cracks and crevices or removed. Only to be applied to areas inaccessible to children.

Herbicide Spray or Granules - non-selective and therefore can only be used in areas where vegetation is not wanted, if weed growth is heavy cut vegetation before treatment.

C) **Chemical: sodium tetraborate pentahydrate (011110)**

Type of chemical: Algaecide, Herbicide, Insecticide

Mechanism of Action: Acts as an abrasive on the exoskeleton of insects and as a stomach poison. It is also used as a herbicide to control weeds & in swimming pools to suppress algal growth. In field crops, it is used to correct or prevent boron deficiencies.

Use groups and sites:

TERRESTRIAL NONFOOD CROP
Nonagricultural uncultivated areas/soils, industrial areas (outdoor), paved areas (private roads/sidewalks).

AQUATIC NONFOOD RESIDENTIAL
Swimming pool water systems.

INDOOR FOOD
Household/domestic dwellings indoor food handling areas, commercial transportation facilities (feed/food-empty), food processing plant premises (non-food contact), food processing plant nonfood handling areas, eating establishments food handling/serving areas (food contact), food/grocery/marketing/storage/distribution facility premise.

INDOOR NONFOOD
Commercial transportation facilities (non feed/ nonfood), eating establishments nonfood areas (nonfood contact) commercial/institutional/industrial premises/ equipment (indoor).

INDOOR MEDICAL
Hospitals/medical institutions premises (human/ veterinary).

INDOOR RESIDENTIAL
Household/domestic dwellings indoor premises.

Pests: algae, klamath weed, poison ivy, leafy spurge, Canada thistle, wild morning glory, wild oats, ryegrass, johnsongrass, poison oak; cockroaches, ants, silverfish

Formulation types:

Single Active Ingredient Products

Granular
96%

Dust
74%

Soluble concentrate/solid
99.5%

Multiple Active Ingredient Products
38% + 2 other active ingredients

Methods and rates of application:

Granular - In fall, winter, or when needed, broadcast, apply spot or prepaving treatment by spreader, granule applicator, or hand at 0.2-13 lb AI/100 sq ft.

Dust - When needed, apply indoor general surface, voids, crack & crevice, or spot treatment by squeeze applicator, duster, or bulbous duster using ready-to-apply dust.

Soluble concentrate/solid - Initially & for subsequent, maintenance, or winterizing treatment, apply at 1 lb AI/1,000 gal pool water.

Use limitations:

Do not contaminate lawns, trees, shrubs, crops, & other desirable plants. Do not contaminate water, feed, or foodstuffs. Do not use in edible product areas of food handling establishments.

D) **Chemical: sodium tetraborate (011112)**

Type of chemical: Acaricide, Herbicide, Insecticide

Mechanism of Action: Acts as an abrasive on the exoskeleton of insects and as a stomach poison. Used as a herbicide to control weeds.

Use Groups and Sites:

TERRESTRIAL NONFOOD CROP
Nonagricultural rights-of-way/fencerows/ hedgerows, industrial areas (outdoor), agricultural uncultivated areas/soils, recreational areas, paved areas (private roads/sidewalks), commercial/institutional/ industrial premises/equipment (outdoor).

INDOOR RESIDENTIAL
Ornamental herbaceous plants, ornamental woody shrubs & vines, ornamental &/or shade trees, ornamental nonflowering plants.

Pests: Powder post beetles, furniture beetles, old house borers, longhorn beetles, ants, mealy bugs, spider mites, aphids, scale insects; broadleaf weeds, grasses

Formulation Types:

Single Active Ingredient Products

Emulsifiable concentrate

0.28%

Granular
100%
Bait/liquid ready to use
5%

Multiple Active Ingredient Products
Soluble concentrate/liquid
11.41% + 1 other active ingredient (AI)

Methods and Rates of Application:

Emulsifiable concentrate - Apply foliar spray with sprayer at 3 tsp of 0.28% product/pt water.

Granular - In fall, winter, or when needed, broadcast or apply spot treatment by spreader or hand using 2.7 to 11 lb AI/100 sq ft. When needed, apply prepaving treatment at 5 lb AI/100 sq ft.

Liquid ready-to-use - When needed, apply few drops of 5% product along ant trails and small amount in cracks & crevices.

Soluble concentrate/liquid - Apply with power or knapsack sprayer. The rates of sodium tetraborate cannot be calculated in terms of AI from the label and, therefore are not reported in this profile.

Use limitations

Do not deposit product over exposed surfaces. Do no contaminate water, food, or food processing surfaces or surfaces likely to be contacted by food. Do not contaminate lawns, trees, shrubs, crops, and other desirable plants.

E) **Chemical: disodium octaborate tetrahydrate (011103)**

Type of Pesticide: Fungicide, insecticide

Mechanism of action: Acts as an abrasive on the exoskeleton of Insects and as a stomach poison, used as a fungicide on wood products to control decay fungi

Use groups and sites:

TERRESTRIAL FOOD + FEED CROP
Compost/compost piles, manure

TERRESTRIAL NONFOOD CROP
Animal kennels/sleeping quarters (commercial), refuse/solid waste sites (outdoor), wood pressure treatment to forest products.

AQUATIC NONFOOD INDUSTRIAL
Sewage systems.

AQUATIC NONFOOD OUTDOOR
Wood protection to aquatic structures/items.

OUTDOOR RESIDENTIAL
Wood protection treatment to buildings/products outdoor

INDOOR FOOD
Food/grocery/marketing/storage/distribution facility premise, poultry (egg/meat).

INDOOR NONFOOD
Commercial storages/warehouses premises (indoor), eating establishments food handling & serving areas (nonfood contact), commercial/institutional/industrial premises/equipment.

INDOOR MEDICAL
Hospitals/medical institutions premises (human/ veterinary).

INDOOR RESIDENTIAL
Household/domestic dwellings and contents, wood protection treatment to buildings/products indoor, pet living/sleeping quarters

Pests: brown rot, fungal decay, white rot, wood rot/decay fungi; ants, cockroaches, fleas, house fly, soldier fly, latrine fly, silverfish, termites, wood boring insects

Formulation types:

Single Active Ingredient Products

Soluble concentrate/liquid
40% (includes 1 product for manufacturing use)

Soluble concentrate/solid
99.4%

Formulation not identified/solid
98%

Methods and rates of application:

Soluble concentrate/solid

Use when needed. Apply compost or manure treatment by dust gun or hand at 20 lb active ingredient (AI)/1,000 ft^2. Spray at 44 lb AI/1,000 ft^2. Sprinkle at 20 to 49 lb AI/1,000 ft^2. Apply wood protection treatment by pressure or by dip-diffusion in tank at 140 to 380 lb AI/100 gal solution. Apply nonsoil contact nonfumigation with sprayer or brush at 6.5 to 29 lb AI/1,000 ft^2 or by tank or injection at 1 to 3.75 lb AI/ gal solution. Mop at 0.25 lb AI/gal solution. Apply indoor premise treatment by carpet shampooer at 2 to 3.3 lb AI/1,000 ft^2.

Soluble concentrate/liquid

Use when needed. Apply nonsoil contact nonfumigation by sprayer, brush, or injection using maximum rate (23% solution) for protection from subterranean and Formosan termites.

Use limitations:

Do not use in edible product areas of food processing plants or on counter tops and other surface areas where food is prepared. Do not use in serving areas while food is exposed. Do not contaminate feed, water, or food. Do not use to treat lumber that will contact soil or be exposed to leaching by weather.

F) **Chemical: disodium octaborate (anhydrous) (011107)**

Type of chemical: Fungicide

Mechanism of action: Used to prevent and control decay fungi in lumber and timber products.

Use groups and sites:

TERRESTRIAL NONFOOD CROP
Wood protection treatment to forest products (seasoned and unseasoned).

OUTDOOR RESIDENTIAL
Wood protection treatment to buildings/products outdoor.

INDOOR RESIDENTIAL
Wood protection treatment to buildings/products indoor.

Pests: decay fungi.

Formulation types:
Crystalline rod
100%

Methods and rates of application:

Rods are inserted into holes drilled to appropriate size and sealed with wooden dowels, wood filler or caulk. For remedial treatment the rate is 4.14 oz (6.0 oz boric acid equivalent) per cubic foot of wood, and for preventative treatment the rate is 1.38 oz (2.0 oz boric acid equivalent) per cubic foot of wood.

Use limitations:
None.

G) **Chemical: sodium metaborate (011104)**

Type of Chemical: Herbicide

Mechanism of Action: Sodium metaborate is taken up by plant roots. Once it enters the leaves, it interrupts the photosynthetic pathway; thereby, causing the plant to die.

Use groups and sites:

TERRESTRIAL NON-FOOD CROP
Agricultural uncultivated areas, airports/landing fields, industrial areas (outdoor), nonagricultural outdoor buildings/structures. nonagricultural rights of way/fencerows/hedgerows, nonagricultural uncultivated areas/soils, nonagricultural uncultivated soil sterilization, and recreational areas.

AQUATIC NON-FOOD INDUSTRIAL
Drainage systems (ditch banks).

OUTDOOR RESIDENTIAL
Paths/patios, paved areas (private roads/sidewalks), nonagricultural rights-of-way/fencerows/hedgerows.

Pests: Sand burr, poison ivy, poison oak, bermudagrss, bindweed, bluegrass, Canada thistle, crabgrass, dallisgrass, downy brome, smooth brome, dock, wild carrot, sweet clover, sheep sorrel, dandelion, plantain, bouncingbet, goldenrod, asters, daisies, dogbane, field bindweed, horsenettle, johnsongrass, kochia, leafy spurge, nutsedge, paragrass, Russian knapweed, Russian thistle, sunflower, whitetop, and willow.

Formulation types

Multiple Active Ingredient Products

Granular

94.0% + 1 active ingredient (AI).
68.0% + 1 active ingredient (AI).
66.5% + 2 active ingredients (AI's)
55.6% + 2 active ingredients (AI's)
54.0% + 1 active ingredient (AI).
50.0% + 2 active ingredients (AI's).

Pelleted/tableted

50.0% + 3 active ingredients (AI's).

Formulation not identified/solid

50.0% + 1 active ingredient (AI)

Soluble concentrate/liquid

19.0% + 1 active ingredient (AI).
10.0% + 1 active ingredient (AI).
10.0% + 2 active ingredients (AI's).
9.08% + 1 active ingredient (AI).
9.0% + 1 active ingredient (AI).
8.75% + 2 active ingredients (AI's).
6.0% + 1 active ingredient (AI).
4.57% + 1 active ingredient (AI).

Ready-to-use liquid

10.0% + 1 active ingredient (AI).

Method and rates of application

Granular soil treatment--When needed, broadcast by power spreader, at 35-376 lbs AI/acre.

Pelleted/tableted--When needed, broadcast by spreader or shaker can at 200 lbs AI/acre.

Formulation not identified/solid--Use as broadcast treatment when needed at 436 lbs AI/acre.

Soluble concentrate/liquid--When needed, apply by hand sprayer, sprinkler can, or power sprayer. Maximum rates vary with the formulation and weeds to be controlled, rates range from 148.8 to 543.6 lbs AI/A.

Liquid ready-to-use--When needed. apply by edging treatment to lawn, apply with squeeze applicator at 0.0512 lb AI/100 linear feet.

Use limitations

Sodium metaborate is not selective and may be toxic to all types of vegetation. It may render the entire area totally or partially unproductive for one or more years. Take care to confine application to the particular area intended to be treated and prevent its contact with lawns, trees, shrubs, crops and other desirable plants which are not intended to be destroyed or injured. This includes precautions in treating areas which may be underlaid by roots of adjacent valuable plants. Do not drain or flush equipment near these areas.

C. ESTIMATED USAGE OF PESTICIDE

This section presents information on the pesticide uses of boric acid and its sodium salts. The estimates provided are derived from a variety of published and proprietary sources available to the Agency. The data, reported on an aggregate and site (crop) basis, reflect annual fluctuations in use patterns as well as the variability in using data from various information sources.

Data from the US Bureau of Mines (1989-1991) report "agricultural uses" of boron minerals averaged 133 metric tons (293,265 lbs.) per year. The pesticide uses are believed to be smaller in volume than the agricultural uses. However, data from the late 1970's early 1980's suggest a much greater usage of boric acid.

Additionally, no technical product is registered for sodium metaborate. Historically, there has been moderate usage of sodium metaborate on rights-of-way, railroads and industrial sites. It is reported that wood preservative uses are second in volume to insecticide uses.

D. DATA REQUIREMENTS

Data requested in the Boric Acid and Boron Containing Salts Registration Standard covered product chemistry, ecological and environmental effects, toxicology and residue chemistry studies for manufacture and end-use products containing boric acid and two sodium salts, sodium tetraborate decahydrate (borax decahydrate), and disodium octaborate tetrahydrate. Appendix B of this document identifies the generic data that the Agency reviewed as part of its determination of reregistration eligibility of boric acid and its sodium salts and lists the acceptable studies.

E. REGULATORY HISTORY

Borate is the accepted common name for the metal salts of boric acid which comprise the following family of chemicals: sodium tetraborate decahydrate, sodium tetraborate pentahydrate, sodium tetraborate (anhydrous borax), disodium octaborate (anhydrous), disodium octaborate tetrahydrate, and sodium metaborate.

The first boric acid product was registered as a pesticide in 1948. In February 1986, the Agency issued two registration standards, dated November 1985, for products containing boric acid and related compounds. The EPA issued minor revisions to both documents in April 1986.

The Boric Acid and Boron Containing Salts Registration Standard covered technical and end-use products containing boric acid and and two sodium salts, sodium tetraborate decahydrate (borax decahydrate), and disodium octaborate tetrahydrate. This standard required submission of certain forms; revised labeling; and additional product and residue chemistry, environmental and ecological effects, toxicology and efficacy data.

The Agency also published the General Registration Standard, Guidance for the Registration and Reregistration of End-Use Pesticide Products Containing the Insecticidal Uses of Boric Acid. This document covered only boric acid products of 99 to 100% purity which were used primarily for cockroach control. Because of the low toxicity and reduced risk of such products and the extensive data base available for boric acid in the public literature, the Agency only required submission of an application form and a special Certification Form verifying the product's adherence to certain specifications concerning composition, form, supplier, and labeling.

Prior to development of the Boric Acid and Boron Containing Salts Registration Standard, the Agency had combined under one active ingredient three distinct sodium salts of boric acid; sodium tetraborate decahydrate, sodium tetraborate pentahydrate, and sodium tetraborate. In the same manner, the Agency had also combined under once active ingredient disodium octaborate decahydrate and disodium octaborate. During the development of this RED, the product chemistry characteristics of each chemical indicated that each chemical is unique in its characteristics and that each chemical should also be uniquely identified.

Furthermore, another sodium salt of boric acid, sodium metaborate, which is supported by data from actives included in the Boric Acid Registration Standard of 1985, was not included in the 1985 Registration Standard, but was later assigned to the barium metaborate case. Because sodium metaborate is a sodium salt of boric acid, the data supporting boric acid and other sodium salts also supports sodium metaborate. Therefore, the Boric Acid Reregistration Eligibility Team decided to include sodium metaborate in the boric acid and its sodium salts reregistration case.

Additionally, the Boric Acid Registration Standard did not include the related compound boric oxide as one of the active ingredients in the boric acid case. This oversight was noted in the March 1990 "Reregistration Plan for Chemicals in List A." At that time the Agency intended to correct this oversight by including boric oxide during the reregistration of boric acid and its sodium salts. However, because there are no active registrations for products containing boric oxide, this RED will not include boric oxide.

Currently, there are 189 products containing boric acid or related compounds that should be subject to this RED: 121 products subject to the Boric Acid and Boron Containing Salts Registration Standard; 43 products subject to the General Boric Acid Standard; and 25 sodium metaborate products not subject to either standard.

III. SCIENCE ASSESSMENT

The Agency has conducted a thorough review of the scientific data base for boric acid and its sodium salts for the purpose of determining the reregistration eligibility of these pesticides.

A. Physical Chemistry Assessment

The physical and chemical properties of boric acid and its sodium salts are as follows:

(1) <u>boric acid</u>

TGAI: boric acid
Molecular weight: 61.88
Color: white
Physical State: solid crystalline powder
Odor: none
Melting Point: 170.9°C ± 0.2°C(340°F) [melts without decomposition]
Specific Gravity: 1.5128 at 20°C
Solubility: 4.72% at 20°C
Vapor Pressure: less than 10^{-4} torr at 20°C
Octanol/Water Partition Coefficient: 0.175
pH: 5.1 (1% solution at 20°C)
Stability: stable

(2) <u>sodium tetraborate decahydrate (borax decahydrate)</u>

TGAI: sodium tetraborate decahydrate
Molecular weight: 381.87
Color: white

Physical State: crystalline powder
Odor: none
Melting Point: 62°C (144°F) [begins to dissolve in water of hydration]
Density: 1.73
Solubility: 4.70 g/100ml at 20°C (68°F)
Vapor Pressure: < 10^{-6} Torr
pH: 9.24 (1% solution) at 20°C
Stability: stable

(3) <u>sodium tetraborate pentahydrate (borax pentahydrate)</u>

TGAI: sodium tetraborate pentahydrate
Molecular Weight: 291.35
Color: white
Physical state: a mild white alkaline salt
Odor: none
Melting Point: < 200°C (with decomposition)
Density: 1.818
Solubility: In water 1.52% (0°C), 3.59% (20°C), 4.43% (25°C), 50.13% (100°C). In organic solvents at 25°C: 16.9% (MeOH), 31.1% (Ethylene glycol).
Vapor Pressure: < 10^{-6} Torr
pH: 9.26 (0.1% solution); 9.24 (1.0% solution) and 9.32 (4.71% saturated solution) at 20°C
Stability: stable under ordinary conditions

(4) <u>sodium tetraborate (anhydrous borax)</u>

TGAI: sodium tetraborate (anhydrous borax)
Molecular Weight: 201.27
Color: white
Physical State: solid crystalline or amorphous
Odor: none
Melting Point: 742°C (1367°F)
Density: 2.367
Solubility: It is soluble in water but at much slower rate than regular borax. The solubility of finely divided crystalline disodium tetraborate in methanol and ethylene glycol, expressed as wt % $Na_2O.2B_2O_3$ are 16.7% and 30% respectively.
Vapor Pressure: < 10^{-6} Torr
pH: data gap
Stability: stable under ordinary conditions

(5) <u>disodium octaborate tetrahydrate</u>

Color: White. Munsell Color: 5.0 Y 9.24/1.25
Physical State: Powder
Odor: None
Specific gravity(bulk density): 25-35 lbs/cubic foot
Solubility: 9.5% at 20°C
pH: 8.5 (1% solution at 23°C)
Storage stability: Stable
Corrosion Characteristics: Non-corrosive to steel and most metals. May be slightly corrosive to Al.

(6) <u>disodium octaborate (anhydrous)</u>

TGAI: disodium octaborate (anhydrous)
Molecular Weight: 340.31
Color: clear to opaque
Physical State: solid rods
Odor: odorless
m.p.: data gap
Density: 1.8 g/ml at 20°C
Storage Stability: data gap

(7) <u>sodium metaborate</u>

TGAI: sodium metaborate
Molecular weight: 65.82
Color: white
Physical State: solid white pieces or powder
Odor: none
Melting Point: Fuses to clear glass at 966°C (1770°F). Some vaporization occurs at 1230°C (2246°F).
Bulk Density(Tetrahydrate): loose Pack (51-55 lbs/ft^3) and Tight Pack (55-61 lbs/ft^3.
Solubility: soluble in water, solution being strongly alkaline
Vapor Pressure: less than 10^{-6} Torr
Octanol/Water Partition Coeff: Data gap
pH: 11.82 (6% aqueous solution of tetrahydrate)
Stability: the crystals will pick up carbon dioxide if exposed to air, forming sodium carbonate and Borax

There are several product chemistry requirements not fully satisfied for boric acid and its sodium salts. Although data gaps exist, these requirements are not critical to the reregistration eligibility decision. The Agency is requiring additional product chemistry data at this time to satisfy these data gaps. The requirements and data gaps are presented in Appendix B.

B. Human Health Assessment

1. Toxicology Assessment

Boric Acid and its sodium salts include sodium tetraborate decahydrate, sodium tetraborate pentahydrate, sodium tetraborate (anhydrous borax), disodium octaborate (anhydrous), disodium octaborate tetrahydrate, and sodium metaborate. The toxicity of all these boron related chemicals is expected to be similar. At the time of the Registration Standard, oncogenicity, teratogenicity, as well as a battery of mutagenicity studies were required. The information available on the effects of boric acid and its sodium salts in humans, supplemented with the data available on their toxicity in laboratory animals, is sufficient to evaluate the toxicity of boric acid and its sodium salts. The laboratory animal data consist of the following:

a. Acute Toxicity

ACUTE TOXICITY VALUES - BORIC ACID

TEST	RESULT	CATEGORY
Oral LD_{50}	3.45 g/kg	III
Dermal LD_{50}	> 2 g/kg	III
Inhalation LC_{50}	--	Not Required

The following table is derived from Manufacturing Use-Products considered toxicologically similar to the boric acid technical.

ACUTE TOXICITY VALUES - BORIC ACID

TEST	RESULT	CATEGORY
Eye irritation	no corneal opacity, conjunctivitis cleared by day 4	III
Skin irritation	erythema present in 1/6 animals at 72 hours	III
Dermal Sensitization	--	Not Required

ACUTE TOXICITY VALUES
SODIUM BORATE (ANHYDROUS BORAX)

TEST	RESULT	CATEGORY
Oral LD_{50}	4.6 g/kg(M)	III
Dermal LD_{50}	> 2 g/kg	III
Inhalation LC_{50}	not conducted w/technical	Not Applicable/ Required

The following table is derived from Manufacturing Use Products considered toxicologically similar to the sodium tetraborate technical.

ACUTE TOXICITY VALUES
SODIUM TETRABORATE (ANHYDROUS BORAX)

TEST	RESULT	CATEGORY
Eye irritation	irritation and corneal opacity evident at day 14	I
Skin irritation	no skin irritation	IV
Dermal Sensitization	--	Not Applicable

b. Subchronic Toxicity

In a subchronic (3 month) feeding study in dogs, borax was tested at doses of 0, 3, 35 or 268 mg/kg/day for males and 0, 2, 22 or 192 mg/kg/day for females. The systemic NOEL was 35 mg/kg/day for males and 22 mg/kg/day for females, and the LOEL was 268 mg/kg/day and 192 mg/kg/day based on clinical pathology; decreased hematocrit and hemoglobin; hemosiderin in the spleen; liver and kidneys; testicular pathology; and, widening of the adrenal cortex in the area of the zona reticularis. Lipid accumulation was also present in the zona reticularis, and in high dose females, there was an increase in brain weight. In males, there were decreases in the testes/brain, testes/body, thyroid/body and thyroid/brain ratios. Although this study was classified as supplementary, the information is considered adequate for use in risk assessment.

c. Chronic Toxicity/Oncogenicity

A two-year chronic feeding/oncogenicity study using boric acid was conducted with B6C3F1 mice. The compound was administered in the diet at levels of 0, 2500 or 5000 ppm (approximately 0, 450, or 1150 mg/kg/day). No clinical signs of toxicity were observed during the course of the study. Testicular pathology was present at the highest dose tested and consisted of testicular atrophy and interstitial cell hyperplasia. Other pathological findings included a dose related increase (at both levels) in the incidence of splenic lymphoid depletion in male mice that was believed to be associated with stress and a dose related increase in the incidence of pulmonary hemorrhage that was of unknown biological significance. The compound was not found to be carcinogenic at the levels tested. A NOEL for systemic toxicity was not determined; the LOEL for systemic toxicity was 2500 ppm (approximately 450 mg/kg/day) based on the pathological findings.

A two-year chronic oncogenicity/feeding study with borax was conducted in Sprague Dawley rats. Animals received doses of 0, 65, 154 or 515 mg/kg/day during the course of the study. The chronic NOEL was determined to be 154 mg/kg/day and the LOEL was 515 mg/kg/day based on reported decreases in body weight, possible anemia and testicular tubular atrophy. The test material was not found to be carcinogenic.

