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MEMORANDUM

TO: John Sanders Ph.D., Chief
Environmental Monitoring Branch
Department of Pesticide Regulation

FROM: George Lew, Chief *George Lew*
Engineering and Certification Branch
Monitoring and Laboratory Division

DATE: August 8, 2001

SUBJECT: FINAL REPORT FOR THE 1999 PROPARGITE AND BIFENTHRIN AIR
MONITORING

Attached is the final, "Report for the Application and Ambient Air Monitoring for Propargite and Bifenthrin in Fresno and Kings Counties." Also attached is the separate volume of appendices for the report. We received your comments (April 9, 2001, Sanders to Lew) on the draft report (December 27, 2000, Lew to Sanders) and have made a number of corrections and changes you recommended.

If you or your staff have questions or need further information, please contact me at 327-0900, or Kevin Mongar at 322-2449.

Attachment/Separate Appendices

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Sharon Lee, DHS (w/Attachment/ Appendices)
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Dennis Bray, Kings County Agricultural Commissioner (w/Attachment)
David L. Crow, San Joaquin Valley Unified APCD (w/Attachment)

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Mr. John Sanders
August 8, 2001
Page 2

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State of California
California Environmental Protection Agency
AIR RESOURCES BOARD

Report for the Application
and Ambient Air Monitoring
for Propargite and Bifenthrin
in Fresno and Kings Counties

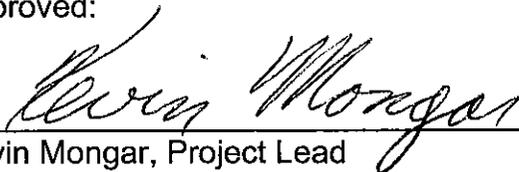
Testing Section
Engineering and Certification Branch
Monitoring and Laboratory Division

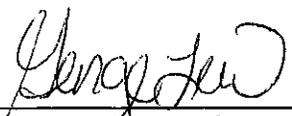
Propargite Project No. C99-032 (Ambient)
C99-032a (Application)

Bifenthrin Project No. C99-033 (Ambient)
C99-033a (Application)

Date: August 8, 2001

Approved:


Kevin Mongar, Project Lead


George Lew, Chief
Engineering and Laboratory Branch

This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

Summary

Report for the Application and Ambient Air Monitoring for Propargite and Bifenthrin in Fresno and Kings Counties

This report presents the results of application and ambient air monitoring for propargite and bifenthrin. The peak use areas and periods for propargite and bifenthrin were very similar, e.g., both were in Fresno County on the west side of Highway 99 during the months of June, July and August. Also, both compounds could be sampled and analyzed together. An effort was made to take advantage of this situation by combining the two compounds into a single monitoring study. This allowed for the expansion of the ambient sampling network to a total of eight sampling sites. However, certain sites are more representative of exposure potential for either propargite or bifenthrin. The application studies were conducted separately.

Ambient monitoring was conducted to coincide with the use of propargite on cotton and grapes and with the use of bifenthrin on cotton in Fresno and Kings Counties from June 24 to August 4, 1999. Application monitoring was conducted in Fresno County around the use of propargite as a miticide on 12 acres of grapes from July 13 to 17, 1999. Application monitoring was conducted in Fresno County around the use of bifenthrin as an insecticide on 300 acres of seed alfalfa from July 17 to 21, 1999.

Air samples for propargite and bifenthrin were collected using XAD-2 adsorbent cartridges and analyzed using gas chromatography with mass selective detector. Laboratory results, in units of ng/sample, equal to or above the estimated quantitation limit (EQL) of 83.5 ng/sample for propargite and 33.5 ng/sample for bifenthrin are reported to 3 significant figures. Results equal to or above the method detection limit (MDL) of 16.7 ng/sample for propargite and 6.70 ng/sample for bifenthrin but below the EQL are reported as detected (Det). Air concentration results (in units of ng/m³ and pptv) are reported to 2 significant figures. The air concentration, expressed in units of ng/m³ (or pptv), associated with the EQL is dependent on the volume of air sampled which varies from sample to sample. For a 24-hour sampling period at 2.5 standard liters per minute (sLpm) the EQLs would be 23 ng/m³ (1.6 pptv) for propargite and 9.3 ng/m³ (0.54 pptv) for bifenthrin as associated with the EQLs.

Propargite Results

Of the one-hundred-seventy-six ambient samples collected (spikes, blanks and the lower of collocated samples excluded), seventy were found to be above the EQL, fifty-four were found to have results of "detected", fifty were below the MDL and the remaining two samples were invalidated due to sampling problems. The highest 24-hour propargite concentration, 1300 ng/m³ (94 pptv), was observed at the Alvina Elementary School (ALV) sampling site in Caruthers on June 29, 1999. This site also had the highest average concentration for the six-week monitoring period of 170 ng/m³.

All three of the application background samples had results above the EQL (one background sample was invalid). The highest background level, 94 ng/m³, was found at the west sampling location. The average of the background samples was 70 ng/m³. Of the twenty application samples collected (spikes, blanks, the lower of the collocated samples, and background samples excluded) seventeen were found to be above the EQL, one sample result was <MDL and two samples were invalidated due to sampling problems. The highest concentration, 3500 ng/m³ (240 pptv), was observed at the south sampling site during the 1st sampling period (application) of 1.5 hours.

Bifenthrin Results

Of the one-hundred-seventy-six ambient samples collected (spikes, blanks and the lower of collocated samples excluded), eleven were found to be above the EQL, twenty-nine were found to have results of "detected", one-hundred-thirty-four were below the MDL and the remaining two samples were invalidated due to sampling problems. The highest 24-hour bifenthrin concentration, 17 ng/m³ (0.97 pptv) was observed at the Helm Elementary School (HES) sampling site in Helm on July 15, 1999. Although most samples were below the EQL, the Helm site also had the highest average concentration for the six-week monitoring period of 4.6 ng/m³.

Three of the four application background samples had results above the EQL and the other background sample was <MDL. The highest background level, 29 ng/m³, was found at the north sampling location. The average of the background samples was 26 ng/m³. Of the thirty-two application samples collected (spikes, blanks, the lower of the collocated samples, and background samples excluded) five were found to be above the EQL, eleven sample results were detected, twelve sample results were <MDL and four samples were invalidated due to sampling problems. The highest concentration, 270 ng/m³ (16 pptv), was observed at the east sampling site during the 1st sampling period (application) of 2.7 hours.

Acknowledgments

Kevin Mongar, Oscar Lopez and Neil Adler of the ARB Testing Section conducted the application studies. Staff of the ARB Air Quality Surveillance Branch collected the ambient samples. Assistance was provided by the Fresno County Agricultural Commissioner's Office and the Kings County Agricultural Commissioner's Office. Bob Okamoto of the Evaluation Section Laboratory performed method development and chemical analyses. Neil Adler of the Testing Section prepared the sampling tree and application site diagrams presented in this report.

