Integrated Mosquito and Vector Management Program Plan

APPENDIX

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PESTICIDE APPLICATION REFERENCE AND SAFETY PROCEDURES

1. Larvicide Oils

BVA2- Will not work with most Aedes species

Short Description:

BVA 2 is highly refined oil used for the control of mosquito pupicide. When applied evenly over the water surface it rapidly interrupts the air water interface and suffocates the larvae. This quick action makes it an effective larvicide and pupicide for any program.

Active Ingredient:

Highly refined petroleum distillate

Mode of Action:

When applied correctly BVA 2 produces a film of oil on top of the water surface that inhibits the mosquito larvae from obtaining oxygen (breathing) resulting in their rapid suffocation.

Where/When to use:

Use BVA 2 when mosquito larvae and pupae are present in these areas: swamps, marshes, flood water areas, drainage areas, waste treatment, settling ponds, ditches, and other manmade depressions that hold water. BVA 2 provides a short residual period of 1 to 3 days.

Features/Benefits:

- BVA 2 is suitable and economical for use in areas where temporary floodwater and mosquito larvae and pupae are present and fish and other desirable aquatic organisms are not.
- BVA 2 provides rapid larvae and pupae mortality.

Application Rate: BVA2 is applied at 1 oz. per 100 sq. feet, 7.5 to 9 oz. per 1000 square feet, 2.5 to 5 gallons per acre.

CocoBear- Not to be used to control Aedes

We were driven by the objectives of creating a consistent, high performance larvicidal oil option without heavy reliance on petroleum oil. The result: a formulation that reduced petroleum distillates from 98.7% to 10% compared to predecessor GoldenBear.

Use areas:

- Marshes
- Swamps
- Temporary rain pools
- Sloughs
- Settling Ponds
- · Drainage areas
- Ditches
- Stagnant pools
- · Standing water on irrigated cropland

Rate

• 3 - 5 gals/ac, 1-3 days residual

2. <u>Methoprene Products</u>

ALTOSID®

Short description

Altosid is a larvicide that disrupts the normal growth pattern of immature mosquitoes in water and prevents them from becoming breeding, biting adults. ALTOSID is an easy to use, long-term, cost-effective and environmentally responsible mosquito control larvicide.

Active Ingredient:

(S)-Methoprene

Mode of Action:

All ALTOSID formulations contain the Insect Growth Regulator, (s)-Methoprene, which interferes with a mosquito's normal metamorphosis. (S)-Methoprene in ALTOSID products has the industry's lowest toxicity rating. ALTOSID naturally degrades in the environment and will not adversely affect humans, fish, waterfowl, mammals or beneficial insects, thus it can be used in your program's most sensitive areas. And you'll feel even better about the effective, long-term control you'll get in return. Furthermore, residual larvicidal activity reduces adult populations and the need for using adulticides.

Altosid Formula	Description	Packaging	Residuals
	30 Day Briquets	400/cs	30 days
Briquets	XR Briquets	220/cs	150 days
	Ingot XR Briquets	220/cs	150 days
Liquid	SR-20	2 x 2.5 gl/cs	Up to 7 days
	A.L.L. SR-5	4 x 1 gl/cs	Up to 7 days
Pellets	Pellets	2 x 22 lb/cs	30-day control in submerged conditions
Water Soluble Pouch	WSP	800/cs	Up to 30 days
	XR-G	40 lb or 1000 lb bag	Up to 21 days in standing water
Granules	SBG	40 lb or 1000 lb bag	Up to 21 days in standing water
	PRO-G	12 x 2.5 lb/cs	Up to 30 days

Application rates: An altosid briquet is applied at 1 per 100 sq. feet, for a depth of 0-2ft

Altosid Pellets and granules are applied at 2.5 - 5 lbs per acre and could go up to 10 lbs depending on the site and 1 oz per 1000 sq .ft.

