



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

September 29, 2022

Michael Kellogg
Regulatory Consultant
Willowood, LLC
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Subject: Registration Review Label Mitigation for Abamectin
Product Name: WILLOWOOD ABAMECTIN EC
EPA Registration Number: 87290-57
Application Date: 09/30/2019
Decision Number: 555724

Dear Michael Kellogg:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Abamectin Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently

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approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Srijana Shrestha by phone at 202-566-2329, or via email at shrestha.srijana@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Linda Arrington', with a long horizontal flourish extending to the right.

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

Enclosure: Stamped Label

[Note to reviewer: [Text] in brackets denotes optional text.]

ABAMECTIN	GROUP	6	INSECTICIDE
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Willowood Abamectin EC

For use on ornamental plants to suppress aphids, thrips and whiteflies and control mites and leafminers

ACTIVE INGREDIENT:

Abamectin* (CAS No. 65195-56-4 and 65195-55-3)..... 2.0%

OTHER INGREDIENTS: 98.0%

TOTAL: 100.0%

*1 gal. contains 0.15 lb. abamectin

KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

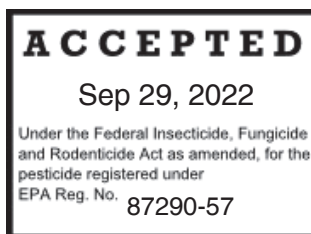
Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

[Optional referral statement: See label booklet for First Aid, Precautionary Statements and Direction for Use including Storage and Disposal instructions.]

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Manufactured for:

Willowood, LLC
385 Interlocken Crescent, Suite 240
Broomfield, CO 80021



EPA Est. No. _____

Net Contents: _____

FIRST AID	
IF IN EYES:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by the poison control center or doctor.• Do not give anything by mouth to an unconscious person.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time or your poison control center at 1-800-222-1222.	
NOTE TO PHYSICIAN	
Early signs of intoxication include dilation of pupils, muscular incoordination, and muscular tremors. Toxicity following accidental ingestion of this product can be minimized by early administration of chemical absorbents (e.g., activated charcoal). If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms, and measurements. In severe cases, observation should continue for at least several days until clinical condition is stable and normal.	

Since abamectin is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic abamectin exposure.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
WARNING/AVISO

Causes substantial but temporary eye injury. Harmful if swallowed. Do not get in eyes or on clothing. Wear goggles, face shield or safety glasses.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Socks and shoes
- Chemical-resistant gloves, such as barrier laminate or butyl rubber \geq 14 mils
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. Do not apply directly to water, 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 wash water or rinsate. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

Attention: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves, such as barrier laminate or butyl rubber \geq 14 mils
- Chemical-resistant footwear plus socks
- Protective eyewear

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not re-enter treated areas until sprays have dried.

PRODUCT INFORMATION

Read and follow all label directions. Applying Willowood Abamectin EC in a manner that is inconsistent with this label may result in decreased control of listed pests or damage to plants.

Willowood Abamectin EC contains 0.15 lb. abamectin per gallon. This product is an emulsifiable concentrate and must be mixed with an adequate amount of water and applied as a foliar spray in order to achieve acceptable coverage.

Phytotoxicity to Willowood Abamectin EC has been tested on a broad variety of ornamentals. Not all combinations of this product with various mix partners (such as adjuvants, surfactants or other pesticides) or series of applications of this product and other additives have been evaluated, so a test application to a portion of the plant(s) is advised prior making a broader application, to assess the potential for damage to plants.

The following species have exhibited phytotoxic effects upon application of Willowood Abamectin EC, therefore its use is not advised on:

- Ferns (e.g., *Adiantum* spp.)
- Shasta Daisy (*Leucanthemum* spp.)

Pests Suppressed	Directions
Aphids Thrips Whiteflies	Aphids, thrips and whitefly will be killed through direct contact with Willowood Abamectin EC application solution. Apply this product when pests first appear in the immature, young stage of development. Repeat treatment at 7 day intervals for 2 -3 weeks. After initial application sequence, use different product(s) with alternative mode(s) of action to this product ¹ for a minimum of 2-3 weeks.
¹ Refer to the Resistance Management section below. Restrictions <ul style="list-style-type: none"> To avoid developing resistance in <i>Liriomyza</i> leafminers and mites, do not apply this product for suppression of pests listed in this table on chrysanthemums, gerbera and roses. These plants are primary hosts of <i>Liriomyza</i> leafminers and mites. Extra applications of Willowood Abamectin EC to suppress pests listed in this table on chrysanthemums, gerbera and roses will increase selection pressure and may lead to greater tolerance of Willowood Abamectin EC on <i>Liriomyza</i> leafminers and mites. Application of this product on chrysanthemums, gerbera and roses should only be for control of leafminers and mites. 	

Pests Controlled	Directions
Leafminers	Apply this product as required for control of leafminers. Repeat applications may be made in order to maintain control at intervals of 7 days or as required. For resistance management of <i>Liriomyza</i> leafminer, apply Willowood Abamectin EC a maximum of three consecutive times. Following applications of this product, rotate to treatment with a product containing the active ingredient cyromazine for 3 consecutive applications maximum. Following treatment with cyromazine, switch back to treatment with Willowood Abamectin EC, or another product. Base variation between products with alternative modes of action on the generation period of the <i>Liriomyza</i> leafminer so that successive generations are not treated with the same product/mode of action. See the Resistance Management section below.
Mites	Apply this product when mites are first observed. Repeat application may be made as required in order to maintain control.

