



---

## Uploaded to VFC Website

### ~ November 2012 ~

---

This Document has been provided to you courtesy of Veterans-For-Change!

Feel free to pass to any veteran who might be able to use this information!

For thousands more files like this and hundreds of links to useful information, and hundreds of "Frequently Asked Questions, please go to:

[Veterans-For-Change](#)

---

*Veterans-For-Change is a 501(c)(3) Non-Profit Corporation  
Tax ID #27-3820181*

***If Veteran's don't help Veteran's, who will?***

We appreciate all donations to continue to provide information and services to Veterans and their families.

[https://www.paypal.com/cgi-bin/webscr?cmd=\\_s-xclick&hosted\\_button\\_id=WGT2M5UTB9A78](https://www.paypal.com/cgi-bin/webscr?cmd=_s-xclick&hosted_button_id=WGT2M5UTB9A78)

---

**Note:** VFC is not liable for source information in this document, it is merely provided as a courtesy to our members.

**Item ID Number** 05202  **Not Scanned**

**Author** Szoke, Ernest G.

**Corporate Author** Amchem Products, Inc.

**Report/Article Title** Environmental Protection Agency (EPA) Before the Administrator, In re: 2,4,5 -Trichlorophenoxyacetic Acid (2,4,5 -T), F.I.F.R.A. Docket Number 295, et al., Amchem Prehearing Memorandum (Number 2)

**Journal/Book Title**

**Year** 1974

**Month/Day** January 17

**Color**

**Number of Images** 26

**Description Notes** Accompanied by four Amchem product labels

ENVIRONMENTAL PROTECTION AGENCY  
BEFORE THE ADMINISTRATOR



In re :  
2,4,5-Trichlorophenoxyacetic : F.I.F.R.A. Docket Number 295,  
Acid (2,4,5-T) : et al

AMCHEM PREHEARING MEMORANDUM  
(Number 2)

This memorandum sets forth the position of the party Amchem as requested by the Chief Administrative Law Judge at the first Prehearing Conference (Tr. Nov. 12, 1973, p. 28). The memorandum contains the following:

- A) Position of the party Amchem re continued use of 2,4,5-T and Answer to statement of issues
- B) Statement as to uses the party Amchem will defend and areas as to which Amchem intends to present evidence.
- C) Amchem request for field hearings outside Washington, D.C., including reasons, numbers, and places.
- D) Documentary evidence that the party Amchem at this time intends to introduce in the proceedings.
- E) Other matters
  - 1) Revised analysis of current Amchem registrations
  - 2) Address for service

A. Position of the party Amchem re continued use of 2,4,5-T and Answer to statement of issues

Based on over twenty years of experience with 2,4,5-T without indication of any adverse consequences when 2,4,5-T was used as directed; the position of Amchem in these proceedings is that 2,4,5-T when used as directed for its currently registered uses, is safe, economical, and beneficial and such registered uses should be continued without change.

As to the specific issues raised, Amchem's answers numerically keyed to the Statement of Issues are as follows:

Issue I

Whether 2,4,5-T products presently registered, or other material submitted in support of these registrations, complies with the provisions of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended.

Answer

The 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) products presently registered by Amchem comply with the provisions of the Federal Insecticide, Fungicide and Rodenticide Act, as amended.

Issue II

Whether 2,4,5-T will perform its intended function without unreasonable adverse effects on the environment.

Answer

When used in accordance with widespread and commonly recognized practice, 2,4,5-T does not generally cause unreasonable adverse effects on the environment, as defined by the Federal Insecticide, Fungicide and Rodenticide Act, as amended.

Issue III

Whether, when used in accordance with widespread and commonly recognized practice, 2,4,5-T generally causes unreasonable adverse effects on the environment, as defined by the Federal Insecticide, Fungicide and Rodenticide Act, as amended.

Answer

When used in accordance with widespread and commonly recognized practice, 2,4,5-T does not generally cause unreasonable adverse effects on the environment, as defined by the Federal Insecticide, Fungicide and Rodenticide Act, as amended.