Liquid applications for Altosid SR 20% is 1 oz. per acre and for Altosid SR5% it is 4 oz. per acre

Water Soluble Packet- 1 per 135 sq. ft

3. <u>Bacillus Thuringiensis Products (BTI)</u>

TEKNAR[®] is a biological larvicide and provides selective, environmentally sound control to most mosquito and blackfly larvae.

Active Ingredient:

Bacillus thuringiensis, var. israelensis. (Bti)

Mode of Action:

The larvae ingest the insecticide, consisting of Bti spores and crystalline toxins produced by the bacteria. Only when activated by the larva's specific gut PH and enzymes, do the crystals become toxic, causing damage to the gut of the mosquito. Mortality rate is dependent on consumption of the Bti by 1st through early 4th instar larvae. Higher application rates are recommended if 3rd and early 4th instar larvae are predominant.

Where/When to use:

TEKNAR SC (liquid formulation) may be applied to almost any water sites where mosquito and black fly larvae are found. Typical sites where the product has been proven effective are floodwaters, standing pools, streams, catch basins, and salt marshes.

Features/Benefits:

- Can be used around plants, fish, pets, humans or other organisms that live in the water.
- Due to multiple toxins being produced by the Bti bacteria, mosquitoes are less likely to develop resistance.
- Larvicidal action occurs within 24 hrs

Bti liquid is one of the few larvicides that can be used in creeks or streams.

Application rate- Teknar SC is applied at 16-32 oz. per acre. Do not mix more than what can be used in 24 hrs.

SMALL QUANTITY DILUTION RATES

Gallons Spray Solution/Acre

(Ounces Needed per Gallon of Spray)

Teknar SC

Rate in Pints

Per acre	10 Gal/A	25 Gal/A	50 Gal/A
0.25 (4 oz)	0.4	0.16	0.08
0.5 (8 oz)	0.8	0.32	0.16
1.0 (16 oz)	1.6	0.64	0.32
2.0 (32 oz)	3.2	1.28	0.64

Vectobac

VECTOBAC® is a biological larvicide and provides selective, environmentally sound control of most mosquito and blackfly larvae.

Active Ingredient:

Bacillus thuringiensis, var. israelensis. (Bti)

Mode of Action:

The larvae ingest the insecticide, consisting of Bti spores and crystalline toxins produced by the bacteria. Only when activated by the larva's specific gut PH and enzymes, do the crystals become toxic, causing damage to the gut of the mosquito. Mortality rate is dependent on consumption of the Bti by 1st through early 4th instar larvae. Higher application rates are recommended if 3rd and early 4th instar larvae are predominant.

Where/When to use:

VECTOBAC can be used in several areas with standing water. It can be used for treatment in ditches, floodwater, standing ponds, livestock watering ponds and troughs, woodland pools, snow melt pool, pastures, catch basins, storm water retention areas, tidal water, salt marshes and rice fields. In addition, standing water containing mosquito larvae, in fields growing crops such as alfalfa, almonds, asparagus, corn, cotton, dates, grapes, peaches, sugar cane and walnuts may be treated at the recommended rates.

Features/Benefits:

- Efficient control at relatively low doses.
- Safe use for operators, no risks for environment from spills.
- No side effects towards non-target organisms.
- The pests are less likely to become resistant.

Application rate- Vectobac is applied at 16-32 oz. per acre. Do not mix more than what can be used in 72 hrs.

SMALL QUANTITY DILUTION RATES

Gallons Spray Solution/Acre

(Ounces Needed per Gallon of Spray)

Rate in Pints

Per acre	10 Gal/A	25 Gal/A	50 Gal/A
0.25 (4 oz)	0.4	0.16	0.08
0.5 (8 oz)	0.8	0.32	0.16
1.0 (16 oz)	1.6	0.64	0.32
2.0 (32 oz)	3.2	1.28	0.64

4. <u>Bacillus Sphaericus Products (BS)</u>

VECTOLEX® Not to be used to control Aedes

is a biological larvicide and provides selective, environmentally sound control of most mosquito larvae. VECTOLEX is based on *Bacillus sphaericus* a naturally occurring bacturim in the environment. These fast-acting products are commonly used in municipal and industrial water treatment facilities, animal waste lagoons, storm sewer catch basins, continuously irrigated croplands and pasture, and mosquito breeding sites. VECTOLEX offers effective residual control of a number of mosquito species.