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Report for the Application
and Ambient Air Monitoring for
Propargite and Bifenthrin
In Fresno and Kings Counties

I. Introduction

At the request of the California Department of Pesticide Regulation (DPR) (December 15, 1998 and December 22, 1998 memorandums, Okumura to Lew), the Air Resources Board (ARB) staff determined airborne concentrations of the pesticides propargite and bifenthrin. Application monitoring was conducted in Fresno County around the use of propargite as a miticide on 12 acres of grapes from July 13 to 17, 1999. Application monitoring was conducted in Fresno County around the use of bifenthrin as an insecticide on 300 acres of seed alfalfa from July 17 to 21, 1999. Ambient monitoring was conducted to coincide with the use of propargite on cotton and grapes, and with the use of bifenthrin on cotton in Fresno County (and one site in northern Kings County) from June 24 to August 4, 1999. This monitoring was done to fulfill the requirements of the Food and Agricultural Code (Division 7, Chapter 3, Article 1.5) which requires the ARB "to document the level of airborne emissions of pesticides which may be determined to pose a present or potential hazard..." when requested by the DPR. The ARB Evaluation Section Laboratory conducted the method development and sample analyses. Testing Section staff conducted site selection for the application and ambient studies and sample collection for the application studies. Air Quality Surveillance Branch staff conducted sample collection for the ambient study. Propargite was previously monitored by the ARB in 1996, but because of analytical problems experienced by the contract laboratory the monitoring was repeated.

The protocol for the application and ambient air monitoring is enclosed separately as Appendix I (page 1 of a separate volume of appendices to this report).

The laboratory report, "Propargite and Bifenthrin Method Development and Propargite and Bifenthrin Analytical Results for Ambient Monitoring and Application Samples", is enclosed separately as Appendix II (page 56 of the separate volume of appendices to this report). The sampling/analysis Standard Operating Procedures (SOP) are also enclosed in Appendix II (page 105 of the separate volume of appendices to this report).

The pesticide use recommendations for the application studies for propargite and bifenthrin are enclosed separately as Appendices III and IV (pages 120 and 123 of the separate volume of appendices to this report).

The DPR's September 15 and 22, 1998 memorandums, "Use Information and Air Monitoring Recommendation for the Pesticide Active Ingredient Propargite" and "Use Information and Air Monitoring Recommendation for the Pesticide Active Ingredient Bifenthrin", are enclosed separately as Appendices V and VI (pages 125 and 137 of the separate volume of appendices to this report).

The ambient and application field log sheets are enclosed separately as Appendices VII, VIII and IX (pages 153, 170 and 173 of the separate volume of appendices).

The propargite and bifenthrin application meteorological monitoring results are enclosed separately as Appendices X and XI (pages 177 and 186 of the separate volume of appendices to this report).

II. Sampling

A sketch of the sampling apparatus is shown in Figure 5. Samples were collected by passing a measured volume of ambient air through XAD-2 resin. Both propargite and bifenthrin can be sampled and analyzed from the same resin tube. The XAD-2 resin tubes were obtained from SKC (#226-30-06). Rotameters were used to control sample flow rates. The rotameters were adjusted to the correct flow before each sampling period and checked at the end of each sampling period using a calibrated digital mass flow meter. The sampling system operated continuously with the exact operating interval noted. Samplers were leak checked before and after each sampling period with the sampling cartridges installed. Any change in the flow rates was recorded in the field log book (see appendices pgs.153, 170 and 173). The resin tubes were protected from direct sunlight and supported about 1.5 meters above the ground (or roof) during the sampling period. At the end of each sampling period the tubes were capped and placed in culture tubes with an identification label affixed. The field log book was used to record start and stop times, sample identifications, start and stop flow rates and any other significant comments. Subsequent to sampling, the samples were shipped or transported on dry ice, as soon as reasonably possible, to the Evaluation Section Laboratory in Sacramento. The samples were then stored in the freezer until extraction and analysis. A chain of custody sheet accompanied all samples.

A. Propargite Application Monitoring

The DPR's monitoring recommendation for propargite suggested that application-site air monitoring should be conducted in Fresno County, during the same months as the ambient study, in association with propargite use on grapes or cotton at the highest rates of use; i.e., about 2.0 to 3.0 pounds per acre.

A 12 acre raisin grape vineyard was chosen for the application monitoring site. Refer to Figure 3 for a diagram of the application site. Refer to Appendix III (page 120 of appendices) for a copy of the pesticide use recommendation.

Information collected regarding the application included: 1) the elevation of each sampling station with respect to the field, 2) the orientation of the field with respect to North (geographic), 3) an accurate record of the positions of the monitoring equipment with respect to the field, including the distance each monitor is positioned away from

the edge of the field and an accurate drawing of the monitoring site showing the precise location of the monitoring equipment and any wind obstacles with respect to the field, 4) the field size, 5) the application rate, 6) formulation and 7) method and length of application. Details regarding the site and application are summarized below in Table 1.

Table 1.
Propargite Application Information

Range/Township/Section: R:20E/T:15S/S:36
 Product Applied: Omite-30W (32% A.I. by weight)
 Type of Application: Blower spray
 Application Rate: 6 lbs. product in 50 gallons water per acre
 (1.92 lbs. propargite A.I. per acre)
 Grower/Applicator: Michael Bopp/Mike's Vineyard Spray

A three day monitoring period was recommended in the DPR's December 22, 1998 memorandum with intended sampling times as follows: (where the first sample is started at the start of application) during application, followed by a 1-hour sample, a 2-hour sample, a 3-hour sample (or up to 1 hour before sunset), a 6-hour sample (or up to 1 hour before sunset), overnight (until 1 hour after sunrise), daytime (until 1 hour before sunset), overnight (until 1 hour after sunrise) and 24 hour (until 1 hour after sunrise).

Background samples were taken at each position to establish if any propargite was detectable in the air before the application (i.e., from nearby applications). The background samples were collected from 1115 to 1115, July 13 to 14, 1999 (24 hours). The application started at 2020 and ended at 2135 on July 14, 1999. The blower spray application was conducted by tractor and started in the southwest corner with east/west passes. Table 2 lists the approximate sampling periods.