In another study, beagle dogs received borax at doses of 0, 13, 26 or 77 mg/kg/day in the feed for a duration of two-years. The NOEL was 77 mg/kg/day (HDT). An additional study was conducted for 38 weeks in which beagles received the test material in the feed at doses of 0 or 359 mg/kg/day. At 359 mg/kg/day, weight decreases were reported for both sexes, and in males, testicular atrophy, decreased testicular weight and decreased testes/body weight ratios were reported. Both of these studies were classified as supplementary; however, the Agency has determined that the information was sufficient for conducting a risk assessment.

d. Reproductive and Developmental Toxicity

Pregnant Sprague Dawley rats were administered boric acid in the diet at dose levels of 0.1%, 0.2%, 0.4%, or 0.8% (approximately 0, 78, 163, 330, or 539 mg/kg/day). The test material was administered from day 0 through day 20 of gestation for the three lower dose levels. At 0.8%, the compound was administered on gestation days 6 through 20. The rationale for providing the test substance for a period that was greater than the period of organogenesis was to allow the dams to reach a steady state with regard to boric acid concentrations. At the highest dose level, exposure to the test material was initiated at a later period in order to minimize preimplantation loss and early embryo lethality. The maternal NOEL was determined to be 0.1% (78 mg/kg/day) and the maternal LOEL was determined to be 0.2% (163 mg/kg/day) based on increased liver and kidney weights. The developmental NOEL was 0.1% (78 mg/kg/day) and the developmental LOEL was 0.2% (163 mg/kg/day) based on decreased fetal body weight and the increase in the incidence of fetuses/litter with variations (short rib XIII).

Dose levels of 0, 0.1%, 0.2% or 0.4% (0, 248, 452, or 1003 mg/kg/day) boric acid were administered to pregnant CD-1 mice in the diet from gestation days 0-17. A maternal NOEL was not established; the LOEL for maternal toxicity was 0.1% (248 mg/kg/day) based on the increased incidence of dilated renal tubules. The developmental NOEL was 0.1% (248 mg/kg/day) and the developmental LOEL was 0.2% (452 mg/kg/day) based on decreased average fetal body weights.

Doses of 0, 62.5, 125 or 250 mg/kg/day were administered by gavage to pregnant New Zealand white rabbits on gestation days 6 through 19, inclusive. The maternal NOEL was 125 mg/kg/day and the maternal LOEL was 250 mg/kg/day based on the presence of vaginal bleeding, decreased weight gain during the treatment period, and decreased gravid uterine weights that were secondary to prenatal mortality. The developmental NOEL was 125 mg/kg/day and the developmental LOEL was 250 mg/kg/day based on prenatal mortality

as characterized by the increase in the total number of resorptions. At this dose level, there was also an increase in the incidence of fetuses with enlarged aortas, intraventricular septal defects and great vessels arising from the right ventricle. Pre implantation losses were also higher at 250 mg/kg but this is probably the result of a dosing error since the compound was supposedly administered after implantation.

In a two generation reproduction study conducted in mice, boric acid was administered throughout the study in the diet at levels of 0, 1000, 4500, or 9000 ppm (0, 150, 675 or 1350 mg/kg). The NOEL for parental and reproductive toxicity was 1000 ppm (150 mg/kg). The parental LOEL was 4500 ppm based on decreases in organ weights in both sexes. The reproductive LOEL was also 4500 ppm based on decreased fertility and decreased pup weight. At this dose, the average number of days between litters increased after the second litter and the number of dams producing litters decreased significantly. At the highest dose tested, no litters were produced and the males in this group had a decrease in sperm concentration and motility when compared to controls.

In a reproduction study conducted in Sprague Dawley rats, borax was administered in the feed at doses of 0, 65, 154 or 515 mg/kg/day for three generations. The systemic and reproductive NOELs were 154 mg/kg/day and the systemic and reproductive LOELs were 515 mg/kg/day. At this dose level, there was a reported decrease in weight gain during the pre-mating period in both sexes and food efficiency was lower in females. The testes in males were atrophied and there was a reported decrease in the number of corpora lutea in females at the highest dose tested. Additionally, no litters were produced when high dose males were mated to high dose females. When high dose females were mated to control males, there was a reported decrease in the number of litters and pup survival was adversely affected. This study was classified as supplementary, but can be used for risk assessment.

e. Mutagenicity

Boric acid has not shown evidence of genetic toxicity. The compound was negative for gene mutations in both bacteria and mammalian cells (in vitro). When administered to male and female Swiss mice, the results did not show a significant increase in the frequency of micronucleated polychromatic erythrocytes in bone marrow cells, i.e., chromosomal aberration (in vivo).

f. Metabolism

No metabolism studies are required.

g. Reference Dose/Carcinogenicity

The OPP/HED RfD Peer Review Committee reviewed all the toxicological data (previously summarized in this document) and concluded that a Reference Dose (RfD) for the boron equivalents of boric acid and borax was calculated to be 0.09 mg/kg/day based on 1) a

no observable effect level (NOEL) of 8.80 mg/kg/day (as boron equivalents) for testicular atrophy observed at 29 mg/kg/day (active ingredient) in combined sub-chronic (38 weeks) and chronic (two years) studies in dogs, and 2) an uncertainty factor of 100 to account for inter-species extrapolation and intra-species variability.

The OPP Carcinogenicity Peer Review Committee has classified boric acid as a "Group E" carcinogen, evidence of non-carcinogenicity for humans.

2. Exposure Assessment

a. Dietary

Tolerances for residues of boron resulting from the use of boric acid and its sodium salts had been established under (40 CFR 180.271) on cottonseed (30 ppm) and citrus fruits (8 ppm, postharvest).

Boric acid and its salts are acaricides, algeacides, fungicides, herbicides, and insecticides which are registered for various non-food, agricultural, medical, and food handling establishment applications. Additionally, boron occurs naturally in water, fruits and vegetables, and forage crops, and is an essential nutrient for plants. In pears and strawberries the levels may reach 160 ppm, and in red cabbage occasionally as high as 200 to 300 ppm. The increment of added boron residues resulting from pesticide use of boric acid and the boron-containing salts is insignificant compared to levels of naturally occurring boron in citrus and cottonseed. For example, lemons average 1 ppm incremental boron due to treatment, compared with 2.5 ppm boron which is endogenous.

The Boric Acid and Boron Containing Salts Registration Standard indicated that the Agency would consider revoking the existing tolerances and replacing them with an exemption as well as establishing food additive regulations to cover the food/feed handling uses at the time the required toxicology studies were submitted and reviewed.

Therefore, based on the review of the toxicological data base and because boric acid occurs naturally with little if any residues of boron expected above endogenous levels, the Agency has determined that boric acid and its sodium salts should be exempted from the requirement of a tolerance on all raw agricultural commodities. Therefore, on August 20, 1993, the Agency established exemptions from the requirement of a tolerance for residues of boric acid and certain derivatives on all raw and agricultural commodities and removed the previously established tolerances (in cotton seed and citrus fruits). The Agency will issue a federal register notice proposing to amend the exemption from tolerances to include the two derivatives, sodium tetraborate pentahydrate (borax pentahydrate) and disodium octaborate (anhydrous), omitted in the original notice. Also, because products of boric acid salts are registered for crack and crevice use in food and feed handling establishments, and the

potential exists, even though unlikely, for residues to occur in food, the Agency is establishing food and feed additive regulations for boric acid and its sodium salts in food and feed handling establishments.

With these actions, there are no residue chemistry data requirements remaining for boric acid and its sodium salts. The tolerances for residues of boron under 40 CFR 180.271 have been revoked and food and feed additive regulations will be proposed under 40 CFR 185 and 186, respectively.

b. Occupational and Residential

The products registered for use which contain boric acid as the active ingredient are applied in aquatic, outdoor and indoor sites (i.e., commercial, industrial, domestic dwellings, food handling establishments, sewage systems, wood protection treatment to buildings, etc). Depending on the use site, boric acid may be applied using a spreader, fixed-wing aircraft, knife/spatula, airblower, power duster, squeeze applicator, or aerosol can. Based on the use patterns, the potential for dermal and inhalation exposure exists, (i.e., exposure to persons applying the products, exposure to humans reentering the treated areas, etc.).

With regards to toxicity, boric acid and its sodium salts are human poisons by ingestion. For boric acid, death in infants has resulted from ingestion of less than 5 grams and adults have died after ingestion of 5 to 20 grams. Technical grade boric acid is classified as an acute oral toxicity category III chemical, and an acute dermal toxicity category III chemical. Contact involving concentrated solutions or nearly pure solid formulations of boric acid may also produce primary eye irritation; additionally, dermal irritation may also occur if accidental contact occurs (i.e. considered toxicity category IV for primary skin irritation).

The potential for dermal and inhalation exposure exists. However, if the products are used in accordance with the label instructions and considering the lack of toxicological concern, data are not required for the reregistration of boric acid (and its related compounds).

The Agency considers the use of a long-sleeved shirt, long pants, shoes, socks, and chemical-resistant gloves a prudent risk-mitigation measure to protect handlers from exposure to boric acid (and its related compounds). Therefore, the Agency requires that all products that contain boric acid (and its related compounds) bear personal protective equipment requirements for handlers that are <u>at least</u> as protective as these items. If the end-use product labeling already bears personal protective equipment requirements that are more protective than these items, the more protective requirement must be retained.

The Agency has determined that, at this time, the personal protective equipment discussed in this section need not apply to residential uses of boric acid (and its related compounds). The predicted frequency, duration, and degree of exposure in residential uses

should not warrant the risk mitigation measures being required for occupational exposed users.

The Worker Protection Standard (WPS) for Agricultural Pesticides -- 40 CFR Parts 156 and 170 -- established an interim restricted-entry interval (REI) of 12 hours for boric acid (and its related compounds) because the known acute toxicity categories for acute dermal toxicity, skin irritation potential, eye irritation potential are Toxicity Category III or IV. The Agency considers the 12-hour REI for this chemical a prudent risk-mitigation measure to protect workers. Therefore, the Agency retains the 12-hour REI for uses within the scope of the WPS and will allow workers to enter areas treated with boric acid (and its related compounds) during the REI only in the few narrow exceptions allowed in the WPS.

The Agency has determined, at this time, the entry restrictions discussed in this section need NOT apply to uses of boric acid (and its related compounds) not within the scope of the Worker Protection Standard for Agricultural Chemicals, including out-of-scope commercial uses and homeowner uses. The predicted frequency, duration, and degree of exposure as a result of such uses should not warrant the risk mitigation measures being required for persons engaged in the production of agricultural plants for commercial or research purposes.

3. Risk Characterization

The human risks associated with boric acid and its salts are known. Ingestion of boric acid (>5 grams) by (adult) humans is fatal. There are no direct food application uses for boric acid and its salts; therefore, there are no dietary concerns based on their current label uses. There is no reasonable expectation that pesticidal or biocidal uses may constitute a hazard or risk to people involved in handling or application activities. Proper care and appropriate adherence to label precautions and directions should reduce exposure. No additional hazard or exposure data are required for reregistration eligibility.

C. Environmental Assessment

The Agency has determined that no new environmental fate data are required because of the relatively small amount of boric acid employed for most uses as a pesticide, and the already significant amounts of boron present in soil and water.

1. Environmental Fate

Boric acid exists in three crystalline forms, with melting points varying from 170 to 200° C.; its solubility in water is 13,000 parts per million. Dilute aqueous solutions contain predominantly undissociated H_3BO_3 molecules, the pK_a being 9.14. The apparent acid strength of boric acid is increased by strong electrolytes. In the presence of excess $CaCl_2$ the strength of boric acid becomes equivalent to that of carboxylic acids.

Boric acid, borax, and boron-containing salts are ubiquitous in the natural environment. Available boron occurs in nature in the form of a number of closely related compounds which differ chiefly in the water of hydration associated with the molecule and are not easily differentiated. Because of this, the following discussion refers to the group as "boric acid," "boron," or "the boron salts." The specie which occurs in solution is the BO_3^{-3} cation. More complex mineral forms containing boron may gradually release it in the form of borate as a result of weathering. The range of boron as a micronutrient in soil is 5-150 ppm, and representative surface soil contains 50 ppm. Boron salts occur naturally in low concentrations in most unpolluted waterways. A study reviewed by the Agency indicated that the adsorption and desorption coefficients were less than 1. This study provided information to confirm that the compound is mobile. The average concentration for boron in surface waters has been reported to range from 0.001 mg/liter to 0.1 mg/liter. Seawater boron concentrations average 4.5 mg/liter. In some geographical areas such as the American Southwest, boron occurs in surface waters in concentrations that have been shown to be toxic to plants of commercial importance. Most of the naturally occurring boron is inorganic, but because it is an essential element for many organisms there is an organically-bound component.

2. Ecological Effects

The following data and risk assessment summaries are based upon boric acid's limited outdoor use patterns. The Agency's concerns for risks to fish and wildlife species are minimal. The limited outdoor use patterns, low toxicity and boron's natural occurrence in terrestrial and aquatic environments are mitigating factors for any potential risk to nontarget organisms.

a. Terrestrial Data

Five studies reviewed by the Agency provide sufficient information to characterize technical boric acid as "practically nontoxic" to avian species on an acute oral and dietary basis. The LD50 value for bobwhite quail is greater than 2510 mg/kg. The dietary LC50 value for mallard duck and bobwhite quail are greater than 5620 ppm and 10,000 ppm, respectively.

The Agency does not anticipate that avian species will be adversely impacted by the outdoor use patterns of boric acid. Although the nonagricultural areas and rights-of-way require high application rates, certain mitigating factors reduce the risk potential; i.e., the infrequent use confined to limited treatment areas and the low avian acute oral and dietary toxicity minimize any unreasonable exposure risk. There have been no records or documentation of field mortalities associated with the use of boric acid submitted to the Agency.

Three other sites which may require high treatment rates are airports/landing fields, agricultural drainage ditches, and industrial drainage ditches. These three sites do not

involve large scale acreage similar to agricultural sites. The airport/landing fields use is for weed control, as needed. The agricultural and industrial drainage systems' uses are intended to keep ditchbanks and culverts clear of vegetation, to keep drainages clear of debris, and to promote rapid drainage. The Agency does not anticipate that these use patterns will adversely impact non-target organisms.

b. Aquatic Data

Four studies reviewed by the Agency provide sufficient information to characterize technical boric acid as "practically nontoxic" to fish and aquatic invertebrates. Acute LC50 values for rainbow trout and bluegill sunfish are >1100 ppm and >1021 ppm, respectively. The acute toxicity value (EC50) for the aquatic invertebrate Daphnia magna ranged from 133 to 226 ppm. One of the studies reviewed indicated that chronic toxicity value (MATC - Maximum Allowable Toxicant Concentration) for Daphnia magna is between 6 and 13 ppm. Therefore, based upon the available acute toxicity data for fish and invertebrates, it was determined that aquatic invertebrates are more sensitive than fish.

However, public literature studies indicate that risk to fish and invertebrates from the outdoor use patterns of boric acid is expected to be minimal because of the low toxicity and infrequent uses. Although the rights-of-ways use pattern requires high application rates, the Agency does not anticipate that aquatic invertebrates will be at risk because of the following mitigating factors; i.e., boron naturally occurs in surface waters inhabited by both fish and invertebrates, there are no official reports in the Agency's files of field effects of boric acid on aquatic ecosystems, and the rights-of-way use pattern is usually limited to treatment of small strips of land (e.g., railroad lines, power lines) thereby limiting the amount of contaminated runoff into adjacent aquatic environments.

Additionally, industrial point sources that discharge effluent into surface waters are subject to NPDES (National Pollutant Discharge Elimination System) permitting process via the EPA's Office of Water. Label statements for these use patterns require users or dischargers to contact the EPA or appropriate state agencies before discharging effluent into surface waters.

c. Beneficial Insects' Data

A study reviewed by the Agency provides sufficient information to characterize technical boric acid as "relatively nontoxic" to beneficial insects. The honey bee acute contact LD50 was greater than 362.58 ppm.

The Agency does not anticipate that beneficial insects will be at risk as a result of the use of boric acid. Further, most of the boric acid use patterns for insect control are limited to indoor use. Outdoor uses are considered to be infrequent.

d. Effects on Plants Data

Seed germination/seedling emergence and vegetative vigor are terrestrial phytotoxicity studies required for herbicides applied to terrestrial food, terrestrial nonfood, aquatic nonfood (excluding residential) and forestry sites if any of the following conditions exist:

- The vapor pressure of the TGAI is equal to or greater than 1.0×10^{-5}mm Hg at 25°C and the TEP is not thoroughly incorporated immediately after application.
- The TEP (excluding granular formulations) is applied by forced air, air blast, or through sprinkler irrigation.
- Endangered or threatened plant species are associated with the site of application (i.e., "rights-of-way").
- There are field incidents of plant phytotoxicity to commercially important plants. The potential phytotoxicity hazard to commercially important plants (e.g. citrus) has also been noted in the public literature.

Because boric acid and its sodium salts meet all the above conditions, the Agency is requiring these terrestrial phytotoxicity studies.

In addition, aquatic plant testing is required for any herbicide applied to terrestrial nonfood (rights-of-way and ditchbanks), aquatic food, aquatic nonfood (excluding residential) and forestry sites. Boric acid and its sodium salts are used in some of these sites . Therefore, to meet this requirement the following species are to be tested: Selenastrum capricornutum, Lemna gibba, Skeletonema costatum, Anabaena flos-aquae, and freshwater diatom.

However, these data requirements are not considered to be part of the target data base, and therefore, they do not affect the reregistration eligibility of boric acid and its sodium salts.

e. Endangered Species Concern

The literature on boric acid indicates that the noncrop herbicidal use has the potential to harm endangered and threatened plant species. The Agency is requiring data on the phytotoxicity of the active ingredient on non-target plants to help determine whether the noncrop herbicidal use of boric acid and its sodium salts may affect listed endangered or threatened plants. Should the data indicate that their use may affect listed endangered or threatened species of plants, the Agency will consult with the U.S. Fish and Wildlife Service.

At the present time, the Agency is working with the U.S. Fish and Wildlife Service and other federal and state agencies to develop a program to avoid jeopardizing the continued existence of listed species by the use of pesticides. When the Endangered Species Protection Program is implemented and subsequent guidance is given, endangered species labeling amendments may be required on affected end-use products. Labeling statements for end-use products will likely refer users to county specific bulletins specifying detailed limitations on use to protect endangered species.

IV. RISK MANAGEMENT AND REREGISTRATION DECISION

A. Determination of Eligibility

Section 4(g)(2)(A) of FIFRA calls for the Agency to determine, after submission of relevant data concerning an active ingredient, whether products containing the active ingredients are eligible for reregistration. The Agency in the Boric Acid and Boron containing Salts Registration Standard previously identified and required the submission of the generic (i.e., active ingredient specific) data required to support reregistration of products containing boric acid and its sodium salts as active ingredients. The Agency has completed its review of these generic data, and has determined that the data are sufficient to support reregistration of all products containing boric acid and its sodium salts (products containing boric acid, sodium tetraborate decahydrate, sodium tetraborate pentahydrate, sodium tetraborate (anhydrous borax), disodium octaborate decahydrate, disodium octaborate (anhydrous), and sodium metaborate). Appendix B identifies the generic data requirements that the Agency reviewed as part of its determination of reregistration for boric acid and its sodium salts, and lists the submitted studies that the Agency found acceptable.

The data identified in Appendix B were sufficient for the Agency to assess the registered uses of boric acid and its sodium salts and to determine that boric acid and its sodium salts products can be used without resulting in unreasonable adverse effects to man and the environment. The Agency therefore finds that all products containing boric acid and its sodium salts 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 boric acid and its sodium salts 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 boric acid and its sodium salts, if new information comes to the Agency's attention or if the data requirements for registration (or the guidelines for generating such data) change.

1. Eligibility Decision

Based on the reviews of the generic data for the active ingredients of boric acid and its sodium salts, the Agency has sufficient information on the health effects of boric acid and its sodium salts and their potential for causing adverse effects in fish and wildlife and the environment. Therefore, the Agency concludes that products containing boric acid and its sodium salts for all uses are eligible for reregistration.

The Agency has determined that boric acid and its sodium salts, labeled and used as specified in this RED document, will not pose unreasonable risks or adverse effects to humans or the environment.

However, before reregistering these products, the Agency is requiring the submittal or citation of product specific data (chemistry, acute toxicity, and efficacy (if needed), a revised Confidential Statement of Formula (CSF), and revised labeling within eight months of the issuance of this document. Refer to Section VI of this document. After these data and labeling have been found acceptable, the Agency will reregister a product if it meets the requirements in Section 3(c)(5) of FIFRA. Those products containing more than one active ingredient will be eligible for reregistration only when the other active ingredients are eligible for reregistration.

Unlike products covered by the Boric Acid and Boron Containing Salts Registration Standard, the Agency has already reregistered all products covered by the General Registration Standard for Boric Acid. For these products, the only additional requirement in this RED will be the submission of a current label and CSF to insure that each product is still in compliance with its special certification form submitted earlier.

2. Eligible and Ineligible Uses

The Agency has determined that all uses of boric acid and its sodium salts are eligible for reregistration.

B. Regulatory Position

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

1. Tolerance Reassessment

Boron occurs naturally in water, fruits, vegetables, and forage crops, and is an essential nutrient for plants. In pears and strawberries the levels may reach 160 ppm, and in red cabbage occasionally as high as 200 to 300 ppm. The increment of added boron residues resulting from pesticide use of boric acid and the boron-containing salts is insignificant

compared to levels of naturally occurring boron in citrus and cottonseed. For example, lemons average 1 ppm incremental boron due to treatment, compared with the 2.5 ppm boron which is endogenous.

Existing tolerances of boron resulting from the use of boric acid and certain derivatives were established under 40 CFR 180.271, for cottonseed (30 ppm) and citrus fruits (8 ppm, post-harvest). Codex maximum residue limits (MRL's) have not been recommended for boron, and tolerances have not been established in Canada or Mexico for residues of boron in any food or feed commodity. The Boric Acid and Boron Containing Salts Registration Standard indicated that the Agency would consider revoking the existing tolerances and replacing them with an exemption as well as establish food additive regulations to cover the food/feed handling uses at such time as the required toxicology studies were submitted and reviewed.

No toxicological concerns have been raised by the review of the toxicology data. Based on this and the fact that the increment of added boron residues resulting from pesticide use of boric acid and boron containing salts is insignificant compared to levels of naturally occurring boron, the Agency has determined that boric acid and its sodium salts should be exempted from the requirements of a tolerance on all raw agricultural commodities under Section 408. This exemption in 40 CFR 180 will also cover the fire ant control use of boric acid in agricultural areas. In addition, because boric acid salts are registered for crack and crevice use in food and feed handling establishments, the Agency will propose food and feed additive regulations for boric acid and its salts at food/feed handling sites under Section 409 of FFDCA. With these actions, there are no residue chemistry data requirements remaining for boric acid and its sodium salts.

On August 20, 1993, the Agency established an exemption from the requirement of a tolerance for residues of boric acid and its salts on all raw agricultural commodities and removed the following established tolerances in cotton seed and citris fruits under 40 CFR 180.271.

The exemption has been established under 40 CFR 180.1121, and reads as follows:

"An exemption from the requirement of a tolerance for residues of boric acid, sodium tetraborate decahydrate (borax decahydrate), sodium tetraborate (anhydrous borax), disodium octaborate tetrahydrate, sodium metaborate, and boric oxide is established in raw agricultural commodities when used as insecticides, herbicides or fungicides pre- or postharvest in accordance with good agricultural practices."

The Agency will issue a federal register notice to amend the exemption from tolerances to include the two derivatives, sodium tetraborate pentahydrate (borax pentahydrate) and disodium octaborate (anhydrous), omitted from the original notice.

The Agency will propose establishing the following food and feed additive regulations under 40 CFR 185 and 186 respectively:

o CFR 40 185:

"A food additive regulation is established permitting the use of boric acid, sodium tetraborate decahydrate (borax decahydrate), sodium tetraborate pentahydrate (borax pentahydrate), sodium tetraborate (anhydrous borax), disodium octaborate tetrahydrate, disodium octaborate (anhydrous), sodium metaborate, and boric oxide in food handling establishments in accordance with the following prescribed condition:

> Application shall be limited solely to careful treatment in food handling establishments where food and food products are held, processed, prepared or served such that contamination of food or food contact surfaces shall be avoided."

o CFR 40 186:

"A feed additive regulation is established permitting the use of boric acid, sodium tetraborate decahydrate (borax decahydrate), sodium tetraborate pentahydrate (borax pentahydrate), sodium tetraborate (anhydrous borax), disodium octaborate tetrahydrate, disodium octaborate (anhydrous), sodium metaborate, and boric oxide in animal feed handling establishments in accordance with the following prescribed condition:

> Application shall be limited solely to careful treatment in animal feed handling establishments where feed and feed products are held, processed, prepared or sold such that contamination of feed or feed contact surfaces shall be avoided."