Active Ingredient:

Bacillus sphaericus (Bs)

Mode of Action:

The larvae ingest the insecticide, consisting of *Bs* spores produced by the bacteria. Only when activated by the larva's specific gut PH and enzymes, do the spores become toxic, causing damage to the gut of the mosquito. Mortality rate is dependent on consumption of the *Bs* by 1st through early 4th instar larvae. The product is quick acting and highly effective against a number of mosquito species and its long term residual makes it ideal for use in a wide number of permanent aquatic habitats.

Where/When to use:

VECTOLEX may be applied to any water sites except treated, finished drinking water reservoirs or drinking water receptacles. VECTOLEX is primarily designed for permanent water habitats and intermittently flooded sites that stay wet long enough for production of additional broods.

Features/Benefits:

- Because of the products specificity it has little effect on plants, fish, or other organisms that live in the water
- The toxins in Bs are target specific and will not affect pets, humans, birds, fish and other non-target organisms.
- Provides long term residual control of mosquito larvae

Application rate: Vectolex WDG is applied at 8oz-24oz/acre Vectolex FG- is applied at 5-20 lb./acre Vectolex WSPis applied at 1 pouch/ 50 sq. feet

SPHERATAX SPH 50G Not for use with most Aedes species

is a highly selective microbial larvicide granule containing the bacterium, *Bacillus sphaericus*. *Bacillus sphaericus* is a naturally occurring bacterium that is found throughout the world and effectively kills mosquito larvae present in water.

Active Ingredient:

Bacillus sphaericus (Bs)

Mode of Action:

When applied according to label directions, SPHERATAX SPH 50G delivers *B. sphaericus* spores, that when eaten by mosquito larvae, release toxins into the mosquito's gut. The toxin disrupts the gut in the mosquito by binding to receptor cells (present in insects but not in mammals) causing the larvae to stop eating and die. SPHERATAX SPH 50G is only effective against actively feeding larvae, and does not affect mosquito pupae or adults.

Where/When to use:

SPHERATAX SPH 50G may be applied to water sites, with aquatic life, fish and plants, when the mosquitoes are in the larval stage. Do not treat water sites that are finished water reservoirs or drinking water receptacles when the water is intended for human consumption.

SPHERATAX SPH 50G is effective for approximately 1 - 4 weeks after application and common sites include: permanent water habitats, especially those with high organic content such as waste lagoons, ditches, flood water pools and swamps. Also catch basins, continuously irrigated crops, pastures and known *Culex* sites.

Features/Benefits:

- SPHERATAX SPH 50G offers effective residual control in both clean and polluted waters.
- SPHERATAX SPH 50G is fast acting against mosquito larvae and has a long residual.

Application rate- Spheratax SPH is applied at 5-20 lbs per acre

Spheratax WSP is applied 1 pouch per 50 sq. feet

5. BTI and BS Products

<u>VECTOMAX</u>™ is a unique biological larvicide that combines Bti and Bacillus sphaericus in one homogenous formulation. These two bacteria are combined in one molecule which ensures that larvae feed on both at the same time. VECTOMAX offers the faster, broad spectrum control of VectoBac® (Bti), with the residual control of VectoLex® (B. Sphaericus).

Active Ingredient:

Bacillus thurengiensis, israelensis and Bacillus sphaericus

Mode of Action:

Bti and *B. Sphaericus* are naturally occurring bacteria that have insecticidal activity on mosquitoes. This bacteria contain protein crystals that, when ingested by mosquito larvae, will rupture the gut wall or the larvae. This results in rapid death of the larvae.

Where/When to use:

Can be used in wide range of sources and habitat. Urban and rural, agricultural sites, crop and non-crop, lakes, ponds, wetland and marshes, catch-basins and swimming pools, etc.