Combining Willowood Abamectin EC with a horticultural spray oil may improve residual control of listed pests. Combine horticultural spray oil at a rate of 0.5-1% of spray application solution volume for the treatment of the following:

- Christmas trees
- Field-grown woody ornamentals
- Landscape plants

A repeat application may be made in order to maintain control. Wait 7 days between repeat applications.

In order to assess plant sensitivity to oils, make a spray application to a portion of the plants and then watch for 2 weeks, prior to making a broader application to the rest of the target area. The likelihood of plant injury following treatment with horticultural oil can be increased by excesses of temperature. Read and follow the label directions of the oil product and any other ingredients in the spray application mix.

RUNOFF PREVENTION

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, Willowood Abamectin EC contains a Group 6 insecticide/acaricide. Any insect/mite population may contain individuals naturally resistant to Willowood Abamectin EC and other Group 6 insecticides/acaricides. The resistant individuals may dominate the insect/mite population if this group of insecticides/acaricides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide/acaricide resistance, take the following steps:

- Rotate the use of Willowood Abamectin EC or other Group 6 insecticides/acaricides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides/acaricides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
 - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
 - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
 - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
 - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
 - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide/acaricides use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance contact Willowood, LLC.

SPRAY DRIFT

Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

Boomless Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

BOOM HEIGHT – Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Handheld Technology Applications:

- Take precautions to minimize spray drift.

Boom-less Ground Applications:

- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Restrictions

- Willowood Abamectin EC must not be applied through an irrigation system of any type.
- Treatment with Willowood Abamectin EC must not be via aerial application.
- Do not apply Willowood Abamectin EC in citrus nurseries.
- Time applications to allow Willowood Abamectin EC to dry on the treated surface prior to a rain event.
- To limit unwanted surface runoff in outdoor ornamental uses, do not apply when growth media is saturated.
- Do not apply more than 16 fl. oz. (0.019 lb. ai) per acre per application.
- Do not apply more than 128 fl. oz. (0.15 lb. ai) per acre per year.
- Do not apply more than 8 applications at the 16 fl. oz. (0.019 lb. ai) per acre per year.

CROP USE DIRECTIONS

For application in the following:

- shadehouse, greenhouse and field-grown ornamentals
- foliage plants
- Christmas trees
- other woody ornamentals

Apply Willowood Abamectin EC at a minimum use rate of 8 fl. oz. per acre and do not exceed 16 fl. oz. per acre. Willowood Abamectin EC must be combined with an adequate amount of water in order to ensure thorough and uniform plant coverage.

Use Rate of Willowood Abamectin EC	Pests Controlled/Suppressed	Directions
4 fl. oz. (0.005 lb. ai) per 100 gallons water	Mites: Carmine Spider Mite Eriophyid Mites: Rust Bud Mites European Red Mite Southern Red Mite Spruce Spider Mite Tarsonemid Mites: Cyclamen Broad Mites Twospotted Spider Mite	Combine the listed use rate with 200-400 gallons of water per acre. If more than 400 gallons of water are to be applied per acre, use a maximum rate of 16 fl. oz. (0.019 lb. ai) Willowood Abamectin EC per acre. If less than 200 gallons of water are to be applied per acre, use a minimum of 8 fl. oz. (0.009 lb. ai) Willowood Abamectin EC per acre. For control of Tarsonemid Mites, newly developing tissue may require multiple treatments.
8 fl. oz. (0.009 lb. ai) per 100 gallons water	Boxwood Leafminer	Apply Willowood Abamectin EC when adult leafminers start egg laying in new foliage, In order to achieve control of leafminer larvae. To maintain control, additional applications can be made at intervals of 7 days, or as needed.
	<i>Liriomyza</i> Leafminers	Combine the listed use rate with 100-200 gallons of water per acre. If more than 200 gallons of water are to be applied per acre, use a maximum rate of 16 fl oz. (0.019 lb. ai) Willowood Abamectin EC per acre. If less than 100 gallons of water are to be applied per acre, use a minimum rate of 8 fl. oz. (0.009 lb. ai) Willowood Abamectin EC per acre. To maintain control, additional applications can be made at intervals of 7 days, or as needed.
	Aphids Thrips Whiteflies	In order to achieve suppression, young immature pests must come into contact with the spray application.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

PESTICIDE STORAGE: Store in a tightly closed container in a cool, dry place.

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

CONTAINER HANDLING:

Nonrefillable Container (five gallons or less): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

Nonrefillable Container (greater than five gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

Clean up minor spills or leaks immediately and follow directions and precautions on this label. During cleanup and disposal of wastes, avoid contamination of facilities and equipment.

CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Willowood, LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Willowood, LLC and Seller harmless for any claims relating to such factors.

Willowood, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Willowood, LLC, and Buyer and User assume the risk of any such use. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, WILLOWOOD, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

To the extent consistent with applicable law, neither Willowood, LLC nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF WILLOWOOD, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE)**

RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF WILLOWOOD, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

Willowood, LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Willowood, LLC.

[EPA APPROVAL DATE]