City of Northampton

MASSACHUSETTS

Select Committee on Pesticide Reduction of the Northampton City Council

Date: September 23, 2019 Time: 10:00 a.m. – 12:00 p.m.

Location: City Council Chambers, Puchalski Municipal Building, 212 Main St., Northampton, MA

Attendance: Kate Simmons, Adele Franks, Cynthia Suopis, James Nash.

Absent: Councilor Alisa F. Klein

Welcome

The meeting commenced at 10:00AM. Welcome by Chair Adele Franks and announcement that meeting is being recorded.

Decision to Change Public Forum Days and Times

Motion to change the Public Forum Days and Times to October 16, 2019 at 7pm in the City Hall Second Floor Hearing Room and October 21, 10AM to 12PM in the City Council Chambers, from Cynthia Suopis. Jim Nash seconded the motion. The reason for the swap is to allow people who cannot attend an evening meeting to have an opportunity to speak at a forum. There was no discussion. The motion was approved with no abstentions.

Draft Posters

The draft posters provided by Alisa Klein were discussed. The committee commented that the posters were informative, pleasing to the eye and nicely laid out. Two recommendations were made:

1. Replace the word 'green' with 'public' spaces.
2. Reduce the amount of wording on the posters.
3. Kate Simmons volunteered to help with the wording.

Interview with Tony Kusnierz, Superintendent School Maintenance

Mr. Kusnierz reviewed the school property areas that are exposed to pesticides. Pesticide applications are restricted to the High School athletic fields with the goal of maintaining a green field, reduced crabgrass, dandelions and new growth and control of grubs.
There are no pesticide applications to any other school playing field or surrounding area except for an occasional bee spray. (The product StingX is used for wasps).
On the HS athletic field Barricade is used for turf management and Escolade 2 is used for dandelion control. Manufacturer data sheets on these products were provided. The

company TruGreen provides these applications as well as fertilizer. There is an expectation that the vendor will ensure a minimal exposure to chemicals. Spraying occurs during off school hours and during school vacations. The student families are notified when applications are scheduled if not during vacation weeks.

Glyphosate products are used sparingly around parking lots.

Occasionally the Department receives inside nuisance complaints of rodents, ants and bees. Treatments for these nuisances are applied by the company, Premier Pest Control.

Adele Franks asked Mr. Pomerantz and Mr. Kusnierz if they recalled an article in the Gazette (2012??) that said the Northampton Schools were out of compliance for their use of pesticides. Neither guest recalled knowledge of this article.

There has been no discussion of discontinuing the use of pesticides on the High School athletic field and if City Council were to move in that direction Mr. Pomerantz indicated that this would increase the resources and budget required to maintain the field. There has been some discussion of replacing the High School athletic field with synthetic turf but the cost may be prohibitive.

The amount of pesticide use is not available as the TruGreen company provides the applications and then invoices the Department for payment.

When asked what the benefit is of having a perfect athletic field at the H.S., the committee was told that that maintenance provides a level playing field and proper drainage.

Interview with Dave Pomerantz, Director of Central Services.

The Central Services department shares staff and resources to maintain city and school property. The department overseas very minimal lawn and shrub areas as their purview is limited to City Hall, Fire Department, Police Department and other smaller city buildings. The department treats the lawn areas with lime. They contract with Premier Pesticide for indoor pest management and anything that might be required for the building surroundings. Mr. Pomerantz indicated that Premier uses as many green products as they can. He will provide this committee with a list of chemicals used by Premier. Premier does not report the amount of chemicals they use. They bill the city on a regular basis.

Interview with Donna Scalia, Director of the Department of Public Works

Director Scalia said the Department is 100% organic in its management of parks and cemeteries where they do not use any pesticides, herbicides or insecticides. They

transitioned to organic management over the past three years. The Department oversees the City parks, cemeteries and recreation areas. They accomplish a 100% organic turf by mowing at a higher height, using organic fertilizers, using nematodes to kill grubs, corn gluten to avoid crabgrass and a vinegar product for other weed control. The Department is mindful of creating an environment where the grass will thrive but the perfect shade of green is not necessary. Organic products are expensive and the labor to apply them is expensive.

The one area where they use a pesticide product is for tree root control in the city sewer system. The product is Razo Rooter 2 that injects a foam with the active ingredient DIQUAT in the sewer. The Director provided an information sheet of the product. The foam attacks the root allowing for a mechanical device to cut up roots that are causing problems in the sewer system. Keeping the city sewer system free of roots is an ongoing method that controls costly sewer claims and repairs for the city. The chemical goes through the water treatment process and is then deposited into the river. There are very strict limits for chemicals in treated wastewater, and the effluent is tested every day.

The U.S. Army Corps of Engineers has strict regulations on the maintenance of vegetation on the City's levees. Invasive plants and other vegetation must be removed from the levee system per the Corps. Most years the vegetation is removed manually, a very labor-intensive process. Every six years the Department contracts out for spot application of glyphosate on steep sections of levees where riprap stone is located to prevent erosion. (Doing this more often would require filing an official vegetation management plan). This work is contracted out to an outside vendor from NY. It would be very costly to the Department if this practice were terminated in favor of a 100% organic solution. As it is, $400,000 per year is spent on manual removal of vegetation.

The Department also contracts with a vendor to control a sewer rat population that surrounds the Waste Water Treatment Plant. (Contrac?)

There are employees in the Department who are licensed pesticide applicators.

NOTE: Director Scalia added these comments to her report:

"Thank you for the opportunity to meet with you on Monday and discuss DPW operations. We maintain 225+ acres of athletic fields, recreational parks, street parks and cemetery grounds. We also maintain more than 11 miles of bicycle paths, which I didn't mention on Monday. Please let me know if you require more information".

Interview with the Northampton Health Department Director Merridith O'Leary

Ms. O'Leary told the committee that the Department of Health conducts proactive testing and treatment of mosquitoes in known breeding areas. Mosquitoes are then trapped for counting and identification after the breeding cycle. The Department uses a non-toxic larvicide that is applied by their contractor, Mosquito Squad. Larvicide is applied to public catch basins, high residential areas, known breeding areas, and standing water areas. Treatments are not applied for nuisance mosquitos, they are applied for control of disease-carrying species. The Department uses BTI Briquets and an informational sheet was provided. BTI comes in a briquette form and does not affect non-targeted species. About 3,500 briquettes are used per season. The Department has a 'risk' map that guides them in their applications. Catch basins are treated three times a year. Applications of the larvicide requires a Pesticide license. The Department spends about $14,000 per year on prevention and $6,000 for treatment.

Ms. O'Leary provided several pieces of documentation that will be attached to these minutes.

Committee Reactions to Interviews

1. It was recommended that we ask Central Services to provide invoices from TruGreen.
2. It was decided we would discuss the interviews further at the next meeting.
3. The possibility of asking representatives from privately owned Look Park and Childs Park to attend the Public Forums was suggested.
4. Adele Franks asked committee members to send her ideas for the next meeting agenda.
5. One possible agenda item is to discuss the structure and format of the recommendation report to City Council.

Approval of minutes from last meeting

A motion to approve the minutes was made by Jim Nash with a Second by Adele Franks. There was no discussion and the minutes where approved with no abstentions.

Public comment if time allows

There was no public comment.

New business

No new business was discussed.

Adjourn

A motion to adjourn the meeting was made by Jim Nash with a second by Kate Simmons. There was no discussion. The motion was approved with no abstentions. The meeting was adjourned at 12:05pm.

(NOTE: Several attachments provided by Department Heads will be attached once scanned and received).

Summit® Mosquito Dunks® / BTI Briquets (vers. 04/29/2015)

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday March 26 2012 / Rules and Regulations

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product name: **Summit® Mosquito Dunks® / BTI Briquets**

USEPA Registration No.: 6218-47

1.2 Relevant identified uses of the substance or mixture and uses advised against

1.3 Details of the Supplier of the safety data sheet

Summit Chemical Company
235 S. Kresson Street
Baltimore, MD 21224-2616
800-227-8664
Summitchemical.com
US EPA Establishment No. 6218-MD-2

1.4 Emergency Telephone Number

CHEMTREC 800-262-8200

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of Substance or Mixture

Classification (GHS-US)

Not Classified

2.2 Label Elements

GHS-US Labeling

No labeling applicable

2.3 Other Hazards

No additional information available

2.4 Unknown Acute Toxicity

No Data Available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURE

NAME	PRODUCT IDENTIFIER	%	CLASSIFICATION
Bacillus thuringiensis subspecies *israelensis* solids, spores and insecticidal toxins* 7,000 aedes egypti (AA) International Toxic Units (ITU) per mg of primary powder.	None: Microbial active ingredient	10.31	Not classified

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

First Aid Measures General : Never Give anything by mouth to an unconscious person. If You feel unwell, seek medical advice (show the label where possible)

First Aid Measures after Inhalation : Assure fresh air breathing. Allow the victim to rest.

First Aid measures after skin contact : Remove affected clothing and wash all exposed skin area with Mild soap and water, followed by warm water rinse.

First aid measures after skin contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First aid measures after ingestion :Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention

4.2 Most Important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3 Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media : Foam. Dry powder. Carbon Dioxide. Water Spray. Sand

Unsuitable Extinguishing Media : Do not use heavy water stream

5.2 Special Hazards Arising from the Substance or Mixture

No additional information available.

5.3 Advice For Firefighters

Firefighting instructions : None

Protection during Firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, Protective Equipment and Emergency Procedures

General Measures : Isolate from fire, if possible, without unnecessary risk.

6.1.1 For Non-Emergency Personnel

Emergency Procedures : Evacuate unnecessary personnel.

6.1.2 For Emergency Responders

Protective Equipment : Equip Cleanup crew with proper protection
Emergency Procedures : Ventilate Area

6.2 Environmental Precautions

Prevent entry to sewers and public waters.

