PESTICIDE DRIFT

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Central Regional Office - Fresno

Drift Mitigation

- What is drift?
- Laws and regulations, policy
- Application methods
- Drift cases
- Mitigation

Drift Mitigation

ENF 2000-034, Pesticide Drift Incident Policy

Drift - the pesticide that moves through the air and is not deposited on the target area at the time of the application.

Drift Mitigation - Law

CFAC section 12972:

The use of any pesticide by any person shall be in such a manner as to prevent substantial drift to nontarget areas.

Drift Mitigation

3CCR 6000 – Definition

Substantial drift – the quantity of pesticide outside the target area is greater than which would have resulted had the applicator used due care.

Drift Mitigation

ENF 2000-034, Pesticide Drift Incident Policy

Due care – the degree of care that a prudent and competent person engaged in the same line of business or endeavor would exercise under the same or similar circumstances. When the person does not exercise due care, the person is said to be negligent.

Drift Mitigation

Due Care?

Drift Mitigation – Incidents

Drift Mitigation -Law

CFAC section 12973:

The use of any pesticide shall not conflict with labeling registered pursuant to this chapter which is delivered with the pesticide or with any additional limitations applicable to the conditions of any permit issued by the director or commissioner.

Label Statements

BUCCANEER®
glyphosate herbicide
TENKOZ

SPRAY DRIFT MANAGEMENT

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower is responsible for considering all these factors when making decisions.

7[-1] Aerial Equipment

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL.

Use the specified rates of this herbicide in 3 to 15 gallons of water per

Aerial Applications in CALIFORNIA:

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters.

AVOID DRIFT—DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the following guidelines when aerial applications are made near crops or desirable perennial vegetation after bud break and before total leaf drop, and/or near other desirable vegetation or annual crops.

1. Do not apply within 100 feet of all desirable vegetation or crop(s).
2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within 500 feet of the desirable vegetation or crop(s).
3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crop(s) may require buffer zones in excess of 500 feet.
4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.
5. Apply by air only to nonresidential areas.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations that dispense spray as fine spray droplets. Do not angle nozzles forward into the air-stream and do not increase spray volume by increasing nozzle pressure. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

Label Statements

Specimen Label

Dow AgroSciences

Goal® 2XL

Herbicide

®Trademark of Dow AgroSciences LLC

Active Ingredient

oxyfluorfen: 2-chloro-1-(3-ethoxy-4-nitrophenoxy) 4-(trifluoromethyl)benzene	22.3%
Other Ingredients	77.7%
Total	100.0%

Contains 2 pounds active ingredient per gallon.
Contains petroleum distillates

Keep Out of Reach of Children

WARNING AVISO

Environmental Hazards

This product is toxic to aquatic invertebrates and wildlife. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. See Directions for Use for additional restrictions. Do not contaminate water when disposing of equipment wash water.

Directions for Use

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

Read all Directions for Use carefully before applying.