V. ACTIONS REQUIRED BY REGISTRANTS

This section specifies the data requirements and responses necessary for the reregistration of both manufacturing-use and end-use products of boric acid and its sodium salts.

A. Manufacturing-Use Products

1. Generic Data Requirements

The generic data base supporting the reregistration of boric acid and its sodium salts, for all eligible uses has been reviewed and determined to be substantially complete. However, some additional product chemistry information must be submitted and there exists a data gap for phytotoxicity studies. All of the product chemistry data for boric acid and its sodium salts were originally required in the Boric Acid and Boron Containing Salts

Registration Standard and are therefore not included in a generic Data Call-In issued with this RED document. Nevertheless, the herbicidal uses justify the requirement of phytotoxicity studies in order to further assess the potential risks to non-target plants and to endangered plant species. Additionally, public literature studies cite the possible phytotoxicity hazard of boron to commercially important plants. The following phytotoxicity studies are required:

123-1(a)	Seed germination/seedling emergence
123-1(b)	Vegetative vigor
123-2	Aquatic plant growth with Lemna gibba, Skeletonema costatum Anabaena flosaquae, and a freshwater diatom (Navicula).

2. Labeling

All manufacturing-use products or end-use products that may be contained in an effluent discharged to the waters of the United States or municipal sewer systems must bear the following revised effluent discharge labeling statement:

> "Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

All affected products distributed or sold by registrants and distributors (supplemental registrants) must bear the above labeling by October 1, 1995. All products distributed or sold by persons other than registrants or supplemental registrants after October 1, 1997 must bear the correct labeling. Refer to PR Notice 91-8: *Revised Policy to Provide Applicants Other Than Basic Manufacturers An Opportunity To Submit Generic Data and Receive Data Compensation For It,* PR Notice 93-10: *Effluent Discharge Labeling Statements* and, 40 CFR 152.46(a)(1) for further information. Additionally, all products must be in compliance with current labelling regulations as specified in 40 CFR 156.10.

B. End-Use Products

1. Product-Specific Data Requirements

Section 4(g)(2)B) of FIFRA calls for the Agency to obtain any needed product-specific data regarding the pesticide after a determination of eligibility has been made. The product specific data requirements are listed in Attachment 3 of Appendix (E), in the Combined Generic and Product Specific Data Call-In Notice.

a. Products Under the General Registration Standard for Boric Acid

For products that meet the criteria of the Guidance for the General Registration Standard and were registered and/or reregistered under the Agency's General Reregistration Standard:

- The registrant relied on available data to support registration or reregistration, products are 100% boric acid or 99% boric acid with one of the following inert ingredients: 1% tricalcium phosphate, 1% magnesium stearate, 1% calcium silicate, 1% diatomaceous earth;
- Certified limit for the active ingredient for all formulations containing one of the inert ingredients specified above is 99.0 to 99.5%; with a certified limit for the inert being 0.5 to 1.0%;
- Products are in Toxicity Categories III and IV;
- Products are used only for domestic and nondomestic indoor use for cockroach, ant, and silverfish control;
- Registrants and applicants purchase their technical from a registered source, and have adopted one of the standard labels);

the Agency is requiring submission of a current label and a CSF within 8 months of receipt of this document.

b. Products Under the Boric Acid and Boron Containing Salts Registration Standard

For products under the Boric Acid and Boron Containing Salts Registration Standard, **the Agency is requiring submission of documentation of their previous successful completion of the product specific data requirements within 90 days of the receipt of this document. If the Agency verifies this documentation, it will only require submission of a revised label and revised CSF within 8 months of receipt of this document.** After the Agency reviews this material, the Agency will determine whether to reregister each product based on whether or not it meets the requirements in section 3(c)(5) of the Federal Insecticide, Fungicide and Rodenticide Act. 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.

Registrants must review previous data submissions to ensure that they meet current EPA acceptance criteria (Appendix E, Attachment 5) 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. For batching options to satisfy data requirements refer to Appendix E, Attachment 4.

c. Products not included in either Boric Acid Standards

For products not included in either of the two previously issued standards (i.e., sodium metaborate), **the registrants must either submit product specific data or cite previously submitted data to support their registrations and submit revised labeling, CSFs, application for reregistration, and a certification with respect to citation of data within 8 months of receipt of this document before the products will be considered for reregistration.** After the Agency reviews these data and the revised labels, the Agency will determine whether to reregister each product based on whether or not it meets the requirements in section 3(c)(5) of the Federal Insecticide, Fungicide and Rodenticide Act. 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. Refer to Appendix E, Attachment 4 on batching for options to satisfy data requirements.

2. Labeling

The labels and labeling of all products must comply with EPA's current regulations and requirements as specified. Please follow the instructions in the Summary of Instructions for Responding to the Reregistration Eligibility Decision Document with respect to labels and labeling.

The Agency has determined that the current label precautions are still applicable and are required for product reregistration.

a. Compliance with the Worker Protection Standard

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

PR Notices 93-7 and 93-11. Unless otherwise specifically directed in this RED or by other EPA guidance, all statements required by PR Notices 93-7 and 93-11 are to be on the product labeling exactly as instructed in those notices.

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

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

Personal Protective Equipment Requirements

■ **Uses On Products NOT Primarily Intended for Home Use:** The personal protective equipment (PPE) requirement for pesticide handlers on all end-use products, except those intended primarily for home use (see tests in PR Notice 93-7 and 93-11), is:

"Applicators and other handlers must wear:
--Long-sleeved shirt and long pants
--Chemical-resistant or waterproof gloves (see instructions * below)
--Shoes plus socks

(*) The glove statement is the statement established through the instructions in Supplement Three of PR Notice 93-7.

End-use products that contain boric acid (and its related compounds) must compare the personal protective equipment requirements set forth in this section to the personal protective equipment requirements, if any, on their current labeling and retain the more protective required PPE. For guidance in choosing which requirement is more protective, see Supplement Three of PR Notice 93-7. If the existing labeling requires a respirator, use the guidance in Supplement Three of PR Notice 93-7 to determine the appropriate respirator statement.

■ **Uses of Products Primarily Intended for Home Use:** For products primarily intended for home use (see tests in PR Notice 93-7 and 93-11), do not add any additional personal protective equipment requirements (PPE) for such products, however, any PPE requirements on the current product labeling must be retained.

Entry Restrictions

- **Products NOT Primarily Intended for Home Use**

Uses Within the Scope of the WPS: A 12-hour restricted entry interval (REI) is required for all uses within the scope of the WPS (see PR Notice 93-7) on all end-use products, except those intended primarily for home use (see tests in PR Notice 93-7 and 93-11). This REI should be inserted into the standardized REI statement required by PR Notice 93-7. The personal protective equipment for early entry should be the PPE required for applicators of boric acid (and its related compounds) except that the requirement for an apron or respirator is waived. This PPE should be inserted into the standardized early entry PPE statement required by PR Notice 93-7."

Sole-active-ingredient end-use products that contain boric acid (and its related compounds) must be revised to adopt the entry restrictions set forth in this section. Any conflicting entry restrictions on their current labeling must be removed.

Multiple-active-ingredient end-use products that contain boric acid (and its related compounds) must compare the entry restrictions set forth in this section to the entry restrictions on their current labeling and retain the more protective entry restrictions. A specific time-period in hours or days is considered more protective than "sprays have dried" or "dusts have settled."

Uses Not Within the Scope of the WPS: Do not add any additional entry restrictions for uses not within the scope of the WPS, however, any entry restrictions on the current product labeling for those uses must be retained.

Products Primarily Intended for Home Use: For products primarily intended for home use (see tests in PR Notice 93-7 and 93-11), do not add any additional entry restrictions for such products, however, any entry restrictions on the current product labeling must be retained.

b. Compliance with the Existing Stocks Provision

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

c. Products Under the General Boric Acid Standard

Labels must comply with the format labels issued with the General Boric Acid Standard. Submit five copies of current labeling.

d. Products Not Under General Boric Acid Standard

Labels must comply with 40 CFR 156.10 and the requirements listed below, if they are appropriate.

o Environmental Hazard Section -

1) Terrestrial Food & Feed and Non-Crop

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

2) Indoor Uses with Effluents

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

o Under "Directions for Use" -

Labels for uses associated with boric acid on carpets and floors to combat fleas, cockroches, ants, and silverfish:

Use Restrictions -

Children and pets should not be in treatment area until after application is completed. Do not treat pets with this product. Avoid contamination of feed and foodstuff. Avoid contamination of ornamental plants.

Carpets -

Apply to dry surfaces only. Apply directly on carpets where pets frequently traffic or sleep. Work powder deeply into fibers and mat with a broom or rug rake. Any powder visible after application must be brushed into carpet fibers or removed.

Upholstery -

Remove loose cushions. Apply along creases and into corners and furniture wells. Do not apply product to exposed fabric. Any product visible after application must be removed.

VI. APPENDICES

APPENDIX A

Table of Use Patterns
Subject to Reregistration

APPENDIX A - Use patterns subject to reregistration for: CASE <0024>, <BORIC ACID>

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **BORIC ACID (CHEMICAL 011001)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Bait application, When needed, Spreader GOLF COURSE TURF USE GROUP TERRESTRIAL NON-FOOD CROP ORNAMENTAL LAWNS & TURF USE GROUP: TERRESTRIAL NON-FOOD + OUTDOOR RESIDENTIAL RECREATIONAL AREAS USE GROUP: TERRESTRIAL NON-FOOD CROP	B/S	4.5 lb/A	Not specified		
Bait application, When needed, Spreader HOUSEHOLD/DOMESTIC DWELLING OUTDOOR PREMISES USE GROUP: OUTDOOR RESIDENTIAL	B/S	.1 lb/1000 sq.ft.	Not specified		
Bait application, When needed, By hand HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL REFUSE/SOLID WASTE CONTAINERS (GARBAGE CANS) USE GROUP: INDOOR RESIDENTIAL	P/T	1.2 tablets or units/ room	As needed		
Bait application or Bait station, When needed, Unspecified COMMERCIAL STORAGE/WAREHOUSES PREMISES (INDOOR) USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD EATING ESTABLISHMENTS NON-FOOD AREAS (NON-FOOD CONTACT) USE GROUP: INDOOR NON-FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL HOUSEHOLD/DOMESTIC DWELLING OUTDOOR PREMISES USE GROUP: OUTDOOR RESIDENTIAL SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL	B/S	0.2 lb/1000 sq.ft.	Not specified		
Bait application, When needed, Unspecified REFUSE/SOLID WASTE CONTAINERS (GARBAGE CANS) USE GROUP: INDOOR RESIDENTIAL REFUSE/SOLID WASTE CONTAINERS (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD	B/S	Not quantified	Not specified		
Bait station, When needed, Portable line sprayer or Pump spray bottle HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD	B/L	Not quantified	As needed		
Bait station, When needed, Unspecified COMMERCIAL TRANSPORTATION FACILITIES--FEED & FOOD EMPTY USE GROUP: INDOOR FOOD EATING ESTABLISHMENTS USE GROUP: INDOOR FOOD FOOD PROCESSING PLANT PREMISES (NON-FOOD CONTACT) USE GROUP: INDOOR FOOD FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISES USE GROUP: INDOOR FOOD COMMERCIAL TRANSPORTATION FACILITIES--NON-FEED/NON-FOOD USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL	B/S	Not quantified	120		
Bait station, When needed, Unspecified HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL	B/S	12 units	120		

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **BORIC ACID (CHEMICAL 011001)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Bait station, When needed, Unspecified ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD PET LIVING/SLEEPING QUARTERS USE GROUP: INDOOR RESIDENTIAL SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL SPECIALIZED ANIMALS USE GROUP: INDOOR NON-FOOD	B/S	Not quantified	90		
Bait station, When needed, Unspecified COMMERCIAL TRANSPORTATION FACILITIES--FEED & FOOD EMPTY USE GROUP: INDOOR FOOD EATING ESTABLISHMENTS USE GROUP: INDOOR FOOD FOOD PROCESSING PLANT PREMISES (NON-FOOD CONTACT) USE GROUP: INDOOR FOOD FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISES USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD COMMERCIAL TRANSPORTATION FACILITIES--NON-FEED/NON-FOOD USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL PET LIVING/SLEEPING QUARTERS USE GROUP: INDOOR RESIDENTIAL SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL SPECIALIZED ANIMALS USE GROUP: INDOOR NON-FOOD	B/S	Not quantified	As needed		
Bait station, When needed, Package applicator HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL HOUSEHOLD/DOMESTIC DWELLING OUTDOOR PREMISES USE GROUP: OUTDOOR RESIDENTIAL	B/L	Not quantified	As needed		
Bait station, When needed, Unspecified HOUSEHOLD/DOMESTIC DWELLING OUTDOOR PREMISES USE GROUP: OUTDOOR RESIDENTIAL ORNAMENTAL LAWNS & TURF USE GROUP: TERRESTRIAL NON-FOOD + OUTDOOR RESIDENTIAL	B/S	.004 bait stations/ ft.	30		
Bait station, When needed, Unspecified ORNAMENTAL LAWNS & TURF USE GROUP: TERRESTRIAL NON-FOOD + OUTDOOR RESIDENTIAL	B/S	4.5 lb/A	Not specified		
Broadcast, When needed, Fixed-wing aircraft or Spreader AGRICULTURAL CROPS/SOILS (UNSPECIFIED) USE GROUP: TERRESTRIAL FOOD & FEED USES ORCHARDS (UNSPECIFIED) USE GROUP: TERRESTRIAL FOOD & FEED USES	G	0.54 lb/A	5	12	
Broadcast, When needed, Fixed-wing aircraft or Spreader AGRICULTURAL UNCULTIVATED AREAS USE GROUP: TERRESTRIAL NON-FOOD CROP GOLF COURSE TURF USE GROUP TERRESTRIAL NON-FOOD CROP NONAGRICULTURAL RIGHTS-OF-WAY/FENCEROWS/HEDGEROWS USE GROUP: TERRESTRIAL NON-FOOD CROP NONAGRICULTURAL UNCULTIVATED AREAS/SOILS USE GROUP: TERRESTRIAL NON-FOOD CROP ORNAMENTAL LAWNS & TURF USE GROUP: TERRESTRIAL NON-FOOD + OUTDOOR RESIDENTIAL RECREATIONAL AREAS USE GROUP: TERRESTRIAL NON-FOOD CROP	G	0.54 lb/A	5		
Contact treatment or Surface treatment, When needed, Aerosol can HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD	PRL	1 sec/spot	Not specified		

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **BORIC ACID (CHEMICAL 011001)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Contact treatment or Surface treatment, When needed, Aerosol can COMMERCIAL TRANSPORTATION FACILITIES--FEED & FOOD EMPTY USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD COMMERCIAL TRANSPORTATION FACILITIES--NON-FEED/NON-FOOD USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD EATING ESTABLISHMENTS NON-FOOD AREAS (NON-FOOD CONTACT) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL	PRL or PRD	Not quantified	As needed		
Crack & crevice treatment, When needed, Aerosol can EATING ESTABLISHMENTS FOOD HANDLING AREAS (FOOD CONTACT) USE GROUP: INDOOR FOOD EATING ESTABLISHMENTS FOOD SERVING AREAS (FOOD CONTACT) USE GROUP: INDOOR FOOD FOOD PROCESSING PLANT PREMISES (NON-FOOD CONTACT) USE GROUP: INDOOR FOOD FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISES USE GROUP: INDOOR FOOD	PRL	.2 sec/ linear ft.	Not specified		
Crack & crevice treatment or Spot treatment, When needed, Aerosol can COMMERCIAL TRANSPORTATION FACILITIES--FEED & FOOD EMPTY USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD COMMERCIAL TRANSPORTATION FACILITIES--NON-FEED/NON-FOOD USE GROUP: INDOOR NON-FOODCOMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL	PRL or PRD	1 sec/ linear ft.	As needed		
Crack & crevice treatment, When needed, Unspecified COMMERCIAL TRANSPORTATION FACILITIES--FEED & FOOD EMPTY USE GROUP: INDOOR FOOD EATING ESTABLISHMENTS FOOD HANDLING AREAS (FOOD CONTACT) USE GROUP: INDOOR FOOD EATING ESTABLISHMENTS FOOD SERVING AREAS (FOOD CONTACT) USE GROUP: INDOOR FOOD FOOD PROCESSING PLANT PREMISES (NON-FOOD CONTACT) USE GROUP: INDOOR FOOD FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISES USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD COMMERCIAL TRANSPORTATION FACILITIES--NON-FEED/NON-FOOD USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD EATING ESTABLISHMENTS NON-FOOD AREAS (NON-FOOD CONTACT) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL PET LIVING/SLEEPING QUARTERS USE GROUP: INDOOR RESIDENTIAL SPECIALIZED ANIMALS USE GROUP: INDOOR NON-FOOD	B/S	18.8 units/ 1000 sq.ft.	14		
Crack & crevice treatment or Spot treatment, When needed, Squeeze applicator HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL	D	.49 lb/ 1000 sq. ft.	As needed		

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **BORIC ACID (CHEMICAL 011001)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Crack & crevice treatment, When needed, Knife or Spatula or Unspecified COMMERCIAL TRANSPORTATION FACILITIES--FEED & FOOD EMPTY USE GROUP: INDOOR FOOD EATING ESTABLISHMENTS FOOD HANDLING AREAS (FOOD CONTACT) USE GROUP: INDOOR FOOD EATING ESTABLISHMENTS FOOD SERVING AREAS (FOOD CONTACT) USE GROUP: INDOOR FOOD FOOD PROCESSING PLANT PREMISES (NON-FOOD CONTACT) USE GROUP: INDOOR FOOD FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISES USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD COMMERCIAL TRANSPORTATION FACILITIES--NON-FEED/NON-FOOD USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD EATING ESTABLISHMENTS NON-FOOD AREAS (NON-FOOD CONTACT) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL PET LIVING/SLEEPING QUARTERS USE GROUP: INDOOR RESIDENTIAL SPECIALIZED ANIMALS USE GROUP: INDOOR NON-FOOD	B/S	Not quantified	365		
Crack & crevice or Spot treatment, When needed, Bulbous duster or By hand or Knife or Spatula or Squeeze applicator or Spoon or Unspecified COMMERCIAL TRANSPORTATION FACILITIES--FEED & FOOD EMPTY USE GROUP: INDOOR FOOD EATING ESTABLISHMENTS USE GROUP: INDOOR FOOD EATING ESTABLISHMENTS FOOD HANDLING AREAS (FOOD CONTACT) USE GROUP: INDOOR FOOD EATING ESTABLISHMENTS FOOD SERVING AREAS (FOOD CONTACT) USE GROUP: INDOOR FOOD FOOD PROCESSING PLANT NON-FOOD HANDLING AREAS USE GROUP: INDOOR FOOD FOOD PROCESSING PLANT PREMISES (NON-FOOD CONTACT) USE GROUP: INDOOR FOOD FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISES USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD POULTRY PROCESSING PLANT PREMISES (NON-FOOD CONTACT) USE GROUP: INDOOR FOOD ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD COMMERCIAL TRANSPORTATION FACILITIES--NON-FEED/NON-FOOD USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD EATING ESTABLISHMENTS NON-FOOD AREAS (NON-FOOD CONTACT) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL HOUSEHOLD/DOMESTIC DWELLING OUTDOOR PREMISES USE GROUP: OUTDOOR RESIDENTIAL NONAGRICULTURAL UNCULTIVATED AREAS/SOILS TERRESTRIAL NON-FOOD CROP PET LIVING/SLEEPING QUARTERS USE GROUP: INDOOR RESIDENTIAL RECREATIONAL AREAS USE GROUP: TERRESTRIAL NON-FOOD CROP SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL SPECIALIZED ANIMALS USE GROUP: INDOOR NON-FOOD	RTU or D or WP/D or B/S	Not quantified	As needed or Not specified		
Crack & crevice treatment or Spot treatment, When needed, Spoon PET LIVING/SLEEPING QUARTERS USE GROUP: INDOOR RESIDENTIAL	D	.5 tsp/gal	As needed		
Dip, When needed, Unspecified WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL	RTU	Not quantified	Not specified		

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **BORIC ACID (CHEMICAL 011001)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Dust, When needed, Brush HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS USE GROUP INDOOR RESIDENTIAL PET LIVING/SLEEPING QUARTERS USE GROUP: INDOOR RESIDENTIAL	D	3.25 lb/ 1000 sq. ft.	Not specified		
Dust, When needed, Unspecified HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS USE GROUP INDOOR RESIDENTIAL PET LIVING/SLEEPING QUARTERS USE GROUP: INDOOR RESIDENTIAL	D	Not quantified	Not specified		
Enclosed premise treatment, When needed, Pressure sprayer or Sprayer or Spreader POULTRY (EGG/MEAT) USE GROUP: INDOOR FOOD	WP/D	19.96 lb/ 1000 sq.ft.	As needed or Not specified		
Enclosed premise treatment, When needed, Spreader POULTRY (EGG/MEAT) USE GROUP: INDOOR FOOD	B/S	6 lb/1000 sq.ft.	As needed		
Enclosed premise treatment, When needed, Shaker can ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD	WP/D	Not quantified	Not specified		
Indoor general surface treatment, When needed, Shaker can or Spoon or Unspecified FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISES USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD COMMERCIAL STORAGES/WAREHOUSES PREMISES (INDOOR) USE GROUP: INDOOR NON-FOOD COMMERCIAL TRANSPORTATION FACILITIES--NON-FEED/NON-FOOD USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD EATING ESTABLISHMENTS NON-FOOD AREAS (NON-FOOD CONTACT) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL SPECIALIZED ANIMALS USE GROUP: INDOOR NON-FOOD	WP/D or D	Not quantified	As needed or Not specified		
Indoor general surface treatment, When needed, Unspecified HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL	D	.99 lb/1000 sq. ft.	As needed		
Injection treatment, When needed, Aerosol can WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL	PRD or PRL	10 sec/spot	Not specified		
Litter and bedding treatment, When needed, Duster or Spreader POULTRY (EGG/MEAT) USE GROUP: INDOOR FOOD	WP/D	19.96 lb/ 1000 sq. ft.	As needed		
Litter and bedding treatment, When needed, Spreader POULTRY (EGG/MEAT) USE GROUP: INDOOR FOOD	B/S	6 lb/1000 sq. ft.	As needed		

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **BORIC ACID (CHEMICAL 011001)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Mop, When needed, Mop FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISES USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD COMMERCIAL STORAGES/WAREHOUSES PREMISES (INDOOR) USE GROUP: INDOOR NON-FOOD COMMERCIAL TRANSPORTATION FACILITIES--NON-FEED/NON-FOOD USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD EATING ESTABLISHMENTS NON-FOOD AREAS (NON-FOOD CONTACT) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL PET LIVING/SLEEPING QUARTERS USE GROUP: INDOOR RESIDENTIAL SPECIALIZED ANIMALS USE GROUP: INDOOR NON-FOOD	WP/D	.5 lb/gal or 1 cup/gal	As needed or Not specified		
Nonsoil contact nonfumigation, When needed, Dip tank or Sprayer WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD	RTU	Not quantified	Not specified		
Perimeter treatment, When needed, Unspecified COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD	B/S	0.2 lb/1000 sq.ft.	As needed		
Perimeter treatment, When needed, Unspecified HOUSEHOLD/DOMESTIC DWELLING OUTDOOR PREMISES USE GROUP: OUTDOOR RESIDENTIAL	B/S	0.19 lb/1000 sq.ft.	Not specified		
Preservative treatment, When needed, Unspecified WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL	RTU	Not quantified	Not specified		
Sewer treatment, When needed, Airblower SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL	D or WP/D	2.64 lb/ 1000 sq. ft.	Not specified		
Sewer treatment, When needed, Duster SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL	WP/D	.99 lb/ manhole	As needed		
Sewer treatment, When needed, Shaker can or Spoon SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL	WP/D	Not quantified	As needed		
Spot treatment, When needed, Spoon BARNS/BARNYARDS/AUCTION BARNS USE GROUP: INDOOR FOOD	D	Not quantified	As needed		
Spot treatment, When needed, Spoon or Unspecified HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL	D	.0006 gal/ spot	As needed Not specified		
Spot treatment, When needed, Unspecified MEAT PROCESSING PLANT PREMISES (NON-FOOD CONTACT) USE GROUP: INDOOR FOOD	D	Not quantified	As needed		
Spot treatment, When needed, Brush HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS USE GROUP: INDOOR RESIDENTIAL PET LIVING/SLEEPING QUARTERS USE GROUP: INDOOR RESIDENTIAL	WP/D	12.8 lb/ 1000 sq.ft.	As needed		
Spot treatment, When needed, Duster SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL	WP/D	.635 lb/ manhole	As needed		