Issue IV

Whether registrations of 2,4,5-T should be cancelled or its classification changed.

Answer

The Amchem registrations of 2,4,5-T should not be cancelled or any classification changed.

## Issue V

The ten issues delineated in the 2,4,5-T Orders of the Administrator of November 4, 1971 and April 13, 1972; (I.F. & R. Docket No. 42 and No. 44) as follows:

1. A contaminant of 2,4,5-T--tetrachlorodibenzoparadioxin (TCDD, or dioxin)--is one of the most teratogenic chemicals known. The registrants have not established that 1 part per million of this contaminant--or even 0.1 ppm--in 2,4,5-T does not pose a danger to the public health and safety.
2. There is a substantial possibility that even "pure" 2,4,5-T is itself a hazard to man and the environment.
3. The dose-response curves for 2,4,5-T and dioxin have not been determined, and the possibility of "no effect" levels for these chemicals is only a matter of conjecture at this time.
4. As with another well-known teratogen, thalidomide, the possibility exists that dioxin may be many times more potent in humans than in test animals (thalidomide was 60 times more dangerous to humans than to mice, and 700 times more dangerous than to hamsters; the usual margin of safety for humans is set at one-tenth the teratogenic level in test animals).
5. The registrants have not established that dioxin and 2,4,5-T do not accumulate in body tissues. If one or both does accumulate, even small doses could build up to dangerous levels within man and animals, and possibly in the food chain as well.
6. The question of whether there are other sources of dioxin in the environment has not been fully explored. Such other sources, when added to the amount of dioxin from 2,4,5-T, could result in a substantial total body burden for certain segments of the population.
7. The registrants have not established that there is no danger from dioxins other than TCDD, such as the hexa- and heptadioxin isomers, which also can be present in 2,4,5-T, and which are known to be teratogenic.

8. There is evidence that the polychlorophenols in 2,4,5-T may decompose into dioxin when exposed to high temperatures, such as might occur with incineration or even in the cooking of food.
9. Studies of medical records in Vietnam hospitals and clinics below the district capital level suggest a correlation between the spraying of 2,4,5-T defoliant and the incidence of birth defects.
10. The registrants have not established the need for 2,4,5-T in light of the above-mentioned risks. Benefits from 2,4,5-T should be determined at a public hearing, but tentative studies by this agency have shown little necessity for those uses of 2,4,5-T which are now at issue.

#### Answer

The party Amchem is not a basic manufacturer of 2,4,5-T. As to the ten questions raised by the Orders of the Administrator, Amchem based on over twenty years of experience with this product, has seen no credible evidence to indicate that when used as directed in current labels, 2,4,5-T represents any danger to the public health and safety. Amchem understands that Dow, U.S.D.A. and perhaps others will develop the facts on the scientific issues raised in findings 1 to 10 above. Amchem does not intend to deal with such issues, but wishes to reserve the right to assume responsibility in such areas if there is useful factual evidence known to Amchem which is not adequately presented by the parties who have indicated an intention to assume the responsibility for the development of these factual issues. Amchem will deal with finding 10 above in so far as it is to apply to the expanded hearing pertaining to use on utility rights-of-way. Utility rights-of-way use

is among those non-farm uses of 2,4,5-T which Dr. Sterling in the Advisory Committee Report on 2,4,5-T indicated "clearly have national benefit" (p. 73). Further, the conclusion of the Advisory Committee is that "Current patterns of usage of 2,4,5-T and its known fate in various compartments of the environment, including the plant and animal foods of man, are such that any accumulation that might constitute a hazard to any aspect of human health is unlikely.". This conclusion applies to uses on utility rights-of-way. It is expected that other parties will deal with all other uses.

Such additional questions as the Administrative Law Judge finds relevant, namely:

Issue V. A.