6.3 Methods and Material for Containment and Cleaning Up

See Heading 8. Exposure controls and personal protection

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Precautions for Safe Handling :Wash hands and other exposed areas with mild soap and water before eating, drinking, smoking tobacco, or chewing gum and when leaving work.

7.2 Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions :Keep only in the original container with original label in a cool, well ventilated place away from Children. Keep Container closed when not in use.
Incompatible Products : Strong bases, acids.
Incompatible Materials : Sources of Ignition

7.3 Specific End Use(s)

No additional information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Bacillus thuringiensis subspecies *israelensis* solids, spores and insecticidal toxins* 7,000 aedes egypti (AA) International Toxic Units (ITU) per mg of primary powder.		
USA ACGIH	ACGIH TWA (mg/m3)	5 mg/m3

8.2 Exposure Controls

Personal protective Equipment : Avoid all unnecessary exposure.
Hand protection : Wear protective gloves.
Eye Protection : Chemical Googles or safety glasses.
Respiratory protection : Wear approved mask.
Other information : When using do not eat, drink, or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

Physical State : Solid
Color : Light Brown
Odor : Mild
Odor Threshold : No data available.
pH : NA

Relative Evaporation rate (butyl acetate=1)	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Self Ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative vapor density at 20 degrees C	: No data available
Relative density	: No data available
Density	: No data available
Solubility	: No data available

9.2 Other Information

No additional information available.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No additional information available.

10.2 Chemical Stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

Not established

10.4 Conditions to Avoid

Heat. Extremely High Temperatures

10.5 Incompatible Materials

No Data Available

10.6 Hazardous Decomposition Products

None

SECTION 11: TOXILOGICAL INFORMATION

11.1 Information on Toxicological Effects

Acute Toxicity : Not classified

Bacillus thuringiensis subspecies *israelensis* solids, spores and insecticidal toxins* 7,000 aedes egypti (AA) International Toxic Units (ITU) per mg of primary powder.	
LD50 oral rat	➢ 10000 mg/kg (Rat)
LD50 dermal rabbit	➢ 10000 mg/kg (Rabbit)

Skin corrosion/irritation : Not classified

Serious Eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not Classified
Germ Cell Mutagenicity	: Not Classified
Carcinogenicity	: Not Classified

Bacillus thuringiensis subspecies *israelensis* solids, spores and insecticidal toxins*

7,000 aedes egypti (AA) International Toxic Units (ITU) per mg of primary powder.
IARC Group 3- Not Classifiable

Reproductive Toxicity	: Not Classified
Specific Target Organ Toxicity (Single Exposure)	: Not Classified
Specific Target Organ Toxicity (Repeated Exposure)	: Not Classified
Aspiration Hazard	: Not Classified
Potential Adverse Human Health Effects and Symptoms	: Based on available date, the classification criteria are not met

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

No additional information available.

12.2 Persistence and Degradability

Summit® Mosquito Dunks® BTI Briquets	
Persistence and Degradability	Not Established

Summit® Mosquito Dunks® BTI Briquets	
Persistence and Degradability	Contains readily biodegradable component(s)

12.3 Bioaccumulative Potential

Summit® Mosquito Dunks® BTI Briquets	
Bioaccumulative Potential	Not established

Summit® Mosquito Dunks® BTI Briquets	
Bioaccumulative Potential	No bioaccumulation data available.

12.4 Mobility in Soil

No additional information available

12.5 Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Waste Disposal Recommendations :Dispose in a safe manner in accordance with local/national regulations.

Ecology – Waste Materials : Avoid Release into the environment

SECTION 14: TRANSPORT INFORMATION

In accordance with DOT
Non dangerous good in sense of transport regulations
Additional Information
Other information : No supplementary information Available

ADR
Transport document description
Transport by Sea
No additional information available.
Air Transport
No additional information available.

SECTION 15: REGULATORY INFORMATION

This chemical is a product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION: KEEP OUT OF REACH OF CHILDREN
Causes moderate eye irritation.

15.1 US Federal Regulations

Summit® Mosquito Dunks® BTI Briquets
Not listed on the United States TSCA (Toxic Substances Control Act) Inventory

Summit® Mosquito Dunks® BTI Briquets
Not listed on the United States TSCA (Toxic Substances Control Act) Inventory

15.2 International Regulations

CANADA
No Additional Information Available

EU-Regulations
No Additional Information Available

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Classification according to Directive 67/548/EEC or 1999/45/EC
Not classified

15.3 US State Regulations

Summit® Mosquito Dunks® BTI Briquets

SECTION 16: OTHER INFORMATION

Other Information : None

Summit Chemical Co./SUMMIT RESPONSIBLE SOLUTIONS

Baltimore, MD 21224

EPA Registration No. 6218-47
EPA Est. No. 6218-MD-2

Net weight: 0.458 oz. per Briquet/Dunks
Or
13 grams per Briquet/Dunks
Contains 20 Briquets/Dunks
Lot. No:

Pre-Flood treatment: Apply one (1) Summit *B.t.i.* BRIQUET/DUNKS to each 100 sq. ft. of dry bed surface which is known or suspected breeding site when flooded.

Evaporative Coolers: Apply one (1) Summit *B.t.i.* BRIQUET/DUNKS to each 100 sq. ft. of Cooler box or for smaller Coolers refer to the table below for application rate.

SAFE FOR USE IN FISH HABITATS

EACH DUNK KILLS MOSQUITOES FOR 30 DAYS OR LONGER
KILLS MOSQUITOES BEFORE THEY ARE OLD ENOUGH TO BITE

Outdoor Use around the Household to kill Mosquito Larvae: Summit *B.t.i.* BRIQUETS/DUNKS can be broken into portions for use in many outdoor applications near the household, such as standing water in bird baths, old automobile tires, rain barrels, ponds, abandoned or unused swimming pools (particularly above ground types), ditches, tree holes, roof gutters for collecting rainwater, flower pots, animal watering troughs or any other locations near the household where water collects and remains for periods of time. Summit *B.t.i.* BRIQUETS/DUNKS can be broken and used as shown in the following table, the amount dependent upon the surface area of water in the treatment site. Mosquito Dunks / Bti Briquets may also be used in any containerized standing water found near the home.

Surface area of standing water	1 to 5 square ft.	5 to 25 square ft.	25 to 100 square ft.	Above 100 square ft.
Use Quantity	1/4 Briquet /Dunk	1/2 Briquet /Dunks	1 Briquet /Dunks	1 Briquet/Dunks per100 sq. ft.

Preflood treatment around the Household: Apply Summit *B.t.i.* BRIQUETS/DUNKS to any dry surface which is known to become flooded after a rain. Use the correct amount in accordance with the above dosage table.

INDOOR USE: For use in areas that collect water from time to time areas such as elevator shafts, basements that flood, sump pumps and any drainage areas within buildings. Use the correct amount in accordance with the above dosage table.

Psychodid Fly Larvae (Filter Flies, Sewage Flies, Drain Flies):

Waste WaterTreatment Plants: Place Summit *B.t.i.* BRIQUETS/DUNKS in a perforated basket, such as a minnow bait basket, and suspend the basket in the waste water stream before the water enters the trickling filter. Keep basket continuously filled with Briquets/Dunks to ensure a steady flow of Bti into the filter. The number of Briquets/Dunks needed for continuous, effective treatment in each facility will be dependent upon the volume and flow rate of the stream. This will have to be determined by the user.

U.S. Pat. No. 4,631,857 Patented in Canada, 1987

DIRECTIONS FOR USE

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

Summit *B.t.i.* BRIQUETS/DUNKS are formulated to release effective levels of Bti for a period of 30 days or more under typical environmental conditions. The floating action of the briquets/dunks will ensure that active material is released at the surface as well as gradually settle to the bottom.

These briquets/dunks may be used in all types of mosquito breeding areas. To prevent briquets/dunks from being flushed out of certain treatment sites, they can be anchored using string tied through the hole in the center or staked in place.

Summit *B.t.i.* BRIQUETS/DUNKS can also be used for pre-flood treatment. If the briquets/dunks are applied to dry areas which are known or suspected to become breeding sites when flooded, such as woodland pools and abandoned swimming pools, the briquets will float to the surface when flooding occurs and start releasing the active Bti material. Alternate wetting and drying will not reduce their effectiveness.

General Information; Mosquito Dunks float on water and will keep on working for 30 days or longer under typical environmental conditions. While floating, they slowly release a long-term, biological mosquito larvicide at the waters surface. This larvicide gradually settles in the water where it is eaten by mosquito larvae growing there. Mosquito Dunks may be used in all standing water sites where mosquito larvae grow. Alternate wetting and drying will not reduce their effectiveness.

APPLICATION RATES

Mosquito Larvae:

Flooded larvae breeding sites: Use one (1) Summit *B.t.i.* BRIQUET/DUNKS for up to 100 sq. ft. of surface area, regardless of depth. In water with a high organic content, such as sewage disposal systems or waste lagoons, the application rate may have to be increased to as much as four (4) times the normal dosage based upon evaluation by the user.

When larval populations are high, aquatic vegetation dense, or the water highly polluted at the time of briquet/dunks use, pre-treatment with SUMMIT MOSQUITO BITS® is recommended. The briquet/dunks will then suppress larval development for up to 30 days or more. Some larvae which hatch after briquet/dunks application may partially develop before dying. Allow a minimum of 48 hours for their control.

Summit

B.t.i. BRIQUETS™

FLOATING SUSTAINED-RELEASE LARVICIDE FOR LONG-TERM CONTROL OF MOSQUITO AND PSYCHODID FLY LARVAE

BIOLOGICAL CONTROL OF MOSQUITOES & PSYCHODID FLIES

ACTIVE INGREDIENT: *Bacillus thuringiensis* subspecies *israelensis* solids, spores and insecticidal toxins.....10.31%

INERT INGREDIENTS:.....89.69%

7000 Aedes aegypti (AA) International Toxic Units (ITU) per milligram primary powder (Dry weight basis)

The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

PRECAUTIONARY STATEMENTS

Keep Out Of Reach Of Children

CAUTION

Hazard to Humans: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

Environmental Hazards: Do not apply directly to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.