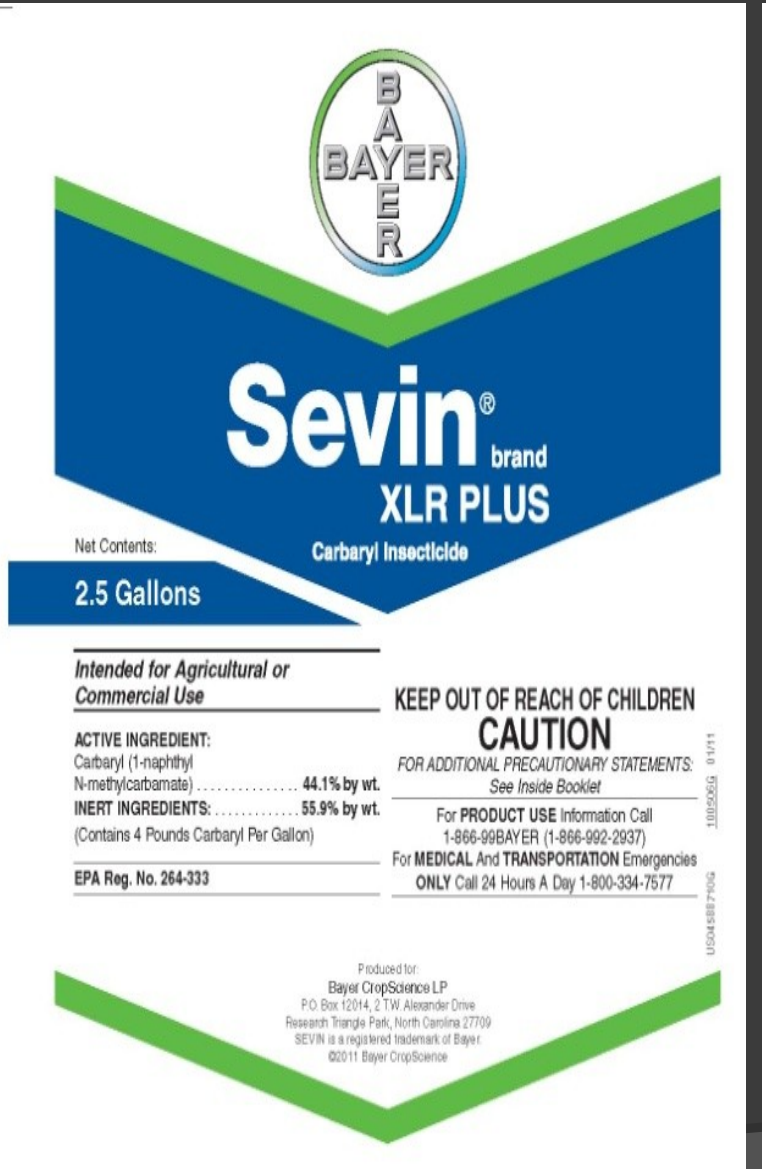
Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Label Statements – Goal 2XL

Spray Drift Buffer Restrictions

- A 25 foot vegetative buffer strip must be maintained between all areas treated with this product and lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.
- Do not allow spray to drift from the application site and contact people, structures people may occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.
- For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy when wind speed is 10 mph or less at the application site as measured by an anemometer.
- Use coarse spray according to ASAE 572 definition for standard nozzles or VMD of 475 microns for spinning atomizer nozzles.
- The applicator also must use all other measures necessary to control drift.

Drift Mitigation – Sevin XLR PLUS



ENVIRONMENTAL HAZARDS

This product is extremely toxic to aquatic invertebrates. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Discharge from rice fields may kill aquatic and estuarine invertebrates. Do not apply when weather conditions favor drift from area treated. Drift and run-off may kill aquatic invertebrates in water adjacent to treated areas. Do not contaminate water by cleaning equipment or disposal of wastes. Do not contaminate water when disposing of equipment washwaters.

BEE CAUTION: This product is highly toxic to honeybees and other bees exposed to direct treatment or residues on crops or weeds in bloom. This product may show residual toxicity to honeybees, especially in humid climates and under slow drying conditions.

Notifying beekeepers within 1 mile of treatment area at lest 48 hours before product is applied will allow them to take additional steps to protect their bees. Limiting application to times when bees are least active, e.g., within 2 hours of sunrise or sunset, will minimize risk to bees.

For crops in bloom (except soybean and corn): Do not apply this product to target crops or weeds in bloom.

For soybean and corn: If application cannot be avoided when target crop or weeds are in bloom, limiting applications to times when bees are least active, e.g. within 2 hours of sunrise or sunset, will minimize risk to bees.

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 before using this product.

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

Drift Mitigation – Label

Sevin XLR PLUS

Drift Mitigation Regulations

3CCR sec. 6600. Gen. Standards of Care.