- A. The health hazards to man and to other animals which may be caused by 2,4,5-T and/or its extremely toxic contaminant, 2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD), with emphasis on the following:
1. Is 2,4,5-T or TCDD a teratogen?
  2. Does 2,4,5-T or TCDD induce other adverse reproductive effects.
  3. Is 2,4,5-T or TCDD a mutagen?
  4. Is 2,4,5-T or TCDD a carcinogen?
  5. Can exposure to 2,4,5-T or TCDD induce sub-lethal chronic health effects?
  6. Can chronic, low-level exposure to 2,4,5-T and/or TCDD cause delayed lethality?

Answer

Amchem expects that Dow and perhaps others will respond to the above scientific issues and Amchem expects to rely on

such response to these issues, reserving the right to supplement as to any factual data known to Amchem which is not adequately developed.

Issue V. B.

- B. The extent of the health risk for man and other animals posed by 2,4,5-T and TCDD, with emphasis on the following conditions:
1. Can additional TCDD be generated in the environment by the thermal stress of 2,4,5-T or its metabolites?
  2. Can 2,4,5-T or TCDD persist and bioaccumulate in the environment.
  3. What are the avenues of human and animal exposure to 2,4,5-T and TCDD? For example, can aerial drift or water transport of 2,4,5-T or TCDD cause movement of these compounds away from the site of application?
  4. Are 2,4,5-T or TCDD residues being stored and accumulated in the human food supply and in human and animal tissue, including humans and wildlife directly exposed to 2,4,5-T?
  5. Are other dioxins and similar contaminants, besides TCDD, present in 2,4,5-T and, if so, what risks to health do they constitute?
  6. What are other environmental sources of dioxins particularly TCDD, and do these sources enhance the total dioxin body burden and exacerbate the health risks raised by 2,4,5-T and related TCDD?

Answer

Same as V. A. above.

Issue V. B. 7

What are the current levels of dioxins in registered 2,4,5-T products and in technical material used to formulate these products?

Answer

The level of dioxins in current technical 2,4,5-T products used by Amchem in formulating its registered herbicidal products contains:

≤0.1 ppm TCDD

Issue V. B. 8

Do the current methods of manufacture of 2,4,5-T provide for consistently low levels of dioxins in the final technical product and what are the quality control measures used to minimize dioxin levels?

Answer

Amchem does not manufacture 2,4,5-T. All technical 2,4,5-T utilized by Amchem in formulating registered herbicidal products is purchased from Dow or others. Specifications for technical 2,4,5-T purchased by Amchem provide for dioxin content as set forth in the answer to V. B. 7 above.

Issue V. C.

The necessity for the continuation of the registered uses of 2,4,5-T with emphasis on the following:

1. What are the pests which each registered use is intended to control and the degree of control achieved by each use.

### Answer

2,4,5-T is used to control regrowth or woody plant species which infest electric, pipeline, and telephone cross-country rights-of-way throughout the continental United States. This regrowth occurs from stumps following removal of trees in the original construction of the rights-of-way. Additional woody growth may subsequently occur from seed deposited on the right-of-way by the wind, birds, or animals.

Due to geographic location, topography, climate, and soil types, the woody plant pest species vary considerably; e.g., the Eastern Appalachian mountain area characterized by such species as:

Oak (*Quercus* spp)  
Maple (*Acer* spp)  
Ash (*Fraxinus* spp)  
Elm (*Ulmus* spp)  
Tulip Poplar (*Liriodendron tulipifera*)  
Black Gum (*Nyssa Syluatica*)  
Locust (*Robinia* spp)  
Sassafras (*Sassafras albidum*)  
Sumac (*Rhus* spp)  
Persimmon (*Diospyros Virginiana*)  
Ailanthus (*Ailanthus altissima*)  
Hickory (*Carya* spp)  
Birch (*Betula* spp)  
Beech (*Fagus grandifolia*)  
Cherry (*Prunus* spp)  
Sycamore (*Platinus occidentalis*)  
Redbud (*Cercis canadensis*)  
Pine (*Pinus* spp)  
Spruce (*Picea* spp)

the Southeastern United States, by such species as:

Sweetgum (*Liquidambar styraciflua*)  
Tulip poplar  
Hickory  
Oak  
Maple  
Sycamore  
Willow (*Salix* spp)  
Pine  
Elderberry (*Sambucus* spp)  
Buttonbush (*Ceanothus occidentalis*)  
and others

the Southwestern United States by such species as:

Ash  
Oak  
Pine  
Mesquite (*Prosopis* spp)  
Hickory  
Persimmon  
Winged elm (*Ulmus*)  
Willow  
Osage Orange (*Morus pomifera*)  
Sycamore  
and others

the Pacific Northwest United States by such species as:

Big leaf maple (*Acer macrophylla*)  
Vine maple (*Acer circinatum*)  
Oak  
Ceanothus (*Ceanothus* spp)

Fir (*Abies* spp)  
Pine  
Spruce (*Picea* spp)  
Cherry (*Prunus* spp)  
and others

the Midwestern area of the United by such species as:

Alder (*Alnus* spp)  
Elderberry  
Cherry  
Birch  
Pine  
Sumac  
Sassafras  
Winged elm  
Ash  
Osage orange  
Sycamore  
Willow

the Western mountain areas of the United States by such species as:

Aspen  
Elm  
Cottonwood (*Populus* spp)  
Oak  
Sycamore  
Willow

2,4,5-T is an essential maintenance tool in integrated pest (woody plant) management systems for utility rights-of-way. It is part of a coordinated program for inhibiting regrowth

of woody plants on established utility rights-of-way, providing excellent control on such species as oak, maple, sycamore, hickory, gum, tulip poplar, elm, beech, redbud, and others mentioned above.

The degree of control obtained by use of 2,4,5-T depends on the rate applied per acre of pest species, the method of application employed and the maintenance program being followed (see 2. below). Thus, by use of 2,4,5-T at proper rates and by proper application techniques as part of an ongoing maintenance program, control of 95% or better of the above pest species can be obtained.

2. What is the cost, timing, and rate of application of 2,4,5-T for each use?

Answer

Cost timing and rate of application for control of woody plant regrowth on utility rights-of-way will vary depending on application method, i.e. foliage spray by ground or air, basal spray, modified basal spray, stump spray, tree injection, dormant cane, frill or soil applications; species present, i.e., whether hard-to-control or easy-to-control; height and density of plant stems and location, i.e. wet or dry climate, soil type, and temperature.

Generally, water-borne ground foliage spray costs average about \$45 to \$75 per treated acre and basal spray costs average up to \$125 per treated acre. Aerial applications range from \$50

to \$85 per treated acre.

The timing of application is largely dependent on the method. Foliage spray is done in the growing season with no more than one treatment per season and generally only one treatment every three to five years. Basal spray is generally done about every fifth year for clean-up of resistant or invading woody species. On the average, utility right-of-way maintenance involves two treatments every three to six years with total 2,4,5-T applied varying between about one-half pound per acre for mesquite on rights-of-way in Texas to about twelve to fifteen pounds per acre for control of red maple regrowth. Average amounts of 2,4,5-T applied to any one area therefore do not generally exceed fifteen pounds per acre in a three year period.

The actual rate of application varies between high volume application techniques for hard to kill species such as foliage spray to red maple and ash at about twelve to fifteen pounds per treated acre and easy to kill species such as mesquite on rights-of-way in Texas at one-half pound per treated acre or low volume application techniques such as basal spray at about eight pounds per acre.

3. What alternative controls exist for each registered use and what is the cost and effectiveness of each alternative.

Answer

Alternatives for 2,4,5-T in control of woody plant regrowth on utility rights-of-way are:

- a. Mechanical, i.e. brush hog, root plowing, hand cutting cut-pile and burn, discing. Mechanical methods are effective for short periods necessitating repeat use every season. These methods seldom kill the roots of the plants; regrowth is stimulated thus aggravating the problem. Average costs vary from \$20 per acre per treatment for brush hog in optimum terrain to \$250 and up for hand cutting.
- b. Chemical other than 2,4,5-T; i.e. 2,4,-D, silvex, ammonium sulfamate, bromacil, diuron, monuron, dicamba, picloram, MSMA, 2,4-DP, amitrole, TCA, Karbutilate, and TBA. Chemical alternatives will cost two to five times as much in order to achieve same level of effectiveness in controlling the woody plant species for which 2,4,5-T is intended.
4. Do alternative pesticide products cause adverse environmental effects?