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **BORIC ACID (CHEMICAL 011001)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Spot treatment, When needed, Power duster SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL	D	1.9 lb/ manhole	As needed		
Spot treatment, When needed, Package applicator HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL HOUSEHOLD/DOMESTIC DWELLING OUTDOOR PREMISES USE GROUP: OUTDOOR RESIDENTIAL	B/L	Not quantified	As needed		
Spot treatment, When needed, Powder duster ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD EATING ESTABLISHMENTS NON-FOOD AREAS (NON-FOOD CONTACT) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL SPECIALIZED ANIMALS USE GROUP: INDOOR NON-FOOD	D	5 sec/spot	As needed		
Spot treatment, When needed, Unspecified HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS USE GROUP: INDOOR RESIDENTIAL	D	3.25 lb/ 1000 sq.ft.	As needed		
Spot treatment, When needed, Unspecified PET LIVING/SLEEPING QUARTERS USE GROUP: INDOOR RESIDENTIAL	D	6.5 lb/1000 sq.ft.	As needed		
Spot treatment, When needed, Knife or Spatula SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL	B/S	Not quantified	365		
Spot treatment, When needed, Knife or Spatula or Spoon or Squeeze applicator or Unspecified SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL	B/S or D or WP/D	Not quantified	As needed		
Spot treatment, When needed, Unspecified SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL	B/S	18.8 units/ 1000 sq.ft.	14		
Spray, When needed, Sprayer WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL	RTU	Not quantified	Not specified		
Void treatment, When needed, Unspecified EATING ESTABLISHMENTS USE GROUP: INDOOR FOOD + INDOOR NON-FOOD FOOD PROCESSING PLANT PREMISES (NON-FOOD CONTACT) USE GROUP: INDOOR FOOD + INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL	IMPR	0.33 lb/ sq.ft.	As needed		
Void treatment, When needed, Knife or Spatula or Unspecified COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL	B/S	Not quantified	365		

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **BORIC ACID (CHEMICAL 011001)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Void treatment, When needed, Duster or Unspecified FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISES USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD COMMERCIAL STORAGES/WAREHOUSES PREMISES (INDOOR) USE GROUP: INDOOR NON-FOOD COMMERCIAL TRANSPORTATION FACILITIES--NON-FEED/NON-FOOD USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD EATING ESTABLISHMENTS NON-FOOD AREAS (NON-FOOD CONTACT) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL SPECIALIZED ANIMALS USE GROUP: INDOOR NON-FOOD	WP/D or D	Not quantified	As needed		
Void treatment, When needed, Unspecified COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL	B/S	18.8 unit/ 1000 sq. ft.	14		
Void treatment, When needed, Aerosol can COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL	PRD or PRL	1 sec/sq.ft.	30		
Void treatment, When needed, Power duster or Unspecified COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL	D	3.96 lb/ 1000 sq.ft.	As needed		
Void treatment, When needed, Squeeze applicator COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL	D	1.96 lb/ 1000 sq.ft.	As needed		
Void treatment, When needed, Knife or Spatula or Squeeze applicator or Unspecified COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL	B/S	Not Quantified	As needed		
Void treatment, When needed, Aerosol can COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL	PRD	.2 sec/ sq.ft.	As needed		
Wood protection treatment by pressure, When needed, Pressure treating vessel WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD	SC/S	Not quantified	Not specified		

Abbreviations used

Header: max. = maximum; min. = minimum; apps. = applications;
Form: B/L = Bait/Liquid; B/S = Bait/Solid; D = Dust; G = Granular; IMPR = impregnated material ; P/T = Pelleted/Tableted; PRD = Pressurized Dust; PRL = Pressurized Liquid; RTU = Liquid-Ready to Use; SC/S = Soluble Concentrate/Solid; WP/D = Wettable Powder/Dust
Rate: ai = active ingredient; sec = second(s); lb = pound; A = acre; sq.ft. = square foot; Not quantified application rates include the following terminology: small amount, complete coverage, uniform coverage, apply evenly, think film, thoroughly spray, spray surfaces until wet, course spray, course wetting spray, spray liberally, apply liberally, etc.

The maximum number of applications and the maximum number of applications at the maximum rate is not specified and has not been included.

APPENDIX A - Use patterns subject to reregistration for: CASE <0024>, <BORIC ACID>

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP SODIUM TETRABORATE DECAHYDRATE (CHEMICAL 011102)	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Bait station, When needed, Unspecified HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL	B/S	Not quantified	30		
Bait station, When needed, Unspecified HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL	B/L	Not quantified	As needed		
Bait station, When needed, Unspecified HOUSEHOLD/DOMESTIC DWELLING OUTDOOR PREMISES USE GROUP: OUTDOOR RESIDENTIAL ORNAMENTAL LAWNS AND TURF USE GROUP: TERRESTRIAL NON-FOOD + OUTDOOR RESIDENTIAL	B/S	1 bait station/ 10 ft.	30		
Broadcast, When needed, By hand or Spreader INDUSTRIAL AREAS (OUTDOOR) USE GROUP TERRESTRIAL NON-FOOD PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD	SC/S	149.3 lb/ 1000 sq.ft.	Not specified		
Crack & crevice treatment, When needed, Bulbous duster EATING ESTABLISHMENTS FOOD HANDLING AREAS (FOOD CONTACT)/EATING ESTABLISHMENTS FOOD SERVING AREAS (FOOD CONTACT) USE GROUP: INDOOR FOOD FOOD PROCESSING PLANT PREMISES (NONFOOD CONTACT) USE GROUP: INDOOR FOOD FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISES USE GROUP: INDOOR FOOD	CR	Not quantified	Not specified		
Dip, When needed, Dip tank WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: INDOOR RESIDENTIAL	SC/L	1 part to 1 part water	Not specified		
Indoor general surface treatment, When needed, Unspecified COMMERCIAL TRANSPORTATION FACILITIES--FEED/FOOD EMPTY USE GROUP: INDOOR FOOD FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISES USE GROUP: INDOOR FOOD FOOD PROCESSING PLANT NON-FOOD HANDLING AREAS USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD COMMERCIAL TRANSPORTATION FACILITIES--NONFEED/NON-FOOD USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD EATING ESTABLISHMENTS NON-FOOD AREAS (NONFOOD CONTACT) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL SPECIALIZED ANIMALS USE GROUP: INDOOR NON-FOOD	CR	Not quantified	As needed		
Injection treatment, When needed, Power duster COMMERCIAL TRANSPORTATION FACILITIES--FEED/FOOD EMPTY USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD COMMERCIAL TRANSPORTATION FACILITIES--NONFEED/NON-FOOD USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL SPECIALIZED ANIMALS USE GROUP: INDOOR NON-FOOD	CR	Not quantified	Not specified		

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **SODIUM TETRABORATE DECAHYDRATE (CHEMICAL 011102)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Mop, When needed, Mop COMMERCIAL TRANSPORTATION FACILITIES--FEED/FOOD EMPTY USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD COMMERCIAL TRANSPORTATION FACILITIES--NONFEED/NON-FOOD USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL SPECIALIZED ANIMALS USE GROUP: INDOOR NON-FOOD	CR	0.63 lb/gal	Not specified		
Nonsoil contact nonfumigation, When needed, Dip tank or Sprayer WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD	RTU	Not quantified	Not specified		
Nonsoil contact nonfumigation, When needed, Dip tank WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (UNSEASONED) USE GROUP: TERRESTRIAL NON-FOOD	SC/S	.2 lb/gal	Not specified		
Nonsoil contact nonfumigation, When needed, Sprayer WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (UNSEASONED) USE GROUP: TERRESTRIAL NON-FOOD	SC/L	1 part to 1 part water	Not specified		
Sewer treatment, When needed, Air-pressurized duster SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL	CR	2.67 lb/ 1000 sq.ft.	Not specified		
Sewer treatment, When needed, Airblower SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL	CR	3.95 lb/ 1000 sq.ft.	Not specified		
Soil contact nonfumigation, When needed, Brush or Caulk gun or Trowel or Wrap WOOD PROTECTION TREATMENT TO AQUATIC STRUCTURES/ITEMS USE GROUP: AQUATIC NON-FOOD OUTDOOR WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS OUTDOOR USE GROUP: OUTDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD	RTU	Not quantified	Not specified		
Spot treatment, When needed, Unspecified EATING ESTABLISHMENTS FOOD SERVING AREAS (FOOD CONTACT) USE GROUP: INDOOR FOOD	CR	Not quantified	Not specified		
Spot treatment, When needed, Unspecified HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS USE GROUP: INDOOR RESIDENTIAL	CR	20 lb/1000 sq.ft.	Not specified		
Spray, When needed, Sprayer INDUSTRIAL AREAS (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD	SC/S	34 lb/ gal	Not specified		
Sprinkle, When needed, Shaker can HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS USE GROUP: INDOOR RESIDENTIAL	CR	2.5 lb/1000 sq.ft.	14		
Stump treatment, When needed, Shaker can or Sprayer FOREST TREE MANAGEMENT/FOREST PEST MANAGEMENT USE GROUP: FORESTRY SITE NOT SPECIFIED	SC/S or CR	20 lb/1000 sq.ft.	Not specified		

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **SODIUM TETRABORATE DECAHYDRATE (CHEMICAL 011102)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Void treatment, When needed, Duster HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS USE GROUP: INDOOR RESIDENTIAL SPECIALIZED ANIMALS USE GROUP: INDOOR NON-FOOD	CR	Not quantified	Not specified		
Wood protection treatment by pressure, When needed, Unspecified WOOD PROTECTION TREATMENT TO FOREST PRODUCTS USE GROUP: TERRESTRIAL NON-FOOD	SC/S	.2 lb/gal	Not specified		

Abbreviations used

Header: max. = maximum; min. = minimum; apps. = applications;
Form: B/L = Bait/Liquid; B/S = Bait/Solid; RTU = Liquid-Ready to Use; SC/S = Soluble Concentrate/Solid; SC/L = Soluble Concentrate/Liquid
Rate: ai = active ingredient; lb = pound; sq.ft. = square foot; Not quantified application rates include the following terminology: small amount, complete coverage, uniform coverage, apply evenly, think film, thoroughly spray, spray surfaces until wet, course spray, course wetting spray, spray liberally, apply liberally, etc.

The maximum number of applications and the maximum number of applications at the maximum rate is not specified and has not been included.

APPENDIX A - Use patterns subject to reregistration for: CASE <0024>, <BORIC ACID>

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP DISODIUM OCTABORATE TETRAHYDRATE (CHEMICAL 011103)	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Animal bedding treatment, When needed, Sprayer PET LIVING/SLEEPING QUARTERS USE GROUP: INDOOR RESIDENTIAL	SC/S	.74 lb/gal	Not specified		
Compost treatment, When needed, By hand or Dust gun COMPOST/COMPOST PILES	SC/S	19.6 lb/ 1000 sq.ft.	Not specified		
Dip, When needed, Unspecified WOOD PROTECTION TREATMENT TO AQUATIC STRUCTURES/ITEMS USE GROUP: AQUATIC NON-FOOD OUTDOOR	SC/S	9.8 lb/1000 sq.ft.	Not specified		
Indoor premise treatment, When needed; By hand HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL	SC/S	2.97 lb/ 1000 sq.ft.	Not specified		
Indoor premise treatment, When needed; Sprayer HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL	SC/S	4.45 lb/ 1000 sq.ft.	Not specified		
Manure treatment, When needed, By hand or Dust gun MANURE USE GROUP: TERRESTRIAL FOOD + FEED CROP POULTRY (EGG/MEAT) USE GROUP: INDOOR FOOD	SC/S	19.6 lb/ 1000 sq.ft.	Not specified		
Mop, When needed, Mop COMMERCIAL TRANSPORTATION FACILITIES--FEED/FOOD EMPTY USE GROUP: INDOOR FOOD FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISE USE GROUP: INDOOR FOOD ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD EATING ESTABLISHMENTS USE GROUP: INDOOR FOOD + INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL SEWAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL SPECIALIZED ANIMALS USE GROUP INDOOR NON-FOOD	SC/S	4 oz/pail of water	1		
Mop, When needed, Mop COMMERCIAL STORAGES/WAREHOUSES PREMISES (INDOOR) USE GROUP: INDOOR NON-FOOD EATING ESTABLISHMENTS USE GROUP: INDOOR FOOD + INDOOR NON-FOOD FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISE USE GROUP: INDOOR FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL	SC/S	0.061 lb/gal	As needed		
Nonsoil contact nonfumigation, When needed, Brush or Sprayer WOOD PROTECTION TREATMENT TO AQUATIC STRUCTURES/ITEMS USE GROUP: AQUATIC NON-FOOD OUTDOOR	SC/S	9.8 lb/1000 sq.ft.	Not specified		
Nonsoil contact nonfumigation, When needed, Brush WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL	SC/L	2 part/1000 sq.ft.	Not specified		
Nonsoil contact nonfumigation, When needed, Brush WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL	SC/S	6.53 lb/1000 sq.ft.	Not specified		

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **DISODIUM OCTABORATE TETRAHYDRATE (CHEMICAL 011103)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Nonsoil contact nonfumigation, When needed, Brush WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS OUTDOOR USE GROUP: OUTDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD	SC/S	6.53 lb/1000 sq.ft.	Not specified		
Nonsoil contact nonfumigation, When needed, Dip tank WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS OUTDOOR USE GROUP: OUTDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD	SC/S	2.74 lb/gal	Not specified		
Nonsoil contact nonfumigation, When needed, Dip tank WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (UNSEASONED) USE GROUP: TERRESTRIAL NON-FOOD	SC/S	3.75 lb/gal	Not specified		
Nonsoil contact nonfumigation, When needed, Foaming apparatus WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL	SC/L	1.25 part/ 1000 sq.ft.	Not specified		
Nonsoil contact nonfumigation, When needed, Fogger or Hand held sprayer WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL	SC/L	.5 part/ 1000 sq.ft.	Not specified		
Nonsoil contact nonfumigation, When needed, Hand held sprayer or Sprayer WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS OUTDOOR USE GROUP: OUTDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD	SC/L	1 part/1000 sq.ft.	Not specified		
Nonsoil contact nonfumigation, When needed, Injection WOOD PROTECTION TREATMENT TO AQUATIC STRUCTURES/ITEMS USE GROUP: AQUATIC NON-FOOD OUTDOOR	SC/S	9.8 lb/1000 sq.ft.	Not specified		
Nonsoil contact nonfumigation, When needed, Injection WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS OUTDOOR USE GROUP: OUTDOOR RESIDENTIAL	SC/S	.98 lb/gal	Not specified		
Nonsoil contact nonfumigation, When needed, Injection WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS OUTDOOR USE GROUP: OUTDOOR RESIDENTIAL	SC/L	.320 gal/ 1000 cu.in.	Not specified		
Nonsoil contact nonfumigation, When needed, Sprayer WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS OUTDOOR USE GROUP: OUTDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD	SC/S	6.86 lb/1000 sq.ft.	Not specified		
Nonsoil contact nonfumigation, When needed, Sprayer WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL	SC/L	5 parts/1000 sq.ft.	Not specified		
Nonsoil contact nonfumigation, When needed, Sprayer WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS OUTDOOR USE GROUP: OUTDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD	SC/L	1 part/1000 sq.ft.	Not specified		
Nonsoil contact nonfumigation, When needed, Tank WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD	SC/S	.98 lb/gal	Not specified		

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **DISODIUM OCTABORATE TETRAHYDRATE (CHEMICAL 011103)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Nonsoil contact nonfumigation, When needed, Unspecified WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS OUTDOOR USE GROUP: OUTDOOR RESIDENTIAL	SC/S	.031 lb/ sq.ft.	Not specified		
Nonsoil contact nonfumigation, When needed, Unspecified WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD	SC/S	.98 lb/gal	Not specified		
Outdoor general treatment, When needed, Sprayer REFUSE/SOLID WASTE SITES (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD	SC/S	19.6 lb/1000 sq.ft.	Not specified		
Outdoor premise treatment, When needed, By hand or Dust gun ANIMAL KENNELS/SLEEPING QUARTERS (INDOOR) USE GROUP: TERRESTRIAL NON-FOOD	SC/S	49 lb/1000 sq.ft.	30		
Outdoor premise treatment, When needed, Sprayer ANIMAL KENNELS/SLEEPING QUARTERS (INDOOR) USE GROUP: TERRESTRIAL NON-FOOD	SC/S	44.1 lb/ 1000 sq.ft.	2		
Outdoor treatment, When needed, By hand or Dust gun REFUSE/SOLID WASTE SITES (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD	SC/S	19.6 lb/1000 sq.ft.	Not specified		
Shampoo, When needed, Shampoo machine HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS USE GROUP: INDOOR RESIDENTIAL	SC/S	2.97 lb/1000 sq.ft.	Not specified		
Soil contact nonfumigation, When needed, Injection WOOD PROTECTION TREATMENT TO AQUATIC STRUCTURES/ITEMS USE GROUP: AQUATIC NON-FOOD OUTDOOR	SC/L	.096 gal/ 1000 cu.in.	Not specified		
Soil contact nonfumigation, When needed, Injection WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS OUTDOOR USE GROUP: OUTDOOR RESIDENTIAL	SC/L	.320 gal/ 1000 cu.in.	Not specified		
Soil contact nonfumigation, When needed, Injection WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD	SC/L	.187 gal/ 1000 cu.in.	Not specified		
Spot treatment, When needed, By hand HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS USE GROUP: INDOOR RESIDENTIAL	SC/S	2.97 lb/ 1000 sq.ft.	Not specified		
Spot treatment, When needed, Carpet steam cleaner HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS USE GROUP: INDOOR RESIDENTIAL	SC/S	3.27 lb/ 1000 sq.ft.	Not specified		
Spot treatment, When neede, Shampoo machine or Sprayer HOUSEHOLD/DOMESTIC DWELLINGS CONTENTS USE GROUP: INDOOR RESIDENTIAL HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL	SC/S	4.46 lb/ 1000 sq.ft.	Not specified		
Spot treatment, When needed, Sprayer PET LIVING/SLEEPING QUARTERS USE GROUP: INDOOR RESIDENTIAL	SC/S	.74 lb/gal	Not specified		
Wood protection treatment by pressure, When needed, Unspecified WOOD PROTECTION TREATMENT TO FOREST PRODUCTS USE GROUP: TERRESTRIAL NON-FOOD	SC/S	Not quantified	Not specified		

Abbreviations used

Header: max. = maximum; min. = minimum; apps. = applications
Form: SC/S = Soluble Concentrate/Solid; SC/L = Soluble Concentrate/Liquid
Rate: ai = active ingredient; sec = second(s); lb = pound; A = acre; gal = gallon(s); sq.ft. = square foot; cu.in. = cubic inches; Not quantified application rates include the following terminology: small amount, complete coverage, uniform coverage, apply evenly, think film, thoroughly spray, spray surfaces until wet, course spray, course wetting spray, spray liberally, apply liberally, etc.

The maximum number of applications and the maximum number of applications at the maximum rate is not specified and has not been included.

APPENDIX A - Use patterns subject to reregistration for: CASE <0024>, <BORIC ACID>

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP DISODIUM OCTABORATE ANHYDROUS (CHEMICAL 011107)	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Nonsoil contact nonfumigation, When needed, By hand WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR USE GROUP: INDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS OUTDOOR USE GROUP: OUTDOOR RESIDENTIAL WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (UNSEASONED) USE GROUP: TERRESTRIAL NON-FOOD	CR	.26 lb/cu.ft.	Not specified		

Abbreviations used
Header: max. = maximum; min. = minimum; apps. = applications
Form: CR = Crystalline
Rate: ai = active ingredient; sec = second(s); lb = pound; cu.ft. = cubic feet; Not quantified

The maximum number of applications and the maximum number of applications at the maximum rate is not specified and has not been included.

APPENDIX A - Use patterns subject to reregistration for: CASE <0024>, <BORIC ACID>

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **SODIUM TETRABORATE PENTAHYDRATE (CHEMICAL 011110)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Broadcast, When needed, Granule applicator INDUSTRIAL AREAS (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD NONAGRICULTURAL UNCULTIVATED AREAS/SOILS USE GROUP: TERRESTRIAL NON-FOOD CROP	G	3.88 lb/ 1000 sq. ft.	Not specified		
Broadcast, Fall or Winter or When needed, By hand or Spreader or Unspecified SITE NOT SPECIFIED	G	129.6 lb/ 1000 sq. ft.	As needed		
Crack & crevice, When needed, Bulbous duster EATING ESTABLISHMENTS FOOD HANDLING AREAS (FOOD CONTACT) USE GROUP: INDOOR FOOD FOOD PROCESSING PLANT PREMISES (NONFOOD CONTACT) USE GROUP: INDOOR FOOD FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISE USE GROUP: INDOOR FOOD	D	Not quantified	Not specified		
Indoor general surface treatment, When needed; Squeeze applicator COMMERCIAL TRANSPORTATION FACILITIES--FEED/FOOD EMPTY USE GROUP: INDOOR FOOD FOOD PROCESSING PLANT NON-FOOD HANDLING AREAS USE GROUP: INDOOR FOOD FOOD/GROCERY/MARKETING/STORAGE/DISTRIBUTION FACILITY PREMISES USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD COMMERCIAL TRANSPORTATION FACILITIES--NONFEED/NONFOOD USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD EATING ESTABLISHMENTS NON-FOOD AREAS (NONFOOD CONTACT) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL	D	Not quantified	As needed		
Prepaving treatment, When needed, By hand or Spreader PAVING AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD	G	72 lb/1000 sq. ft.	Not specified		
Prepaving treatment, When needed, Unspecified PAVING AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD	G	86.4 lb/1000 sq. ft.	Not specified		
Spot treatment, When needed, Unspecified EATING ESTABLISHMENTS FOOD SERVING AREAS (FOOD CONTACT) USE GROUP: INDOOR FOOD	D	Not quantified	Not specified		
Spot treatment, When needed, Unspecified SITE NOT SPECIFIED	G	129.6 lb/ 1000 sq. ft	As needed		
Void treatment, When needed, Duster COMMERCIAL TRANSPORTATION FACILITIES--FEED/FOOD EMPTY USE GROUP: INDOOR FOOD HOUSEHOLD/DOMESTIC DWELLINGS INDOOR FOOD HANDLING AREAS USE GROUP: INDOOR FOOD COMMERCIAL TRANSPORTATION FACILITIES--NONFEED/NONFOOD USE GROUP: INDOOR NON-FOOD COMMERCIAL/INSTITUTIONAL/INDUSTRIAL PREMISES/EQUIPMENT (INDOOR) USE GROUP: INDOOR NON-FOOD HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY) USE GROUP: INDOOR MEDICAL HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES USE GROUP: INDOOR RESIDENTIAL	D	Not quantified	As needed		
Water treatment, Initial or Winterizing; Unspecified SWIMMING POOL WATER SYSTEMS	SC/S	0.995 lb/ 1000 gal	Not specified		

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **SODIUM TETRABORATE PENTAHYDRATE (CHEMICAL 011110)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Water treatment, Subsequent/maintenance; Unspecified SWIMMING POOL WATER SYSTEMS	SC/S	0.0995 lb/ 1000 gal	Not specified		

Abbreviations used

Header: max. = maximum; min. = minimum; apps. = applications

Form: D = Dust; G = Granular; SC/S = Soluble Concentrate/Solid

Rate: ai = active ingredient; sec = second(s); lb = pound; A = acre; sq.ft. = square foot; gal = gallon(s); Not quantified application rates include the following terminology: small amount, complete coverage, uniform coverage, apply evenly, think film, thoroughly spray, spray surfaces until wet, course spray, course wetting spray, spray liberally, apply liberally, etc.

The maximum number of applications and the maximum number of applications at the maximum rate is not specified and has not been included.