FIRST AID

If in eyes	Hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinising eye. Call poison control center or doctor for treatment advise.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Storage: Tightly close containers of unused briquets/dunks. Store in cool, dry well-ventilated place.

Disposal: Do not reuse empty carton or packaging material. Perforate or crush and discard carton according to local trash disposal regulations.

Personal Protective Equipment (PPE)
Mixers, loaders, applicators, and other handlers must wear the following:
- long-sleeve shirt,
- long pants,
- shoes and socks,
- chemical-resistant gloves made of neoprene or nitrile rubber.

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. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

USER SAFETY RECOMMENDATIONS
Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS
This pesticide is extremely toxic to aquatic organisms, including fish and invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash-waters.
This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

PHYSICAL OR CHEMICAL HAZARDS
Flammable. Contents under pressure. Keep away from heat, sparks, and open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.

FIRST AID	
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 or doctor for treatment advice.
IF SWALLOWED	• Call a poison control center or doctor for treatment advice. • Do not give any liquid to the person. • Do not induce vomiting unless told to by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: Contains petroleum distillate - vomiting may cause aspiration pneumonia.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

For medical and environmental emergencies, call CHEMTREC® at 1-800-424-9300.

Not for Resale
MADE IN THE U.S.A
5388CMAA
1M208

QUALITY ISO 9001 ASSURANCE

STEEL
PLEASE RECYCLE WHEN EMPTY

TO REORDER, Call TOLL-FREE:
1-800-527-9919
FAX: 1-972-438-0634

STING-X®

- **Drops Wasps, Hornets and Yellow Jackets Instantly**
- **Kills with Residual Action as Wasps and Hornets Return to the Nest**
- **Kills the Entire Nest**
- **Sprays up to 20 feet**
- **Dielectric Breakdown Voltage of 47,300 Volts**
- **Can be used Both Indoors (Attics and other Places Where Nests are Built) and Outdoors on Wasp and Hornet Nests**

ACTIVE INGREDIENTS

Tetramethrin*	0.10%
Permethrin	0.25%
Piperonyl Butoxide	0.50%
OTHER INGREDIENTS+	99.15%
TOTAL	100.00%

*1-cyclohexene-1,2-dicarboximidomethyl 2,2-dimethyl-3-(2-methylpropenyl)cyclopropanecarboxylate.
+Contains Petroleum Distillates

KEEP OUT OF REACH OF CHILDREN
CAUTION

EPA Reg. No. 1769-370-66114
EPA Est. No. 4140-TX-1

See elsewhere on the label for additional precautionary language.

NET WEIGHT: 14 oz (400g)

Packed For

CHECK MARK™

A Division of DM Resources, Inc.
1310 E. Northgate Drive, Irving, Texas 75062

Help stop inhalation abuse.
For more information visit http://inhalant.org

DIRECTIONS FOR USE: It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Read the entire label.

GENERAL PRECAUTIONS AND RESTRICTIONS
Do not enter or allow others to enter until sprays have dried. 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. Do not apply when food is present. Do not use in commercial food/feed handling establishments, restaurants, or other sites where food/feed is commercially prepared or processed. Not for use in Federally inspected meat and poultry plants. In the home, all food processing surfaces and utensils should be covered during treatment or thoroughly washed before use. Exposed food should be covered or removed. Application is prohibited directly into sewers or drains, or to any area like a gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur. Do not allow the product to enter any drain during or after application. Do not make applications during rain. Remove or cover exposed food and drinking water before application. Remove or cover dishes, utensils, food processing equipment, and food preparation surfaces, or wash them before use. Not for broadcast use on indoor residential surfaces. All outdoor applications must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses:
1) Applications to building foundations, up to a maximum height of 3 feet.

Other than applications to building foundations, all outdoor applications to impervious surfaces such as sidewalks, driveways, patios, porches, and structural surfaces (such as windows, doors, and eaves) are limited to spot and crack-and-crevice applications only.

FOR INDOOR AND OUTDOOR USE
For the best results, spray in the early morning or late evening when insect activity is minimal. Stand a safe distance from the nest and not directly underneath. (Remove protective cap.) Hold can upright and point spray opening toward the nest with the wind at your back. For optimum performance in overhead treatments, align the actuator opening directly opposite the mark on the valve cup. When treating in a downward direction, align the actuator with the mark on the valve cup. Spray until the nest is thoroughly saturated to kill the entire nest population. The residual action will kill wasps and hornets returning to the nest. Wait at least 24 hours before removing the nest.
To kill wasps, hornets, and yellow jackets under eaves, screens, window frames, doors, patios, cracks, holes, or crevices wherever insects are noticed, spray for about 1-2 seconds or until surfaces are moist. To prevent entrance of insects into the house, spray around points where insects may enter such as outside plumbing, faucets, etc., and cracks or crevices in foundations as well as along sills and ledges. When using indoors for crack-and-crevice treatments, do not use more than 1 oz of product to treat every 1.8 square feet.
Do not apply to pets or contaminate feed, foodstuffs, dishes or utensils. Avoid spraying vegetation directly.

STORAGE AND DISPOSAL
Do not contaminate water, food or feed by storage or disposal.
STORAGE: Store in a cool, dry area away from children. Do not store near heat or open flame.
CONTAINER DISPOSAL: This container is made with at least 25% recycled steel and may be recycled in the few but growing number of communities where steel aerosol can recycling is available. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE OR INCINERATE. If recycling is not available, wrap the container and discard in the trash.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION
Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

RAZOROOTER® II

FOR USE TO CONTROL TREE ROOT INTRUSIONS IN SANITARY SEWERS, STORM DRAINS, AND OTHER DRAINAGE SYSTEMS

ACTIVE INGREDIENT: By Weight

Diquat dibromide [6, 7-dihydrodipyrido (1,2-a:2',1'-c) pyrazinedilium dibromide] 37.3%
OTHER INGREDIENTS 62.7%
TOTAL 100.0%
This product contains 2-lbs. diquat cation per gal. as 3.73 lbs. salt per gal.

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

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 or doctor for treatment advice.
If swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have a 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.
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 inhaled:	• Move person to fresh air. • If person is not breathing call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for treatment advice.

Hot Line Number

For 24-hour Emergency medical assistance call Prosar: 1-800-291-7661.

Note to Physician: Call Prosar 1-800-291-7661 at any hour to obtain toxicology information and a diquat analysis. To be effective, treatment for diquat poisoning must be performed IMMEDIATELY. Treatment consists of binding diquat in the gut with suspensions of activated charcoal or bentonite clay, administration of cathartics to enhance elimination and removal of diquat from the blood by charcoal hemoperfusion or continuous hemodialysis.

See Side Panel for Additional Precautionary Statements

EPA Reg. No. 64898-8
EPA Est. No. _____

Made in U.S.A.
Sewer Sciences, Inc. (SSI)
1020 Hiawatha Blvd. West
Syracuse, NY 13204

Net Contents _____

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS

CAUTION: Harmful if inhaled. Harmful if swallowed. Causes moderate eye irritation. Avoid breathing spray mist. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Avoid contact with eyes or clothing. Wear protective eyewear. Wear long sleeve shirt and long pants, socks shoes and gloves.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:
- Coveralls over short-sleeved shirt and short pants.
- Chemical resistant gloves.
- Chemical-resistant footwear plus socks.
- Protective eyewear.
- Chemical-resistant apron when cleaning equipment, mixing or loading.
- A dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

EXCEPTION: If a closed system is used during mixing, dilution, product transportation, and cleaning, and applications will be made to closed, subsurface sewers and drains, and the product will be diluted in the closed system with water at a ratio of at least 1 part product to 50 parts water prior to use, then applicators, mixers, loaders, and other handlers may wear:
- Short sleeved shirt and long pants
- Shoes plus socks
- Waterproof gloves

EMERGENCY INFORMATION

For spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic invertebrates. Keep out of lakes, ponds, and streams. Do not apply directly to water bodies, 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. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. Keep off lawns and plants, as they may be severely injured. Foam should be shoveled off planted areas immediately rather than washing off with water.

Notify appropriate wastewater agency prior to use of this product so that it may monitor the operations of the wastewater treatment plant.

USER SAFETY RECOMMENDATIONS

Users should:
- Wash hands 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.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
- Do not enter manholes or other confined space areas adjacent to treated areas until all foam or spray has dried and always use full Federal and State OSHA mandated procedures for confined space entry.

STORAGE & DISPOSAL

Do not contaminate water, food or feed by storage, disposal or cleaning of equipment. Open dumping is prohibited.
Pesticide Storage: Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Do not contaminate feed, foodstuffs or drinking water. Do not store or transport near feed or food. Store at temperature above 32°F. For help with any spill, leak, fire or exposure involving this material, call CHEMTREC (1-800-424-9300).
Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
Container Disposal: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of container in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.
Container Precautions: Before refilling, inspect thoroughly for damage, such as cracks, punctures, bulges, dents, abrasions and damaged or worn threads on closure devices.
Refill Only with RAZOROOTER® II. The contents of this container cannot be completely removed by cleaning. Refilling with materials other than RAZOROOTER® II will result in contamination and may weaken container.
After filling and before transporting, check for leaks.
Do not refill or transport damaged or leaking container.
CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER.

WARRANTY STATEMENT

SSI and Seller warrant that this product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with the directions and instructions specified on the label under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to SSI or Seller, and buyer assumes the risk of any such use.
RAZOROOTER® II is a trademark of SSI.

PRODUCT INFORMATION

RAZOROOTER® II is uniquely suited to sewer applications. RAZOROOTER® II is a soluble liquid designed to control tree roots in sewer, on contact. RAZOROOTER® II is a non-selective herbicide, which works on all varieties of tree roots and will not harm above-ground vegetation, when applied according to label instructions. RAZOROOTER® II is not volatile, and will not produce toxic gases.