Answer

2,4,5-T is the herbicide of choice wherever presently used by vegetation managers. Significant factors in this choice are: (1) lengthy experience in the use of 2,4,5-T without any adverse consequences from persistence or mobility as compared to some of the alternatives; (2) the undesirable handling features of some of the alternatives; (3) a long history of excellent control of pest species with low impact on the environment as compared to some of the alternatives.

5. What are the economic implications of these alternatives, including that of no control?

Answer

Mechanical methods are not feasible in difficult terrain areas. Labor for hand cutting is either not available or prohibitively costly. The economic implications of alternative chemicals is set out in V. C. 2. and V. C. 3. No control causes: (1) interruption of services; (2) preventive maintenance is impeded and made more costly and less efficient; (3) reestablishment of service is more difficult.

- B. Statement as to uses the party Amchem will defend and areas as to which Amchem intends to present evidence

Amchem expects to be concerned primarily with the issue of use on utility rights-of-way in V. C. including drift control techniques employed in both aerial and ground application methods; with quality control in V. B. 7. and V. B. 8; and with the issue of aerial drift in V. B. 3. only to the extent it involves drift control during application as it pertains to products formulated by Amchem. Amchem will deal with other uses only to the extent they are not adequately dealt with by other parties who have indicated their intention to present evidence that the use of 2,4,5-T is safe, economical and beneficial for such other uses for which 2,4,5-T is currently registered. In particular, Amchem understands that other rights-of-way uses especially railroad and highway rights-of-way will be developed by the Association of

American Railroads and by the Department of Transportation respectively. Amchem requests leave to supplement its submission with respect to such other rights-of-way uses in the next document to be submitted by February 22, 1974 in the event they are not covered.

C. Amchem request for field hearings outside Washington, D.C. including reasons, numbers, and places

Amchem requests that a field hearing be held near Roanoke, Virginia with respect to the issue of use of 2,4,5-T for control of woody plant regrowth on rights-of-way and the control of drift during both aerial and ground application. The reason for the field hearing is to provide a first hand view of the application of 2,4,5-T to rights-of-way including demonstrations of spray techniques employed in controlling drift during both aerial and ground application. It is anticipated that such field hearings and demonstrations will consume about two days and involve testimony of about four witnesses including applicators and utility users.

D. Documentary evidence that the party Amchem at this time intends to introduce in the proceedings

Attached hereto as Exhibit A to Amchem Prehearing Memorandum Number 2 is a list of documentary evidence which Amchem presently intends to offer into evidence. Further searching is currently in progress and any additional documents which Amchem intends to rely on will be deposited when available. The documents listed will be submitted to the Hearing Clerk's

Repository numbered consecutively (Amchem Repository Exhibit \_\_\_\_)

and indexed by subject matter as follows:

- V. B. 3. Drift control
- V. B. 7. Quality control
- V. B. 8. Quality control
- V. C. 1. through 5. Use on utility rights-of-way

E. Other Matters

- 1) Attached hereto as Exhibit B to Amchem Prehearing Memorandum (Number 2) is a revised analysis listing current Amchem registrations in two parts:

- (a) active registrations for products presently being made and sold by Amchem Products, Inc.

Note: copies of labels for the products Weedone IBK Odor Inhibited, Registration Number 264-268; Envert-DT Odor Inhibited, Registration Number 264-269; and Asplundh 1054-E Brush Killer, Registration Number 264-200 which were not included with Amchem letter of December 31, 1973 are attached to this Exhibit B. The label for Envert-T, Registration Number 264-123 contained a misprint in the registration number. A corrected copy of the Envert-T label is also attached to this Exhibit B.)

- (b) inactive registrations for products no longer made or sold and which registrations it is intended will lapse by failure to renew.