Features/Benefits:

- Great control on a wide range of mosquito species and sites, including agricultural sites and wetlands
- Fast control, long residual

Application rates: Vectomax FG is applied at 5-20 lbs. an acre

Vectomax WSP is applied at 1 pouch per 50 sq feet

FOURSTAR[®] is a highly selective microbial insecticide effective against mosquito larvae in a variety of habitats. To enhance performance, FOURSTAR larvicides contain a patented "Dual Action" release technology. This innovative technology regulates the release of active ingredients to the water surface as well as throughout the water column to ensure a long residual and maximum coverage.

Active Ingredient:

Bacillus thuringiensis subspecies israelensis (Bti)

or

Bacillus thuringiensis subspecies israelensis (Bti) and Bacillus sphaericus (Bs)

Mode of Action:

Bti and Bs are naturally occurring bacteria that have insecticidal activity on mosquitoes. These active ingredients are inherent in soil and contain protein crystals that when ingested rupture the gut wall of the larvae causing larval death. FourStar can be applied to areas that contain aquatic life, fish and plants as well as areas in contact with humans, animals, horses, livestock, pets, birds or wildlife.

Formulations/Packaging:

FourStar Formula	Description	Packaging	Residuals
	45 Day Briquets	200/cs	45 days
Briquets	90 Day Briquets	200/cs	90 days
	180 Day Briquets	200/cs	180 days
Granules	SBG	40 lb or 1000 lb bag	7 days
	MBG	40 lb bag	30 days
	CRG	35 lb bag	60 days
Water Soluble Pouch	WSP	400/cs	60 days

Features/Benefits:

- Positive environmental profile
- The first microbial (*Bti/Bsph*) products offered in multiple formulations that offer extended residual and optimized delivery of the active ingredient to target site
- Duel active ingredients prevent resistance development
- Long residuals reduce treatment frequency

Application Rates: Fourstar Briquets are applied at 1 per 100 sq. feet for a depth of 0-2 feet

6. Spinosad Product

Natular - OMRI certified - Not to be used on federal land!!!

Active ingredient - is Spinosad

Mode of Action

The active ingredient in Natular® works like no other larvicide. Spinosad alters the function of insect nicotinic acetylcholine receptors in a unique action that causes continuous nervous impulses. This constant involuntary nervous stimulus causes paralysis and death. The action results primarily by ingestion, as well as by contact with the active

The active ingredient in Natular® larvicides, spinosad, is a highly selective insect control product with high potency for target insects but low toxicity toward mammals and other non-target organisms.

Natular formulations have been tested on twenty of the most common vector and nuisance mosquito species and spinosad is effective against all of them. Given the fact that spinosad is a new active ingredient and has a completely unique mode of action; we expect to see consistent performance across all species.

Application rate - The Natular tablets should be applied at 1 per 100 sq. feet. T30 last 30 days and XRT last 180 days

The natular granules should be applied at 5-20 lbs per acre

Natular 2EC application rate 1.1 -2.8 oz per acre

7. <u>Deltamethrin and Yellow Jacket control Products</u>

Suspend SC

Short Description:

Insecticide with DeltaGard® offers the benefits of deltamethrin in a concentrated suspension of pure micro-crystals. The micro-crystals give SUSPEND® SC a long residual and instead of being absorbed into porous materials, they stay on the surface. As a result, insects continue to contact them long after the insecticide has been applied. Yet SUSPEND SC leaves no visible residue, has virtually no odor, and won't clog spray equipment. Suspend offers excellent long term residual control of mosquitoes and flies.

Active Ingredient:

Deltamethrin

Mode of Action:

The deltamethrin works when it has made contact or is ingested by the insect and it disrupts their normal nervous system function. SUSPEND SC insecticide is a suspended concentrate insecticide containing 0.42 lb active ingredient per gallon. SUSPEND SC insecticide is designed for use both indoors and outdoors and will provide effective knockdown and long residual control of a wide variety of pests. Each application will provide a perimeter barrier treatment to prohibit pests from entering the treated surface.