Each person performing pest control shall:

(a) Use equipment which is in good repair and safe to operate

(b) Perform pest control in a careful and effective manner

(c) Methods and equipment suitable to insure proper application of pesticides

(d) Under climatic conditions suitable insure proper application

(e) Precautions to avoid contamination of the environment

Drift Mitigation – 3CCR 6600

Equipment in Good Repair

Drift Mitigation -3CCR 6600

Careful and Effective, Climatic Conditions

Drift Mitigation – 3CCR 6600

Methods and Equipment Suitable…

Drift Mitigation Regulations

3CCR sec. 6614. Protection of Persons, Animals, and Property.

(a) An applicator prior to and while applying a pesticide shall evaluate all the equipment to be used, meteorological conditions, the property to be treated, and surrounding properties to determine to likelihood of harm or damage

Drift Mitigation Regulations

3CCR sec. 6614 continued….

(b) Notwithstanding substantial would be prevented, no pesticide application shall be made or continued when:

(1) There is a reasonable possibility of contamination of the bodies or clothing of persons not involved in the application process;

(2) There is a reasonable possibility of damage to non-target crops, animals, or other public or private property; or

(3) There is reasonable possibility of contamination of non-target public or private property, including the creation of a health hazard, preventing normal use of such property…

Drift Mitigation – Regulations

Possibility of Contamination

Drift Mitigation – 3CCR 6614

Possibility of Damage

Drift Mitigation – 3CCR 6614

Possibility of Damage

Application Methods

Application Methods

Application Methods

Application Methods

Application Methods

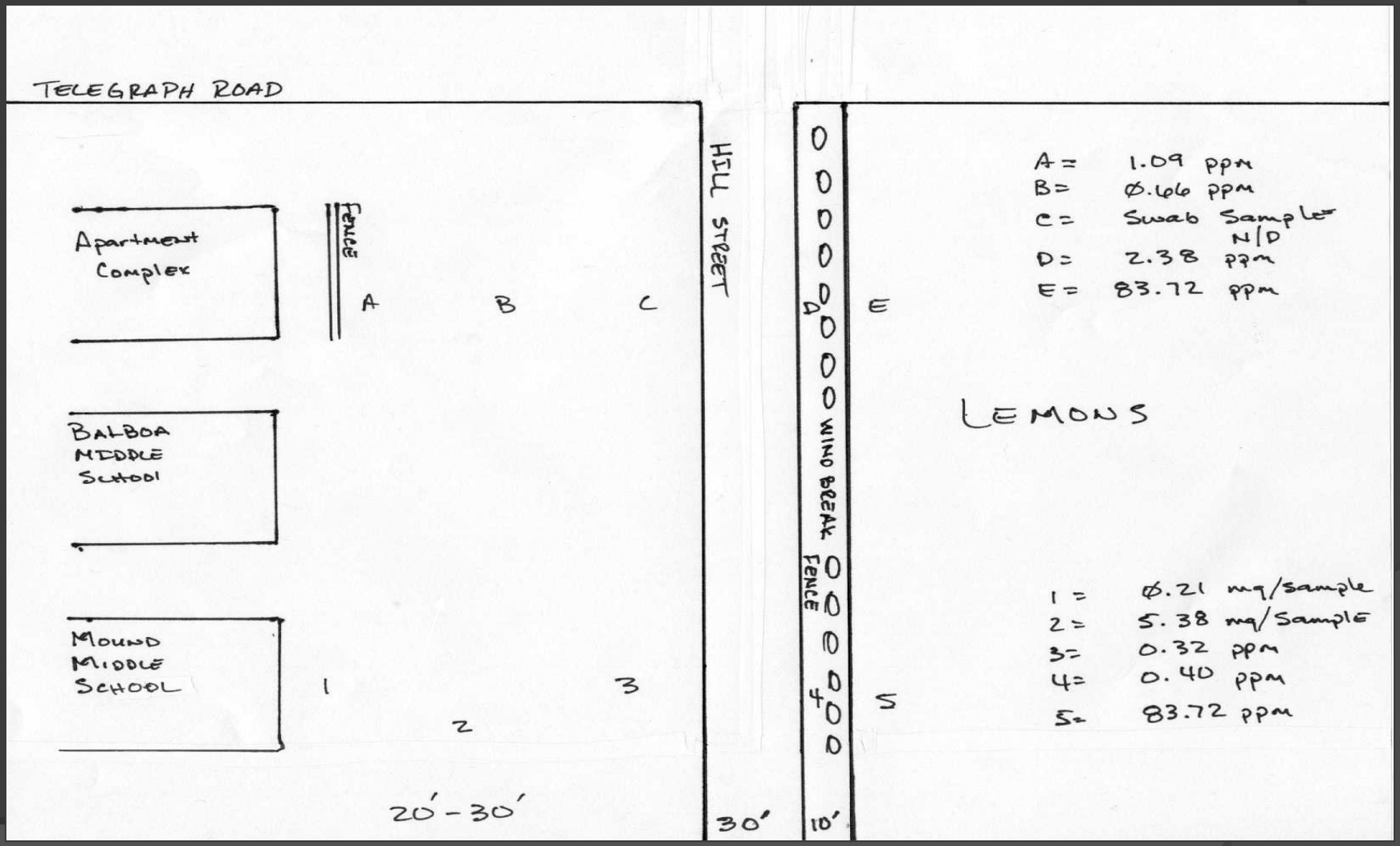
Drift Cases (Incidents)

