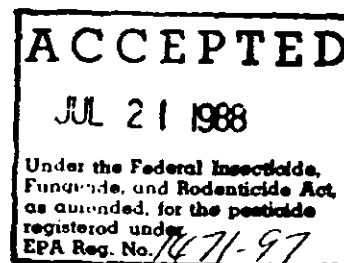


June 23, 1988

Mr. Robert J. Taylor
Product Manager (25)
Office of Pesticide Programs (TS-767C)
Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460



Dear Mr. Taylor:

RE: TRANSMITTAL DOCUMENT
SPIKE® 80W (EPA REG. NO. 1471-97)
LABEL AMENDMENT TO ACCOMMODATE WATER SOLUBLE PACKAGING

In addition to our current packaging in 4 and 25 pound bags, Elanco Products Company is planning to market SPIKE 80W in water soluble packaging. Thus, enclosed are the following to amend the above registration.

<u>Volume/ Guideline No.</u>	<u>Study Title and File Reference</u>
Volume 1	Transmittal Document and Application for Pesticide Amendment (Form 8570-1)
Volume 2	Amended Label [103***WP**80/LABELS/US/F3002/83-98]

The only proposed changes on the label are those which refer to the water soluble packaging. No other changes are being requested.

Sincerely,

ELANCO PRODUCTS COMPANY
A DIVISION OF ELI LILLY & COMPANY

James D. Helmer, Ph.D., Project Manager
Plant Science Projects Development
and Registration Division

JDH:cj

---DELETE---

ID 5955

ELANCO

Spike®

80W

Contains 0.8 pound
active ingredient
per 1 pound water
soluble packet.

(Contains 4 one pound water
soluble packets)

Do not remove
packets from
container except
for immediate use.

DELETE

Herbicide
Spike®

80W

Net Weight 4 Pounds

A preemergence and postemergence herbicide for
total control of brush and weeds in such areas as:

- Airport runways
- Utility substations and rights-of-way
- Tank farms
- Railway roadbeds & ballast
- Railroad rights-of-way
- Road shoulders where no vegetation is desired
- Under asphalt and concrete pavements where no future landscaping is planned
- At the base of highway guardrails, signposts, and markers
- At the base of transmission towers and poles
- Around industrial buildings
- Lumberyards
- Railroad yards
- Ditchbanks
- Firebreaks
- Fence rows

The degree and duration of control may vary with the amount of chemical
applied, soil texture, and other conditions.

Active ingredient

tributhyrone 7.15 (1,1-dimethylurea) 13.4

thiadiazol 2-(1,1-dimethylurea)

Inert ingredients

80.0%
20.0%

*Spike®—tributhyrone (Elanco)

Keep Out of Reach of Children

CAUTION

See back panel for additional precautionary statements

Not For Residential Use

EPA Reg. No. 1471-97

EPA Est. 37429 GA 01, 477 TX-1
Superscript used is first letter of list number



See Booklet on Bottom of Bag for Complete Directions for Use

**Directions
Enclosed**

See literature



DELETE

Directions for Use

Read All Directions Carefully
Before Applying

See Booklet on Bottom of Bag for Complete Directions for Use and Precautions

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

STORAGE AND DISPOSAL

Storage: The herbicidal properties of Spike 80W require caution in handling, storage and transportation of this product. Store in original container only. In case of leak or spill, contain material and dispose as waste.

Pesticide Disposal: Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Precautionary Statements

Keep Out of Reach of Children

Hazards to Humans and Domestic Animals

CAUTION

Causes eye irritation. Harmful if swallowed, inhaled, or absorbed through the skin. Avoid breathing dust and contact with skin, eyes, or clothing. Use eye protection and protective clothing, such as coveralls, a long-sleeved shirt, and impermeable gloves when handling this product. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Statements of Practical Treatment

If swallowed: Call a physician or Poison Control Center. Drink one or two glasses of water and induce vomiting by touching back of throat with finger or, if available, by administering one to two teaspoons of syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation develops.

If in eyes: Flush eyes with plenty of water. Call a physician if irritation develops.