DIRECTIONS FOR USE

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

Do not use in potable water systems. Do not use in storm, field or other drains unless effluent is treated in a sanitary sewer system.

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. Refer to the personal protective equipment information under Precautionary Statements and use all required protective clothing and equipment.

RAZOROOTER® II may be applied directly to sewers either as a high-pressure spray or as a foam. RAZOROOTER® II may be applied in conjunction with herbicides, surfactants and foaming agents available through SSI.

RAZOROOTER® II is not compatible with anionic surfactants.

Consider pipe size, sewer flow, lateral conditions, line obstructions, and severity of root intrusion in selecting proper application technique.

MIXING INSTRUCTIONS

Before mixing, determine the scope of work, including pipe size and overall lineal footage, while assessing field conditions. Using the charts below as guidance, determine the amount of solution required for the job.

SMALL DIAMETER PIPES

TOTAL GALLONS PREPARED SOLUTION	TREATMENT AREA (LINEAL FEET) PER PIPE DIAMETER				
	4"	6"	8"	10"	12"
10	300'	140'	80'	50'	35'
100	3000'	1400'	800'	500'	350'
200	6000'	2800'	1600'	1000'	700'
300	9000'	4200'	2400'	1500'	1050'

LARGE DIAMETER PIPES

TOTAL GALLONS PREPARED SOLUTION	TREATMENT AREA (LINEAL FEET) PER PIPE DIAMETER								
	15"	18"	21"	24"	27"	30"	36"	42"	48"
10	35'	27'	23'	20'	17'	15'	12'	11'	10'
100	350'	270'	230'	200'	170'	150'	120'	110'	100'
200	700'	540'	460'	400'	340'	300'	240'	220'	200'
300	1000'	810'	690	600'	510'	450'	360'	330'	300'

Prepare solution by mixing at a rate of 2 quarts of RAZOROOTER® II per 100 gallons of water. Use only clean, fresh water to prepare the solution. Prepare enough solution to complete the job, or to fill the solution tank, whichever is less. Use solution promptly after mixing.
If foaming method will be used, add the amount of foaming agent required to produce 20 gallons of foam per gallon of solution, as prepared above. Only use foam-making equipment approved by SSI, and additives approved by SSI which specifically state "for use with RAZOROOTER® II" on the label. RAZOROOTER® II is not compatible with anionic surfactants.

SPRAY APPLICATION

Prepared RAZOROOTER® II solution may be sprayed into sewers at various pressures and flow rates, depending upon the capabilities of the application equipment. Do not exceed the equipment manufacturer's recommendations for pressures and flow rates.

Begin at downstream sections of the area to be treated. Insert the spray discharge hose through the length of the pipeline intended for treatment. Spray the prepared RAZOROOTER® II solution under pressure as the hose is retrieved. Retrieve the discharge hose at a rate sufficient to contact and saturate all root masses in the pipeline with RAZOROOTER® II solution, applying to the point of runoff. Monitor tank level and solution flow rate to calibrate discharge hose retrieval rate, in order to evenly apply all prepared solution.

Treat large pipes (15" or larger in diameter) with a hose fitted with skids designed to elevate the discharge nozzle. This will center the discharge nozzle in the pipe and enhance performance. Contact SSI to obtain skids, if needed.

Treat manholes by retrieving hose vertically while spraying walls to the point of runoff. Do not re-enter manholes until sprays have dried.

FOAM APPLICATION

Mixing prepared RAZOROOTER® II solution with foam during application extends contact time of roots with product, and helps product to reach roots in lateral connections. Foam application equipment used with RAZOROOTER® II must be approved by SSI and used only by applicators trained to operate the equipment. Training in RAZOROOTER® II application by foam is available from SSI.

Begin at downstream sections of the area to be treated. Insert the spray discharge hose through the length of the pipeline intended for treatment. Spray the prepared RAZOROOTER® II solution and foam under pressure as the hose is retrieved.

Treat manholes by applying a 3" layer of foam to walls while retrieving hose vertically. Do not re-enter manholes until foam has dried.

Building Laterals: Building laterals may be treated using the foaming method by injecting the foam via flow-through inflatable cleanout plugs. Cap or plug all drain lines, cleanouts, and fixtures that tie into the line being treated. Determine the lateral pipe size and length and operate equipment for the time it takes to produce the required amount of foam. Use caution to prevent plug blow out.

CONTRAC®

RAT & MOUSE BAIT READY TO USE PLACE PACS

KILLS RATS, MICE & MEADOW VOLES*

Kills Warfarin Resistant Norway Rats

Norway rats, roof rats and house mice may consume a lethal dose in one night's feeding with first dead rodents appearing four or five days after feeding begins.

ACTIVE INGREDIENT:	Bromadiolone (CAS #28772-56-7):	0.005%
OTHER INGREDIENTS†:		99.995%
†Contains Denatonium Benzoate	TOTAL:	100.000%

KEEP OUT OF REACH OF CHILDREN

CAUTION

See side panels for First Aid and additional precautionary statements.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage: Store only in original container in a cool, dry place inaccessible to children and pets. Keep containers closed and away from other chemicals.

Pesticide Disposal: Wastes resulting from the use of this product may be placed in trash or delivered to an approved waste disposal facility.

Pesticide Container: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Dispose of empty container by placing in trash, at an approved waste disposal facility or by incineration. Call your Local Waste Agency for any questions on proper disposal.

WARRANTY: To the extent consistent with applicable law, seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

Manufactured by:

Bell LABORATORIES, INC.
3699 Kinsman Blvd.
Madison, WI 53704 U.S.A.
www.belllabs.com
MADE IN USA

NET WEIGHT: 16.3 lbs (7.4 kg)
174 x 1.5 oz (43 g) Place Pacs

EPA REG. NO. 12455-75
EPA EST. NO. 12455-WI-1

FIRST AID

HAVE LABEL WITH YOU WHEN OBTAINING TREATMENT ADVICE

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.
- Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING:
- Take off contaminated clothing. Rinse skin immediately with plenty of soap and 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 or doctor 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 K_1 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 K_1. 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.

DIRECTIONS FOR USE

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

READ THIS LABEL: Read this entire label and follow all use directions and use precautions. Use only for sites, pests and application methods described on this label.

IMPORTANT: Do not expose children, pets, or nontarget animals to rodenticides. To help to prevent accidents:

1. Store unused product out of reach of children and pets.
2. Apply bait in locations out of reach of children, pets, domestic animals and nontarget wildlife, or in tamper-resistant bait stations. These stations must be resistant to destruction by dogs and by children under six years of age, and must be used in a manner that prevents such children from reaching into bait compartments and obtaining bait. If bait can be shaken from bait stations when they are lifted, units must be secured or otherwise immobilized. Stronger bait stations are needed in areas open to hoofed livestock, raccoons, bears, or other potentially destructive animals, or in areas prone to vandalism.
3. Dispose of product container and unused, spoiled, or unconsumed bait as specified on this label.

Bait stations are mandatory for outdoor, above ground use. Tamper-resistant bait stations must be used wherever children, pets, non-target mammals, or birds may have access to the bait placement location.

USE RESTRICTIONS: This product may only be used to control the following rodent pests in and around man-made structures: House mouse *(Mus musculus)*, Norway rat *(Rattus norvegicus)*, Roof rat *(Rattus rattus)*, Cotton rat* *(Sigmodon hispidus)*, Eastern harvest mouse* *(Reithrodontomys humuli)*, Golden mouse* *(Ochrotomys nuttalli)*, Polynesian rat* *(Rattus exulans)*, Meadow vole* *(Microtus pennsylvanicus)*, White-throated woodrat* *(Neotoma albigula)*, Southern plains woodrat* *(Neotoma micropus)*, and Mexican woodrat* *(Neoloma mexicana)*. This product must be used in and within 100 feet of man-made structures constructed in a manner so as to be vulnerable to commensal rodent invasions and/or to harboring or attracting rodent infestations. Examples of such structures include homes and other permanent or temporary residences, food processing facilities, industrial and commercial buildings, trash receptacles, agricultural and public buildings, transport vehicles (ships, trains, aircraft), docks and port or terminal buildings and related structures around and associated with these sites. Fence and perimeter baiting, beyond 100 feet from a structure as defined above, is prohibited. This product must not be applied directly to food or feed crops.

Burrow baiting with CONTRAC Rat & Mouse Bait Ready To Use Place Pacs is prohibited.

Do not place near or inside ventilation duct openings. Do not contaminate water, food, feedstuffs, food or feed handling equipment, or milk or meat handling equipment or surfaces that come into direct contact with food. When used in USDA inspected facilities, this product must be applied in tamper-resistant bait stations. Do not broadcast bait. Do not use this product in sewers.

Do not sell this product in individual containers holding less than 16 pounds of bait.

SELECTION OF TREATMENT AREAS: Determine areas where rats, mice or meadow voles* will most likely find and consume the bait. Generally, these areas are along walls, by gnawed openings, in corners and concealed places, between floors and walls, or in locations where rodents or their signs have been seen. Protect bait from rain and snow. Remove as much alternative food as possible.

APPLICATION DIRECTIONS:

RATS: Apply 2 to 10 Place Pacs at intervals of 15 to 30 feet per placement. Maintain an uninterrupted supply of fresh bait for at least 10 days or until signs of rat activity cease to appear.

MICE AND MEADOW VOLES*: Place 1 Place Pac at 8 to 12 foot intervals. Maintain an uninterrupted supply of fresh bait for at least 15 days or until signs of mouse or meadow vole* activity cease to appear.

FOLLOW-UP: Replace contaminated or spoiled bait immediately. Wearing gloves, collect and dispose of all dead animals and leftover bait properly. To prevent reinfestation, limit sources of rodent food, water, and harborage as much as possible. If reinfestation does occur, repeat treatment. Where a continuous source of infestation is present, establish permanent bait stations and replenish as needed.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Do not get in eyes, on skin, or on clothing. Keep away from children, domestic animals and pets.