Incidents

Incidents


Central Coast October 2005
Constitution Blvd & E Boronda Rd,
Constitution Blvd
Boston St
Freedom Pkwy
E Boronda Rd
Durango St
Mezalian St
Image © 2007 DigitalGlobe
© 2007 Navteq
Google

Incident


TELEGRAPH ROAD
Apartment Complex
BALBOA MIDDLE SCHOOL
MOUND MIDDLE SCHOOL
FENCE
A
B
C
1
2
3
20'-30'
HILL STREET
30'
WIND BREAK FENCE
10'
D
E
LEMONS
A = 1.09 ppm
B = Ø.66 ppm
C = Swab Sample N/D
D = 2.38 ppm
E = 83.72 ppm
1 = Ø.21 mg/sample
2 = 5.38 mg/Sample
3 = 0.32 ppm
4 = 0.40 ppm
5 = 83.72 ppm

Diazinon drift onto a pruning crew

Drift Site

1= 0.11ppm

2=0.14ppm

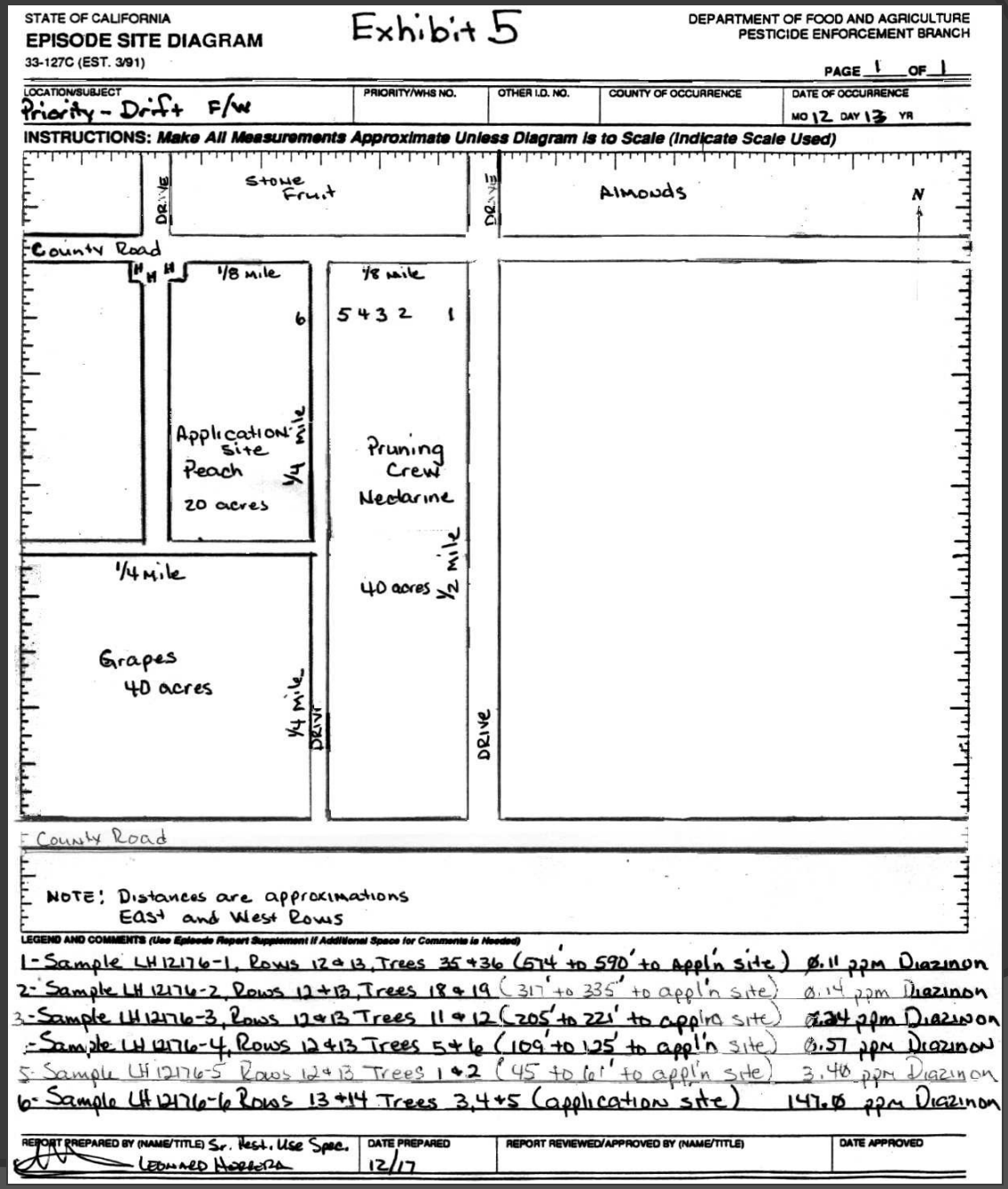
3=0.24ppm

4=0.57ppm

5=3.40ppm

Appl'n Site

147.0ppm



STATE OF CALIFORNIA
EPISODE SITE DIAGRAM
33-127C (EST. 3/91)

Exhibit 5

DEPARTMENT OF FOOD AND AGRICULTURE
PESTICIDE ENFORCEMENT BRANCH

PAGE 1 OF 1

LOCATION/SUBJECT	PRIORITY/WHS NO.	OTHER I.D. NO.	COUNTY OF OCCURRENCE	DATE OF OCCURRENCE
Priority - Drift F/W				MO 12 DAY 13 YR

INSTRUCTIONS: *Make All Measurements Approximate Unless Diagram is to Scale (Indicate Scale Used)*