APPENDIX A - Use patterns subject to reregistration for: CASE <0024>, <BORIC ACID>

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP SODIUM TETRABORATE (ANHYDROUS) (CHEMICAL 011112)	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Broadcast, Fall or When needed or Winter, By hand or Spreader AGRICULTURAL UNCULTIVATED AREAS USE GROUP: TERRESTRIAL NON-FOOD CROP INDUSTRIAL AREAS (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD NONAGRICULTURAL RIGHTS-OF-WAY/FENCEROWS/HEDGEROWS USE GROUP: TERRESTRIAL NON-FOOD CROP	G	109.2 lb/ 1000 sq.ft.	As needed		
Bait application, When needed, Unspecified SITE NOT SPECIFIED	B/L	Not quantified	Not specified		
Prepaving treatment, When needed, Low pressure PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD	SC/L	12.77 lb/ 1000 sq.ft.	Not specified		
Prepaving treatment, When needed, Unspecified PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD	G	50.05 lb/ 1000 sq.ft.	Not specified		
Spray, Foliar, Sprayer ORNAMENTAL AND/OR SHADE TREES USE GROUP: INDOOR RESIDENTIAL	EC	.00062 lb/ gal	Not specified		
Spray, Foliar Sprayer ORNAMENTAL HERBACEOUS PLANTS USE GROUP: INDOOR RESIDENTIAL ORNAMENTAL NONFLOWERING PLANTS USE GROUP: INDOOR RESIDENTIAL ORNAMENTAL WOODY SHRUBS AND VINES USE GROUP: INDOOR RESIDENTIAL	EC	.000077 lb/ gal	Not specified		
Spray treatment, When needed, Knapsack sprayer or Power sprayer AGRICULTURAL UNCULTIVATED AREAS USE GROUP: TERRESTRIAL NON-FOOD CROP INDUSTRIAL AREAS (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD NONAGRICULTURAL RIGHTS-OF-WAY/FENCEROWS/HEDGEROWS USE GROUP: TERRESTRIAL NON-FOOD CROP RECREATIONAL AREAS USE GROUP: TERRESTRIAL NON-FOOD	SC/L	.32 lb/gal	Not specified		
Spot treatment, When needed, Unspecified AGRICULTURAL UNCULTIVATED AREAS USE GROUP: TERRESTRIAL NON-FOOD CROP INDUSTRIAL AREAS (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD NONAGRICULTURAL RIGHTS-OF-WAY/FENCEROWS/HEDGEROWS USE GROUP: TERRESTRIAL NON-FOOD CROP	G	109.2 lb/ 1000 sq.ft.	As needed		

Abbreviations used
Header: max. = maximum; min. = minimum; apps. = applications;
Form: B/L = Bait/Liquid; EC = Emulsifiable concentrate; G = Granular; Soluble Concentrate/Liquid
Rate: ai = active ingredient; lb = pound; sq.ft. = square foot

The maximum number of applications and the maximum number of applications at the maximum rate is not specified and has not been included.

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **SODIUM METABORATE (CHEMICAL 011104)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Broadcast, When needed, Shaker can NONAGRICULTURAL OUTDOOR BUILDINGS/STRUCTURES USE GROUP: TERRESTRIAL NON-FOOD NONAGRICULTURAL RIGHTS-OF-WAY/FENCEROWS/HEDGEROWS USE GROUP: TERRESTRIAL NON-FOOD CROP + OUTDOOR RESIDENTIAL PATHS/PATIOS USE GROUP: TERRESTRIAL NON-FOOD + OUTDOOR RESIDENTIAL + OUTDOOR RESIDENTIAL RECREATIONAL AREAS USE GROUP: TERRESTRIAL NON-FOOD	G	26.6 lb/ 1000 sq.ft.	Not specified		
Broadcast or Spray, When needed, Spreader or Sprayer AIRPORTS/LANDING FIELDS USE GROUP: TERRESTRIAL NON-FOOD CROP DRAINAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL INDUSTRIAL AREAS (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD NONAGRICULTURAL RIGHTS-OF-WAY/FENCEROWS/HEDGEROWS USE GROUP: TERRESTRIAL NON-FOOD CROP NONAGRICULTURAL UNCULTIVATED AREAS/SOILS USE GROUP: TERRESTRIAL NON-FOOD CROP NONAGRICULTURAL OUTDOOR BUILDINGS/STRUCTURES USE GROUP: TERRESTRIAL NON-FOOD PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD	G	27.2 lb/ 1000 sq.ft.	Not specified		
Broadcast, When needed, Shaker can REFUSE/SOLID WASTE SITES (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD	G	19.95 lb/ 1000 sq.ft.	Not specified		
Broadcast, When needed Spreader INDUSTRIAL AREAS (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD NONAGRICULTURAL RIGHTS-OF-WAY/FENCEROWS/HEDGEROWS USE GROUP: TERRESTRIAL NON-FOOD CROP NONAGRICULTURAL UNCULTIVATED AREAS/SOILS USE GROUP: TERRESTRIAL NON-FOOD CROP PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD	WP/D	376 lb/A	Not specified		
Broadcast, When needed Spreader REFUSE/SOLID WASTE SITES (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD	G	27.2 lb/ 1000 sq.ft.	Not specified		
Dip, Not applicable, Tank WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD	SC/L	.03 gal product/gal	Not specified		
Edging treatment, When needed, Squeeze applicator PATHS/PATIOS USE GROUP: TERRESTRIAL NON-FOOD + OUTDOOR RESIDENTIAL PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD + OUTDOOR RESIDENTIAL	RTU	.63 gal/1000 linear ft.	Not Specified		
Prepaving treatment, When needed, Shaker can PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD	G	19.95 lb/ 1000 sq.ft.	Not specified		
Prepaving treatment, When needed, Spreader or Sprayer PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD	G	27.2 lb/ 1000 sq.ft.	Not specified		
Prepaving treatment, When needed, Sprayer PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD	RTU	4.34 lb/ 1000 sq.ft.	Not specified		

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **SODIUM METABORATE (CHEMICAL 011104)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Spot treatment, When needed, Sprinkler can DRAINAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL NONAGRICULTURAL OUTDOOR BUILDINGS/STRUCTURES USE GROUP: TERRESTRIAL NON-FOOD PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD + OUTDOOR RESIDENTIAL REFUSE/SOLID WASTE SITES (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD	G	19.95 lb/ 1000 sq.ft.	Not specified		
Spray, When needed, Sprayer AGRICULTURAL UNCULTIVATED AREAS USE GROUP: TERRESTRIAL NON-FOOD CROP PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD	SC/L	4.38 lb/ 1000 sq.ft.	Not specified		
Spray, When needed, Sprayer DRAINAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL INDUSTRIAL AREAS (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD NONAGRICULTURAL RIGHTS-OF-WAY/FENCEROWS/HEDGEROWS USE GROUP: TERRESTRIAL NON-FOOD CROP PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD	RTU	4.34 lb/ 1000 sq.ft.	Not specified		
Spray, When needed, Sprayer NONAGRICULTURAL UNCULTIVATED AREAS/SOILS USE GROUP: TERRESTRIAL NON-FOOD CROP	RTU	2.94 lb/ 1000 sq.ft.	Not specified		
Spray, When needed, Sprayer AIRPORTS/LANDING FIELDS USE GROUP: TERRESTRIAL NON-FOOD DRAINAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL NONAGRICULTURAL OUTDOOR BUILDINGS/STRUCTURES USE GROUP: TERRESTRIAL NON-FOOD REFUSE/SOLID WASTE SITES (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD	G	27.2 lb/ 1000 sq.ft.	Not specified		
Spray, When needed, Sprayer DRAINAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL NONAGRICULTURAL OUTDOOR BUILDINGS/STRUCTURES USE GROUP: TERRESTRIAL NON-FOOD NONAGRICULTURAL RIGHTS-OF-WAY/FENCEROWS/HEDGEROWS USE GROUP: TERRESTRIAL NON-FOOD CROP NONAGRICULTURAL UNCULTIVATED AREAS/SOILS USE GROUP: TERRESTRIAL NON-FOOD CROP	SC/L	20.25 lb/ 1000 sq.ft.	Not specified		
Spray, When needed, Power sprayer INDUSTRIAL AREAS (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD NONAGRICULTURAL RIGHTS-OF-WAY/FENCEROWS/HEDGEROWS USE GROUP: TERRESTRIAL NON-FOOD CROP NONAGRICULTURAL UNCULTIVATED AREAS/SOILS USE GROUP: TERRESTRIAL NON-FOOD CROP	G	320 lb/A	Not specified		
Spray, When needed, Sprayer INDUSTRIAL AREAS (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD	SC/L	7 lb/1000 sq.ft.	Not specified		
Spray, When needed, Sprayer INDUSTRIAL AREAS (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD NONAGRICULTURAL RIGHTS-OF-WAY/FENCEROWS/HEDGEROWS USE GROUP: TERRESTRIAL NON-FOOD CROP NONAGRICULTURAL UNCULTIVATED AREAS/SOILS USE GROUP: TERRESTRIAL NON-FOOD CROP PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD	WP/D	9.4 lb/1000 sq.ft.	Not specified		
Spray, When needed, Sprayer PATHS/PATIOS USE GROUP: TERRESTRIAL NON-FOOD + OUTDOOR RESIDENTIAL	G	19.95 lb/ 1000 sq.ft.	Not specified		

Application Type, Application Timing, Application Equipment USE SITE/USE GROUP **SODIUM METABORATE (CHEMICAL 011104)**	Form	Maximum Application Rate (ai)	Min. Interval Between Apps. @ Max. Rate (Days)	Restricted Entry Interval (Hours)	Use Limitations
Spray, Not applicable, Sprayer WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED) USE GROUP: TERRESTRIAL NON-FOOD	SC/L	0.3 gal product/gal	Not specified		
Sprinkler, When needed, Sprinkler can AGRICULTURAL UNCULTIVATED AREAS USE GROUP: TERRESTRIAL NON-FOOD CROP INDUSTRIAL AREAS (OUTDOOR) USE GROUP: TERRESTRIAL NON-FOOD PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD RESIDENTIAL	SC/L	4.38 lb/ 1000 sq.ft.	Not specified		
Sprinkler, When needed, Sprinkler can DRAINAGE SYSTEMS USE GROUP: AQUATIC NON-FOOD INDUSTRIAL NONAGRICULTURAL OUTDOOR BUILDINGS/STRUCTURES USE GROUP: TERRESTRIAL NON-FOOD NONAGRICULTURAL RIGHTS-OF-WAY/FENCEROWS/HEDGEROWS USE GROUP: TERRESTRIAL NON-FOOD CROP NONAGRICULTURAL UNCULTIVATED AREAS/SOILS USE GROUP: TERRESTRIAL NON-FOOD CROP	SC/L	20 lb/ 1000 sq.ft.	Not specified		
Sprinkler, When needed, Sprinkler can PATHS/PATIOS USE GROUP: TERRESTRIAL NON-FOOD + OUTDOOR RESIDENTIAL PAVED AREAS (PRIVATE ROADS/SIDEWALKS) USE GROUP: TERRESTRIAL NON-FOOD + OUTDOOR RESIDENTIAL RECREATIONAL AREAS USE GROUP: TERRESTRIAL NON-FOOD	SC/L	2.73 lb/ 1000 sq.ft.	Not specified		

Abbreviations used
Header: max. = maximum; min. = minimum; apps. = applications
Form: G = Granular; RTU = Ready to Use; SC/S = Soluble Concentrate/Solid; SC/L = Soluble Concentrate/Liquid; WP/D = Wettable Powder/Dust
Rate: ai = active ingredient; lb = pound; A = acre; sq.ft. = square foot; gal = gallon(s)

The maximum number of applications and the maximum number of applications at the maximum rate is not specified and has not been included.

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 Boric Acid and Its Sodium Salts covered by this Reregistration Eligibility Decision Document. It contains generic data requirements that apply to Boric Acid and Its Sodium Salts 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, or a scientific study available in the public literature. Refer to the Bibliography appendix for the citation of the study or publication.

APPENDIX B

Generic Data Requirements for Reregistration of BORIC ACID

Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
PRODUCT CHEMISTRY			
61-1	Chemical Identify	All	42931801
61-2	Starting Material and Manufacturing Process	All	42931801
61-3	Formation of Impurities	All	42931801
62-1	Preliminary Analysis	All	42931801
62-2	Certification of Limits	All	42931801
62-3	Analytical Method	All	42931801
63-2	Color	All	42931802
63-3	Physical State	All	42931802
63-4	Odor	All	42931801
63-5	Melting Point	All	42931801
63-6	Boiling Point	All	NOT APPLICABLE
63-7	Density	All	42931801

APPENDIX B

Generic Data Requirements for Reregistration of BORIC ACID

Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
PRODUCT CHEMISTRY			
63-8	Solubility	All	42931801
63-9	Vapor Pressure	All	42931804
63-10	Dissociation Constant	All	DATA GAP
63-11	Octanol/Water Partition	All	42931801
63-12	pH	All	42931804
63-13	Stability	All	42931801

APPENDIX B

Generic Data Requirements for Reregistration of SODIUM TETRABORATE DECAHYDRATE (BORAX DECAHYDRATE) Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
PRODUCT CHEMISTRY			
61-1	Chemical Identity	All	42931801
61-2	Starting Materials and Manufacturing Process	All	42931801
61-3	Formation of Impurities	All	42931801
62-1	Preliminary Analysis	All	42931801
62-2	Certification of Limits	All	42931801
62-3	Analytical Method	All	42931801
63-2	Color	All	42931801
63-3	Physical State	All	42931801
63-4	Odor	All	42931801
63-5	Melting Point	All	42931801
63-6	Boiling Point	All	NOT APPLICABLE
63-7	Density	All	42931801
63-8	Solubility	All	42931801
63-9	Vapor Pressure	All	42931801
63-10	Dissociation Constant	All	DATA GAP

APPENDIX B

Generic Data Requirements for Reregistration of SODIUM TETRABORATE DECAHYDRATE (BORAX DECAHYDRATE) Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
PRODUCT CHEMISTRY			
63-11	Octanol/Water Partition	All	DATA GAP
63-12	pH	All	42931801
63-13	Stability	All	42931801

APPENDIX B

Generic Data Requirements for Reregistration of SODIUM TETRABORATE PENTAHYDRATE (BORAX PENTAHYDRATE) Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
PRODUCT CHEMISTRY			
61-1	Chemical Identity	All	42931801, 42931804
61-2	Starting Materials and Manufacturing Process	All	42931804
61-3	Formation of Impurities	All	42931804
62-1	Preliminary Analysis	All	42931801
62-2	Certification of Limits	All	42931801
62-3	Analytical Method	All	42931801
63-2	Color	All	42931804
63-3	Physical State	All	42931804
63-4	Odor	All	42931804
63-5	Melting Point	All	42931804
63-6	Boiling Point	All	NOT APPLICABLE
63-7	Density	All	42931804
63-8	Solubility	All	42931804
63-9	Vapor Pressure	All	42931804
63-10	Dissociation Constant	All	DATA GAP

APPENDIX B

Generic Data Requirements for Reregistration of SODIUM TETRABORATE PENTAHYDRATE (BORAX PENTAHYDRATE) Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
PRODUCT CHEMISTRY			
63-11	Octanol/Water Partition	All	DATA GAP
63-12	pH	All	42931804
63-13	Stability	All	42931804

APPENDIX B

Generic Data Requirements for Reregistration of SODIUM TETRABORATE (ANHYDROUS BORAX) Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
PRODUCT CHEMISTRY			
61-1	Chemical Identity	All	42931804
61-2	Starting Materials and Manufacturing Process	All	42931804
61-3	Formation of Impurities	All	42931804
62-1	Preliminary Analysis	All	42931801
62-2	Certification of Limits	All	42931801
62-3	Analytical Method	All	42931801
63-2	Color	All	42931804
63-3	Physical State	All	42931804
63-4	Odor	All	42931804
63-5	Melting Point	All	42931801, 42931804
63-6	Boiling Point	All	NOT APPLICABLE
63-7	Density	All	42931801, 42931804
63-8	Solubility	All	42931801, 42931804
63-9	Vapor Pressure	All	42931804
63-10	Dissociation Constant	All	DATA GAP

APPENDIX B

Generic Data Requirements for Reregistration of SODIUM TETRABORATE (ANHYDROUS BORAX) Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
PRODUCT CHEMISTRY			
63-11	Octanol/Water Partition	All	DATA GAP
63-12	pH	All	42931801
63-13	Stability	All	42931801

APPENDIX B

Generic Data Requirements for Reregistration of DISODIUM OCTABORATE TETRAHYDRATE Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
PRODUCT CHEMISTRY			
61-1	Chemical Identity	All	42931804
61-2	Starting Materials and Manufacturing Process	All	42931804
61-3	Formation of Impurities	All	42931804
62-1	Preliminary Analysis	All	DATA GAP
62-2	Certification of Limits	All	42931804
62-3	Analytical Method	All	42931804
63-2	Color	All	42931804
63-3	Physical State	All	42931804
63-4	Odor	All	42931804
63-5	Melting Point	All	42931804
63-6	Boiling Point	All	NOT APPLICALBE
63-7	Density	All	42931804
63-8	Solubility	All	42931804
63-9	Vapor Pressure	All	42931804
63-10	Dissociation Constant	All	DATA GAP

APPENDIX B

Generic Data Requirements for Reregistration of DISODIUM OCTABORATE TETRAHYDRATE Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
PRODUCT CHEMISTRY			
63-11	Octanol/Water Partition	All	DATA GAP
63-12	pH	All	42931804
63-13	Stability	All	42931804

APPENDIX B

Generic Data Requirements for Reregistration of DISODIUM OCTABORATE (ANHYDROUS) Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
PRODUCT CHEMISTRY			
61-1	Chemical Identity	All	40534001
61-2	Starting Materials and Manufacturing Process	All	40534001
61-3	Formation of Impurities	All	40534001
62-1	Preliminary Analysis	All	40534002
62-2	Certification of Limits	All	40534002
62-3	Analytical Method	All	40534002
63-2	Color	All	40534003
63-3	Physical State	All	40534003
63-4	Odor	All	40534003
63-5	Melting Point	All	40534003
63-6	Boiling Point	All	NOT APPLICABLE
63-7	Density	All	40534003
63-8	Solubility	All	40534003
63-9	Vapor Pressure	All	40534003

APPENDIX B

Generic Data Requirements for Reregistration of DISODIUM OCTABORATE (ANHYDROUS) Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
PRODUCT CHEMISTRY			
63-10	Dissociation Constant	All	40534003
63-11	Octanol/Water Partition	All	40534003
63-12	pH	All	40534003
63-13	Stability	All	40534003

APPENDIX B

Generic Data Requirements for Reregistration of SODIUM METABORATE Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
PRODUCT CHEMISTRY			
61-1	Chemical Identity	All	42931801, 42931804
61-2	Starting Materials and Manufacturing Process	All	42931804
61-3	Formation of Impurities	All	42931804
62-1	Preliminary Analysis	All	42931801
62-2	Certification of Limits	All	42931801
62-3	Analytical Method	All	42931801
63-2	Color	All	42931801
63-3	Physical State	All	42931801
63-4	Odor	All	42931801
63-5	Melting Point	All	42931801
63-6	Boiling Point	All	NOT APPLICABLE
63-7	Density	All	42931801, 42931804
63-8	Solubility	All	42931801, 42931804
63-9	Vapor Pressure	All	42931804
63-10	Dissociation Constant	All	DATA GAP

APPENDIX B

Generic Data Requirements for Reregistration of SODIUM METABORATE Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
PRODUCT CHEMISTRY			
63-11	Octanol/Water Partition	All	DATA GAP
63-12	pH	All	42931804
63-13	Stability	All	42931801, 42931804

APPENDIX B

Generic Data Requirements for Reregistration of BORIC ACID AND ITS SODIUM SALTS Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
ECOLOGICAL EFFECTS			
71-1(a)	Acute Avian Oral Quail/Duck	A,B,C,D,E, F,J,K	GS0024-017
71-2(a)	Acute Avian Diet. Quail	A,B,C,D,E, F,J,K,	Acc. No. 254367, GS0024-018, GS0024-019
71-2(b)	Acute Avian Det. Duck	A,B,C,D,E,J,K	Acc. No. 254367, GS0024-020, GS0024-021
72-1(a)	Fish Toxicity Bluegill	A,B,C,D,E, F,J,K,	40594601
72-1(c)	Fish Toxicity Rainbow Trout	A,B,C,D,E, F,J,K,	40594602, GS0024-022
72-2(a)	Invertebrate Toxicity	A,B,C,D,E, F,J,K,	GS0024-023
72-4(b)	Life-Cycle Aquatic Invertebrates	A,B,C,D,E,F,	Footnote 1
123-1(a)	Seed Germ./Seedling Emergence	A,B,C,D,E, F,J,K,	Data Gap
123-1(b)	Vegetative Vigor	A,B,C,D,E, F,J,K,	Data Gap

APPENDIX B

Generic Data Requirements for Reregistration of BORIC ACID AND ITS SODIUM SALTS Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
123-2	Aquatic Plant Growth	A,B,C,D,E, F,J,K,	Data Gap

Footnote 1: Results of scientific studies available in the public literature are being used to supplement the boric acid and its sodium salts data base because of the reported low toxicity and the limited outdoor use patterns. No additional data will be required untles future use dictate otherwise.

APPENDIX B

Generic Data Requirements for Reregistration of BORIC ACID AND ITS SODIUM SALTS Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
TOXICOLOGY			
BORIC ACID			
81-1	Acute Oral Tox. Rat	A,B,C,D,E,F,G, J,K,L,M,N,O	Acc. No. 246338
81-2	Acute Dermal Tox. Rabbit/Rat	A,B,C,D,E,F,G, J,K,L,M,N,O	Acc. No. 247814
81-3	Acute Inhalation Tox Rat	A,B,C,D,E,F,G, J,K,L,M,N,O	Tox Data Eval Rec (DER) #005381
81-4	Primary Eye Irritiation Rabbit	A,B,C,D,E,F,G, J,K,L,M,O	Acc. No. 246338
81-5	Primary Dermal Irritation	A,B,C,D,E,F,G, J,K,L,M,N,O	Acc. No. 247814
82-2	21-Day Dermal Rabbit/Rat	A,B,C,D,E,F,G, J,K,L,M,N,O	41861301, DER#9834
83-3(a)	Teratogenicity - Rat	A,B,D,L	417254, 42377101, 41861301(mice)
83-3(b)	Teratogenicity - Rabbit	A,B,D,L	42164201, 42164202, DER#8719
83-4	2-Generation Repro - Rat	A,B,D,L	41589101, DER#8333
84-2(a)	Gene Mutation - Ames	A,B,C,D,E,F,G, J,K,L,M,N,O	42038902

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Generic Data Requirements for Reregistration of BORIC ACID AND ITS SODIUM SALTS Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
TOXICOLOGY			
84-2(b)	Struc. Chrom. Aberration	A,B,C,D,E,F,G, J,K,L,M,N,O	42038901, DER#9661
84-4	Other Genotoxic Effects	A,B,C,D,E,F,G, J,K,L,M,N,O,	42038904
85-1	General Metabolism	A,B,D,L	000005621, 000005631,

APPENDIX B

Generic Data Requirements for Reregistration of BORIC ACID AND ITS SODIUM SALTS Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
TOXICOLOGY			
SODIUM TETRABORATE (ANHYDORUS BORAX)			
81-1	Acute Oral Tox. Rat	A,B,C,D,E,F,G, J,K,L,M,N,O	40692303
81-2	Acute Dermal Tox. Rabbit/Rat	A,B,C,D,E,F,G, J,K,L,M,N,O	DER#009301
81-4	Primary Eye Irritation - Rabbit	A,B,C,D,E,F,G, J,K,L,M,N,O	DER#009301
81-5	Primary Dermal Iritation	A,B,C,D,E,F,G, J,K,L,M,N,O	DER#009301
82-1	90-Day Feeding	A,B,C,D,E,F,G, J,K,L,M,N,O	406923207
82-2	21-Day Dermal - Rabbit/Rat	A,B,C,D,E,F,G, J,K,L,M,N,O	40692309, 40692308, 40692310, DER#9301
83-4	2-Generation Repro - Rat	A,B,D,L,	40692311, DER#9301

APPENDIX B

Generic Data Requirements for Reregistration of BORIC ACID AND ITS SODIUM SALTS Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
ENVIRONMENTAL FATE			
163-1	Leaching and Adsorption/Desorption	A,B,C,D,E,F,G, J,K,	05008133

Because of the relatively small amount of boric acid employed for most uses as a pesticide, and the already significant amounts of boron present in soil and water, the Agency, at this time, will not require any additional environmental fate data.