Table 2.
Propargite Application Sampling Periods

<u>Period</u>	<u>Approx. # Hours</u>	<u>Date</u>	<u>Time</u>
Background	24 hours	7/13-14/99	1115 to 1115
1 (Application)	1 1/4 hours	7/14/99	2020 to 2140
2	9 1/2 hour (overnight)	7/14-15/99	2140 to 0710
3	12 1/4 hours (daytime)	7/15/99	0710 to 1925
4	11 3/4 hours (overnight)	7/15-16/99	1925 to 0705
5	24 hours	7/16-17/99	0705 to 0710

Four samplers were positioned, one on each side of the field. A fifth sampler was collocated at the east position (refer to Figure 3). The east, north, west and south samplers were positioned 25 feet, 42 feet, 26 feet and 19 feet respectively from the

sides of the field. The west, south and east samplers were at the same elevation relative to the field and the north sampler was 7 feet higher.

The meteorological station (oriented toward geographic north) was positioned at the northeast corner of the field. The meteorological station was set up to determine wind speed and direction, air temperature, barometric pressure and relative humidity. The raw meteorological station data is available on a 1.44 MB diskette (comma delimited text format). Appendix X (page 177 of the appendices) lists the meteorological station data in 15-minute averages for the test period. ARB staff noted the degree of cloud cover on the sample log sheet whenever sample cartridges were changed. The sky conditions were clear to partly cloudy during the study period.

B. Bifenthrin Application Monitoring

The DPR's monitoring recommendation for bifenthrin suggested that application-site air monitoring should be conducted in Fresno County during the same months as the ambient study, in association with bifenthrin use on cotton at the highest rates of use; i.e., about 1.0 pounds per acre.

A 300 acre seed alfalfa field (actually 2 adjacent plots) was chosen for the application monitoring site. The maximum application rate allowed by the product label (for either cotton or alfalfa) was 6.4 oz of "Capture" per acre, which corresponds to 0.1 pounds of bifenthrin active ingredient per acre. The DPR's recommendation for monitoring associated with a use rate of 1.0 pounds per acre was not correct (as confirmed with DPR staff). An alfalfa site was chosen, instead of a cotton field, due to the significant decrease in the use of bifenthrin on cotton in the Fresno County area during 1999.

Refer to Figure 4 for a diagram of the application site. Refer to Appendix IV (page 123 of appendices) for a copy of the pesticide use recommendation. Details regarding the site and application are summarized below in Table 3.

Table 3.
Bifenthrin Application Information

Range/Township/Section:	R:16E/T:15S/S:33
Product Applied:	Capture 2 EC-CAL (2 lbs. A.I. per gallon)
Type of Application:	Aerial spray
Application Rate:	6.4 oz product in 10 gal. water per acre (0.1 lbs. bifenthrin A.I. per acre)
Grower/Applicator:	Kacie Ranch/Grouleff Aviation

Background samples were taken at each position to establish if any bifenthrin was detectable in the air before the application (i.e., from nearby applications). The background samples were collected from 1230 to 0215, July 17 to 18, 1999 (13 3/4 hours). The application started at 0230 and ended at 0440 on July 18, 1999. The

aerial spray application was conducted by airplane and started in the northeast corner with north/south passes. Table 4 lists the approximate sampling periods.

Table 4.
Bifenthrin Application Sampling Periods

<u>Period</u>	<u>Approx. # Hours</u>	<u>Date</u>	<u>Time</u>
Background	13 3/4 hours	7/17-18/99	1230 to 0215
1 (Application)	2 3/4 hours	7/18/99	0215 to 0455
2	2 1/4 hour	7/18/99	0455 to 0705
3	3 hours	7/18/99	0705 to 1005
4	9 1/4 hours	7/18/99	1005 to 1925
5	12 hours (overnight)	7/18-19/99	1925 to 0725
6	11 3/4 hours (daytime)	7/19/99	0725 to 1915
7	12 hours (overnight)	7/19-20/99	1915 to 0715
8	24 hours	7/21-21/99	0715 to 0715

Four samplers were positioned, one on each side of the field. A fifth sampler was collocated at the east position (refer to Figure 4). The east, north, west and south samplers were positioned 76 feet, 88 feet, 51 feet and 93 feet respectively from the sides of the field. All the samplers were at the same elevation as the field.

The meteorological station (oriented toward geographic north) was positioned in the middle of the two plots on the east-side of the fields. The meteorological station was set up to determine wind speed and direction, air temperature, barometric pressure and relative humidity. The raw meteorological station data is available on a 1.44 MB diskette (comma delimited text format). Appendix XI (page 186 of the appendices) lists the meteorological station data in 15-minute averages for the test period. The sky conditions were clear during the study period. Whenever sample cartridges were changed ARB staff noted the degree of cloud cover on the sample log sheet.

C. Propargite and Bifenthrin Ambient Monitoring

Ambient monitoring was conducted to coincide with the use of propargite on cotton and grapes and with the use of bifenthrin on cotton in Fresno County from June 24 to August 4, 1999. Seven sampling sites were selected by ARB personnel from the areas of Fresno County where cotton and grape farming occurs and in populated areas or in areas frequented by people. Sites selection was based on considerations for accessibility, security of the sampling equipment, and compliance with technical siting requirements. Urban background samples were collected at the ARB air monitoring station in Fresno. The eight sites are presented in Figures 1 and 2 and are listed in Table 5. Figure 1 shows the sampling sites relative to propargite use in the area in 1996. Figure 2 shows the sampling sites relative to the bifenthrin use in 1996. Twenty-four hour (approximately) samples were taken Monday through Friday (4 samples/week) at a flow rate of 2.5 sLpm. Twenty-two discreet sampling days were

monitored at each site (21 at 2 of the sites) for a total of 174 samples (plus 53 collocated samples, 5 trip blanks and 8 quality assurance spikes).

The peak use areas and periods for propargite and bifenthrin were very similar, e.g., both were in Fresno County on the west side of Highway 99 during the months of June, July and August. Both compounds can also be sampled and analyzed together. An effort was made to take advantage of this situation by combining the two compounds into a single monitoring study. This allowed for the expansion of the sampling network to a total of eight sampling sites. However, referring to Figures 1 and 2, certain sites should be considered more representative (closer to applications) for propargite exposure assessment and certain others more representative for bifenthrin exposure assessment. Relative to the 1996 propargite use map shown in Figure 1, all sites except the Huron Elementary school could be considered as relevant sampling sites for propargite with the greatest exposure potential at the Kerman, Kingsburg and Alvina Elementary School sites. Relative to the 1996 bifenthrin use map shown in Figure 2, the San Joaquin Elementary School, Helm Elementary School, Huron Elementary School and Stratford Elementary School sites could be considered as the more relevant sampling sites for bifenthrin. The ARB understands that DPR staff will verify and quantify the actual use of propargite and bifenthrin that occurred during the study when the information becomes available.