All handlers (including applicators) must wear long sleeved shirt and long pants, shoes plus socks, and waterproof 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. 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 fish, birds and other wildlife. Dogs, cats, 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.

***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**

011116/08-15

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY AND
ENVIRONMENTAL AFFAIRS
Department of Agricultural Resources
251 Causeway Street, Suite 500, Boston, MA 02114
617-626-1700 fax 617-626-1850 www.Mass.gov/AGR

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

IAN A. BOWLES
Secretary

DOUGLAS W. PETERSEN
Commissioner

NEW POLICY ON CHILDREN'S AND FAMILIES PROTECTION ACT STANDARD WRITTEN NOTIFICATION REQUIREMENTS

DATE: January 21, 2009

TO: Schools, Day Cares, School Age Child Care Programs
Massachusetts Early Education and Care
Pesticide Applicator Associations
Licensed Dealers

FROM: Massachusetts Department of Agricultural Resources, Division of Crop Protection and Pest Management, Pesticide Program

BACKGROUND:
The Children and Families Protection Act currently requires that schools send standard written notification home to parents and employees at least two working days before an outdoor pesticide application is to take place. A full notification includes the following three parts:

1. Consumer Information Bulletin;
2. Department Notification Form ; and
3. Chemical Fact Sheet.

In the past, it was the Department's interpretation that schools must send all parents hard copies of the above information, in order to comply with the standard written notification requirements. This notification method is costly to schools and did not take advantage of current electronic communication technology. With these issues in-mind, the Department now has the following policy permitting schools to provide Standard Written Notification to parents via electronic means as an option to providing such notices in hard-copy format.

POLICY
It is the Department's policy to permit schools the following options for providing standard written notification to parents via electronic means. The following are examples of electronic standard written notification that the Department would find acceptable under this policy:

Option A: Schools may elect to send a letter home at the beginning of the school year that would provide an opportunity for parents to choose whether they wish to receive notification via hard copy or email format. Should parents choose to receive the notification via email, language in the letter shall make clear that it is the parents responsibility to routinely check their email and notify the school when their email address changes. The letter shall be issued every year and be maintained by the school for five-years, along with the school IPM plan. The letter shall also be provided to parents of any new or transfer students after registration at the school. See Appendix A for a model format of an acceptable letter format.

Email notification of pesticide applications shall include the three parts as outlined above. The schools must ensure that the notification is sent out in a manner so that it can be viewed at least two-working days prior to the pesticide application.

Option B: Schools may elect to use reverse 911 (community notification systems), to notify parents of an outdoor pesticide application. The reverse 911call shall be made at least two working days prior to the application and direct parents to the school's website whereby; interested parties may view copies of the standard written notification. The website shall post the three parts as outlined above. Should parents not have the capability to view the notification on the website, the school shall make a hard copy available.

Option C: Schools may elect to call parents individually to notify parents that an outside pesticide application is going to take place. The call shall be made at least two working days prior to the application and direct parents to the school's website; whereby, interested parties may view copies of the standard written notification. The website shall post the three parts as outlined above. Should parents not have the capability to view the notification on the website, the school shall make a hard copy available.

Douglas Petersen, Commissioner of the Massachusetts Department of Agricultural Resources

Appendix A

Dear Parents:

The Children and Families Protection Act of 2000 requires all schools (public, private, day care and school age child care programs) to develop and maintain an Integrated Pest Management Plan concerning any pest problems that may exist inside or outside of our school. The law also requires that you be notified at least two working days prior to any outdoor pesticide applications.

Should our school have to make any pesticide applications to the outside of the building we are asking for parents to "sign up" should they want to be notified of these applications via email. Please note that by choosing the option of being notified via email, you agree to routinely check your email as the notification is required to be sent out at two working days prior to the scheduled application Please fill out the bottom of this form and return it by *(write in date)*. Should you choose to not be notified via email then the notification will be sent home with your child.

_____ **NO,** I would not like to be notified of outdoor pesticide applications via email, I would prefer to have the notification sent home with my child.

_____

Name of Student(s) Registered or Enrolled

_____

Signature and Date of Parent or Legal Guardian

_____ **YES,** I would like to be notified of outdoor pesticide applications via email. Please send such notifications to the below provided email address(es).

_____

Email Address(es) of Parent(s) or Legal Guardian(s)

_____

Name of Student(s) Registered or Enrolled

_____

Signature and Date of Parent or Legal Guardian

2019 Northampton Mosquito Control Report

The Meadows Recap

We were scheduled to treat the Meadows in April, June and August. Due to some access restrictions by the town due to flooded areas our April service was limited so we were back in mid-May when the roads were accessible. Because of the increase in precipitation we used more dunks than anticipated during the April & May treatments. Since it was not as wet in July and August this balance out for the year. This bumped the June service into July and then we were back again in August. Over the season we used more than 1,200 dunks.

When we treat the Meadows, the technicians walk into the woods from Lyman street behind the houses. They drive down Mahan Road, Potash Road and Old Springfield Road up to Fort Street. They also enter the Meadows from South Street onto Pynchon Meadow Road down through Curtis Nook Road. From these streets they can access ponds, puddles, swampy area and standing water walking through the woods. If the water levels are too high, like they were in April access is restricted from going in to far, but we can still treat from the dry areas to as far as we can reach.

Catch Basin Recap

We maintained the original schedule treating basins in June, July & August. We treated 2,284 basins this season. Full details are on the attached report.

Additional Request Recap

In addition to the scheduled catch basin applications we also treated wet and swampy areas behind the Salvo house and off Fruit Street. This area was identified as a problem area due to the mosquito breeding grounds and the fact that it is a senior housing area. These additional areas were treated on April 25th, June 10th, July 11th, August 21st.

	Northampton 2019 Catch Basin Report	Round 1		Round 2		Round 3	
Area	Street	Date	#of Basins	Date	#of Basins	Date	# of Basins
Downtown	Conz Street	6/10/19	26	7/11/2019	26	8/21/19	26
Downtown	Salvo House (additional application behind building)	6/10/19	11	7/11/2019	15	8/21/19	14
Downtown	Butch's Way	6/10/19	3	7/11/2019	3	8/21/19	3
Downtown	Fruit Street (additional application behind building)	6/10/19	11	7/11/2019	21	8/21/19	20
Downtown	Smith Street	6/10/19	2	7/11/2019	2	8/21/19	2
Downtown	Maple Ave.	6/10/19	4	7/11/2019	4	8/21/19	4
Downtown	Crafts Avenue	6/10/19	3	7/11/2019	3	8/21/19	3
Downtown	Phillips Place	6/10/19	6	7/11/2019	6	8/21/19	6
Downtown	Dewey Court	6/10/19	4	7/11/2019	4	8/21/19	4
Downtown	Center Street	6/11/19	4	7/11/2019	4	8/21/19	4
Downtown	Hawley Street	6/10/19	11	7/11/2019	12	8/21/19	12
Downtown	Green Street	6/10/19	9	7/11/2019	11	8/21/19	11
Downtown	Arnold Avenue	6/10/19	2	7/11/2019	2	8/21/19	2
Downtown	Parsons Street	6/10/19	10	7/11/2019	10	8/21/19	10
Downtown	Linden Street	6/10/19	4	7/11/2019	4	8/21/19	4
Downtown	Cherry Street	6/10/19	6	7/11/2019	6	8/21/19	6
Downtown	Trumbull Road	6/11/19	6	7/11/2019	6	8/21/19	6
Downtown	Prospect Street	6/11/19	14	7/11/2019	14	8/21/19	14
Downtown	College Lane	6/11/19	21	7/11/2019	21	8/21/19	24
Downtown	Grove Street	6/10/19	14	7/11/2019	14	8/21/19	14
Downtown	Laurel Street	6/10/19	4	7/11/2019	4	8/21/19	4
Downtown	Warfield Place	6/11/19	4	7/11/2019	4	8/21/19	4
Downtown	Paradise Road	6/11/19	14	7/11/2019	16	8/21/19	14
Downtown	Milton Street	6/11/19	10	7/11/2019	8	8/21/19	8

Northampton 2019 Catch Basin Report

		Round 1		Round 2		Round 3	
Area	Street	Date	#of Basins	Date	#of Basins	Date	# of Basins
Leeds	Mulberry Street	6/13/19	4	7/16/2019	4	8/23/19	4
Leeds	Grove Avenue	6/13/19	4	7/16/2019	4	8/23/19	4
Leeds	Front Street	6/13/19	11	7/16/2019	13	8/23/19	8
Leeds	Leonard Street	6/13/19	14	7/16/2019	14	8/23/19	12
Leeds	Reservoir Road	6/13/19	6	7/16/2019	6	8/23/19	6
Leeds	Florence Street (construction 6/13, 7/16)	6/13/19	20	7/16/2019	25	8/23/19	28
Florence	Maple Street	6/11/19	9	7/16/2019	9	8/22/19	9
Florence	Nonotuck Street (construction 6/11, 7/16)	6/11/19	25	7/16/2019	22	8/22/19	37
Florence	Beacon Street	6/11/19	9	7/16/2019	7	8/22/19	10
Florence	Spring Street (under construction 6/11,7/16,8/22)	6/11/19	15	7/16/2019	0	8/22/19	52
Florence	Hatfield Street	6/11/19	18	7/16/2019	21	8/22/19	19
Florence	Greeley Ave.	6/11/19	2	7/16/2019	2	8/22/19	2
Florence	N.Main Street	6/11/19	55	7/16/2019	53	8/22/19	55
Florence	Main Street	6/13/19	17	7/16/2019	16	8/22/19	17
Florence	North Maple (construction 6/11, 7/16)	6/11/19	46	7/16/2019	45	8/22/19	52
Florence	Meadow Street	6/11/19	8	7/16/2019	8	8/22/19	10
Florence	Spring grove	6/11/19	4	7/16/2019	4	8/22/19	4
Florence	Pine Street	6/11/19	24	7/16/2019	27	8/22/19	29
Florence	Chestnut Street	6/11/19	4	7/16/2019	4	8/22/19	4
Florence	Park Street	6/11/19	13	7/16/2019	11	8/22/19	13
Florence	Keyes Street	6/11/19	5	7/16/2019	8	8/22/19	8
Florence	Lilly Street	6/11/19	9	7/16/2019	9	8/22/19	9
Florence	JFK	6/11/19	25	7/16/2019	24	8/22/19	25
Florence	Smith Voc.	6/11/19	22	7/16/2019	25	8/22/19	25