APPENDIX B

Generic Data Requirements for Reregistration of BORIC ACID AND ITS SODIUM SALTS Data Citations Supporting Reregistration

Guideline	Title of Study	Use Patterns	Bibliographic Citation
RESIDUE CHEMISTRY			
171-4	Nature of Residue (Metabolism)		
	- Plants		005012937, 005009091, 005008425
	- Livestock		005012315
171-4	Residue Analytical Method		
	- Plant Residues		005007137
	- Animal Residues		005007137
	- Water Residues		005007137

APPENDIX C

Citations Considered to be Part of the Data Base Supporting Reregistration

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 submitted. The resulting "studies" generally have a distinct title (or at least a single subject), can stand alone for purposes of review and can be described with a conventional bibliographic citation. The Agency has also attempted to unite basic documents and commentaries upon them, treating them as a single study.

3. **IDENTIFICATION OF ENTRIES.** The entries in this bibliography are sorted numerically by Master Record Identifier, or "MRID Number". This number is unique to the citation, and should be 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 de-faulted 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.

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FOR
BORIC ACID AND ITS SODIUM SALTS
REREGISTRATION ELIGIBILITY DECISION DOCUMENT

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APPENDIX D

List of Available Related Documents

The following is a list of available documents related to Boric Acid and its Sodium Salts. It's purpose is to provide a path to more detailed information if it is needed. These accompanying documents are part of the Administrative Record for Boric Acid and its Sodium Salts 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. Boric Acid and its Sodium Salts RED Fact Sheet

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

5. Guidance for the Reregistration of Pesticide Products Containing Boric Acid and Boron Containing Salts as the Active Ingredient. Issued November 1985. (NTIS publication Number PB87-101903).

6. Guidance for the Registration and Reregistration of End-Use Pesticide Products Containing the Insecticidal Uses of Boric Acid -- General Registration Standard. Issued November 1985.

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

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

PR NOTICE 91-2

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

ATTENTION: Persons Responsible for Federal Registration of Pesticide Products.

SUBJECT: Accuracy of Stated Percentages for Ingredients Statement

I. PURPOSE:

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

II. BACKGROUND

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

Current regulations require that the percentage listed in the active ingredient statement be as precise as possible

reflecting good manufacturing practices 40 CFR 156.10(g)(5). The certified limits required for each active ingredient are intended to encompass any such "good manufacturing practice" variations 40 CFR 158.175(c)(3).
The upper and lower certified limits, which must be proposed in connection with a product's registration, represent the amounts of an ingredient that may legally be present 40 CFR 158.175. The lower certified limit is used as the enforceable lower limit for the product composition according to FIFRA section 12(a)(1)(C), while the nominal concentration appearing on the label would be the routinely achieved concentration used for calculation of dosages and dilutions.

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

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

III. REQUIREMENTS

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

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

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

IV. PRODUCTS THAT REQUIRE EFFICACY DATA

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

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

V. COMPLIANCE SCHEDULE

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

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

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

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

VI. FOR FURTHER INFORMATION

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

Anne E. Lindsay

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

APPENDIX E

Generic and Product Specific Data Call-In Notice

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

GENERIC AND PRODUCT SPECIFIC
DATA CALL-IN NOTICE

FEB 16 1994

CERTIFIED MAIL

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 1 through 7; or

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

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

If you do not respond to this Notice, or if you do not satisfy EPA that you will comply with its requirements or should be exempt or excused from doing so, then the registration of your product(s) subject to this Notice will be subject to suspension. We have provided a list of all of your products subject to this Notice in Attachment 2. All products are listed on both the generic and product specific Data Call-In Response Forms. Also included is a list of all registrants who were sent this Notice (Attachment 6).

The authority for this Notice is section 3(c)(2)(B) of the Federal Insecticide, Fungicide and Rodenticide Act as amended (FIFRA), 7 U.S.C. section 136a(c)(2)(B). Collection of this information is authorized under the Paperwork Reduction Act by OMB Approval No. 2070-0107 and 2070-0057 (expiration date 3-31-96).

Printed on Recycled Paper

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

Section I	-	Why You are Receiving this Notice
Section II	-	Data Required by this Notice
Section III	-	Compliance with Requirements of this Notice
Section IV	-	Consequences of Failure to Comply with this Notice
Section V	-	Registrants' Obligation to Report Possible Unreasonable Adverse Effects
Section VI	-	Inquiries and Responses to this Notice

The Attachments to this Notice are:

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

SECTION I. WHY YOU ARE RECEIVING THIS NOTICE

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

SECTION II. DATA REQUIRED BY THIS NOTICE

II-A. DATA REQUIRED

The data required by this Notice are specified in the Requirements Status and Registrant's Response Forms: Attachment 3 (for both generic and product specific data requirements). Depending on the results of the studies required in this Notice, additional studies/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 the Requirements Status and Registrant's Response Forms (Attachment 3) 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 (Telephone number: 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, 2001 L Street, N.W., Washington, D.C. 20036 (Telephone number 202-785-6323; Fax telephone number 202-785-0350).

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].

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

You must use the correct forms and instructions when completing your response to this Notice. The type of Data Call-In you must comply with (Generic or Product Specific) is

specified in item number 3 on the four Data Call-In forms (Attachments 2 and 3).

III-A. SCHEDULE FOR RESPONDING TO THE AGENCY

The appropriate responses initially required by this Notice for generic and 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

1. Generic Data Requirements

The options for responding to this Notice for generic data requirements are: (a) voluntary cancellation, (b) delete use(s), (c) claim generic data exemption, (d) agree to satisfy the generic data requirements imposed by this Notice or (e) request a data waiver(s).

A discussion of how to respond if you choose 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 generic 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.

Two forms apply to generic data requirements, one or both of which must be used in responding to the Agency, depending upon your response. These two forms are the Data-Call-In Response Form, and the Requirements Status and Registrant's Response Form, (contained in Attachments 2 and 3, respectively).

The Data Call-In Response Forms must be submitted as part of every response to this Notice. The Requirements Status and Registrant's Response Forms also must be submitted if you do not qualify for a Generic Data Exemption or are not requesting voluntary cancellation of your registration(s). Please note that the company's authorized representative is required to sign the first page of both Data Call-In Response Forms and the Requirements Status and Registrant's Response Forms (if this form is required) and initial any subsequent pages. The forms contain separate detailed instructions on the response options. Do not alter the printed material. If you have questions or need assistance in preparing your response, call or write the contact person(s) identified in Attachment 1.

a. 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 completed Generic and Product Specific Data Call-In Response Forms (Attachment 2), indicating your election of this option. Voluntary cancellation is item number 5 on both Data Call-In Response Form(s). If you choose this option, these are the only forms 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.

b. 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 (Attachment 3), 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 under item 9 in the instructions for the Requirements Status and Registrant's Response Forms. 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 Branch, Registration Division, Office of Pesticide Programs, EPA, by calling (703) 308-8358.

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

c. 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:

(i). 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;

(ii). 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

(iii). You must have provided to EPA an accurate and current "Confidential Statement of Formula" for each of your products to which this Notice applies.

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

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 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.

d. Satisfying the Generic Data Requirements of this Notice

There are various options available to satisfy the generic data requirements of this Notice. These options are discussed in Section III-C.1. of this Notice and comprise options 1 through 6 of item 9 in the instructions for the Requirements Status and Registrant's Response Form and item 6b on the Data Call-In Response Form. If you choose item 6b (agree to satisfy the generic data requirements), you must submit the Data Call-In Response Form and the Requirements Status and Registrant's Response Form as well as any other information/data pertaining to the option chosen to address the data requirement. Your response must be on the forms marked "GENERIC" in item number 3.

e. Request for Generic Data Waivers.

Waivers for generic data are discussed in Section III-D.1. of this Notice and are covered by options 8 and 9 of item 9 in the instructions for 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.

2. Product Specific Data Requirements

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.2. A discussion of options relating to requests for data waivers is contained in Section III-D.2.

Two forms apply to the product specific data requirements one or both of which must be used in responding to the Agency, depending upon your response. These forms are the Data-Call-In Response Form, and the Requirements Status and Registrant's Response Form, for product specific data (contained in Attachments 2 and 3, respectively). 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 also must be submitted for each product listed on the Data Call-In Response Form unless the voluntary cancellation option is selected. Please note that the company's authorized representative is required to sign the first page of the Data Call-In Response Form and Requirements Status and Registrant's Response Form (if this form is required) and initial any subsequent pages. The forms contain separate detailed instructions on the response options. Do not alter the printed material. If you have questions or need assistance in preparing your response, call or write the contact person(s) identified in Attachment 1.

a. 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 both the Generic and

Product Specific Data Call-In Response Forms. If you choose this option, you must complete both Data Call-In response forms. These are the only forms 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.

b. 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.2. of this Notice and comprise options 1 through 6 of item 9 in the instructions for the product specific Requirements Status and Registrant's Response Form and item numbers 7a and 7b (agree to satisfy the product specific data requirements for an MUP or EUP as applicable) on the product specific Data Call-In Response Form. Note that the options available for addressing product specific data requirements differ slightly from those options for fulfilling generic data requirements. Deletion of a use(s) and the low volume/minor use option are not valid options for fulfilling product specific data requirements. It is important to ensure that you are using the correct forms and instructions when completing your response to the Reregistration Eligibility Decision document.

c. Request for Product Specific Data Waivers.

Waivers for product specific data are discussed in Section III-D.2. of this Notice and are covered by option 7 of item 9 in the instructions for the Requirements Status and Registrant's Response Form. If you choose this option, you must submit the Data Call-In Response Form and the Requirements Status and Registrant's Response Form as well as any other information/data pertaining to the option chosen to address the data requirement. Your response must be on the forms marked "PRODUCT SPECIFIC" in item number 3.

III-C SATISFYING THE DATA REQUIREMENTS OF THIS NOTICE

1. Generic Data

If you acknowledge on the Generic Data Call-In Response Form that you agree to satisfy the generic data requirements (i.e. you select item number 6b), then you must select one of the six options on the Generic 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 you 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. 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 the offer. To qualify for this option, you must submit documentation to the Agency proving that you have made an offer to another registrant (who has an obligation to submit data) to share in the burden of developing that data. You must also submit to the Agency a completed EPA Form 8570-32, Certification of Offer to Cost Share in the Development of Data, Attachment 7. In addition, you must demonstrate that the other registrant to whom the offer was made has not accepted your offer to enter into a cost-sharing agreement by including a copy of your offer and proof of the other registrant's receipt of that offer (such as a certified mail receipt). Your offer must, in addition to anything else, offer to share in the burden of producing the data upon terms to be agreed to 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 burden 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 normally will 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 "'[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, means "any material derived from a test system for examination or analysis."

b. Health and safety studies completed after May 1984 also must also contain all GLP-required quality assurance and quality control information, pursuant to the requirements of 40 CFR Part 160. Registrants also must 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 usually are 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 1. If you

submit data to upgrade an existing study you must satisfy or supply information to correct all deficiencies in the study identified by EPA. You must provide a clearly articulated rationale of how the deficiencies have been remedied or corrected and why the study should be rated as acceptable to EPA. Your submission must also specify the MRID number(s) of the study which you are attempting to upgrade and must be in conformance with PR Notice 86-5.

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

This option also should 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.

2. Product Specific Data

If you acknowledge on the product specific 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 time-frame (Developing Data)
(2) I have entered into an agreement with one or more registrants to develop data jointly (Cost Sharing)
(3) I have made offers to cost-share (Offers to Cost Share)
(4) I am submitting an existing study that has not been submitted previously to the Agency by anyone (Submitting an Existing Study)
(5) I am submitting or citing data to upgrade a study classified by EPA as partially acceptable and upgradeable (Upgrading a Study)

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

Option 1. Developing Data -- The requirements for developing product specific data are the same as those described for generic data (see Section III.C.1, Option 1) except that normally no protocols or progress reports are required.

Option 2. Agree to Share in Cost to Develop Data -- If you enter into an agreement to cost share, the same requirements apply to product specific data as to generic data (see Section III.C.1, Option 2). However, 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.

Option 3. Offer to Share in the Cost of Data Development --The same requirements for generic data (Section III.C.I., Option 3) apply to this option. This option only applies to acute toxicity and certain efficacy data as described in option 2 above.

Option 4. Submitting an Existing Study -- The same requirements described for generic data (see Section III.C.1., Option 4) apply to this option for product specific data.

Option 5. Upgrading a Study -- The same requirements described for generic data (see Section III.C.1., Option 5) apply to this option for product specific data.

Option 6. Citing Existing Studies -- The same requirements described for generic data (see Section III.C.1., Option 6) apply to this option for product specific data.

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, and in the generic data requirements section (III.C.1.), as appropriate.

III-D REQUESTS FOR DATA WAIVERS

1. Generic Data

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 not appropriate for your product.

a. Low Volume/Minor Use Waiver

Option 8 under item 9 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 low volume pesticides to be 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:

(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.

(iii) 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.

(iv) 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.

(v) 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.

(vi) 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.

(vii) 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.

(viii) 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.

b. Request for Waiver of Data

Option 9, under Item 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 requirement is inappropriate. You must submit a rationale explaining why you believe the data requirements should not apply. You also must 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 are not appropriate 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.

2. Product Specific Data

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 product specific Requirements Status and Registrant's Response Form. Product specific data requirements for product chemistry, acute toxicity and efficacy (where appropriate) are required for all products and the Agency would grant a waiver only under extraordinary circumstances. You should also be aware that submitting a waiver request will not automatically extend the due date for the study in question. Waiver requests submitted without adequate supporting rationale will be denied and the original due date will remain in force.

SECTION 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:

   i. 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.

   ii. Fulfill the commitment to develop and submit the data as required by this Notice; or

   iii. 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 generally would 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 also must 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 1, the Data Call-In Chemical Status Sheet.

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

Generic and Product Specific Data Call-In Response Forms need be submitted.

The Office of Compliance Monitoring (OCM) of the Office of Prevention, Pesticides and Toxic Substances (OPPTS), 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

The Attachments to this Notice are:

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

Attachment 1

Generic and Product Specific Data Call-In Notice

Data Call-In Chemical Status Sheet

Generic and Product Specific Data Call-In

Chemical Status Sheet
for
Boric Acid and its Sodium Salts

INTRODUCTION

You have been sent this **combined Generic and Product Specific Data Call-In Notice** because you have product(s) containing boric acid and its sodium salts; specifically this Notice covers products containing boric acid, sodium tetraborate decahydrate (borax decahydrate), sodium tetraborate pentahydrate (borax pentahydrate), sodium tetraborate (anhydrous borax), disodium octaborate tetrahydrate, disodium octaborate (anhydrous), and sodium metaborate.

This combined **Generic and Product Specific Data Call-In Chemical Status Sheet** contains an overview of data required by this combined notice, and points of contact for inquiries pertaining to the reregistration of boric acid and its sodium salts. This attachment is to be used in conjunction with:

- The Combined Generic and Product Specific Data Call-In Notice (Appendix E),
- The Generic Data Call-In and Product Specific Data Call-In Response Forms with Instructions (Attachment 2)
- The Generic Data Call-In and Product Specific Data Call-In Requirements Status and Registrant's Response Forms with Instructions (Attachments 3),
- EPA's Grouping of End-Use Products for Meeting Acute Toxicology Data Requirements for Reregistration (Attachment 4),
- The EPA Acceptance Criteria (Attachment 5),
- List of registrants receiving this combined DCI (Attachment 6), and
- The Cost Share and Data Compensation Forms (Attachment 7)

Instructions and guidance accompany each form.

DATA REQUIRED BY THIS NOTICE

The additional data requirements needed to complete the data base for Boric Acid and its Sodium Salts are contained in the Requirements Status and Registrant's Response Forms, (Attachment 3). The Agency has concluded that additional data on Boric Acid and its Sodium Salts are needed for specific products. These data are required to be submitted to the Agency within the time frame listed. These data are needed to fully complete the reregistration of all eligible Boric Acid and its Sodium Salts products.

INQUIRIES AND RESPONSES TO THIS NOTICE

If you have any questions regarding the generic database of Boric Acid and its Sodium Salts, please contact Mario F. Fiol at (703) 308-8049.

If you have any questions regarding the product specific data requirements and procedures established by this Notice, please contact Sue Rathman at (703) 308-8049.

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

By U.S. Mail:

Document Processing Desk **(RED-SRRD-PRB-0024)**
Office of Pesticide Programs (7504C)
EPA, 401 M St. S.W.
Washington, D.C. 20460-0001

By express:

Document Processing Desk **(RED-SRRD-PRB-0024)**
Office of Pesticide Programs (7504C)
Room 266A, Crystal Mall 2
1921 Jefferson Davis Hwy.
Arlington, VA 22202

Attachment 2

Generic and Product Specific Data Call-In Notice

Data Call-In Response Forms

With Instructions

Instructions For Completing
The
"Data Call-In Response Forms"
For The Generic And Product Specific Data Call-In

INTRODUCTION

These instructions apply to the Generic and Product Specific "Data Call-In Response Forms" and are to be used by registrants to respond to generic and product specific Data Call-Ins as part of EPA's Reregistration Program under the Federal Insecticide, Fungicide, and Rodenticide Act. **The type of data call-in (generic or product specific) is indicated in item number 3 ("Date and Type of DCI") on each form.** BOTH "Data Call-In Response" forms must be completed.

Although the form is the same for both generic and product specific data, instructions for completing these forms are different. Please read these instructions carefully before filling out the forms.

EPA has developed these forms individually for each registrant, and has preprinted these forms with a number of items. DO NOT use these forms for any other active ingredient.

Items 1 through 4 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.

The public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, Mail Code 2136, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, D.C. 20460; and to the Office of Management and Budget, Paperwork Reduction Project 2070-0107, Washington, D.C. 20503.

INSTRUCTIONS FOR COMPLETING THE DATA CALL-IN RESPONSE FORMS
Generic and Product Specific Data Call-In

Item 1. **ON BOTH FORMS:** This item identifies your company name, number and address.

Item 2. **ON BOTH FORMS:** This item identifies the case number, case name, EPA chemical number and chemical name.

Item 3. **ON BOTH FORMS:** This item identifies the type of Data Call-In. The date of issuance is date stamped.

Item 4. **ON BOTH FORMS:** 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. **ON BOTH FORMS:** 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. Since this Data Call-In requires both generic and product specific data, you must complete item 5 on both Data Call-In response forms. You do not need to complete any item on the Requirements Status and Registrant's Response Forms.

Item 6a. **ON THE GENERIC DATA FORM:** Check this Item if the Data Call-In is for generic data as indicated in Item 3 and 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. **ON THE GENERIC DATA FORM:** Check this Item if the Data Call-In is for generic data 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.

NOTE: **Item 6a and 6b are not applicable for Product Specific Data.**

Item 7a. **ON THE PRODUCT SPECIFIC DATA FORM:** 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."

FOR BOTH MUP and EUP products

You should also respond "yes" to this item (7a for MUP's and 7b for EUP's) if your product is identical to another product and you qualify for a data exemption. You must provide the EPA registration numbers of your source(s); do 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.

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.

NOTE: **Item 7a and 7b are not applicable for Generic Data.**

INSTRUCTIONS FOR COMPLETING THE DATA CALL-IN RESPONSE FORMS
Generic and Product Specific Data Call-In

Item 8. **ON BOTH FORMS:** 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. **ON BOTH FORMS:** Enter the date of signature.

Item 10. **ON BOTH FORMS:** Enter the name of the person EPA should contact with questions regarding your response.

Item 11. **ON BOTH FORMS:** Enter the phone number of your company contact.

Note: You may provide additional information that does not fit on this form in a signed letter that accompanies your response. 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.

Generic

Data Call-In Response Form

DRAFT COPY

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

Form Approved
OMB No. 2070-0107
2070-0057
Approval Expires 03-31-96

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	0024 Boric Acid & its Sodium Salts Chemical # and Name	GENERIC

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

Product Specific

Data Call-In Response Form

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

DATA CALL-IN RESPONSE

Form Approved
OMB No. 2070-0107
2070-0057
Approval Expires 03-31-96

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	0024 Boric Acid & its Sodium Salts	PRODUCT SPECIFIC

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 and I agree to satisfy the EUP requirements on the attached 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 3

Generic and Product Specific Data Call-In Notice

Requirements Status and Registrant's Response Forms

With Instructions

Instructions For Completing
The
"Requirements Status and Registrant's Response Forms"
For The Generic and Product Specific Data Call-In

INTRODUCTION

These instructions apply to the Generic and Product Specific "Requirements Status and Registrant's Response Forms" and are to be used by registrants to respond to generic and product specific Data Call-In's as part of EPA's reregistration program under the Federal Insecticide, Fungicide, and Rodenticide Act. **The type of Data Call-In (generic or product specific) is indicated in item number 3 ("Date and Type of DCI") on each form.** Both "Requirements Status and Registrant's Response" forms must be completed.

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. Please read these instructions carefully before filling out the forms.

EPA has developed these forms individually for each registrant, and has preprinted these forms to include certain information unique to this chemical. DO NOT use these forms for any other active ingredient.

Items 1 through 8 have been preprinted on the form. Item 9 must be completed by the registrant as appropriate. Items 10 through 13 must be completed by the registrant before submitting a response to the Agency.

The public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, Mail Code 2136, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, D.C. 20460; and to the Office of Management and Budget, Paperwork Reduction Project 2070-0107, Washington, D.C. 20503.

INSTRUCTIONS FOR COMPLETING THE "REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE FORMS"
Generic and Product Specific Data Call-In

Item 1. **ON BOTH FORMS:** This item identifies your company name, number and address.

Item 2. **ON THE GENERIC DATA FORM:** This item identifies the case number, case name, EPA chemical number and chemical name.

ON THE PRODUCT SPECIFIC DATA FORM: This item identifies the case number, case name, and the EPA Registration Number of the product for which the Agency is requesting product specific data.

Item 3. **ON THE GENERIC DATA FORM:** This item identifies the type of Data Call-In. The date of issuance is date stamped.

ON THE PRODUCT SPECIFIC DATA FORM: This item identifies the type of Data Call-In. The date of issuance is also date stamped. Note the unique identifier number (ID#) assigned by the Agency. This ID number must be used in the transmittal document for any data submissions in response to this Data Call-In Notice.

Item 4. **ON BOTH FORMS:** This item identifies the guideline reference number of studies required. These guidelines, in addition to the requirements specified in the Data Call-In 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. **ON BOTH FORMS:** 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.

INSTRUCTIONS FOR COMPLETING THE "REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE FORMS"
Generic and Product Specific Data Call-In

Item 6. **ON BOTH FORMS:** This item identifies the code associated with the use pattern of the pesticide. In the case of efficacy data (product specific requirement), the required study only pertains to products which have the use sites and/or pests indicated. 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. **ON BOTH FORMS:** This item identifies the code assigned to the substance that must be used for testing. A brief description of each code follows:

EUP	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 Indredient or Pute 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 completed by the Agency identifies the time frame allowed for submission of the study or protocol identified in item 5.

ON THE GENERIC DATA FORM: The time frame runs from the date of your receipt of the Data Call-In notice.

ON THE PRODUCT SPECIFIC DATA FORM: The due date for submission of product specific studies begins from the date stamped on the letter transmitting the Reregistration Eligibility Decision document, and not from the date of receipt. However, your response to the Data Call-In itself is due 90 days from the date of receipt.

Item 9. **ON BOTH FORMS:** 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.

Option 1. **ON BOTH FORMS:** (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.

Option 2. **ON BOTH FORMS:** (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.

However, for Product Specific Data, I understand that this option is available for acute toxicity or certain efficacy data **ONLY** if the Agency 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.

Option 3. **ON BOTH FORMS:** (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 also submitting a completed "Certification of offer to Cost Share in the Development of Data" form. 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 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 apply as well.

However, for Product Specific Data, I understand that this option is available only for acute toxicity or certain efficacy data and only if the Agency indicates in an attachment to this Data Call-In Notice that my product is similar enough to another product to qualify for this option.

Option 4. **ON BOTH FORMS:** (Submitting Existing Data) I will submit an existing study by the specified due date 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.

Option 5. **ON BOTH FORMS:** (Upgrading a Study) I will submit by the specified due date, or will cite 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.

Option 6. **ON BOTH FORMS:** (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. If reviewed, I am providing the Agency's classification of the study.

However, for Product Specific Data, 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 the Agency 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). If I cite another registrant's data, I will submit a completed "Certification With Respect To Data Compensation Requirements" form.