(See Amchem letter of December 31, 1973.)

Note: Labels for these products are no longer in print. Copies of the label text can be made available if any party requests them.

2) Address for Service

It is respectfully requested that all future documents served upon the party Amchem Products, Inc. be addressed to:

Ernest G. Szoke, Chief Counsel

Amchem Products, Inc.

Brookside Avenue

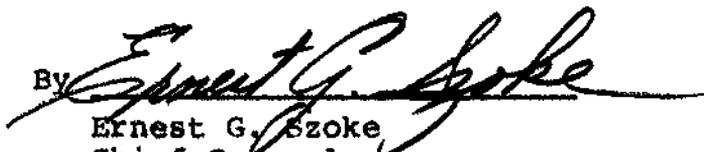
Ambler, Pennsylvania 19002

Dated: Ambler, Pennsylvania  
January 17, 1974

Respectfully submitted,

AMCHEM PRODUCTS, INC.

By



Ernest G. Szoke  
Chief Counsel  
Amchem Products, Inc.  
Brookside Avenue  
Ambler, Pennsylvania 19002

CERTIFICATE OF SERVICE

I hereby certify that a copy of the attached Amchem Prehearing Memorandum (Number 2), dated January 17, 1974, was served today by postage prepaid mail, upon the persons whose names and addresses are listed below:

American Farm Bureau Federation  
William J. Kuhfuss, President  
225 Touhy Avenue  
Park Ridge, Illinois 60068

Association of American Railroads  
Harry J. Breithaupt, Jr., Esq.  
General Counsel  
Law Department  
American Railroads Building  
Washington, D.C. 20036

Kaye, Scholer, Fierman, Hays and Handler  
Attorneys for The Dow Chemical Company  
425 Park Avenue  
New York, New York 10022

Environmental Defense Fund, Inc.  
Consumers Union of United States, Inc.  
Harrison Wellford  
John F. Dienelt, Esq.  
William A. Butler, Esq.  
1525 18th Street, N.W.  
Washington, D.C. 20036

Environmental Protection Agency  
Timothy L. Harker, Esq.  
Office of General Counsel  
401 M Street, S.W.  
Washington, D.C. 20460

National Forest Products Association  
William D. Rogers, Esq.  
Richard Wetheimer, Esq.  
Arnold & Porter  
1229 Nineteenth Street, N.W.  
Washington, D.C. 20036

Thompson-Hayward Chemical Company  
C.E. Lombardi, Jr., Esq.  
Blackwell Sanders Matheny Weary & Lombardi  
Five Crown Center  
2480 Pershing Road  
Kansas City, Missouri 64108

Transvaal, Inc.  
J. Robert Hasness  
Director of Technical Services  
Post Office Box 69  
Jacksonville, Arkansas 72076

United States Department of Agriculture  
Raymond W. Fullerton, Esq.  
Alfred R. Nolting, Esq.  
Office of the General Counsel  
12th & Independence Streets, S.W.  
Washington, D.C. 20250

United States Department of Transportation  
J. Thomas Tidd, Esq.  
General Counsel  
Washington, D.C. 20590

  
Ernest G. Szoke  
Chief Counsel  
Amchem Products, Inc.  
Brookside Avenue  
Ambler, Pennsylvania 19002

Dated: Ambler, Pennsylvania  
January 17, 1974

## EXHIBIT A

Documentary evidence that the party Amchem at this time intends to introduce in the proceedings in accordance with the directions of the Chief Administrative Law Judge at the Conference on Monday, November 12, 1973 (Transcript p. 29)

### Amchem Subject Index

|                     |                              |
|---------------------|------------------------------|
| V. B. 3.            | Drift control                |
| V. B. 7.            | Quality control              |
| V. B. 8.            | Quality control              |
| V. C. 1. through 5. | Use on utility rights-of-way |