Where/When to use:

Indoors: When used in accordance with label directions, SUSPEND SC may be applied in and around residential and non-residential buildings and structures including residential kitchens and all types of food/feed handling establishments. Suspend SC is intended to be mixed with water and applied indoors as a crack and crevice, spot or general surface treatment with hand pressurized or power operated sprayers or other suitable equipment for applying insecticides to localized areas. For residential buildings and structures apply only as a crack and crevice or spot treatment. This product can be applied to walls, floors, ceilings, in and around cabinets, between, behind and beneath equipment and appliances, around floor drains, window and door frames and around plumbing, sinks and other possible pest harborage sites.

Outdoor: Use SUSPEND SC to control outdoor pests by application as a perimeter treatment, residual spray or broadcast application to lawns, grounds and ornamental plantings. Treatment sites, when used in accordance with label directions, may be applied as a perimeter treatment or as a residual spray around residential and non-residential settings.

Features/Benefits:

- Four to six week residual
- Low toxicity
- Treats multiple insect species including mosquitoes
- Low application rates

Application rate: Suspend SC should be applied at .75 oz. to 1.5 oz per gallon

Delta DustShort description

For ground wasps, dust entrance and surrounding areas. For best results check nests carefully one or two days after treatment to ensure complete kill, then remove and destroy nest to prevent emergence of newly-hatched

insects. If removal is not feasible, retreat the nest, if necessary.

Do not use this product to treat overhead nests.

Active ingredient: Deltamethrin

<u>Mode of Action</u>- Deltamethrin works when it has made contact or is ingested by the insect. It disrupts their normal nervous system function and they die.

Application Rate- Delta Dust is applied at .25 oz. per yellow jacket nest

Spectracide Wasp and Hornet Killer

Active ingredients: Prallethrin .025% and Lambda Cyhalothrin .010%

<u>Mode of action</u>: Kills either by ingestion or contact, affecting the nervous system. By disrupting the nervous system of insects, lambda-cyhalothrin may cause paralysis or death.

Spectracide 20 oz. Wasp and Hornet Killer eliminates wasp and hornet nests by killing insects on contact. It lets you spray nests with a 27 ft. jet spray. It won't stain the areas where it is applied when used as directed. It is formulated for outdoor control of dangerous stinging pests.

- •Up to 27 ft. jet spray
- •Kills on contact
- •Eliminates the nest
- Non-staining

This product controls the following pests: wasps, bees, hornets, yellow jackets, mud daubers, tent caterpillars, ants, scorpions.

8. Herbicide Products

Nufarm Polaris (Spartina Control) -

A liquid post-emergent herbicide that contains Imazapyr for effective management of grasses and broadleaf weeds, undesirable emergent and floating aquatic vegetation, and many brush and vine species in a variety of settings. Nufarm Polaris provides a multi-purpose label that includes vegetation management, aquatic and railroad applications.

Benefits/Use**

Highly effective herbicide providing long-term control of unwanted vegetation

Provides control of various broadleaf weeds, annual and perennial grasses as well as many brush and vine species

Prevents re-sprouting or germination of labeled weeds and brush in treated areas when used at recommended rates

Labeled for application in lakes, rivers, streams, ponds, drainage ditches, canals, reservoirs, swamps, and many mor

Promotes plan diversity and increased forage, favored by wildlife

Application rate for Polaris is 96 oz. per acre

Application Rate for Liberate is 32 oz per acre

Application rate for Turf Trax is 32 oz. per acre

All 3 products are mixed in a 25 gallon tank with water

Round up Pro- herbicide

Active ingredient: 41% Glyphosate

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 cleaning equipment or disposing of equipment.

Mode of Action: The active ingredient in this product inhibits an enzyme found only in

plants and microorganisms that is essential to formation of specific amino acids.