Northampton 2019 Catch Basin Report

		Round 1		Round 2		Round 3	
Area	**Street**	**Date**	**#of Basins**	**Date**	**Area**	**Street**	**Date**
Florence	Jackson Street School	6/11/19	10	7/16/2019	10	8/22/19	10
Florence	Jackson Street	6/13/19	26	7/16/2019	26	8/22/19	26
Route 66	Burts Pit Road (UNDER CONSTRUCTION 6/13, 7/16)	6/13/19	0	7/16/2019	37	8/23/19	62
Route 66	Easthampton Rd.	6/13/19	10	7/16/2019	10	8/23/19	10
Route 66	Mtn. Laurel Path	6/13/19	2	7/16/2019	2	8/23/19	2
Route 66	Stone Ridge Rd.	6/13/19	7	7/16/2019	6	8/23/19	6
Route 66	Maple Ridge Rd.	6/13/19	16	7/16/2019	16	8/23/19	16
Route 66	Crestview	6/13/19	6	7/16/2019	6	8/23/19	6
Route 66	Willow Street	6/13/19	5	7/16/2019	5	8/23/19	5
Route 66	Blk. Birch Trail	6/13/19	2	7/16/2019	2	8/23/19	2
Route 66	Spruce Lane	6/13/19	4	7/16/2019	4	8/23/19	4
Route 66	Prince Street	6/13/19	4	7/16/2019	4	8/23/19	4
Route 66	Chapel Street	6/13/19	10	7/16/2019	10	8/23/19	10
Route 66	Bliss Street	6/13/19	6	7/16/2019	6	8/23/19	6
Route 66	Barrett Place	6/13/19	8	7/16/2019	8	8/23/19	8
Route 66	Earle Street	6/13/19	10	7/16/2019	10	8/23/19	10

THE COMMONWEALTH OF MASSACHUSETTS

EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

Department of Agricultural Resources
251 Causeway Street, Suite 500, Boston, MA 02114
617-626-1700 fax: 617-626-1850 www.mass.gov/agr

MDAR
MASSACHUSETTS DEPARTMENT OF AGRICULTURAL RESOURCES

THE ACT PROTECTING CHILDREN AND FAMILIES FROM HARMFUL PESTICIDES OF 2000

Massachusetts Pesticide Enforcement Consumer Information Bulletin FOR SCHOOLS, DAYCARE CENTERS AND SCHOOL AGE CHILD CARE PROGRAMS

The Massachusetts Pesticide Control Act requires parents, staff, and children to receive this Consumer Information bulletin whenever pesticide applications are being made on the property of your school, daycare center or school age child care program. This bulletin is being provided to you along with a Standard Written Notification form and a Pesticide Specific Factsheet.

Why am I receiving this information and what should I do when I receive it?
The purpose of the Standard Written Notification is to provide you with information about pesticide applications which are taking place on the property of your school, day care center or school age child care program. The bulletin provides information about precautions you can take to minimize exposure to any pesticides. The Pesticide Specific Factsheets provide information about the properties of the pesticides being used.

Who applies pesticides in my school, daycare center or school age child care program?
Commercial pest management professionals, facilities managers, grounds personnel or custodians. Regardless of the approach used, the person who applies the pesticides must have a current and valid Pesticide Bureau Applicator license. Check the standard written notification form for the applicator's license number.

How do I know when pesticides are being applied?
Employees, supervised children and their guardians must receive standard written notification at least two working days prior to the application of pesticides outdoors on the property. The standard written notification form, which accompanies this bulletin, includes:

- approximate dates when the application shall commence and conclude;
- specific location of the application;
- product name, type and EPA Registration number of the pesticide;
- a Pesticide Specific Fact Sheet;
- a description of the purpose of the application and
- this Consumer Information Bulletin

The notification must also be posted in a common area of the facility at least two working days before the outdoor application is to commence and at least 72 hours after the application. Treated areas will be posted with clear and conspicuous warning signs along the perimeter. This information will be supplied to the school by the licensed pesticide applicator.

PESTICIDE STANDARD WRITTEN NOTIFICATION

FOR SCHOOLS, DAY CARE PROGRAMS, AND SCHOOL-AGE CHILDCARE PROGRAMS

- The school, day care center, and/or school-age childcare program is responsible for sending this standard written notification form to employees, pupils, parents etc. to insure that they receive this information at least 2 working days prior to any pesticide use.
- It is recommended that the Pest Management Professional use this ready-to-copy standard written notification form for the purpose of providing pesticide use information to the school, day care center, and/or school-age childcare program. The Pest Management Professional should save this form for copying.

School: Northampton High School

Name of School , Day care center, and/or School age childcare program

Pest Management Company: TruGreen — 2160 Westover Rd

(Please Print) Name — Address

Pest Management Professional: Paul Labonte — 29859

(Please Print) — License number

A. List the Approximate Dates on which the pesticide use shall commence and conclude

Beginning Date 4/18/19 **Ending Date** 4/18/19

B. Record the specific location of the anticipated pesticide use

All Athletic Fields in back of school

C. Pesticide Information (Pest Management Professional should be specific as is possible when listing product(s) to be used)

Pesticide Product Name	Pesticide Type	EPA Registration #	Description/Purpose of treatment and/or application
1. Fertilzer w/ Barricade	Herbicide	961-367	Crabgrass
2. Escalade 2	Herbicide	228-442	Clover, Dandelions and broadleaf weeds
3.			
4.			
5.			

This standard written notification must be accompanied by the following 2 documents. These materials are available from the MDAR web page www.mass.gov/agr. Follow the links to the Children's Protection page.

- Chemical Specific Fact Sheet(s)
- Consumer Information Bulletin for school, day care center, and/or school-age childcare program.

PERSONAL PROTECTION EQUIPMENT:

EYES AND FACE: Safety glasses with side shields, goggles, or face shield are required
RESPIRATORY: NIOSH/MSHA approved respiratory protection
GLOVES: PVC gloves recommended
PROTECTIVE CLOTHING: Long-sleeved shirt and long pants, shoes plus socks

WORK HYGENIC PRACTICES: Practice good care and good safety precautions when handling this product.

IX. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: Not Applicable
MELTING POINT: Not Applicable
VAPOR DENSITY (air = 1): Not Applicable
ODOR: Bland odor
APPEARANCE: Multi-colored granules
pH: Not Determined

SPECIFIC GRAVITY: Not Applicable
EVAPORATION RATE: Not Applicable
VAPOR PRESSURE: Not Applicable
SOLUBILITY IN WATER: Partially soluble
PERCENT VOLATILE: Not Applicable
BULK DENSITY (lbs./cu ft): 56 - 60

X. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Oxidizing agents; thermal, mechanical and electrical ignition sources
STABILITY: Stable
POLYMERIZATION: Will not occur
INCOMPATIBLE MATERIALS: Strong acids, alkalis
HAZARDOUS DECOMPOSITION PRODUCTS: If heated to decomposition, may give off ammonia and formaldehyde as well as oxides of sulfur, manganese, magnesium, iron, potassium and phosphorus, nitrogen, carbon, and chlorine. Urea can yield cyanuric acid or biuret upon heating.

XI. TOXICOLOGICAL INFORMATION

EYE EFFECTS: (Rabbit): Mildly irritating (AI)
SKIN EFFECTS: (Rabbit): Non-irritating (AI)
DERMAL LC_{50}: (Rat): >2000 mg/kg body weight (AI)
ORAL LD_{50}: (Rat): >5000 mg/kg body weight (AI)
INHALATION LC_{50}: (Rat): >1.8 mg/l air – 4 hours (AI)
SENSITIZATION: (Guinea Pig): Sensitizing (AI)
ACUTE EFFECTS FROM OVEREXPOSURE: Eye irritation, possible skin sensitization
CHRONIC EFFECTS FROM OVEREXPOSURE: Prodiamine: (AI)
Reproductive Hazard Potential: Fetal toxicity at high dose levels (rats); developmental and maternal toxicity observed at 1 g/kg/day.
Chronic/Subchronic Toxicity Studies: Liver (alteration and enlargement) and thyroid effects (hormone imbalances) at high dose levels (rats); decreased body weight gains
CARCINOGENICITY: Prodiamine: (AI)
Potential: Benign thyroid tumors (rat). None observed (mouse)

IARC: Sodium Sulfite, Group 3
NTP: Not Listed
OSHA: Not Listed
OTHER: Not Listed

XII. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: No data available for the formulation. The information presented here is for the active ingredient, Prodiamine: (AI)
Stable in sterile water, in the dark at pH 5,7 and 9, but degrades rapidly in the light, in both water (t1/2 = 0.33 hr @ pH 5.5) and soil (t1/2 – 50 hr). Degradation in soil, in the dark is variable under aerobic conditions (t1/2 ~ 57 – 218 d), more rapid under anaerobic conditions (t1/2 ~ 30 d). Immobile in various soils (Koc >9000). Bioaccumulation is high (BCF = 1300X, whole fish).
ECOTOXICOLOGICAL INFORMATION: No data

XIII. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS:

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

Container: Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill, or at an incineration facility, or, if allowed by state and local authorities, by burning locally. If burned, stay out of smoke.