FOR THE GENERIC DATA FORM ONLY: The following three options (Numbers 7, 8, and 9) are responses that apply only to the "Requirements Status and Registrant's Response Form" for generic data.

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

Option 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.

Option 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 a rationale explaining why I believe the data requirements do not apply. I am also submitting a copy of my current labels. (You must also submit a copy of your Confidential Statement of Formula if not already on file with EPA). I understand that, unless modified by the Agency in writing, the data requirement as stated in the Notice governs.

FOR PRODUCT SPECIFIC DATA: The following option (number 7) is a response that applies to the "Requirements Status and Registrant's Response Form" for product specific data.

Option 7. (Waiver Request) I request a waiver for this study because it is inappropriate for my product. 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" form specifying 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.

Item 10. **ON BOTH FORMS:** 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. **ON BOTH FORMS:** Enter the date of signature.

Item 12. **ON BOTH FORMS:** Enter the name of the person EPA should contact with questions regarding your response.

Item 13. **ON BOTH FORMS:** Enter the phone number of your company contact.

NOTE: You may provide additional information that does not fit on this form in a signed letter that accompanies this your response. 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 the Agency can ensure that its records are correct.

Generic

Requirements Status and Registrant's Response Form

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

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved
OMB No. 2070-0107
2070-0057
Approval Expires 03-31-96

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
0024 Boric Acid
Chemical # and Name 011001
Boric acid

3. Date and Type of DCI
GENERIC
FEB 16 1994

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
123-1(a) *	Seed germ/seedling emerg					CJK	TGAI	12 mos.	
123-1(b) *	Vegetative vigor					CJK	TGAI	12 mos.	
123-2 *	Aquatic plant growth					CJK	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
0024 Boric Acid
Chemical # and Name
011001 Boric acid

GUIDELINE	COMMENT
123-1(a)	The herbicidal uses justify the requirement of phytotoxicity studies in order to further assess the potential risks to non-target and endangered plant species.
123-1(b)	Refer to comment for 123-1(a).
123-2	Refer to comment for 123-1(a).

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

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved
OMB No. 2070-0107
2070-0057
Approval Expires 03-31-96

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
0024 Boric Acid
Chemical # and Name 011102
Borax

3. Date and Type of DCI
GENERIC
FEB 16 1994

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
123-1(a) *	Seed germ/seedling emerg					CJK	TGAI	12 mos.	
123-1(b) *	Vegetative vigor					CJK		12 mos.	
123-2 *	Aquatic plant growth					CJK		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
0024 Boric Acid
Chemical # and Name
011102 Borax

GUIDELINE	COMMENT
123-1(a)	The herbicidal uses justify the requirement of phytotoxicity studies in order to further assess the potential risks to non-target and endangered plant species.
123-1(b)	Refer to comment for 123-1(a).
123-2	Refer to comment for 123-1(a).

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

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved
OMB No. 2070-0107
2070-0057
Approval Expires 03-31-96

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
0024 Boric Acid
Chemical # and Name 011110
Sodium Tetraborate Pentahydrate

3. Date and Type of DCI
GENERIC
FEB 16 1994

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
123-1(a) *	Seed germ/seedling emerg					CJK	TGAI	12 mos.	
123-1(b) *	Vegetative vigor					CJK	TGAI	12 mos.	
123-2 *	Aquatic plant growth					CJK	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
0024 Boric Acid
Chemical # and Name
011110 Sodium Tetraborate Pentahydrate

GUIDELINE	COMMENT
123-1(a)	The herbicidal uses justify the requirement of phytotoxicity studies in order to further assess the potential risks to non-target and endangered plant species.
123-1(b)	Refer to comment for 123-1(a).
123-2	Refer to comment for 123-1(a).

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

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved
OMB No. 2070-0107
2070-0057
Approval Expires 03-31-96

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
0024 Boric Acid
Chemical # and Name 011112
Sodium Tetraborate Anhydrous

3. Date and Type of DCI
GENERIC
FEB 16 1994

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
123-1(a) *	Seed germ/seedling emerg					CJK	TGAI	12 mos.	
123-1(b) *	Vegetative vigor					CJK	TGAI	12 mos.	
123-2 *	Aquatic plant growth					CJK	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
0024 Boric Acid
Chemical # and Name
011112 Sodium Tetraborate Anhydrous

GUIDELINE	COMMENT
123-1(a)	The herbicidal uses justify the requirement of phytotoxicity studies in order to further assess the potential risks to non-target and endangered plant species.
123-1(b)	Refer to comment for 123-1(a).
123-2	Refer to comment for 123-1(a).

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

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved
OMB No. 2070-0107
2070-0057
Approval Expires 03-31-96

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
0024 Boric Acid
Chemical # and Name 011103
Disodium octaborate tetrahydrate

3. Date and Type of DCI
GENERIC
FEB 16 1994

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
123-1(a) *	Seed germ/seedling emerg					CJK	TGAI	12 mos.	
123-1(b) *	Vegetative vigor					CJK	TGAI	12 mos.	
123-2 *	Aquatic plant growth					CJK	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
0024 Boric Acid
Chemical # and Name
011103 Disodium octaborate tetrahydrate

GUIDELINE	COMMENT
123-1(a)	The herbicidal uses justify the requirement of phytotoxicity studies in order to further assess the potential risks to non-target and endangered plant species.
123-1(b)	Refer to comment for 123-1(a).
123-2	Refer to comment for 123-1(a).

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

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved
OMB No. 2070-0107
2070-0057
Approval Expires 03-31-96

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
0024 Boric Acid
Chemical # and Name 011107
Disodium Octaborate Anhydrous

3. Date and Type of DCI
GENERIC
FEB 16 1994

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
123-1(a) *	Seed germ/seedling emerg					CJK	TGAI	12 mos.	
123-1(b) *	Vegetative vigor					CJK	TGAI	12 mos.	
123-2 *	Aquatic plant growth					CJK	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
0024 Boric Acid
Chemical # and Name
011107 Disodium Octaborate Anhydrous

GUIDELINE	COMMENT
123-1(a)	The herbicidal uses justify the requirement of phytotoxicity studies in oder to further assess the potential risks to non-target and endangered plant species.
123-1(b)	Refer to comment for 123-1(a).
123-2	Refer to comment for 123-1(a).

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

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved
OMB No. 2070-0107
2070-0057
Approval Expires 03-31-96

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 000100
CIBA-GEIGY CORP.
P.O. BOX 18300
GREENSBORO NC 27419

2. Case # and Name
0632 Barium metaborate
Chemical # and Name 011104
Sodium metaborate

3. Date and Type of DCI
GENERIC FEB 16 [redacted]

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
123-1(a) *	Seed germ/seedling emerg					CJK	TGAI	12 mos.	
123-1(b) *	Vegetative vigor					CJK	TGAI	12 mos.	
123-2 *	Aquatic plant growth					CJK	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
0632 Barium metaborate
Chemical # and Name
011104 Sodium metaborate

GUIDELINE	COMMENT
123-1(a)	The herbicidal uses justify the requirement of phytotoxicity studies in order to further assess the potential risks to non-target and endangered plant species.
123-1(b)	Refer to comment for 123-1(a).
123-2	Refer to comment for 123-1(a).

Product Specific

Requirements Status and Registrant's Response Form

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

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved
OMB No. 2070-0107
2070-0057
Approval Expires 03-31-96

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
0024 Boric Acid & its Sodium Salts
EPA Reg. No. NNNNNN-NNNNN

3. Date and Type of DCI
PRODUCT SPECIFIC
ID# NNNNNN-RD-NNNN
FEB 16 1994

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 (1,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
61-2(a)	Descriptn starting materials, (1,2,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
	productn & formulatn								
	process								
61-2(b)	Discussion of formation of (1,3,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
	impurities								
62-1	Preliminary analysis (1,4,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
62-2	Certification of limits (1,5,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
62-3	Analytical method (1,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
63-2	Color (50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
63-3	Physical state (50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
63-4	Odor (50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
63-7	Density (50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
63-12	pH (50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
63-14	Oxidizing or reducing action (1,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	

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NO CITY, XX 00000

2. Case # and Name
0024 Boric Acid & its Sodium Salts
EPA Reg. No. NNNNNN-NNNNN

3. Date and Type of DCI
PRODUCT SPECIFIC
ID# NNNNNN-RD-NNNN
FEB 16 1994

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
63-16	Explodability (12,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
63-17	Storage stability (50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
63-18	Viscosity (13,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
63-20	Corrosion characteristics (50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
	Acute Toxic - Regular Chemical								
81-1	Acute oral toxicity-rat (1,7,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
81-2	Acute dermal toxicity-rabbit/rat (1,2,3,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
81-3	Acute inhalation toxicity-rat (3,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
81-4	Primary eye irritation-rabbit (2,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
81-5	Primary dermal irritation (1,2,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
81-6	Dermal sensitization (4,50)					ABCDEFG JKLMNO	MP/EP	8 mos.	
	Efficacy - Invertebrate Control Agents								
	Foliar and General Soil Treatments								
95-2,3	Laboratory efficacy evaluation (50,51,56)					ABC JKLM O	EP	8 mos.	
95-2,3	Comparative field test (50,51,56)					ABC JKLM O	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

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved
OMB No. 2070-0107
2070-0057
Approval Expires 03-31-96

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
0024 Boric Acid & its Sodium Salts
EPA Reg. No. NNNNNN-NNNNN

3. Date and Type of DCI
PRODUCT SPECIFIC
ID# NNNNNN-RD-NNNN
FEB 16 1994

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
	Domestic Animals and Their								
	Manmade Premises								
95-10	Laboratory efficacy (50,52,56)					K O	EP	8 mos.	
	evaluation								
95-10	Comparative field test (50,52,56)					K O	EP	8 mos.	
	Premises Treatments								
95-11	Laboratory efficacy (50,53,56)					KLM O	EP	8 mos.	
	evaluation								
95-11	Comparative field test (50,53,56)					KLM O	EP	8 mos.	
	Wood Structure Protection								
	Treatments								
95-12	Laboratory efficacy (50,54,56)					K M O	EP	8 mos.	
	evaluation								
95-12	Comparative field test (50,54,56)					K M O	EP	8 mos.	
	Stored Products Treatment								
95-13	Laboratory efficacy (50,55,56)					LM O	EP	8 mos.	
	evaluation								
95-13	Comparative field test (50,55,56)					LM O	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: 0024 Boric Acid & its Sodium Salts

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 To support registration of an MP or EP, whether produced by an integrated system or not, the technical grade of Active Ingredient must be analyzed. If the technical grade of Active Ingredient cannot be isolated, a statement of composition of the practical equivalent of the technical grade of Active Ingredient must be submitted. Data on EPs or MPs will be required on a case-by-case basis.

5 Certified limits are not required for inert ingredients in products proposed for experimental use.

12 Required if product is potentially explosive.

13 Required if product is a liquid.

50 Not required if product:
1) has already been reregistered or registered under the General Boric Acid Standard issued in 1986 (i.e., product numbers from 20201-20206) or
2) is already supported by all Product Specific Data of the Boric Acid and Boron Containing Salts Standard ["Regular Standard"] issued in 1986.

Registrants with a qualifying product must review Appendix G, Attachment C and respond with Option 8 or 9:
Option 8: I am currently in compliance with the General Standard and need only submit a Confidential Statement of Formula (CSF) and current label within 8 mos. of RED issuance and await Agency comments.
Option 9: I am currently in compliance with the Regular Standard and need only submit the attached documents verifying my previous satisfactory completion of the product specific data requirments and await Agency requests, if needed, for additional documents or selection of another option.
I will be submitting a revised CSF and revised label within 8 mos. of RED issuance.

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

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

FOOTNOTES AND KEY DEFINATIONS FOR GUIDELINE REQUIREMENTS

Case # and Name: 0024 Boric Acid & its Sodium Salts

Footnotes (cont.):

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.
50 See Footnote 50 under "Prod Chem - Regular Chemical".

Efficacy - Invertebrate Control Agents

50 See Footnote 50 under "Prod Chem - Regular Chemical".
51 Required for products claiming fire ants.
52 Required for products claiming ticks and fleas on domestic animals.
53 Required for the following products claiming control of cockroaches:
1. All dust or bait products containing 50% active or less
2. All dust or bait products containing greater than 0.5% Cab-o-Sil M-5.

Required for products claiming fleas on carpets.
Required for products claiming control of "ground beetles" (darkling or lesser mealworm) in poultry houses.
Required for products claiming control of carpet beetles, hibernating stages of cluster flies, elm leaf beetles, clover mites, and boxelder bugs.
54 Required for products claiming to control subterranean termites.
55 Required for products claiming to control drugstore and other beetles in stored products.
56 If a test needs to be generated, contact the Agency first for guidance in developing a protocol, which must be submitted with the 90 day response. Mr. Vern McFarland, at 703-305-6694, can assist you in obtaining such guidance.

Attachment 4

EPA Grouping of End-Use products for

Meeting Acute Toxicology Data Requirements for Reregistration

EPA'S BATCHING OF PRODUCTS CONTAINING BORIC ACID, ANHYDROUS SODIUM TETRABORATE, SODIUM TETRABORATE DECAHYDRATE, SODIUM TETRABORATE PENTAHYDRATE, ANHYDROUS DISODIUM OCTABORATE, DISODIUM OCTABORATE TETRAHYDRATE AND SODIUM METABORATE AS THE ACTIVE INGREDIENTS FOR MEETING ACUTE TOXICITY DATA REQUIREMENTS FOR REREGISTRATION

In an effort to reduce the time, resources and number of animals needed to fulfill the acute toxicity data requirements for reregistration of products containing the active ingredients boric acid, anhydrous sodium tetraborate, sodium tetraborate pentahydrate, sodium tetraborate decahydrate, anhydrous disodium octaborate, disodium octaborate tetrahydrate and sodium metaborate, the Agency has batched products which can be considered similar in terms 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, and frequently acute toxicity data on individual products has been found to be incomplete. Notwithstanding the batching process, the Agency reserves the right to require, at any time, acute toxicity data for an individual product should the need arise.

Registrants of products within a batch may choose to cooperatively generate, submit or cite a single battery of six acute toxicological studies to represent all the products within that batch. It is the registrants' option to participate in the process with all other registrants, only some of the other registrants, or only their own products within a batch, or to generate all the required acute toxicological studies for each of their own products. If a registrant chooses to generate the data for a batch, he/she must use one of the products within the batch as the test material. If a registrant chooses to rely upon previously submitted acute toxicity data, he/she may do so provided that the data base is complete and valid by today's standards (see acceptance criteria attached), the formulation tested is considered by EPA to be similar for acute toxicity, and the formulation has not been significantly altered since submission and acceptance of the acute toxicity data. Regardless of whether new data is generated or existing data is 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 1 displays the batches for the active ingredients boric acid, anhydrous sodium tetraborate, sodium tetraborate pentahydrate, sodium tetraborate decahydrate, anhydrous disodium octaborate, disodium octaborate tetrahydrate and sodium metaborate.

Table 1.

Batch	EPA Reg. No.	Active Ingredient(s)	Formulation Type
1	239-2529	99.0% - Boric Acid	Dust
	1624-117	100.0% - Boric Acid	Granular
	5481-79	95.0% - Boric Acid	Dust
	9444-129	100.0% - Boric Acid	Dust
	9444-130	99.0% - Boric Acid	Dust
	9608-2	99.0% - Boric Acid	Dust
	10370-81	99.0% - Boric Acid	Wettable Powder / Dust
	10370-249	99.0% - Boric Acid	Wettable Powder / Dust
	43357-1	99.0% - Boric Acid	Dust
	45735-1	98.0% - Boric Acid	Dust
	47006-3	99.8% - Boric Acid	Dust
	51311-1	100.0% - Boric Acid	Dust
	64222-1	99.0% - Boric Acid	Wettable Powder / Dust
	64745-3	99.8% - Boric Acid	Granular

Batch	EPA Reg. No.	Active Ingredient(s)	Formulation Type
2	3-1	40.0% - Boric Acid	Tablet
	3941-17	40.0% - Boric Acid	Tablet
	51311-2	55.0% - Boric Acid	Bait
	54314-1	53.3% - Boric Acid	Bait
	60038-2	50.0% - Boric Acid	Tablet
	60164-1	51.48% - Boric Acid	Dust
	63992-1	70.0% - Boric Acid	Bait
	64396-1	64.0% - Boric Acid	Dust
	65445-1	52.0% - Boric Acid	Bait
	65700-1	33.3% - Boric Acid	Bait
3	10370-63	64.0% - Boric Acid	Dust
	44757-3	64.0% - Boric Acid	Wettable Powder / Dust
	59111-1	64.0% - Boric Acid	Wettable Powder / Dust
	62962-1	65.0% - Boric Acid	Dust
	66287-1	65.0% - Boric Acid	Dust
4	56-66	51.0% - Boric Acid	Liquid / Bait
	499-312	50.0% - Boric Acid	Liquid / Bait
	499-327	50.0% - Boric Acid	Liquid / Bait
	3324-7	40.0% - Boric Acid	Liquid / Bait
	10370-238	51.0% - Boric Acid	Liquid / Bait
	47362-3	51.24% - Boric Acid	Liquid / Bait
	50039-2	51.24% - Boric Acid	Liquid / Bait
	54452-2	33.3% - Boric Acid	Liquid / Bait
	55501-1	47.0% - Boric Acid	Liquid / Bait
	56667-3	51.24% - Boric Acid	Liquid / Bait
	57727-1	50.0% - Boric Acid	Liquid / Bait
	58645-1	45.0% - Boric Acid	Liquid / Bait
	61282-2	51.0% - Boric Acid	Liquid / Bait
	65445-2	52.0% - Boric Acid	Liquid / Bait
5	475-237	2.0% - Boric Acid	Bait
	4972-23	6.0% - Boric Acid	Bait
	9444-131	5.0% - Boric Acid	Bait
	9444-135	5.0% - Boric Acid	Bait
	10370-266	5.0% - Boric Acid	Bait

Batch	EPA Reg. No.	Active Ingredient(s)	Formulation Type
5 (cont'd)	56667-4	5.0% - Boric Acid	Bait
	64405-2	5.0% - Boric Acid	Bait
6	1624-11	98.0% - Disodium Octaborate Tetrahydrate	Soluble Concentrate / Solid
	1624-39	98.0% - Disodium Octaborate Tetrahydrate	Soluble Concentrate / Solid
	1625-125	98.0% - Disodium Octaborate Tetrahydrate	Solid
	9444-132	98.0% - Disodium Octaborate Tetrahydrate	Soluble Concentrate / Solid
	19713-286	98.0% - Disodium Octaborate Tetrahydrate	Soluble Concentrate / Solid
	44313-19	98.0% - Disodium Octaborate Tetrahydrate	Solid
	54089-1	99.4% - Disodium Octaborate Tetrahydrate	Soluble Concentrate
	63442-1	98.0% - Disodium Octaborate Tetrahydrate	Soluble Concentrate
	64820-1	98.0% - Disodium Octaborate Tetrahydrate	Soluble Concentrate / Solid
	65382-2	98.0% - Disodium Octaborate Tetrahydrate	Wettable Powder
	65705-1	98.0% - Disodium Octaborate Tetrahydrate	Soluble Concentrate
	66480-2	98.0% - Disodium Octaborate Tetrahydrate	Soluble Concentrate
7	64405-1	40.0% - Disodium Octaborate Tetrahydrate	Soluble Concentrate
	64405-3	40.0% - Disodium Octaborate Tetrahydrate	Solution
	64405-4	40.0% - Disodium Octaborate Tetrahydrate	Ready-To-Use Solution
8	802-352	66.5% - Sodium Metaborate Tetrahydrate	Granular
	7001-292	66.5% - Sodium Metaborate Tetrahydrate	Wettable Powder / Dust
	7001-337	66.5% - Sodium Metaborate Tetrahydrate	Wettable Powder / Dust
9	802-563	68.0% - Sodium Metaborate Tetrahydrate	Granular
	7001-341	68.0% - Sodium Metaborate Tetrahydrate	Wettable Powder / Dust

Batch	EPA Reg. No.	Active Ingredient(s)	Formulation Type
9 (cont'd)	10827-58	68.0% - Sodium Metaborate Tetrahydrate	Wettable Powder / Dust
10	1421-151	6% - Sodium Metaborate 18% - Sodium Chlorate	Soluble Concentrate
	1769-82	9% Sodium Metaborate 18% Sodium Chlorate	Soluble Concentrate
11	5905-165	53.84% - Sodium Metaborate Tetrahydrate 41.04% - Sodium Chlorate 4.22% - Bromacil	Tablet
	5906-166	55.47% - Sodium Metaborate Tetrahydrate 41.07% - Sodium Chlorate 4.22% - Bromacil	Tablet
12	9754-7	19.1% - Sodium Metaborate Octaborate 18.1 - Sodium Chlorate	Soluble Concentrate
	11440-3	19.1% - Sodium Metaborate Octaborate 18.1 - Sodium Chlorate	Soluble Concentrate
13	7001-339	66.5% - Sodium Metaborate Tetrahydrate 30.0% - Sodium Chlorate 1.5% - Bromacil	Wettable Powder / Dust
	7413-3	66.5% - Sodium Metaborate Tetrahydrate 30.0% - Sodium Chlorate 1.5% - Bromacil	Dust
14	7001-345	8.75% - Sodium Metaborate Anhydrous 10.3% - Sodium Chlorate 0.41% - Bromacil	Soluble Concentrate
	9754-1	10% - Sodium Metaborate Anhydrous 7.0% - Sodium Chlorate 0.3% - Bromacil	Soluble Concentrate
15	1624-1	100% - Sodium Tetraborate Pentahydrate	Granular
	51708-11	100% - Sodium Tetraborate Pentahydrate	Granular
	64745-1	100% - Sodium Tetraborate Pentahydrate	Granular
16	1624-94	100% - Sodium Tetraborate Decahydrate	Crystalline
	9444-134	100% - Sodium Tetraborate Decahydrate	Dust
	64745-2	100% - Sodium Tetraborate Decahydrate	Soluble Concentrate / Solid

Batch	EPA Reg. No.	Active Ingredient(s)	Formulation Type
16 (cont'd)	65161-1	100% - Sodium Tetraborate Decahydrate	Dust
	66674-1	100% - Sodium Tetraborate Decahydrate	Wettable Powder / Dust
17	149-8	5.4% - Sodium Tetraborate Decahydrate	Bait / Liquid
	3095-47	5% - Sodium Tetraborate Decahydrate	Bait / Liquid
18	8383-1	0.47% - Sodium Tetraborate 1.41% - Phenol 0.24% - Sodium Phenate	Ready-To-Use Solution
	8383-3	0.47% - Sodium Tetraborate 1.41% - Phenol 0.24% - Sodium Phenate	Ready-To-Use Solution
	8383-7	0.47% - Sodium Tetraborate 1.41% - Phenol 0.24% - Sodium Phenate	Towelette

Table 2 lists those products the Agency was unable to batch. These products were either considered not to be similar to other products for purposes of acute toxicity or the Agency lacked sufficient information for decision making. Registrants of these products are responsible for meeting the acute toxicity data requirements for each product.

Table 2.