Table 5.
Ambient Sampling Sites

HES	Helm Elementary School 13883 S. Lassen Avenue Helm, CA 93627 Range/Township/Section: R.17E/T.16S/S.15-SE1/4 of SE1/4	(559) 693-1115 Dr. Vaughn Superintendent
SJE	San Joaquin Elementary School 8535 South 9 th San Joaquin, CA 92660 Range/Township/Section: R.16E/T.15S/S.23-SE1/4 of SE 1/4	(559) 693-1115 Dr. Vaughn Superintendent
HUR	Huron Elementary School 36131 N Street Huron, CA 93234 Range/Township/Section: R.17E/T.20S/S.11-NW1/4	(559) 935-7500 Pat Lewis Superintendent
SES	Stratford Elementary School 19348 Empire St. Stratford, CA 93266 Range/Township/Section: R.20E/T.20S/S.17 NE1/4	(559) 947-3391 Joan Gusinow Superintendent

ALV	Alvina Elementary School 295 W. Saginaw Caruthers, CA 93609 Range/Township/Section: R.20E/T.16S/S.9-SE1/4	(559) 864-9411 Larry Wilson Superintendent
KBB	Kingsburg School District Bus Barn 1900 Mariposa Kingsburg, CA 93631 Range/Township/Section: R.22E/T.16S/S.22 (estimated from use map)	(559) 897-2331 Jim Haslip Superintendent
KHS	Kerman High School 205 S 1 st Street Kerman, CA 93630 Range/Township/Section: R.17E/T.14S/S.11(estimated from use map)	Lloyd Wamhos Superintendent (559) 846-5383
ARB	ARB Air Monitoring Station 3425 N First, Suite 205B Fresno, CA 93726-6819 Range/Township/Section: R.20E/T.11S/S.22-SE1/4 of SE1/4	(559) 228-1825 Dave Wilkerson

The Helm Elementary School is in the small town of Helm. There were cotton fields directly to the west (20 yards) and approximately 200 yards to the north. The sampling unit was placed on the ground behind the school. The sampling cartridges were positioned approximately 8 feet above the ground.

The San Joaquin Elementary School is located in the small town of San Joaquin. There were alfalfa and cotton fields to the north and northeast at a distance of approximately 300 yards and cotton fields to the south and west at a distance of approximately 1 mile. The sampling unit was placed on the top of an eight foot high chiller unit. The sampling cartridges were positioned approximately 4 feet above the top. Thus, air was sampled through the cartridges at a height of approximately 12 feet.

The Huron Elementary School is located in a residential area in the small town of Huron. There were cotton fields at a distance of approximately 1 mile to the south and northwest. The sampling unit was placed on the top of a single story building at a height of approximately 16 feet. The sampling cartridges were positioned approximately 4 feet above the roof. Thus, air was sampled through the cartridges at a height of approximately 20 feet.

The Stratford Elementary School is located in the small town of Stratford. There were cotton fields to the east at a distance of approximately 100 yards and to the south and west at a distance of approximately ½ mile. The sampling unit was placed on the roof of the school gymnasium at a height of approximately 35 feet. The sampling cartridges were positioned approximately 4 feet above the roof. Thus, air was sampled through

the cartridges at a height of approximately 39 feet.

The Alvina Elementary School is located in a rural area outside of the small town of Caruthers. There are grape fields directly to the east at a distance of approximately 70 yards. Vineyards are also found to the north, south and west at distances of 100 to 200 yards. The sampling unit was placed on the top of a pumphouse building at a height of approximately 9 feet. The sampling cartridges were positioned approximately 4 feet above the roof. Thus, air was sampled through the cartridges at a height of approximately 13 feet.

The Kingsburg School District Bus Barn is located in a residential area in the town of Kingsburg. There were grape fields at a distance of approximately 100 yards to the south and approximately 1 mile to the northwest. The sampling unit was placed on the top of a single story building at a height of approximately 9 feet. The sampling cartridges were positioned approximately 4 feet above the roof. Thus, air was sampled through the cartridges at a height of approximately 13 feet.

The Kerman High School is located in a residential area in the small town of Kerman. There were cotton fields at a distance of approximately 1/4 to 1/2 mile to the southwest, west and northwest. There were alfalfa fields approximately 1/2 mile to the north and vineyards approximately 1/2 mile to the northeast. The sampling unit was placed on the top of a single story building at a height of approximately 18 feet. The sampling cartridges were positioned approximately 4 feet above the roof. Thus, air was sampled through the cartridges at a height of approximately 22 feet.

The background monitoring was conducted at the ARB air monitoring site in a residential/business area in Fresno. The sampler was placed on a second-story roof near other monitoring equipment at a height of approximately 30 feet. The sampling cartridges were positioned approximately 4 feet above the roof. Thus, air was sampled through the cartridges at a height of approximately 34 feet.

III. Analytical Methodology

The SOPs for sampling and analysis of propargite and befenthrin are enclosed in Appendix II (pages 106 and 113 of appendices). The procedures specify that the exposed XAD-2 resin tubes are stored in an ice chest on dry ice or in a freezer until desorbed during sonication into 3 mL of 50:50 ethyl acetate/acetone. An aliquot of the extract is spiked with 30 ng of malathion-D₁₀ prior to injection. The splitless injection volume is 1 uL. A gas chromatograph with a DB-5MS capillary column and a quadrapole mass spectrometer (MS) is used for analysis. The MS detector is operated in selected ion monitoring mode.

IV. Application and Ambient Results

Tables 6 and 9 present the results of application monitoring for propargite and bifenthrin, respectively. Summaries of the application results are presented in Tables 7 and 10 respectively. The propargite and bifenthrin ambient monitoring results are presented in Table 12 and are summarized in Tables 13 and 14.

For propargite, the Evaluation Section laboratory determined the method detection limit (MDL), as $3.14 \times s$ (from 40 CFR 136, Appendix B); where s is the standard deviation calculated for the results of seven replicate resin spikes (near the estimated detection limit). The MDL was 16.7 ng/sample. The estimated quantitation limit (EQL), calculated as 5 times the MDL, was 83.5 ng/sample. For bifenthrin, the Evaluation Section laboratory determined the analytical MDL as $(3.14)(s)$; where s is the standard deviation calculated for the results of seven replicate resin spikes (near the estimated detection limit). The MDL was 6.7 ng/sample and the EQL was 33.5 ng/sample. Results equal to or above the MDL but below the EQL are reported as detected (Det). Laboratory results, in units of ng/sample, equal to or above the EQL are reported to 3 significant figures. Air concentration results (in units of ng/m^3 and pptv) are reported to 2 significant figures. The air concentration, expressed in units of ng/m^3 (or pptv), associated with the EQL is dependent on the volume of air sampled which varies from sample to sample. For a 24-hour sampling period at 2.5 Lpm the EQL for propargite would be $23 \text{ ng}/\text{m}^3$ (1.6 pptv) and for bifenthrin would be $9.3 \text{ ng}/\text{m}^3$ (0.54 pptv). The DPR target 24-hour quantitation limits for propargite and bifenthrin were $270 \text{ ng}/\text{m}^3$ and $14,000 \text{ ng}/\text{m}^3$, respectively.