### Amchem List of Documents

|  |   |
|--|---|
| Amchem Repository Exhibit 1<br>V. B. 3.<br>V. C. 2. & 3. | AMCHEM PRODUCTS, INC. In harmony with our environment. Movie (16 mm, color, sound, 22 minutes) produced by Amchem Products, Inc., Ambler, Pa.   |
| Amchem Repository Exhibit 2<br>V. C. 2. & 3..            | TECHNOMIC RESEARCH ASSOCIATES. 1972. Industrial herbicides. A report on the current and future use of herbicides for industrial weed control. VI. Utility right-of-way market. Technomic Research Associates Project Number 72-8057, pages 38-43. |
| Amchem Respository Exhibit 3<br>V. C. 4.                 | REIGNER, I.C., W.E. SOPPER, and R.R. JOHNSON. 1964. Control of riparian vegetation with phenoxy herbicides and the effect on stream-flow quality. Proc. Northeastern Weed Control Conference 18:563-570.  |
| Amchem Repository Exhibit 4<br>V. C. 4.                  | BRAMBLE, W.C. and W.R. BYRNES. 1972. A long-term ecological study of game food and cover on a sprayed utility right-of-way. Purdue University Research Bulletin 885. Lafayette, Indiana. 20 pages.  |

## EXHIBIT B

## Analysis of Amchem Products, Inc. 2,4,5-T Registrations

Active Registrations

| <u>Product</u>  | <u>Registration Number</u> | <u>Form</u>                         | <u>Use</u>   |
|-----------------|----------------------------|-------------------------------------|--|
| Weedone 2,4,5-T | 264-9                      | 2,4,5-T ester<br>Butoxyethyl        | Highway rights-of-way<br>Utility rights-of-way<br>Railroad rights-of-way   |
| Weedone BK 32   | 264-10                     | 2,4,5-T ester<br>Butoxyethyl        | Pastures and grasses<br>Fencerows<br>Farm roads and walkways<br>Highway rights-of-way<br>Utility rights-of-way<br>Railroad rights-of-way |
| Weedone BK 64   | 264-19                     | 2,4,5-T ester<br>Butoxyethyl        | Fencerows<br>Highway rights-of-way<br>Utility rights-of-way<br>Railroad rights-of-way  |
| Weedone IBK     | 264-21                     | 2,4,5-T ester<br>Butoxyethyl        | Highway rights-of-way<br>Utility rights-of-way<br>Railroad rights-of-way   |
| Weedar Amine BK | 264-53                     | 2,4,5-T amine salt<br>Triethylamine | Fencerows<br>Highway rights-of-way<br>Utility rights-of-way  |
| Weedar 2,4,5-T  | 264-62                     | 2,4,5-T amine salt<br>Triethylamine | Fencerows<br>Highway rights-of-way<br>Utility rights-of-way  |
| Amchem Trinoxol | 264-84                     | 2,4,5-T ester<br>Butoxyethyl        | Pine release<br>Highway rights-of-way<br>Utility rights-of-way<br>Railroad rights-of-way   |