NOTE: Distances are approximations
East and West Rows

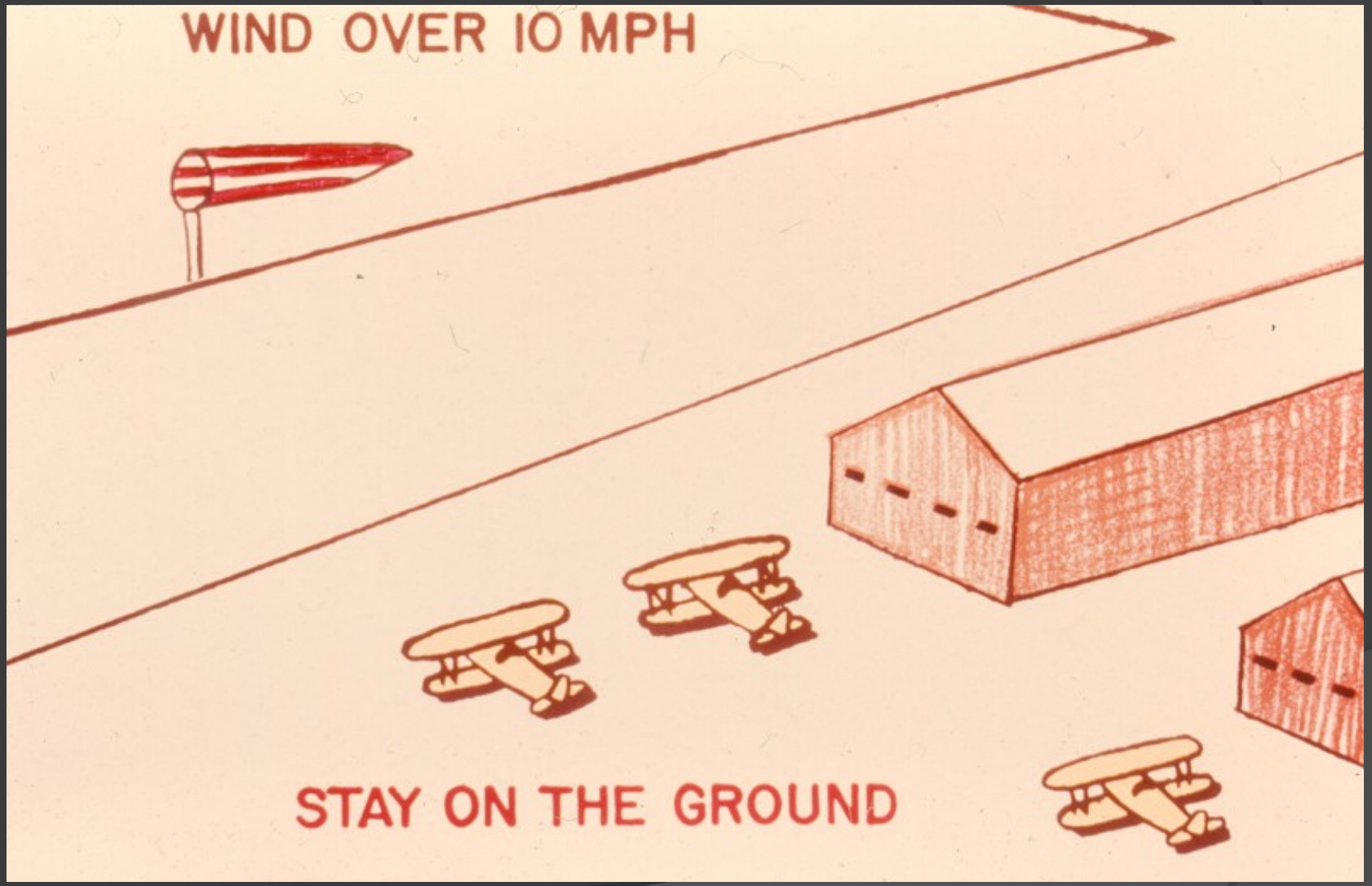
LEGEND AND COMMENTS (*Use Episode Report Supplement If Additional Space for Comments is Needed*)

1- Sample LH 12176-1, Rows 12 & 13, Trees 35 + 36 (574' to 590' to Appl'n site) 0.11 ppm Diazinon
2- Sample LH 12176-2, Rows 12 + 13, Trees 18 & 19 (317' to 335' to appl'n site) 0.14 ppm Diazinon
3- Sample LH 12176-3, Rows 12 & 13 Trees 11 & 12 (205' to 221' to appl'n site) 0.24 ppm Diazinon
4- Sample LH 12176-4, Rows 12 & 13 Trees 5 + 6 (109' to 125' to appl'n site) 0.57 ppm Diazinon
5- Sample LH 12176-5 Rows 12 + 13 Trees 1 & 2 (45' to 61' to appl'n site) 3.40 ppm Diazinon
6- Sample LH 12176-6 Rows 13 + 14 Trees 3, 4 + 5 (application site) 147.0 ppm Diazinon

REPORT PREPARED BY (NAME/TITLE)	DATE PREPARED	REPORT REVIEWED/APPROVED BY (NAME/TITLE)	DATE APPROVED
Sr. Pest. Use Spec. Leonard Herrera	12/17		