If inhaled: Remove individual to fresh air. If breathing difficulty occurs, get medical attention. If not breathing, provide cardiopulmonary resuscitation assistance (mouth-to-mouth) and get medical attention.

Environmental Hazards

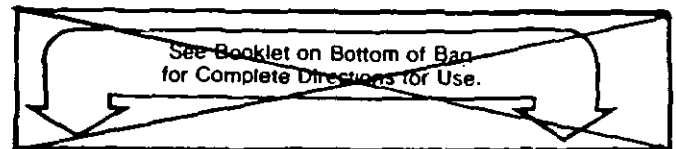
Precaution: Do not use Spike 80W in any area where desirable species are in the vicinity of the plants to be controlled. A small amount of Spike 80W in contact with the roots of desirable trees or other woody species may cause severe injury or death. The roots of such plants may extend far beyond their drip lines.

Do not apply directly to water or wetlands (swamps, bogs, marshes and potholes). Do not contaminate water by cleaning of equipment or when disposing of wastes or equipment washwater.

Do not apply to any portion of the ditchbank that will come into contact with water. Do not apply to ditches used to transport irrigation or potable water.

Elanco Products Company • A Division of Eli Lilly and Company
Indianapolis, IN 46285, U.S.A.

FN 3002



DELETE

Container Disposal: Dispose of overpack in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Each individual one pound water soluble packet will be stamped as follows:

CONTAINS TEBUTHIURON

CAUTION
KEEP OUT OF REACH OF CHILDREN

EPA REG. NO. 1471-97

SEE OVERPACK CONTAINER AND ACCOMPANYING
LITERATURE FOR USE DIRECTIONS

103****/WP**80/LABELS/US/F3002/86

Literature revised June 15, 1988
PI 2157 AMP

Contains 0.8 pound
active ingredient per
1 pound water soluble
packet.

ELANCO

ID 5955



**A preemergence and postemergence
herbicide for total control of brush
and weeds**

Not For Residential Use

Active ingredient:

tebuthiuron* N-[5-(1,1-dimethylethyl)-1,3,4-
thiadiazol-2-yl]-N,N-dimethylurea 80.0%

Inert Ingredients 20.0%

Contains 20 pounds active ingredient per 25 pound bag

Spike—(tebuthiuron, Elanco)

EPA Reg. No. 1471-97

Elanco Products Company
A Division of Eli Lilly and Company
Indianapolis, IN 46285, U.S.A.

Copyright© 1988 by Elanco Products Company

Storage area should be cool, dry, and ventilated.
Do not expose to prolonged heat. Contact of
containers with flames or high temperatures will
cause an explosion. This product will support
combustion. Keep container closed when not in use.
PESTICIDE DISPOSAL: Do not contaminate water,
food, or feed by storage or disposal. Wastes
resulting from the use of this product may be
disposed of on site or at an approved waste
disposal facility.
CONTAINER DISPOSAL: For plastic containers, triple
rinse (or equivalent). Then offer for recycling or
reconditioning, or puncture and dispose of in a
sanitary landfill, or incineration, or, if allowed
by state and local authorities, by burning. If
burned, stay out of smoke. For metal 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.

-- FOR OUTDOOR USE ONLY --
GROUND APPLICATION ONLY.

Do not treat areas where food or feed crops are growing. Do not
apply to potable water. Do not apply this product through any
type of irrigation system.

ORNAMENTALS & TREES

To control certain insects on ornamentals apply PESTROY at the
rates indicated in the following table per 100 gallons of water
with appropriate sprayer. The finished spray should be applied
to the point of runoff, thoroughly wetting all parts of the
affected plants. Use outdoors, in nurseries or greenhouses as a
broadcast or spot application. Repeat applications may be
necessary to maintain insect control. Do not repeat more than
once a week.

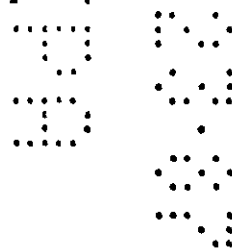


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Directions for Use

Read All Directions Carefully
Before Applying

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

Do not apply Spike 80W through any type of irrigation system.