Prepare the desired volume of spray solution by mixing the amount of this product in

water as shown in the following table:

Spray Solution Application rate

Desired	0.5%	1%	1.5%	2%	5%	10%
Volume						

1 gal		1.3 oz	2 oz	2.7 oz	6.5 oz	13 oz
	0.7 oz					
25 gal		1 qt	1.5 qt	2 qt	5 qt	10 qt
	1pt		·	·	·	·

2 tablespoons = 1 fluid ounce

For use in knapsack sprayers, it is suggested that the recommended amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

9. Adulticiding Products

Zenivex E4

Active Ingredient: 4% Etofenprox a non-organophosphate, non-carbamate, non-ester pyrethroid Mode of Action:

Nerve: Sodium Channel interference. The active ingredient in Zenivex® adulticide is Etofenprox, a unique molecule for the control of adult mosquitoes. Etofenprox presents a low toxicity to birds and dried foliar residues are not harmful to honeybees. The EPA has classified Etofenprox as reduced risk, making Zenivex® products the ideal choice in mosquito adulticides.

- No synergist, therefore no Piperonyl Butoxide (PBO)
- Ultra Low Volume (ULV) usage
- Diluted or undiluted application options
- No aquatic setbacks
- EPA reduced risk classification

Application Rate: 2.25 oz per acre

PYRENONE® 25-5

Active ingredients: pyrethrins 5% synergized with (PBO) piperonyl butoxide 25%.

Oil based Adulticide

<u>Mode of Action</u>; Pyrethrins disrupt the normal functioning of sex hormones while PBO affect the functioning of hormone related organs.

These active ingredients are exempt from tolerances when applied to growing crops so both Pyrenone 25-5 and Pyrenone Crop Spray may be applied over all agricultural crops according to label directions.

Both Pyrenone 25-5 and Pyrenone Crop Spray effectively control mosquitos and all common diptera and are used for ground and aerial application at rates up to 0.0025-lb. pyrethrins/acre. Pyrenone 25-5 is an oil-based formulation.

Application Rate: 2 1/4 oz. per acre

Aqua Halt

Active ingredient: (PBO) piperonyl botoxide 20% and pyrethrins 5%

Water-based Adulticide

<u>Mode of Action</u>; Pyrethrins disrupt the normal functioning of sex hormones while PBO affect the functioning of hormone related organs.

A water based formulation for control of adult mosquitoes in Outdoor Residential, Recreational,

and other Outdoor Areas; and for use in and around animal areas and quarters for control of Flies, Mosquitoes, Small Flying Moths, and other listed insects.

Application Rate: 2 1/4 oz. per acre

Aqua Anvil

Active ingredient: (PBO) piperonyl botoxide 10% and Sumithrin 10%

Water-based Adulticide

<u>Mode of Action</u>; Pyrethrins disrupt the normal functioning of sex hormones while PBO affect the functioning of hormone related organs.

A water based formulation for control of adult mosquitoes in Outdoor Residential, Recreational, and other Outdoor Areas; and for use in and around animal areas and quarters for control of Flies, Mosquitoes, Small Flying Moths, and other listed insects.

Application Rate: 2 1/4 oz. per acre

Duplex

Duplex is a mixture of Teknar SC or Vectobac 12AS with Altosid SR 20% or Altosid SR 5%.

Formulation Rates- mixed with water in a 25 gallon tank = 5 acre treatment- 5 gallons = 1 acre

Teknar SC or Vectobac 12 AS	16-32 oz per acre
Altosid SR 20	1 oz per acre
Teknar SC or Vectobac 12 AS	16-32 oz. per acre
Altosid SR 5%	4 oz. per acre

10. Rodenticides

Fastrac All weather BloX

Active ingredient: Bromethalin

Mode of Action: Nerve toxin. Rodents consume a lethal dose in a single nights feeding. Cease feeding after consuming a toxic dose. It may take 2 or more days from the time of bait consumption for these rodents too die.

Sites and Application rate: place 2-12 blocks per station at intervals of 15-30 ft. Can be used indoor and outdoors. Bait stations are mandatory for outdoor above ground use and must be within placed a 100 ft of man made structures.

Target species: Norway rat, Roof rat and House mice

Pesticide disposal: Waste resulting from this product can be disposed of in the trash.