The equation used to convert propargite air concentration from units of ng/m^3 to pptv units at 1 atmosphere and 25 °C is shown below.

$$\text{pptv} = (\text{ng}/\text{m}^3) \times \frac{(0.0820575 \text{ liter-atm}/\text{mole}\cdot\text{K})(298\text{K})}{(1 \text{ atm})(350.5 \text{ gram}/\text{mole})} = (0.06977) \times (\text{ng}/\text{m}^3)$$

The equation used to convert bifenthrin air concentration from units of ng/m^3 to pptv units at 1 atmosphere and 25 °C is shown below.

$$\text{pptv} = (\text{ng}/\text{m}^3) \times \frac{(0.0820575 \text{ liter-atm}/\text{mole}\cdot\text{K})(298\text{K})}{(1 \text{ atm})(422.9 \text{ gram}/\text{mole})} = (0.05782) \times (\text{ng}/\text{m}^3)$$

A. Propargite Application Monitoring Results

The propargite application sample results have also been summarized as associated with sampling period wind roses in Figures 6 through 11. The spokes of the wind roses correspond to the compass direction of origin of the wind. The segments of each spoke correspond to incremental increases in wind speed (knots), as illustrated by the legends. The length of the spoke (and each segment) corresponds to the portion of the sampling time that the wind was from that direction (at that speed).

All three of the application background samples had results above the EQL (one background sample was invalid). The highest background level, 94 ng/m³, was found at the west sampling location. The average of the background samples was 70 ng/m³. Of the twenty application samples collected (spikes, blanks, the lower of the collocated samples, and background samples excluded) seventeen were found to be above the EQL, one sample result was <MDL and two samples (E3 and S5) were invalidated due to sampling problems. The highest concentration, 3500 ng/m³ (240 pptv), was observed at the south sampling site during the 1st sampling period (application) of 1.5 hours.

B. Bifenthrin Application Monitoring Results

The bifenthrin application sample results have also been summarized as associated with sampling period wind roses in Figures 12 through 20. The spokes of the wind roses correspond to the compass direction of origin of the wind. The segments of each spoke correspond to incremental increases in wind speed (knots), as illustrated by the legends. The length of the spoke (and each segment) corresponds to the portion of the sampling time that the wind was from that direction (at that speed).

Three of the four application background samples had results above the EQL and the other background sample was <MDL. The highest background level, 29 ng/m³, was found at the north sampling location. The average of the background samples was 26 ng/m³. Of the thirty-two application samples collected (spikes, blanks, the lower of the collocated samples, and background samples excluded) five were found to be above the EQL, eleven sample results were detected, twelve sample results were <MDL and four samples (N4, N5, W8 and S6) were invalidated due to sampling problems. The highest concentration, 270 ng/m³ (16 pptv), was observed at the east sampling site during the 1st sampling period (application) of 2.7 hours.

C. Ambient Monitoring Results

For propargite, of the one-hundred-seventy-six ambient samples collected (spikes, blanks and the lower of collocated samples excluded), seventy were found to be above the EQL, fifty-four were found to have results of "detected", fifty were below the MDL and the remaining two samples (KBB2, SES10) were invalidated due to sampling problems. The highest propargite concentration, 1300 ng/m³ (94 pptv), was observed at the Alvina Elementary School (ALV) sampling site in Caruthers on June 29, 1999.

For bifenthrin, of the one-hundred-seventy-six ambient samples collected (spikes, blanks and the lower of collocated samples excluded), eleven were found to be above the EQL, twenty-nine were found to have results of "detected", one-hundred-thirty-four were below the MDL and the remaining two samples (KBB2, SES10) were invalidated due to sampling problems. The highest bifenthrin concentration, 17 ng/m³ (0.97 pptv) was observed at the Helm Elementary School (HES) sampling site in Helm on July 15, 1999.

V. Quality Assurance

Field quality control (QC) for the application monitoring included the following:

- 1) Four field spikes (same environmental and experimental conditions as those occurring at the time of ambient sampling) prepared by the Evaluation Section staff. The field spikes were obtained by sampling ambient air at the same flow rate and for the same duration as the background samples (i.e, collocated with a background sample);
- 2) four trip spikes;
- 3) collocated (duplicate) samples collected at one of the four sampling sites;
- 4) a trip blank; and
- 5) four background samples collected before the application.

Field QC for the ambient monitoring included the following:

- 1) Four field spikes (same environmental and experimental conditions as those occurring at the time of ambient sampling) prepared by the Evaluation Section staff; the field spikes were obtained by sampling ambient air at the same flow rate and for the same duration as an ambient sample (collocated with an ambient sample);
- 2) four trip spikes;
- 3) collocated (duplicate) samples taken for six dates at each sampling location;
- 4) five trip blanks.

Rotameters were used to control the sampling flow rate. The flow rates were set at the start of every sampling period (every sample) using a mass flow meter (battery operated). The flow rates were also checked and recorded at the end of each sampling period using the mass flow meter. The ARB Standards Laboratory calibrated the mass flow meter (ARB#5063) used for the ambient sample collection and the manufacturer (Aalborg Instruments and Controls, Inc.) calibrated the mass flow meter (ARB#5286) used for the application studies.

VII. Quality Assurance Results

A. Method Development

Refer to Appendix II (page 56 of the appendices) for discussion and results of method development studies. The freezer storage stability study results (pg. 62 of appendices) show that propargite is stable for at least 24 weeks and bifenthrin is stable for at least 8 weeks. All of the ambient and application samples were analyzed within 29 days of receipt.

B. Trip Blanks

The application trip blanks (1 each for the propargite and bifenthrin applications) and the 5 ambient trip blanks all had results of <MDL for propargite and bifenthrin. Note that the trip blank collected on July 30, 1999 was written into the field log sheet as log number 216. Log number 216 was also used for sample KHS21.

C. Application Background Sample Results

For propargite, all three of the application background samples had results above the EQL (1 background sample was invalid). The highest background level, 94 ng/m³, was found at the west sampling location. The average of the background samples was 70 ng/m³.

For bifenthrin, three of the four application background samples had results above the EQL and the other background sample was <MDL. The highest background level, 29 ng/m³, was found at the north sampling location. The average of the background samples was 26 ng/m³.

D. Collocated Sample Results

Referring to Table 8, three collocated pairs of samples for the propargite application study had both results above the EQL. The average of the relative differences (100 x difference/average) of the data pairs was 9.7% with the range from 2% to 16%.

Referring to Table 11, one collocated pair of samples for the bifenthrin application study had both results above the EQL. The relative difference (100 x difference/average) of the data pair was 12%.