## EXHIBIT B

-2-

| <u>Product</u>                               | <u>Registration<br/>Number</u> | <u>Form</u>  | <u>Use</u>                                     |
|--|--------------------------------|--|--|
| Amine 2,4,5-T for Rice                       | 264-86                         | 2,4,5-T amine salt   | Rice   |
| Weedone 2,4,5-T Special Air<br>Spray Formula | 264-89                         | 2,4,5-T ester<br>Butoxyethyl   | Forest trees<br>Forage grasses                 |
| Anchem Dinoxol                               | 264-103                        | 2,4,5-T ester<br>Butoxyethyl   | Utility rights-of-way<br>Industrial sites      |
| Anchem Ervert-DT                             | 264-121                        | 2,4,5-T ester<br>Butoxyethyl   | Utility rights-of-way                          |
| Anchem Dinoxol 64                            | 264-122                        | 2,4,5-T ester<br>Butoxyethyl   | Utility rights-of-way<br>Industrial sites      |
| Anchem Ervert-T                              | 264-123                        | 2,4,5-T ester<br>Butoxyethyl   | Utility rights-of-way                          |
| Anchem Trinoxol Super-6                      | 264-128                        | 2,4,5-T ester<br>Butoxyethyl   | Forest trees<br>Utility rights-of-way          |
| Dinoxol Super 6                              | 264-132                        | 2,4,5-T ester<br>Butoxyethyl   | Utility rights-of-way<br>Industrial sites      |
| Anchem Emulsamine 2,4,5-T                    | 264-161                        | 2,4,5-T amine salt<br>Alkyl (C <sub>12</sub> )<br>Alkyl (C <sub>14</sub> ) | Highway rights-of-way<br>Utility rights-of-way |
| Anchem Emulsamine Brush Killer               | 264-163                        | 2,4,5-T amine salt<br>Alkyl (C <sub>12</sub> )<br>Alkyl (C <sub>14</sub> ) | Utility rights-of-way                          |
| Asplundh 1054-E Brush Killer                 | 264-200                        | 2,4,5-T ester<br>Butoxyethyl   | Utility rights-of-way<br>Industrial sites      |
| Emulsavert 100                               | 264-208                        | 2,4,5-T mixed acid/amine salt<br>N,N-dimethyloleylamine                    | Utility rights-of-way                          |

## EXHIBIT B

-3-

| <u>Product</u>  | <u>Registration Number</u> | <u>Form</u>   | <u>Use</u>  |
|---|----------------------------|---|---|
| Emulsavert 248  | 264-209                    | 2,4,5-T mixed acid/amine salt<br>N,N-dimethyloleylamine | Utility rights-of-way   |
| 2,4,5-Trichlorophenoxy acetic acid (for use in the manufacture of herbicides) | 264-225                    | 2,4,5-T-Trichlorophenoxy-acetic acid                    | Manufacturing   |
| Technical 2,4,5-T Ester (for use in the manufacture of herbicides)            | 264-234                    | 2,4,5-T ester<br>Butoxyethyl                            | Manufacturing   |
| Weedone IBK Odor Inhibited  | 264-268                    | 2,4,5-T ester<br>Butoxyethyl                            | Pine release<br>Fencerows<br>Highway rights-of-way<br>Utility rights-of-way<br>Railroad rights-of-way |
| Anchem Envert DT Odor Inhibited   | 264-269                    | 2,4,5-T ester<br>Butoxyethyl                            | Highway rights-of-way<br>Utility rights-of-way<br>Railroad rights-of-way                              |

## EXHIBIT B

-4-

Inactive Registrations

| <u>Product</u>                                     | <u>Registration Number</u> | <u>Form</u>                   | <u>Use</u>   |
|--|----------------------------|-------------------------------|--|
| 2,4,5-T Low Volatile Ester<br>Brush Killer         | 264-71                     | 2,4,5-T ester<br>2-Ethylhexyl | Uncultivated nonagricultural<br>areas                                    |
| 2,4,-D, 2,4,5-T Low Volatile<br>Ester Brush Killer | 264-73                     | 2,4,5-T ester<br>2-Ethylhexyl | Uncultivated nonagricultural<br>areas                                    |
| Iso-Octyl-T  | 264-102                    | 2,4,5-T ester<br>2-Ethylhexyl | Uncultivated nonagricultural<br>areas                                    |
| Anchem 6T Low Volatile<br>Ester Brush Killer       | 264-114                    | 2,4,5-T ester<br>2-Ethylhexyl | Uncultivated agricultural areas<br>Uncultivated nonagricultural<br>areas |
| Anchem 6DT Low Volatile<br>Ester Brush Killer      | 264-115                    | 2,4,5-T ester<br>2-Ethylhexyl | Uncultivated agricultural areas<br>Uncultivated nonagricultural<br>areas |
| Iso-Octyl-DT6                                      | 264-116                    | 2,4,5-T ester<br>2-Ethylhexyl | Uncultivated agricultural areas<br>Uncultivated nonagricultural<br>areas |
| Weedone T-758                                      | 264-125                    | 2,4,5-T ester<br>Butoxyethyl  | Uncultivated nonagricultural<br>areas                                    |