PRECAUTIONARY STATEMENTS Hazards to Humans and Domestic Animals CAUTION: Harmful if swallowed. Keep away from children, domestic animals and pets. All handlers (including applicators) must wear shoes plus socks, and gloves. Any person who retrieves carcasses or unused bait following application of this product must wear gloves.

User Safety Requirements:

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. Remove PPE immediately after handling this product. Wash the outside of gloves before removing them. As soon as possible, wash hands thoroughly after applying bait and before eating, drinking, chewing gum, using tobacco or using the toilet and change into clean clothing.

Environmental Hazards:

This product is extremely toxic to mammals and birds. Dogs and other predatory and scavenging mammals and birds might be poisoned if they feed upon animals that have eaten this bait. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff also may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash water or rinsate.

*Not permitted for use against the following species in California: Cotton rat, Eastern harvest mouse, Golden mouse, Polynesian rat, Meadow vole, White-throated woodrat, Southern plains woodrat, and Mexican woodrat

First Aid IF SWALLOWED: • Call a poison control center, doctor, or 1-877-854-2494 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.

Treatment for pet poisoning:

If an animal eats this bait, call a veterinarian at once. NOTE TO PHYSICIAN OR VETERINARIAN Contains the nerve poison Bromethalin. This product is not an anticoagulant type rodenticide. For humans or animals ingesting bait and/or showing poisoning signs (such as muscle tremors, loss of hind limb use, or seizures for animals), limit absorption by either emesis or gastric lavage. Sublethal symptoms, if present, would be the result of cerebral edema and should be treated accordingly through administration of an osmotic diuretic and corticosteroid.

Contrac All Weather Blox

Active ingredient: Bromadialone

Mode of Action: Single feeding Anticoagulant reduces the clotting ability of the blood and cause bleeding. Rodents may continue to consume bait even after ingesting a toxic dose. First dead rodents start to show up 4 or 5 days after first feeding.

Sites and application rates: place 3-16 blocks per station at intervals of 15-30 ft. Can be used indoor and outdoors. Bait stations are mandatory for outdoor above ground use and must be within placed a 100 ft of a structural building.

Target species: Norway rat, Roof rat and House mice

Pesticide disposal: Waste resulting from this product can be disposed of in the trash.

Precautionary Staements

HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION: Harmful if swallowed or absorbed through the skin. Keep away from children, domestic animals and pets. Do not get in eyes, on skin or on clothing. All handlers (including applicators) must wear: shoes plus socks, and waterproof gloves. Any person who retrieves carcasses or unused bait following application of this product must wear gloves.

First Aid: IF SWALLOWED: • Call a poison control center, doctor, or 1-877-854-2494, or 1-800-858-7378** 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. IF ON SKIN OR CLOTHING: • Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. • Call a poison control center or doctor for treatment advice. IF IN EYES: • 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, doctor, or 1-877-854-2494 immediately for treatment advice. ** Also call this number for information on health concerns and pesticide incidents

NOTE TO PHYSICIAN If swallowed or absorbed through the skin, this material may reduce the clotting ability of the blood and cause bleeding. If ingested, administer Vitamin K1 intramuscularly or orally. Repeat as necessary based on monitoring of prothrombin times.

TREATMENT FOR PET POISONING If animal eats bait, call veterinarian at once. NOTE TO VETERINARIAN Anticoagulant Bromadiolone: For animals ingesting bait and/or showing poisoning signs (bleeding or elevated prothrombin times), give Vitamin K1. If needed, check prothrombin times every 3 days until values return to normal (up to 30 days). In severe cases, blood transfusions may be needed.

Environmental hazards:

This product is extremely toxic to fish, birds and other wildlife. Dogs and predatory and scavenging mammals and birds might be poisoned if they feed upon animals that have eaten this bait. Do not apply this product directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff also may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash water or rinsate.

User Safety Requirements:

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. Remove PPE immediately after handling this product. Wash the outside of gloves before removing them. As soon as possible, wash hands thoroughly after applying bait and before eating, drinking, chewing gum, using tobacco or using the toilet and change into clean clothing.