Unbatched Boric Acid, Anhydrous Sodium Tetraborate, Sodium Tetraborate Pentahydrate, Sodium Tetraborate Decahydrate, Anhydrous Disodium Octaborate, Disodium Octaborate Tetrahydrate and Sodium Metaborate.		
EPA Reg. No.	Active Ingredients	Formulation Type
100-479	Sodium Metaborate ..... 50.0% Sodium Chlorate ..... 40.0% Prometon ..... 5.0% Simazine 0.75%	Pellet / Tablet
499-220	Boric Acid 20.0%	Pressurized Dust
690-48	Sodium Metaborate ..... 49.0% Sodium Chlorate 48.0%	Granular
1022-536	Sodium Tetraborate Decahydrate ..... 40.0% Copper Naphthenate 18.16%	Ready-To-Use Solution
1083-1	Borax 0.28%	Emulsifiable Concentrate

Unbatched Products (continued)		
EPA Reg. No.	Active Ingredient(s)	Formulation Type
1624-3	Sodium Tetraborate 100.0%	Granular
2869-15	Sodium Metaborate Tetrahydrate ..... 4.57% Sodium Chlorate 3.11%	Soluble Concentrate
3095-24	Ortho Boric Acid ..... 4.0% Sodium Tetraborate Decahydrate 5.0%	Bait
4236-8	Sodium Metaborate (anhydrous) ..... 10.0% Sodium Chlorate 7.0%	Ready-To-Use Solution
5887-46	Sodium Metaborate ..... 10.1% Sodium Chloride 18.5%	Soluble Concentrate
7001-340	Sodium Metaborate Tetrahydrate ..... 94.0% Bromacil 4.0%	Soluble Concentrate
7701-34	Sodium Borate ..... 11.41% Sodium Chlorate 22.14%	Soluble Concentrate
8020-1	Boric Acid 90.0%	Dust
9444-133	Boric Acid 20.0%	Pressurized Liquid
10356-16	Disodium Octaborate, (Anhydrous) 100.0%	Solid Rods
18910-6	Boric Acid 63.2%	Ready-To-Use Solution
19713-204	Sodium Metaborate ..... 50.0% Sodium Chlorate ..... 40.0% Bromacil 8.0%	Granular
19713-206	Sodium Tetraborate Pentahydrate ..... 38.8% Sodium Chlorate ..... 58.0% Bromacil 2.5%	Pellet / Tablet
33436-1	Boric Acid ..... 0.9% Calcium Sulfate, Dihydrate ..... 74.0% Aluminum Sulfate, Octadecahydrate 15.9%	Soluble Concentrate / Solid
33560-43	Sodium Metaborate ..... 50.0% Sodium Chlorate ..... 40.0% Bromacil ..... 2.0% Diuron 2.0%	Pellet / Tablet
44757-4	Boric Acid 14.72%	Impregnated Material
46196-1	Boric Acid 63.5%	Dust
48211-73	Sodium Metaborate Tetrahydrate ..... 66.5% Sodium Chlorate ..... 30.0% Bromacil 1.5%	Granular
49168-1	Borax 74.0%	Dust
59977-1	Boric Acid 18.0%	Granular

Unbatched Products (continued)		
EPA Reg. No.	Active Ingredients	Formulation Type
62190-9	Boric Acid 26.3%	Soluble Concentrate / Solid
AL92000300	Sodium Tetraborate Decahydrate 4.0%	Ready-To-Use Solution
AL92000400	Boric Acid ..... 2.0% Sodium Borate ..... 2.0% Didecyl Dimethyl Ammonium Chloride 2.0%	Ready-To-Use Solution

Attachment 5

EPA Acceptance Criteria

SUBDIVISION D

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

61 Product Identity and Composition

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

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

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

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

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

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

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

7.____ Description of each beginning material in the manufacturing process.

____ EPA Registration Number if registered; for other beginning materials, the following:

____ Name and address of manufacturer or supplier.
____ Brand name, trade name or commercial designation.
____ Technical specifications or data sheets by which manufacturer or supplier describes composition, properties or toxicity.

8.____Description of manufacturing process.

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

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

62 Analysis and Certification of Product Ingredients

ACCEPTANCE CRITERIA

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

Does your study meet the following acceptance criteria?

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

63 Physical and Chemical Characteristics

ACCEPTANCE CRITERIA

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

Does your study meet the following acceptance criteria?

63-2 Color

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

63-3 Physical State

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

63-4 Odor

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

63-5 Melting Point

____ Reported in °C
____ Any observed decomposition reported

63-6 Boiling Point

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

63-7 Density, Bulk Density, Specific Gravity

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

63-8 Solubility

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

63-9 Vapor Pressure

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

63-10 Dissociation Constant

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

63-11 Octanol/water Partition Coefficient

____ Measured at about 20-25° C

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

____ Data supporting reported value provided

63-12 pH

____ Measured at about 20-25° C

____ Measured following dilution or dispersion in distilled water

63-13 Stability

____ Sensitivity to metal ions and metal determined

____ Stability at normal and elevated temperatures

____ Sensitivity to sunlight determined

SUBDIVISION F

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

81-1 Acute Oral Toxicity in the Rat

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

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

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

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

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

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

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

81-3 Acute Inhalation Toxicity in the Rat

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

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

81-4 Primary Eye Irritation in the Rabbit

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

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

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

81-5 Primary Dermal Irritation Study

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1.____ Identify material tested (technical, end-use product, etc).
2.____ Study not required if material is corrosive or has a pH of ≤ 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^2.
8.____ Application site covered with a gauze patch held in place with nonirritating tape.
9.____ Material removed, washed with water, without trauma to application site.
10.___ Application site examined and graded for irritation at 1, 24, 48 and 72 hr, then daily until normal or 14 days (whichever is shorter).
11.*__ Individual daily observations.

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

81-6 Dermal Sensitization in the Guinea Pig

ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

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

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

Attachment 6

List of Registrants Receiving this Notice

List of All Registrants Sent This Data Call-In Notice

Case # and Name

0024 Boric Acid

Chemical # and Name

011001 Boric acid

Company Number	Company Name	Additional Name	Address	City & State	Zip
000003	P.F. HARRIS MFG. CO., INC.		BOX 7344	JACKSONVILLE FL	32238
000056	EATON JT & COMPANY INC		1393 E. HIGHLAND ROAD	TWINSBURG OH	44087
000099	WATKINS INCORPORATED		150 LIBERTY ST	WINONA MN	55987
000239	SOLARIS GROUP, THE	A DIV OF THE AG DIV OF MONSANTO CO	BOX 5008	SAN RAMON CA	94583
000475	RECKITT & COLEMAN HOUSEHOLD PRODUC		1655 VALLEY RD	WAYNE NJ	07474
000499	WHITMIRE RESEARCH LABORATORIES, IN		3568 TREE CT INDUSTRIAL BLVD	ST LOUIS MO	63122
000655	PRENTISS INC		C. B. 2000	FLORAL PARK NY	11002
000769	H.R. MCLANE, INC.	AGENT FOR: SURECO, INC.	7210 RED ROAD, SUITE 206	MIAMI FL	33143
000869	GREEN LIGHT COMPANY		P.O. BOX 17985	SAN ANTONIO TX	78217
001475	LANDIS INTERNATIONAL, INC.	AGENT FOR: WILLERT HOME PRODUCTS	3025 MADISON HWY BOX 5126	VALDOSTA GA	30603
001624	U.S. BORAX INC		BOX 926	VALENCIA CA	91380
003095	PIC CORP		23 S ESSEX AVE	ORANGE NJ	07050
003282	D-CON COMPANY INC		225 SUMMIT AVENUE	MONTVALE NJ	07645
003324	GENERAL PEST SERVICE CO		1819 GOLDFIELD STREET #B	NORTH LAS VEGAS NV	89030
003487	BACON PRODUCTS COMPANY INC		BOX 22187	CHATTANOOGA TN	37422
004972	PROTEXALL PRODUCTS INC		1109-11 HWY 427 N.	LONGWOOD FL	32750
005130	REGWEST CO	AGENT FOR: JOHNSON CHEMICAL CO, IN	BOX 2220	GREELEY CO	80632
005481	AMVAC CHEMICAL CORP		4100 EAST WASHINGTON BLVD	LOS ANGELES CA	90023
008020	BEST ENTERPRISES LTD		BOX 946	WINTERVILLE NC	28590
008660	ANDERSONS, (THE), LAWN FERTILIZER	AGENT FOR: ANDERSONS, THE	BOX 119	MAUMEE OH	43537
008848	SAFEGUARD CHEMICAL CORP		806 E. 144 ST.	BRONX NY	10454
009086	ROXIDE INTERNATIONAL INC		BOX 249	NEW ROCHELLE NY	10802
009444	WATERBURY COMPANIES INC		BOX 640	INDEPENDENCE LA	70443
009608	COPPER BRITE, INC.		BOX 50610	SANTA BARBARA CA	93150
010039	RAGO PRODUCTS INC.		657 CRESCENT AVE	BRONX NY	10458
010088	ATHEA LABORATORIES INC		P.O. BOX 23926	MILWAUKEE WI	53223
010370	ROUSSEL UCLAF CORP		95 CHESTNUT RIDGE RD	MONTVALE NJ	07645
011474	SUNGRO CHEMICALS, INC.		P. O. BOX 24632	LOS ANGELES CA	90024
018910	DESOWAG MATERIALSCHUTZ GMBH	SOLVAY TECHNOLOGIES, INC.	500 FIFTH AVE SUITE 3000	NEW YORK NY	10110
019713	DREXEL CHEMICAL CO		BOX 9306	MEMPHIS TN	38109
034797	QUALIS INC		4600 PARK AVE	DES MOINES IA	50321

List of All Registrants Sent This Data Call-In Notice

Case # and Name

0024 Boric Acid

Chemical # and Name

011001 Boric acid

Company Number	Company Name	Additional Name	Address	City & State	Zip
035488	J.M.W. APP & COMPANY, INC.		330 CLUB DRIVE	GASTONIA NC	28054
040849	REGWEST CO	AGENT FOR: ENFORCER PRODUCTS INC	BOX 2220	GREELEY CO	80632
043357	GERALD G. MCCARTHY		900 MAIN ST	MASSENA IA	50853
043512	J. C. CHEMICAL CO.		1725 SO. HARVARD BLVD.	LOS ANGELES CA	90006
044405	NU-WAY PRODUCTS		5927 S. WESTERN AVE.	CHICAGO IL	60636
044632	CHEM PRODUCTS CO		1120 CHALLEDON RD	GREAT FALLS VA	22066
044757	IN-CIDE TECHNOLOGIES, INC.		50 N. 41 AVENUE, SUITE #2	PHOENIX AZ	85009
045385	CTX INC		481 SCOTLAND RD	MCHENRY IL	60050
045735	BURLINGTON SCIENTIFIC CORPORATION		222 SHERWOOD AVENUE	FARMINGDALE NY	11735
046196	T.W.O. INC.		719 GALLOWAY CT	WINTER SPRINGS FL	32708
047006	UNICORN LABS AND PHAETON CORP		1000 118TH AVE N	ST. PETERSBURG FL	33716
047362	LANDIS INTERNATIONAL INC	AGENT FOR: SEABRIGHT ENTERPRISES L	BOX 5126	VALDOSTA GA	31603
048005	ROACHPROOFING ASSOCIATES, INC.		P.O. BOX 9293	CORAL SPRINGS FL	33075
049585	PESTICIDE REGULATORY SERVICES	AGENT FOR: ALLJACK & CO.	3703 SEDGEFIELD DR	VALDOSTA GA	31602
050039	WHEELUS SERVICES, INC		1360 NEW HOPE RD	LAWRENCEVILLE GA	30245
051311	TAMBY CHEMICAL INC.		214 51ST STREET	BROOKLYN NY	11220
051463	REGWEST CO	AGENT FOR: AMERICAN HOUSEHOLD PROD	BOX 2220	GREELEY CO	80632
051793	RSR LABORATORIES, INC		501 FIFTH ST	BRISTOL TN	37620
053114	MAGNAGARD, INC		1718 DIETRICH RD	FORISTELL MO	63348
053651	ROSE & CO.		BOX 681 14 EMILY RD.	BROAD BROOK CT	06016
054089	R VALUE/WEST		150 N SANTA ANITA AVE, #300	ARCADIA CA	91006
054314	MARIA V. THORNHILL		11705 LONGLEAF	HOUSTON TX	77024
054452	BLUE DIAMOND EXTERMINATING & MFG,		ROUTE 2 BOX 1322	ROGERSVILLE TN	37857
054700	JERRI-LEIGH ENTERPRISES		ROUTE 1 BOX 450	NEESES SC	29107
055501	EARTH FRIENDLY PRODUCTS INC		BOX 47	SLOCOMB AL	36375
055540	MULLIS ENTERPRISE		RT #1	CADWELL GA	31009
056667	J. WOODALL & ASSOCIATES, INC		BOX 415	GRAYSON GA	30221
056982	A J AMERICA CO. INC.		1338 RIFLE RANGE RD.	EL CERRITO CA	94530
057445	ALEXANDER ENTERPRISES		2958 RAINBOW DRIVE, SUITE 215	DECATUR GA	30034
057727	LANDIS INTERNATIONAL INC	AGENT FOR: BUDDIES PUDDY CO	BOX 5126	VALDOSTA GA	31603
058645	ROACH X-ODOS	MARGARET K. DEMETRE ENTERPRISES	9602 HIGHMEADOW	HOUSTON TX	77063

List of All Registrants Sent This Data Call-In Notice

Case # and Name
0024 Boric Acid
Chemical # and Name
011001 Boric acid

Company Number	Company Name	Additional Name	Address	City & State	Zip
059111	RX FOR FLEAS, INC		6555 NW 9TH AVE SUITE 412	FORT LAUDERDALE FL	33309
059177	ENTRE MARKETING & SALES, INC.		164 S TERRACE	MT VERNON NY	10550
059504	Z A P ROACH POWDER		5820 WILSHIRE BLVD., SUITE 503	LOS ANGELES CA	90036
059977	BUSHWHACKER ASSOCIATES INC, THE	DIVISION OF BETHURUM RESEARCH & DE	BOX 3456	GALVESTON TX	77552
060038	CLEVELAND J. BREAUX, SR.		1703 JUANITA ST .	NEW IBERIA LA	70560
061282	HACCO, INC.		537 ATLAS AVE	MADISON WI	53716
062190	HICKSON CORPORATION		3941 BONSAL RD	CONLEY GA	30027
062577	KITTRICH CORPORATION		4500 DISTRICT BOULEVARD	LOS ANGELES CA	90058
062962	ECOTECH	DBA ENVIROTECH	143 NW 16TH ST	BOCA RATON FL	33432
063992	LANDIS INTERNATIONAL INC	AGENT FOR: TANISAKE CO LTD	BOX 5126	VALDOSTA GA	31603
064396	BIO NATURAL INC		1751 BAHIA VISTA ST	SARASOTA FL	34239
064405	REGWEST CO	AGENT FOR: NISUS CORP	BOX 2220	GREELEY CO	80632
064745	NORTH AMERICAN CHEMICAL CO		8300 COLLEGE BLVD	OVERLAND PARK KS	66210
065145	DEYPSEY-FITZ CORP		108 1/2 POSTOAK RD (N)	SULPHUR LA	70664
065445	LO TOX PRODUCTS INTERNATIONAL INC		200 SOUTH 14TH AVE	MT VERNON NY	10550
065505	ROACH RID INC		9528-35 MIRAMAR RD	SAN DIEGO CA	92126
065527	FLEA STOPPERS INTERNATIONAL INC.		3208 OLD CHARLOTTE HWY	MONROE NC	28110
065700	WACO CHEMICAL MFG. CO INC.		BOX 588	HYDEN KY	41749
065754	ENVIRONMENTAL COATINGS INC		BOX 2068	DOTHAN AL	36302
065906	JONES, CORK & MILLER	AGENT FOR: ROACH BUSTERS INC	BOX 6437	MACON GA	31208
066287	BENJAMIN E ROGERS		8301 WRENS WAY	LARGO FL	34643
066480	JOHN W. KENNEDY CONSULTANTS	AGENT FOR: ECO-FRESH INDUSTRIES IN	9101 CHERRY LANE	LAUREL MD	20708
066674	CANINE CARE INC		BOX 11436	COSTA MESA CA	92627
066680	CARE-FLEA ONE YEAR GUARANTEE CO		114 STANDFIELD	MESQUITE TX	75181
066746	NATIONAL FEATURES SYNDICATE		2359 JEFFERSON DR S.E.	GRAND RAPIDS MI	49507
066764	JOHN MARSHALL		25601 NARBONNE AVE	LOMITA CA	90717
066791	BUG HOUSE PEST CONTROL		1776 NORTH JEFFERSON ST - STE A	MILLEDGEVILLE GA	31061
066986	PARASITIX CORP		4980 CARROLL CANYON RD	SAN DIEGO CA	92121

List of All Registrants Sent This Data Call-In Notice

Case # and Name

0024 Boric Acid

Chemical # and Name

011102 Borax (B4Na2O7.10H2O) (1303-96-4)

Company Number	Company Name	Additional Name	Address	City & State	Zip
000149	SENORET CHEMICAL COMPANY, INC.		566 LEFFINGWELL AVE	KIRKWOOD MO	63122
001022	IBC MANUFACTURING CO		416 BROOKS RD	MEMPHIS TN	38109
001624	U.S. BORAX INC		BOX 926	VALENCIA CA	91380
002935	WILBUR ELLIS CO.		191 W SHAW AVE	FRESNO CA	93704
003095	PIC CORP		23 S ESSEX AVE	ORANGE NJ	07050
008383	SPORICIDIN INTERNATIONAL		5901 MONTROSE RD	ROCKVILLE MD	20852
009444	WATERBURY COMPANIES INC		BOX 640	INDEPENDENCE LA	70443
042198	REGWEST CO	AGENT FOR: NATIONAL RESEARCH & CHE	BOX 2220	GREELEY CO	80632
064745	NORTH AMERICAN CHEMICAL CO		8300 COLLEGE BLVD	OVERLAND PARK KS	66210
065161	FLEAGO INDUSTRIES		444 PINE AVE	NAPLES FL	33963
065754	ENVIRONMENTAL COATINGS INC		BOX 2068	DOTHAN AL	36302
066674	CANINE CARE INC		BOX 11436	COSTA MESA CA	92627

List of All Registrants Sent This Data Call-In Notice

Case # and Name

Chemical # and Name

011110 Boron sodium oxide (B4Na2O7), pentahydrate (12179-

Company Number	Company Name	Additional Name	Address	City & State	Zip
001624	U.S. BORAX INC		BOX 926	VALENCIA CA	91380
019713	DREXEL CHEMICAL CO		BOX 9306	MEMPHIS TN	38109
049168	O.U.T. LABORATORIES		5 LOCKWOOD DR	HAMPTON VA	23661
051708	JOHN GIRVAN CO. INC.		11730 PHILLIPS HIGHWAY	JACKSONVILLE FL	32256
064745	NORTH AMERICAN CHEMICAL CO		8300 COLLEGE BLVD	OVERLAND PARK KS	66210

List of All Registrants Sent This Data Call-In Notice

Case # and Name

Chemical # and Name

011112 Boron sodium oxide (B4Na2O7) (1330-43-4)

Company Number	Company Name	Additional Name	Address	City & State	Zip
001083	CED-O-PRODUCTS CORP		903 ALLEN ROAD	NORTH SYRACUSE NY	13212
001624	U.S. BORAX INC		BOX 926	VALENCIA CA	91380
003095	PIC CORP		23 S ESSEX AVE	ORANGE NJ	07050
007701	CHEMICAL SPECIALTIES INC		149 WEST TRIGG AVENUE	MEMPHIS TN	38106

List of All Registrants Sent This Data Call-In Notice

Case # and Name

0024 Boric Acid

Chemical # and Name

011103 Boron sodium oxide (B8Na2013), tetrahydrate (1228

Company Number	Company Name	Additional Name	Address	City & State	Zip
001624	U.S. BORAX INC		BOX 926	VALENCIA CA	91380
003008	OSMOSE WOOD PRESERVING, INC		980 ELLICOTT ST	BUFFALO NY	14209
009444	WATERBURY COMPANIES INC		BOX 640	INDEPENDENCE LA	70443
019713	DREXEL CHEMICAL CO		BOX 9306	MEMPHIS TN	38109
035053	HONOLULU WOOD TREATING CO		91-291 HANUA STREET	EWA BEACH HI	96707
040849	REGWEST CO	AGENT FOR: ENFORCER PRODUCTS INC	BOX 2220	GREELEY CO	80632
044313	R VALUE INC		5421 CRESTWOOD DR	KNOXVILLE TN	37914
044757	IN-CIDE TECHNOLOGIES, INC.		50 N. 41 AVENUE, SUITE #2	PHOENIX AZ	85009
054089	R VALUE/WEST		150 N SANTA ANITA AVE, #300	ARCADIA CA	91006
063442	FIVE POINTS INC.		RD#1 BOX 12 SODUM RD	LITTLE VALLEY NY	14755
064405	REGWEST CO	AGENT FOR: NISUS CORP	BOX 2220	GREELEY CO	80632
064820	REGWEST CO	AGENT FOR: SASHCO	BOX 2220	GREELEY CO	80632
065382	FLEAXPERTS INC		8993 COMPLEX DR	SAN DIEGO CA	92123
065705	ENVIROTECH VENTURES INTERNATIONAL		504 R E CORNWALLIS DR BOX 13088	GREENSBORO NC	27415
066144	FLEAXPERTS INC		8993 COMPLEX DR	SAN DIEGO CA	92123
066480	JOHN W. KENNEDY CONSULTANTS	AGENT FOR: ECO-FRESH INDUSTRIES IN	9101 CHERRY LANE	LAUREL MD	20708

List of All Registrants Sent This Data Call-In Notice

Case # and Name

Chemical # and Name
011107 Boron sodium oxide (B8Na2013) (12008-41-2)

Company Number	Company Name	Additional Name	Address	City & State	Zip
010356	CHEMICAL SPECIALTIES, INC.		ONE WOODLAWN GREEN	CHARLOTTE NC	28217

List of All Registrants Sent This Data Call-In Notice

Case # and Name

0632 Barium metaborate

Chemical # and Name

011104 Sodium metaborate (NaBO2)

Company Number	Company Name	Additional Name	Address	City & State	Zip
000100	CIBA-GEIGY CORP.		P.O. BOX 18300	GREENSBORO NC	27419
000690	PERK PRODUCTS AND CHEMICAL CO., IN		BOX 100585	NASHVILLE, TN	37210
000802	CHAS H. LILLY CO.		7737 N.E. KILLINGSWORTH	PORTLAND OR	97218
001769	NCH CORP		2727 CHEMSEARCH BLVD.	IRVING TX	75062
002869	CRYSTAL CHEM CORP		101-02 37TH AVENUE	CORONA NY	11368
004236	BANDWAGON MFG INC		54 INDUSTRIAL WAY	WILMINGTON MA	01887
005905	HELENA CHEMICAL CO		6075 POPLAR AVE SUITE 500	MEMPHIS TN	38119
007001	J.R. SIMPLOT CO.		BOX 198	LATHROPE CA	95330
007413	PENNINGTON ENTERPRISES, INC.		BOX 290	MADISON GA	30650
009754	GRO-LYFE		810 E. 18TH STREET	LOS ANGELES CA	90021
010827	CHEMICAL SPECIALTIES INC.		P. O. BOX 312	SAN MARCOS TX	78666
011440	LANE LAB. INC.		BOX 24632	LOS ANGELES CA	90024
019713	DREXEL CHEMICAL CO		BOX 9306	MEMPHIS TN	38109
033560	PRO SERVE INC		400 EAST BROOKS RD BOX 161059	MEMPHIS TN	38186
048211	INTERCON CHEMICAL		1100 CENTRAL INDUSTRIAL DR	ST. LOUIS MO	63110

Attachment 7

Cost Share and Data Compensation Forms

and

Confidential Statement of Formula Form with Instructions

United States Environmental Protection Agency
Washington, DC 20460

CERTIFICATION OF OFFER TO COST SHARE IN THE DEVELOPMENT OF DATA

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

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

Please fill in blanks below.

Company Name	Company Number
Product Name	EPA Reg. No.

I Certify that:

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

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

Name of Firm(s)	Date of Offer

Certification:

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

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

EPA	United States Environmental Protection Agency Washington, DC 20460 **CERTIFICATION WITH RESPECT TO DATA COMPENSATION REQUIREMENTS**	Form Approved OMB No. 2070-0107 2070-0057 Approval Expires 3-31-96

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

Please fill in blanks below.

Company Name	Company Number
Product Name	EPA Reg. No.

I Certify that:

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

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

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

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

Signature	Date
Name and Title (Please Type or Print)	

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

Signature	Date
Name and Title (Please Type or Print)	

Confidential Business Information: Does Not Contain National Security Information (E.O. 12065) Form Approved. OMB No. 2070-0060. Approval Expires 2/28/94

EPA

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

Confidential Statement of Formula

A. ☐ Basic Formulation ☐ Alternate Formulation

B. Page of

See Instructions on Back

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

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

3. Product Name

4. Registration No./File Symbol

5. EPA Product Mgr/Team No.

6. Country Where Formulated

7. Pounds/Gal or Bulk Density

8. pH

9. Flash Point/Flame Extension

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

16. Typed Name of Approving Official

17. Total Weight 100%

18. Signature of Approving Official

19. Title

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

21. Date

EPA Form 8570-4 (Rev. 12-88) Previous editions are obsolete. If you can photocopy this, please submit an additional copy. White - EPA File Copy (original) Yellow - Applicant copy

Instructions for Completing the Confidential Statement of Formula

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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