XIV. TRANSPORTATION INFORMATION:

DOT Transportation: Not Regulated
Proper Shipping Name: Not Applicable
Hazard Class: Not Applicable
U.S. Surface Freight Class: Herbicides, NOI
Reportable Quantity (RQ): Not Applicable

ID NO.: Not Applicable
Marine Pollution #1: Not Applicable
HM 181 Shipping Name: Not Regulated

XV. REGULATORY INFORMATION – UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

Y **Immediate (Acute Health)**
N **Delayed (Chronic Health)**
N **Fire**
N **Sudden Release of Pressure**
N **Reactivity**

SEC 302: Not Applicable
SEC 304: Not Applicable
SEC 313: Not Applicable
CERCLA RQ: Iron Sulfate (7720-78-7) 1,000
CAA RQ: Not Applicable

EPA Registration No.: 10404-88 (0.20%); 10404-89 (0.43%); 10404-90 (0.68%); 10404-91 (2.0%); 60063-28-10404 (0.29%); 100-1338-10404 (0.28%); 100-1339-10404 (0.38%)

Preparation and distribution of this Material Safety Data Sheet is done for LESCO, Inc., pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

The information contained herein is based on available data. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof; and you should make your investigation to determine safety for the use you contemplate. LESCO makes no warranty of merchantability of fitness for a particular use, nor is there any other express or implied warranty except as may be specifically provided otherwise on product.

LESCO, Inc. assumes no responsibility or liability for any incidental or consequential damages whether related to personal injury or property damage, to vendees, users or third parties, caused by the material and LESCO's responsibility is limited to replacement of, or repayment of, the purchase price for the material(s) with respect to which any damages are claimed. All vendees or users assume all risk associated with the use of the material(s).

For further information, contact: LESCO, Inc. • 1301 East 9th Street, Suite 1300 • Cleveland, OH 44114-1849 or (800) 321-5325.

MATERIAL SAFETY DATA SHEET #4309

1301 East 9th Street, Suite 1300, Cleveland, OH 44114-1849
EMERGENCY PHONE: LESCO: (800) 321-5325
CHEMTREC: (800) 424-9300

DATE ISSUED: 12/8/09
SUPERSEDES: 11/24/09

I. PRODUCT IDENTIFICATION

PRODUCT NAME: LESCO Stonewall® Pre-emergence Herbicide plus Fertilizer; LESCO Stonewall® (0.20%, 0.29%, 0.43%, 0.68%, 2.0%) Plus Fertilizer; LESCO Barricade® (0.20%, 0.29%, 0.43%, 0.68%, 2.0%) Plus Fertilizer; LESCO Barricade® 0.28% Plus Fertilizer; LESCO Barricade® 0.38% Plus Fertilizer
Chemical Family: Dinitroaniline Herbicide
Chemical Name/Synonyms: N3,N3-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-phenylenediamine

II. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	%(by/wt.)	CAS #	PEL/TLV
Prodiamine	0.20% – 2.0%	29091-21-2	Not Established
Formulated with one or more of the following ingredients. Check specific product label.			
Urea	0 – 98	57-13-6	10 mg/M^3 (dust) 5 mg/M^3 (resp)
Potassium Chloride	0 – 95	7447-40-7	10 mg/M^3
Potassium Sulfate	0 – 95	7778-80-5	10 mg/M^3
Monoammonium Phosphate	0 – 95	7722-76-1	15 mg/M^3 (dust) 5 mg/M^3 TLV
Diammonium Phosphate	0 – 95	7783-28-0	15 mg/M^3 (dust) 5 mg/M^3 (resp)
Ammonium Sulfate	0 – 95	7783-20-2	15 mg/M^3 (dust)
Calcium Carbonate	0 – 95	1317-65-3	15 mg/M^3 (dust) 5 mg/M^3 (resp)
Sulfur	0 – 20	7704-34-9	5 ppm (SO_2)
Iron Oxide	0 – 10	1309-37-1	15 mg/M^3 (dust)
Iron Sulfate	0 – 10	7720-78-7	15 mg/M^3 (dust)
Manganese Oxide	0 – 10	1317-35-7	15 mg/M^3 (dust)
Magnesium Sulfate	0 – 10	7487-88-9	15 mg/M^3 (dust)
Urea Formaldehyde	0 – 10	9011-05-6	Not Established
Sulfate of Potash-Magnesia	0 – 10	14977-37-8	Not Established
Magnesium Carbonate	0 – 10	39409-82-0	Not Established
Biosolids	0 – 10	Not Established	Not Established
Kaolin Clay	0 – 10	Not Established	15 mg/M^3 (dust) 5 mg/M^3 (resp)
Sodium Sulfite	0 – <1	Not Established	Not Established

TLV of all chemicals and mixtures is 15 mg/M^3; TWA is 10 mg/M^3; Respirable dust TLV of 5mg/M^3, unless otherwise indicated

III. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Primary Route(s) of Entry: Eyes, Skin, Inhalation, Ingestion
POTENTIAL HEALTH EFFECTS: May cause mild irritation to skin and eyes. Ingestion of large amounts may cause gastrointestinal disorder, nausea, vomiting and/or diarrhea.
EYE: May cause mild irritation
SKIN: Prolonged or frequently repeated skin contact may cause allergic reactions to some individuals.
INHALATION: Dust may be irritating to nose, respiratory tract and throat
INGESTION: Ingestion may result in rapid onset of abdominal pain, nausea, diarrhea, blurred vision, sweating, salivation, muscle twitching, and tremors.
MEDICAL CONDITIONS AGGRAVATED: Pre-existing respiratory, skin, or eye conditions

POTENTIAL ENVIRONMENTAL HAZARDS: This product has low solubility in water. At the limits of solubility, this product is not toxic to fish. However, at concentrations above the level of water solubility, it may be toxic to fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

IV. FIRST AID MEASURES

EYES: Flush with large amounts of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.
SKIN: Remove contaminated clothing. Wash area of contact thoroughly with soap and water. Get medical attention if irritation persists.
INHALATION: If symptoms develop, remove person from source of exposure to fresh air. If breathing is difficult, administer oxygen if available. Get medical attention if irritation persists.
INGESTION: Give 1 or 2 glasses of water. Induce vomiting by touching back of throat with finger. Do not give anything by mouth to an unconscious person. Seek medical attention.
NOTES TO MEDICAL DOCTOR: Treat symptomatically

V. FIRE FIGHTING MEASURES

Flash Point (Method Used): Not Applicable

Auto Ignition Temperature: Not Applicable

Lower Explosion Limits: Not Applicable

Upper Explosion Limits: Not Applicable

NFPA/HMIS Rating: Health: 2 Fire: 1 Reactivity: 0

EXTINGUISHING MEDIA:

x	Foam		Alcohol Foam	x	Dry Chemical
x	Water Spray	x	Use media suitable for surrounding fire	x	CO_2

EXPLOSION HAZARDS: Dispersion of fine dust in the air may form an explosive mixture.
FIRE FIGHTING PROCEDURES: Wear NIOSH approved positive pressure, self-contained breathing apparatus. Do not breathe fumes. Remove from area of fire at first opportunity. Prevent water runoff from entering drains, sewers or water sources. Fertilizer will become slippery when wet Guard against falls.
HAZARDOUS COMBUSTION PRODUCTS: If heated to decomposition, will give off toxic fumes of ammonia and formaldehyde. Under fire conditions, urea may decompose to cyanuric acid, biuret or ammonia. Thermal decomposition product may also include, but are not limited to, oxides of nitrogen, hydrogen fluoride and carbon monoxide

VI. ACCIDENTAL RELEASE MEASURES

RELEASE NOTES: If material is spilled, sweep up, keeping dust to a minimum and store for re-use. Contaminated product and/or environmental media should be recovered and disposed of properly. Avoid breathing the dust.

VII. HANDLING AND STORAGE

GENERAL PROCEDURES: Read product label before handling. Use only as directed on the label. Do not contaminate water, food, or feed by storage or disposal. Store in original container away from other fertilizer, feed, or food stuffs and separated from other pesticides and way from drains, sewers, and water sources. Do not contaminate water source from disposal of equipment washwater. Do not eat, drink, or smoke while handling this product.
OTHER PRECAUTIONS: Keep out of reach of children. Avoid contact with eyes, skin and clothing. Wash thoroughly after using.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust ventilation recommended. Applicators should stand upwind when handling.

Nufarm

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night: 1-800-424-9300. For Medical Emergencies Only, Call 1-877-325-1840.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Escalade$_{TM}$ ^{2}
Synonyms: Herbicide Mixture of 2,4-D, Fluroxypyr and Dicamba
EPA Reg. No.: 228-442

Company Name: Nufarm Americas Inc.
1333 Burr Ridge Parkway, Suite 125A
Burr Ridge, IL 60527

Date of Issue: July 15, 2005 **Supersedes:** June 17, 2005
Sections Revised: 1, 2 and 9

2. HAZARDS IDENTIFICATION

Emergency Overview:
Appearance and Odor: Amber colored liquid with an amine odor.
Warning Statements: Keep out of reach of children. WARNING. Avoid contact on skin, eyes or clothing. Causes substantial but temporary eye injury. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin or on clothing.

Potential Health Effects:
Likely Routes of Exposure: Inhalation, eye and skin contact
Eye Contact: Causes substantial but temporary eye damage. Vapors and mist may cause irritation.
Skin Contact: Moderately irritating. Overexposure by skin absorption may cause symptoms similar to those for ingestion.
Ingestion: Harmful if swallowed. May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation, weakness and central nervous system depression.
Inhalation: Low inhalation toxicity.
Medical Conditions Aggravated by Exposure: Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

See Section 11: TOXICOLOGICAL INFORMATION for more information

Potential Environmental Effects:
This product is toxic to fish. Drift or runoff from treated areas may be hazardous to aquatic organisms and non-target plants.