STORAGE AND DISPOSAL

Storage: The herbicidal properties of Spike 80W require caution in handling, storage and transportation of this product. Store in original container only. In case of leak or spill, contain material and dispose as waste.

Pesticide Disposal: Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Precautionary Statements

Keep Out of Reach of Children.

Hazards to Humans and Domestic Animals

CAUTION

Causes eye irritation. Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing dust and contact with skin, eyes, or clothing. Use eye protection and protective clothing, such as coveralls, long-sleeved shirt, and impermeable gloves when handling this product. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

(Malepella teugifolia); Southern Red Mite (Oligonychus ilices)						
PALMERWORM: Dichomeris ligulella			X			
PSYLLID: Boxwood Psyllid (Psylla buxi); Hackberry Psyllid (Pachypsylla celtidisysipula)		X				
PINE TIPMOTH: (Adult) (Rhyacionia spp.)		X				
SAWFLY: European pine sawfly (Neodiprion sertifer) European spruce sawfly (pine sawfly (Diprion hercyniae)		X				
SCALE: Red pine scale (Matsucoccus resinosa - 1st generation crawler)						X
Cottony Taxus Scale Crawlers; (Pulvinaria floccifera)		X				
SPITTLEBUG: Saratoga spittlebug (Aphrophora saratogensis)				X		
Meadow Spittlebug (Philaenus leucophthalmus)		X				
SLUG: Rose Slug (Endelomyia aethiops)		X				
WEBWORM: Fall Webworm (Hyphantria cunea)				X		
WEEVIL: Pales Weevil (Hylobius pales); Northern Pine Weevil (Pissodes approximatus); Black Vine Weevil (Brachyrhinus sulcatus)		X				
WHITEFLY: Citrus Whitefly (Dialeurodes citri)		X				

Statements of Practical Treatment

If swallowed: Call a physician or Poison Control Center. Drink one or two glasses of water and induce vomiting by touching back of throat with finger or, if available, by administering one to two teaspoons of syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation develops.

If in eyes: Flush eyes with plenty of water. Call a physician if irritation develops.

If inhaled: Remove individual to fresh air. If breathing difficulty occurs, get medical attention. If not breathing, provide cardiopulmonary resuscitation assistance (mouth-to-mouth) and get medical attention.

Environmental Hazards

Precaution: Do not use Spike 80W in any area where desirable species are in the vicinity of the plants to be controlled. A small amount of Spike 80W in contact with the roots of desirable trees or other woody species may cause severe injury or death. The roots of such plants may extend far beyond their drip lines.

Do not apply directly to water or wetlands (swamps, bogs, marshes and potholes). Do not contaminate water by cleaning of equipment or when disposing of wastes or equipment washwaters.

Do not apply to any portion of the ditchbank that will come into contact with water. Do not apply on ditches used to transport irrigation or potable water.

4

Precautions



Spike 80W is intended for noncrop vegetation control. It is an extremely active herbicide which will kill trees, shrubs and other forms of desirable vegetation having roots extending into the treated area. Feeder roots of many species of desirable vegetation extend many feet beyond the drip line of the branches, and a very small amount of Spike 80W in contact with one feeder root of a tree, shrub or other desirable vegetation may cause serious injury or death to the entire plant.

An arboriculturist (tree expert) should be consulted to help you to determine if the area of proposed application is free of all roots of desirable vegetation. The effect of Spike 80W on desirable vegetation may be irreversible and its presence in the soil may prevent growth of other desirable vegetation for some years after application.

Read the entire label before using Spike 80W. Determine if this product is suitable for the desired purpose.