Referring to Table 15, seventeen of the ambient collocated pairs had both propargite results above the EQL. The average of the relative differences (100 x difference/average) was 13% with a range from 0% to 52%. None of the ambient collocated pairs had both bifenthrin results above the EQL.

E. Laboratory, Trip and Field Spikes

Laboratory, trip and field spikes are all prepared at the same time and at the same level. The spikes are prepared in replicate sets of four (4). The laboratory spikes are placed immediately in a freezer and kept there until extraction and analysis. The trip spikes are kept in a freezer until transported to the field. The trip spike samples are kept on dry ice in an ice chest (the same one used for samples) during transport to and from the field and at all times while in the field except for trip spike sample log-in and labeling. The field spikes are kept in a freezer until transported to the field. The field spike samples are kept on dry ice in an ice chest (the same one used for samples and trip spikes) during transport to and from the field and at all times while in the field.

except for the sampling period. Field spikes were collected at the same environmental and experimental conditions as those occurring at the time of ambient sampling. The field spikes were obtained by sampling ambient air through the previously spiked cartridges and are collocated with an ambient sample. The extraction and analysis of laboratory, trip and field spikes normally occurs at the same time. Laboratory, trip and field spikes for the application and ambient studies were prepared by Evaluation Section staff.

1) Propargite

- a) Laboratory Spikes: The laboratory spike results for the application and ambient studies are listed in Tables 16 and 19 respectively. Each of the spike cartridges was spiked with 200 ng of propargite. The average recovery for propargite for the application lab spikes was 106%. The average recovery for propargite for the ambient lab spikes was also 106%.
- b) Trip Spikes: The trip spike results for the application and ambient studies are listed in Tables 17 and 20 respectively. Each of the cartridges was spiked with 200 ng of propargite. The average recoveries for propargite for the application trip spikes was 105% and for the ambient trip spikes was 105%. These results are consistent with the lab spike results and indicate that the sample transport, storage and analytical procedures used in this study produce acceptable results for propargite.
- c) Field Spikes: The field spike results for the application and ambient studies are listed in Tables 18 and 21 respectively. Each of the cartridges was spiked with 200 ng of propargite. The average recovery for propargite for the application field spikes was 50% and for the ambient field spikes was 95%. The ambient results are consistent with the lab and trip spike results and indicate that the sampling, sample transport, storage and analytical procedures used in this study produce acceptable results for propargite. The application field spike results, however, indicate low recovery for propargite. Note that the application background samples collocated with the field spikes all had significant levels for propargite. The background amount was greater for all three background samples than the amount of propargite added to the field spike cartridge. The propargite field spike results were adjusted (by subtraction of the background amount/sample) for this background level before calculation of the percent recoveries. Method variability of the higher level ambient results could account for the discrepancy in the lower level spike recovery calculation. For "field" spike recovery determination the spike level should be at least 5 to 10 times higher than the ambient concentration. For future studies the spike levels should be increased to avoid this problem.

2) Bifenthrin

- a) Laboratory Spikes: The laboratory spike results for the application and ambient studies are listed in Tables 22 and 25 respectively. Each of the spike cartridges was spiked with 300 ng and 200 ng of bifenthrin for the application and ambient studies respectively. The average recovery for bifenthrin for the application lab spikes was 71%. The average recovery for bifenthrin for the ambient lab spikes was 124%.
- b) Trip Spikes: The trip spike results for the application and ambient studies are listed in Tables 23 and 26 respectively. Each of the spike cartridges was spiked with 300 ng and 200 ng of bifenthrin for the application and ambient studies respectively. The average recoveries for bifenthrin for the application trip spikes was 94% and for the ambient trip spikes was 103%. These results are consistent with the lab spike results and indicate that the sample transport, storage and analytical procedures used in this study produce acceptable results for bifenthrin.
- c) Field Spikes: The field spike results for the application and ambient studies are listed in Tables 24 and 27 respectively. Each of the spike cartridges was spiked with 300 ng and 200 ng of bifenthrin for the application and ambient studies respectively. The average recovery for bifenthrin for the application field spikes was 80% and for the ambient field spikes was 95%. The ambient results are consistent with the lab and trip spike results and indicate that the sampling, sample transport, storage and analytical procedures used in this study produce acceptable results for bifenthrin.

Figure 1
Propargite Ambient Monitoring Area
 (use map provided by DPR)