See Section 12: ECOLOGICAL INFORMATION for more information

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	% BY WEIGHT
Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	2008-39-1	39.53
1-Methylheptyl Ester of Fluroxypyr	81406-37-3	5.90
Dicamba (3,6-Dichloro-o-Anisic Acid)	1918-00-9	4.10
Other Ingredients Including:		50.47
Aromatic Solvent	64742-94-5	
(Contains Naphthalene)	91-20-3	

4. FIRST AID MEASURES

If in Eyes: Hold eye open and rinse slowly and gently with water for 15 to 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: 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.
If on Skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.
If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

5. FIRE FIGHTING MEASURES

Flash Point: >230°F (>110°C) Setaflash
Autoignition Temperature: Not determined **Flammability Limits:** Not determined

Extinguishing Media: Recommended for large fires: foam or water spray. Recommended for small fires: dry chemical or carbon dioxide.
Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.
Unusual Fire and Explosion Hazards: If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.
Hazardous Decomposition Materials (Under Fire Conditions): May produce gases such as hydrogen chloride, nitrogen oxides, and carbon oxides.

National Fire Protection Association (NFPA) Hazard Rating:
Rating for this product: Health: 2 **Flammability:** 1 **Reactivity:** 1
Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

6. ACCIDENTIAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.
Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.
Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.
Methods for Clean-Up and Disposal: Pump any free liquid into an appropriate closed container. Collect washings for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.
Other Information: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

Handling:
Avoid contact with skin, eyes or clothing. Do not get in eyes, on skin or on clothing. Users should wash hands, face, and arms with soap and water before eating, smoking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash

See Section 2: HAZARDOUS IDENTIFICATION for more information.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Data on 2,4-D Dimethylamine Salt

96-hour LC_{50} Bluegill:	524 mg/l	Bobwhite Quail Oral LD_{50}:	500 mg/kg
96-hour LC_{50} Rainbow Trout:	250 mg/l	Mallard Duck 8 day Dietary LC_{50}:	>5,620 ppm
48 hour EC_{50} Daphnia:	184 mg/l		

*Data on Fluroxypyr 1-Methylheptyl Ester:

Acute LC_{50} Blue Gill:	above water solubility	Bobwhite Quail Acute Oral LD_{50}:	>2,000 mg/kg
Acute LC_{50} Rainbow Trout:	above water solubility	Mallard Duck Acute Oral LC_{50}:	>2,000 mg/kg
Acute Immobilization EC 50 Daphnia Magna:	>499 µg/L		

*Fluroxypyr 1-Methylheptyl Ester is highly insoluble in water.

Data on Dicamba

96-hour LC_{50} Bluegill:	135 mg/l	Bobwhite Quail 8 day Dietary LC_{50}:	>10,000 ppm
96-hour LC_{50} Rainbow Trout:	135 mg/l	Mallard Duck 8 day Dietary LC_{50}:	>10,000 ppm
48 hour EC_{50} Daphnia:	110 mg/l		

Environmental Fate:

In laboratory and field studies, 2,4-D DMA salt rapidly dissociated to parent acid in the environment. The typical half-life of the resultant 2,4-D acid ranged from a few days to a few weeks. Fluroxypyr has a hydrolysis half-life of 12.8 to 16.5 hours. Under aerobic and anaerobic soil conditions the half-life for Fluroxypyr is 7 days. Dicamba has low bioaccumulation potential, is not persistent in soil, is highly mobile in soil and degrades rapidly.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Pesticide wastes are toxic. If container is damaged or if pesticide has leaked, contain all spillage. Absorb and clean up all spilled material with granules or sand. Place in a closed, labeled container for proper disposal. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling and Disposal:

Plastic Bottles and Non-Returnable Plastic Drums: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Returnable/Refillable Containers: Close all openings and replace all caps. Contact Nufarm Customer Service at 1-800-345-3330, to arrange for return of the empty refillable container.

14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this MSDS.

For Department of Transportation (DOT) regulatory information, if required, consult transportation regulations, product-shipping papers or call Nufarm's DOT Manager at 708-755-2104, Monday through Friday, 8:00 AM to 5:00 PM Central Time.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

TSCA Inventory: This product is exempted from TSCA because it is solely for FIFRA regulated use.

SARA Hazard Notification/Reporting:
Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):
Immediate, Delayed

Section 313 Toxic Chemical(s):
Acetic Acid, (2,4-Dichlorophenoxy)- (CAS No. 94-75-7), 32.83% equivalent by weight in product
Dicamba (CAS No. 1918-00-9), 4.10% by weight in product
Naphthalene (CAS No. 91-20-3), 0.77% by weight in product

Reportable Quantity (RQ) under U.S. CERCLA:
Acetic Acid, (2,4-Dichlorophenoxy)- (CAS No. 94-75-7) 100 pounds
Dicamba (CAS No. 1918-00-9) 1,000 pounds
Naphthalene (CAS No. 91-20-3) 100 pounds

RCRA Waste Code:
Acetic Acid, (2,4-Dichlorophenoxy)- (CAS No. 94-75-7) U240
Naphthalene (CAS No. 91-20-3) U165

State Information:
Other state regulations may apply. Check individual state requirements.

California Proposition 65: WARNING. This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

16. OTHER INFORMATION

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Nufarm Americas Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Nufarm Americas Inc. be responsible for damages of any nature whatsoever resulting from the use or of reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

If the container is over one gallon and less than five gallons, then persons engaged in open pouring of the product must also wear coveralls or a chemical-resistant apron. If the container is five gallons or more in capacity, do not open pour product from the container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of the container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal.

Storage:
Always use original container to store pesticides in a secured warehouse or storage building. Protect from freezing. Store at temperatures above 25°F. If allowed to freeze, remix before using. This does not alter the product. Containers should be opened in well-ventilated areas. Keep container tightly sealed when not in use. Do not stack cardboard cases more than two pallets high. Do not store near open containers of fertilizer, seed or other pesticides. Do not contaminate water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:
Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Personal Protective Equipment:
Eye/Face Protection: To avoid contact with eyes, wear face shield, goggles or safety glasses with front, brow and temple protection. An emergency eyewash should be readily accessible to the work area.
Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, socks, shoes and chemical-resistant gloves. When open pouring the product, also wear coveralls or a chemical-resistant apron. An emergency shower should be readily accessible to the work area.
Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.
General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) Do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Exposure Guidelines:

	OSHA		ACGIH		
Component	TWA	STEL	TWA	STEL	Unit
DMA Salt of 2,4-D	10*	NE	10*	NE	mg/m^3
Fluroxypyr	NE	NE	NE	NE	
Dicamba	NE	NE	NE	NE	
Naphthalene	10	NE	10 (Skin)	15 (Skin)	ppm

*Based on adopted limit for 2,4-D
NE = Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Amber colored liquid with an amine odor.

Boiling Point:	Not determined	**Solubility in Water:**	Soluble
Density:	9.74 pounds/gallon	**Specific Gravity:**	1.169
Evaporation Rate:	Not determined	**Vapor Density:**	Not determined
Freezing Point:	25°F (4°C)	**Vapor Pressure:**	Not determined

pH: 5.9 (1% solution) **Viscosity:** 51.6 cps @ 25°C

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

10. STABILITY AND REACTIVITY

Chemical Stability: This material is stable under normal handling and storage conditions.
Conditions to Avoid: Excessive heat. Do not store near heat or flame.
Incompatible Materials: Strong oxidizing agents: bases and acids.
Hazardous Decomposition Products: Under fire conditions, may produce gases such as hydrogen chloride, nitrogen oxides, and carbon oxides.
Hazardous Reactions: Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological Data:
Data from laboratory studies conducted on a similar, but not identical, formulation:
Oral: Rat LD_{50}: 1, 750 mg/kg (female); FIFRA Category III
Dermal: Rats LD_{50}: >2,000 and <5,000 mg/g; FIFRA Category III
Inhalation: Rat 4-hr LC_{50}: >2.07 mg/L; FIFRA Category IV
Eye Irritation: Rabbits (3): Moderately irritating; FIFRA Category II
Skin Irritation: Rabbits (3); Moderately irritating; FIFRA Category III
Skin Sensitization: Not a contact sensitizer in guinea pigs following repeated skin exposure.

Subchronic (Target Organ) Effects: Repeated overexposure may cause effects to liver, kidneys, blood chemistry, testes and gross motor function. Rare cases of peripheral nerve damage have been reported, but extensive animal studies have failed to substantiate these observations, even at high doses for prolonged periods.
Carcinogenicity / Chronic Health Effects: The International Agency for Research on Cancer (IARC) lists exposure to chlorophenoxy herbicides as a class 2B carcinogen, the category for limited evidence for carcinogenicity in humans. However, more current 2,4-D lifetime feeding studies in rats and mice did not show carcinogenic potential. The U.S. EPA has given 2,4-D and dicamba a Class D classification (not classifiable as to human carcinogenicity). Fluroxypyr did not cause cancer in laboratory animals. The hydrocarbon component may contain naphthalene, which is listed by IARC as a class 2B and the U.S. National Toxicology Program as reasonably anticipated to be a human carcinogen.
Reproductive Toxicity: No impairment of reproductive function attributable to 2,4-D have been noted in laboratory animal studies. In animal studies, fluroxypyr has been shown not to interfere with reproduction. Dicamba did not interfere with fertility in reproduction studies in laboratory animals.
Developmental Toxicity: Studies in laboratory animals with 2,4-D have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals. Fluroxypyr did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects in the mother. Animal tests with dicamba have not demonstrated developmental effects.
Genotoxicity: There have been some positive and some negative studies, but the weight of evidence is that 2,4-D is not mutagenic. Animal tests with fluroxypyr and dicamba did not demonstrate mutagenic effects.

Assessment Carcinogenicity:
This product contains substances that are considered to be probable or suspected human carcinogens as follows:

	Regulatory Agency Listing As Carcinogen			
Component	ACGIH	IARC	NTP	OSHA
Chlorophenoxy Herbicides	No	2B	No	No
Naphthalene	No	2B	Yes*	No

*Reasonably anticipated to be a human carcinogen