Do not use Spike 80W on areas such as waterways, driveways, streets, lawns, patios, tennis courts, swimming pools, cemeteries, or other landscaped areas, or under asphalt or concrete pavement where future landscaping is planned. Do not apply on crops. Do not apply on any area into which the roots of field crops or other desirable vegetation extend. Roots of trees, shrubs, and other desirable

EUONYMUS	(<i>Euonymus fortunei</i>) - Evergreen euonymus (<i>Euonymus japonicus</i>) - (<i>Euonymus vegetus</i>)
FERN	
FIR	Balsam Fir - Douglas Fir - True Fir (<i>Abies</i> sp.) - Noble Fir - Grand Fir - White Fir - Chester Fir
GARDENIA	Radicans - Mystery - August Beauty
HACKBERRY	(<i>Celtis occidentalis</i>)
HEARTNUT	
HENLOCK	Eastern Hemlock
HONEYSUCKLE	
HONEY LOCUST	
HOLLY	(<i>Ilex crenata</i>) var. <i>convexa</i> - (<i>Ilex cornuta</i>) var. <i>Burfordii</i> - (<i>Ilex rotunda</i>) - (<i>Ilex</i> <i>compacta</i>) - Yaupon (<i>Ilex vomitoria</i>) - (<i>Ilex</i> <i>crenata</i>) var. <i>Helleri</i> - Blue angel (<i>Ilex</i> <i>meserveae</i>)
HOPHORNBEAM	Eastern hophornbeam
HORNBEAM	American hornbeam
HOSTA	Variegated hosta
HORSECHESTNUT	Red horsechestnut
IRIS	Study in Black - Frontier - Marshall
JAPONICA	<i>Pieris Japonica</i>
IVY	English Ivy
JUNE BERRY	(<i>Amelanchier</i>)
JUNIPER	Blue rug (<i>Juniperus horizontalis</i>) - Torulosa - Variegated Prostrata - Hill's Blue - (<i>Juniper</i> <i>chinensis</i>) "Pfitzeriana" - (<i>Juniper chinensis</i>) "Hetzi"
KENTUCKY COFFEETREE	

vegetation may extend far beyond the drip line of the plant's branches.

Avoid nontarget drift or product movement. Do not apply when winds are gusty or under any other condition which will allow drift or product movement. Do not apply to areas where soil movement by water erosion and/or natural or mechanical means is likely. Do not apply to areas where wind is likely to cause soil movement unless a soil sealant is used. Drift or any form of product movement from treated areas may cause damage to any vegetation to which treatment is not intended.

Ditchbank Usage—Do not apply Spike 80W to any portion of the ditchbank that will come into direct contact with water as movement of Spike 80W in this water to non-target plant species may result in the injury or death of those plants. Do not apply on ditches used to transport irrigation or potable water. Keep from contact with other pesticides and seeds.

Thoroughly clean all traces of Spike 80W from application equipment after use. Do not empty residues cleaned from application equipment on areas where they may come in contact with the roots of desirable vegetation or the water source for such vegetation.

Woody Plant Control—Grazing is allowed in areas receiving band or individual plant treatments with 5 pounds per acre or less of Spike 80W. In areas receiving band or individual plant treatments with 5 pounds per acre or less of Spike 80W, grass may be cut for hay one year after application.

6

Spike 80W may injure or suppress certain herbaceous vegetation in the treated area. Therefore, do not apply where such injury cannot be tolerated. Do not apply broadcast applications of Spike 80W where forage or maintenance of a grass cover is desired. Injury to most herbaceous perennials is reduced. Spike 80W is applied when this vegetation is dormant.

Directions for Use

Read All Directions Carefully Before Applying.

Do not apply Spike 80W through any type of irrigation system.

Total Vegetation Control

Spike 80W is a preemergence and postemergence herbicide for total control of vegetation in suitable noncropland areas as: airport runways, utility substations and rights-of-way, road shoulders where no vegetation is desired, under asphalt and concrete pavements where no future landscaping is planned, at the base of highway guardrails, sign posts and markers, at the base of transmission towers and poles, around industrial buildings, lumberyards, railroad yards, ditchbanks, firebreaks, and fence rows.