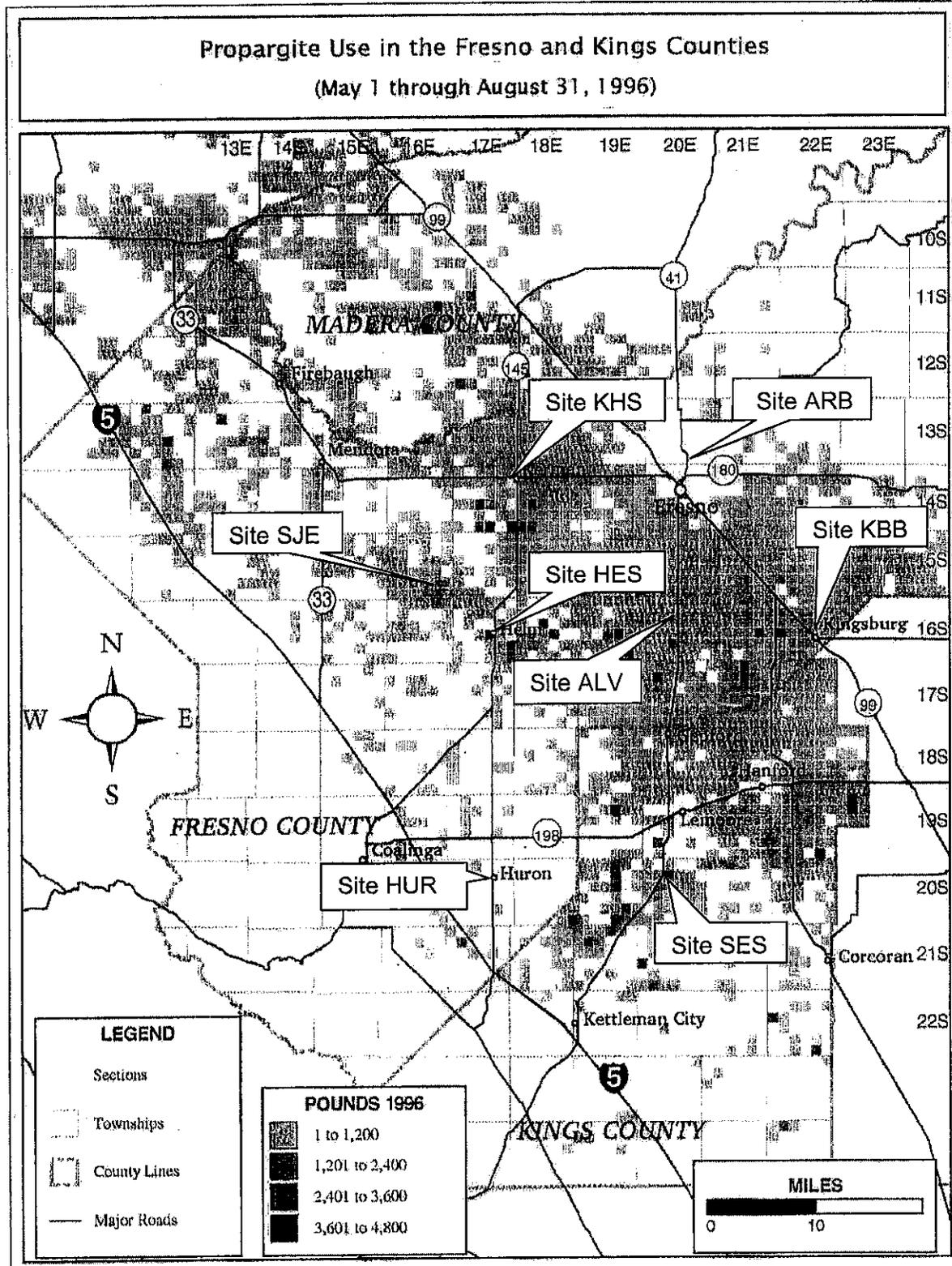


Figure 2
Bifenthrin Ambient Monitoring Area
 (use map provided by DPR)

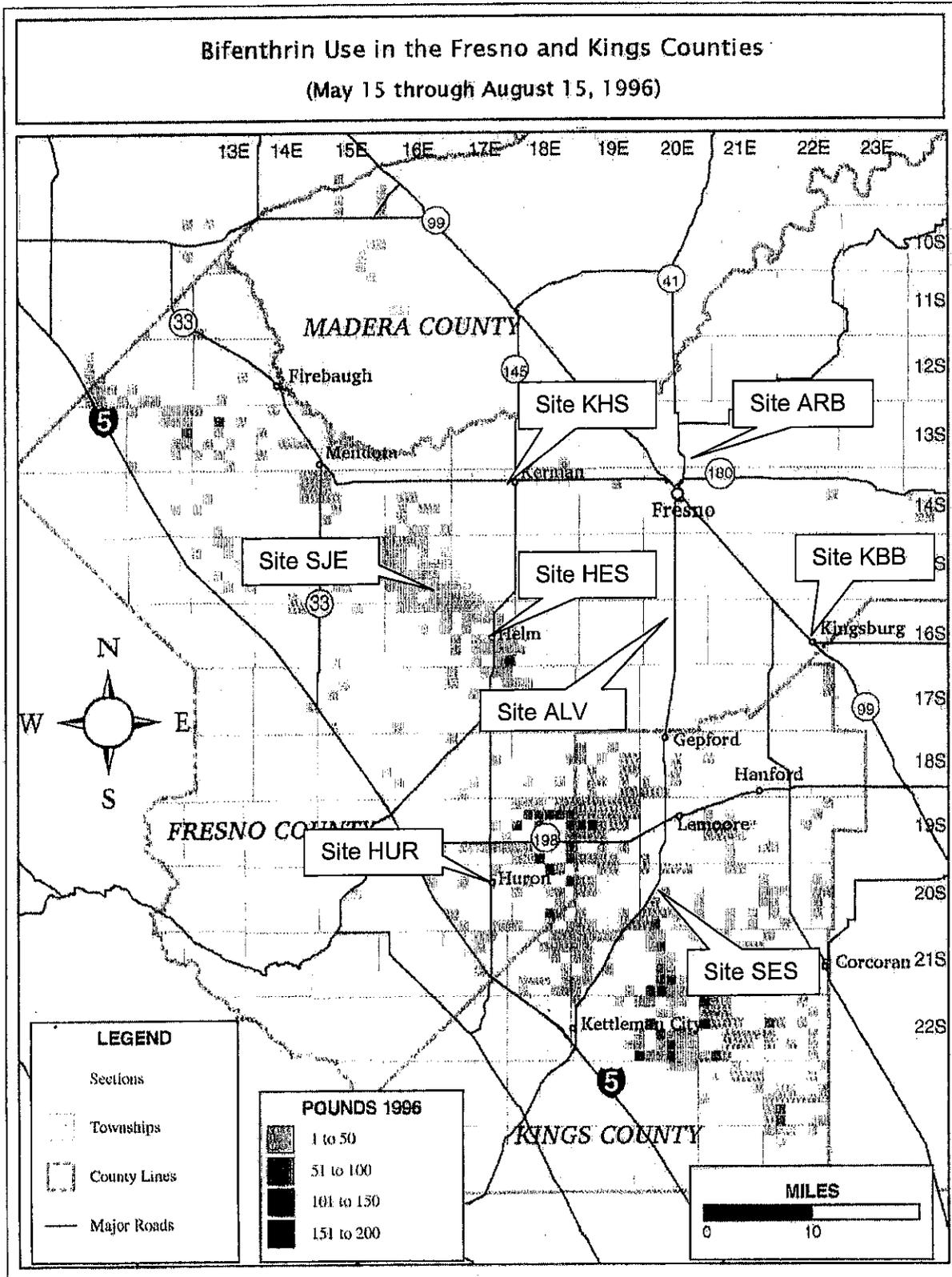
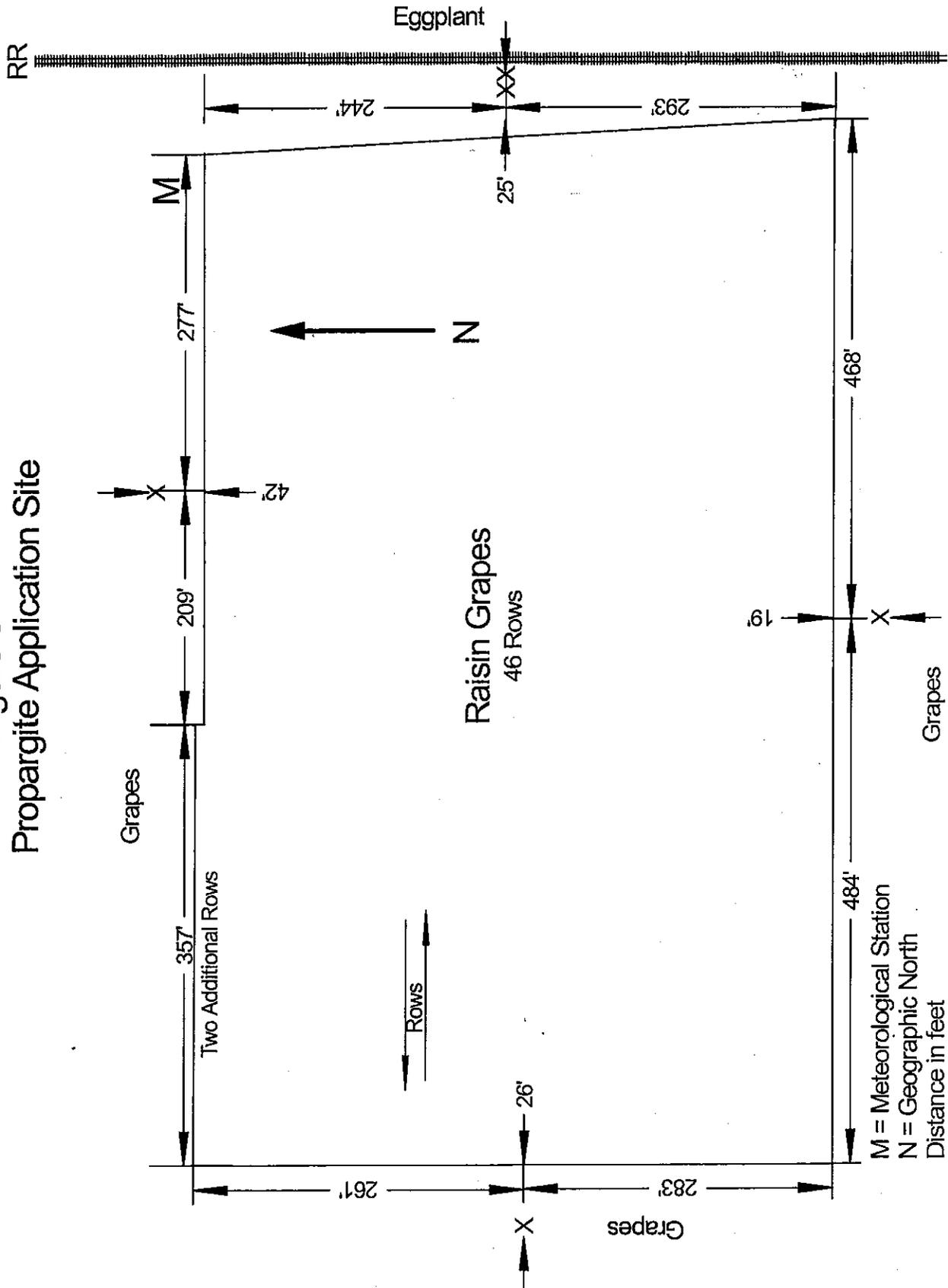