Mitigation

Environmental Conditions

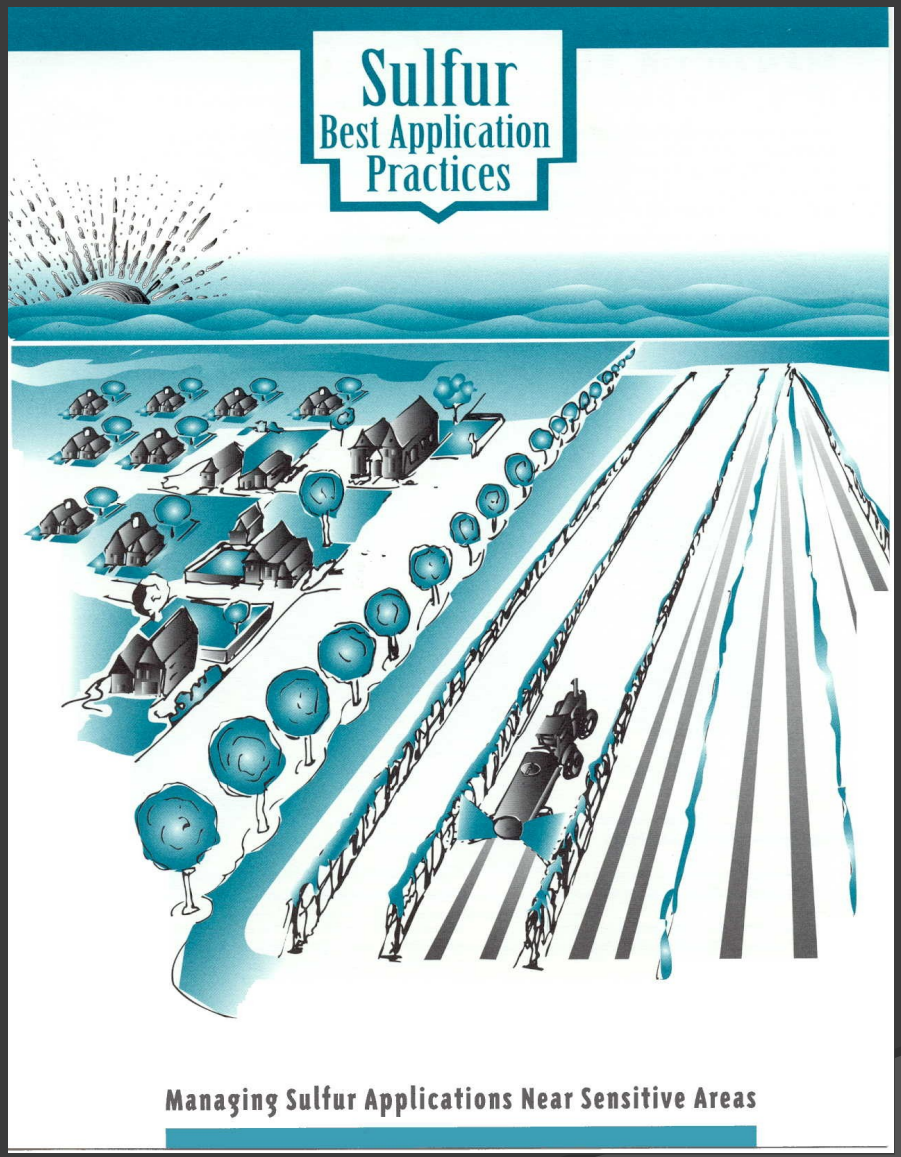


Aerial Equipment Fixed-Winged Aircraft

Environmental Conditions

Equipment and Timing

Inversions


Sulfur
Best Application
Practices
Managing Sulfur Applications Near Sensitive Areas

Is this a good practice?

Review

- What is drift?
- Laws (label), regulation, and policy
- Drift cases
- Methods of application
- Ways to mitigate drift

Questions or Comments?