For total vegetation control in areas not treated the previous season with Spike 80W or other residual herbicides, apply Spike 80W prior to or just after

REDBUD	(<i>Cercis canadensis</i>)
RHODODENDRON	(<i>Rhododendron</i>) var. <i>Azalea mollis</i> - Nova embla (<i>Rhododendron catawbiense</i>) - (<i>Rhododendron</i>) var. <i>Snowball</i>
ROSE	Confidence (<i>Rosa</i>) var. <i>Confidence</i> - Zorina (<i>Rosa</i>) var. <i>Zorina</i> - Nuqqet (<i>Rosa</i>) var. <i>Nuqqet</i>
SERVICEBERRY	Downy Serviceberry
SPRUCE	Blue Spruce (<i>Picea pungens</i>) - Norway Spruce (<i>Picea abies</i>) - White Spruce (<i>Picea glauca</i>) - Alberta Spruce (<i>Picea albertiana</i>) - (<i>Picea</i> <i>englemanni</i>)
SWEETGUM	(<i>Liquidambar styraciflua</i>)
SYCAMORE	American sycamore
TANARACK	
TAXUS	(<i>Taxus media</i>) var. <i>Hicksii</i>
TUPELO	Black Tupelo
TULIPTREE	
VIBURNUM	<i>Viburnum</i> (RL) - <i>Viburnum</i> (SL)
WALNUT	Black Walnut
WILLOW	Laurel willow (<i>Salix pentandra</i>) - Black willow (<i>Salix nigra</i>) - Golden willow
WITCHHAZEL	

Southern Pine Beetle control in Ornamental Pine Trees

Do not use this chemical in Bastrop and Burleson counties, without first consulting with endangered species personnel of Texas Parks and Wildlife Service (telephone 817-334-2961) to ensure adequate safeguards for the endangered Houston toad. Do not use within 1/2 mile of known red-cockaded woodpecker colonies. Apply spray to individual trees using hand or power operated ground application equipment.

emergence of plants as follows:

At 5 pounds per acre, Spike 80W will control the following:

Alfalfa	Hemlock, poison
Aster, heath	Henbit
Aster, white heath	Honeysuckle,
Barley, little	Japanese
Bedstraw	Horseweed,
Bluegrass, annual	Knapweed
Bluegrass, Kentucky	Kochia
Bouncingbet	Lambsquarters
Bromegrass, downy	Lupine
Bromegrass, ripgut	Medic, black
Bromegrass, smooth	Morningglory
Broomsedge	Mullein, common
Buffelgrass	Nightshade,
Burclover	silverleaf
Buttercup,	Oat, wild
smallflower	Panicum, Texas
Camphorweed	Pepperweed,
Carrot, wild	Virginia
Catsear, spotted	Pigweed
Cheat	Plantain, buckhorn
Chickweed	Puncturevine
Clover, red	Ragweed, giant
Cocklebur	Raspberry, red
Creosote, Virginia	Ryegrass, Italian
Crowfootgrass	Sedge, annual
Dock, curly	Shepherdspurse
Dogfennel	Sida, prickly
Fescue	Sowthistle, annual
Fescue, rattail	Spikeweed

Fiddleneck, coast

Filaree	Spurge
Filaree, redstem	Spurge, spotted
Fleabane, annual	Starthistle,
Foxtail	yellow
Gaillardia,	Strawberry
rosering	Sunflower, common
Geranium,	Telegraphplant
Carolina	Timothy
Goldenrod	Trumpet creeper
Grape	Velvetgrass
Gumweed	Vetch
	Witchgrass

At 7.5 pounds per acre, Spike 80W will control the following:

Awnggrass, triple	Ivy, poison
Barley, foxtail	Reed, common
Bromegrass, Japanese	Sandbar, field
Canarygrass,	Smartweed, swamp
reed	Sowthistle,
Carpetweed	perennial
Chicory	Spurge, prostrate
Cinquefoil, common	Sumac, staghorn
	Sweetclover, white

For the maintenance of total vegetation control in noncropland areas east of the Rocky Mountains which were treated the previous season with Spike 80W or other residual herbicides, apply Spike 80W prior to or just after emergence of plants as follows. (Some of the species listed may show erratic control depending on the time between application and weed germination.)