Figure 3
Propargite Application Site



M = Meteorological Station
N = Geographic North
Distance in feet

Figure 4
Bifenthrin Application Site

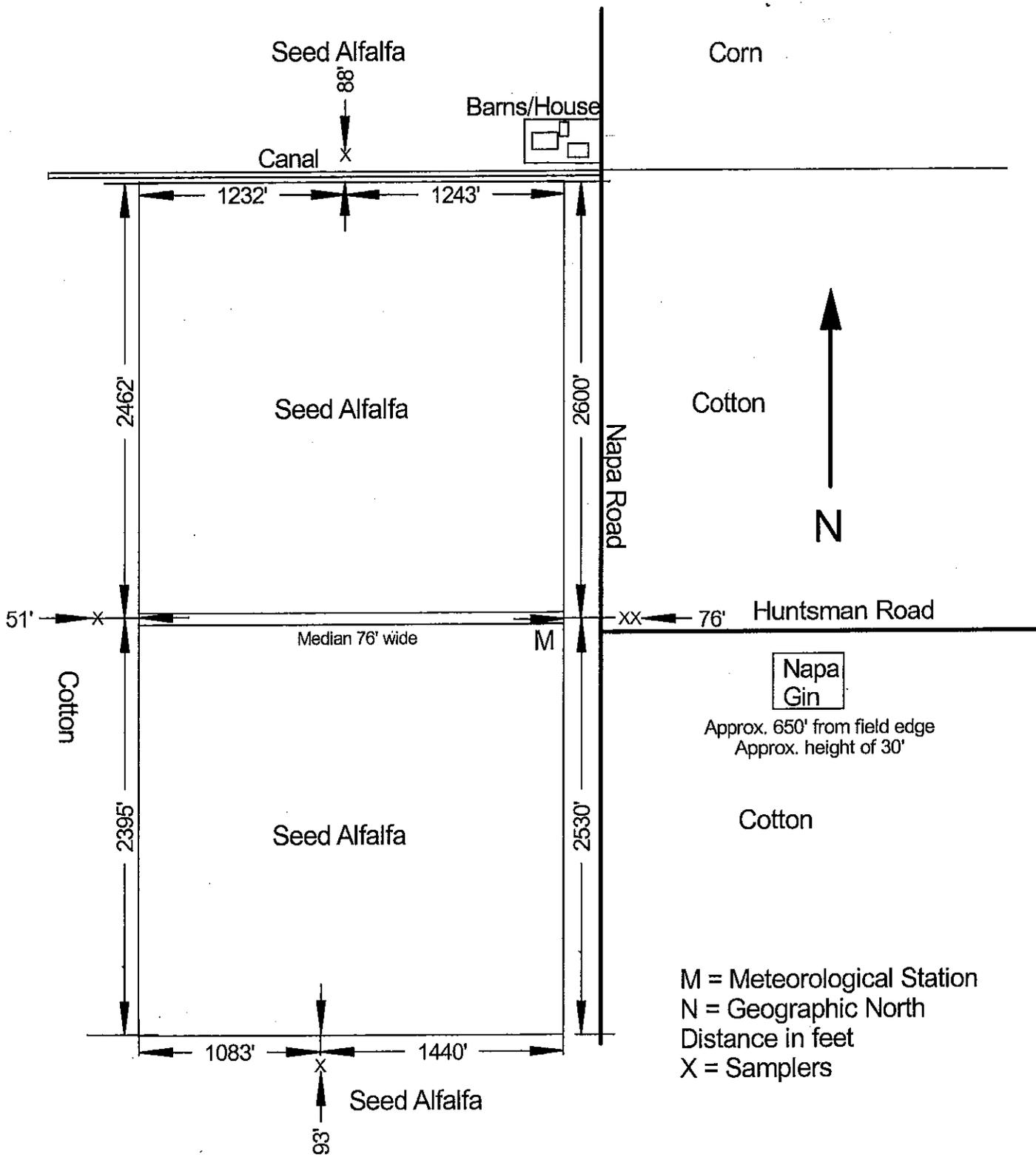


Figure 5.
Sample Tree

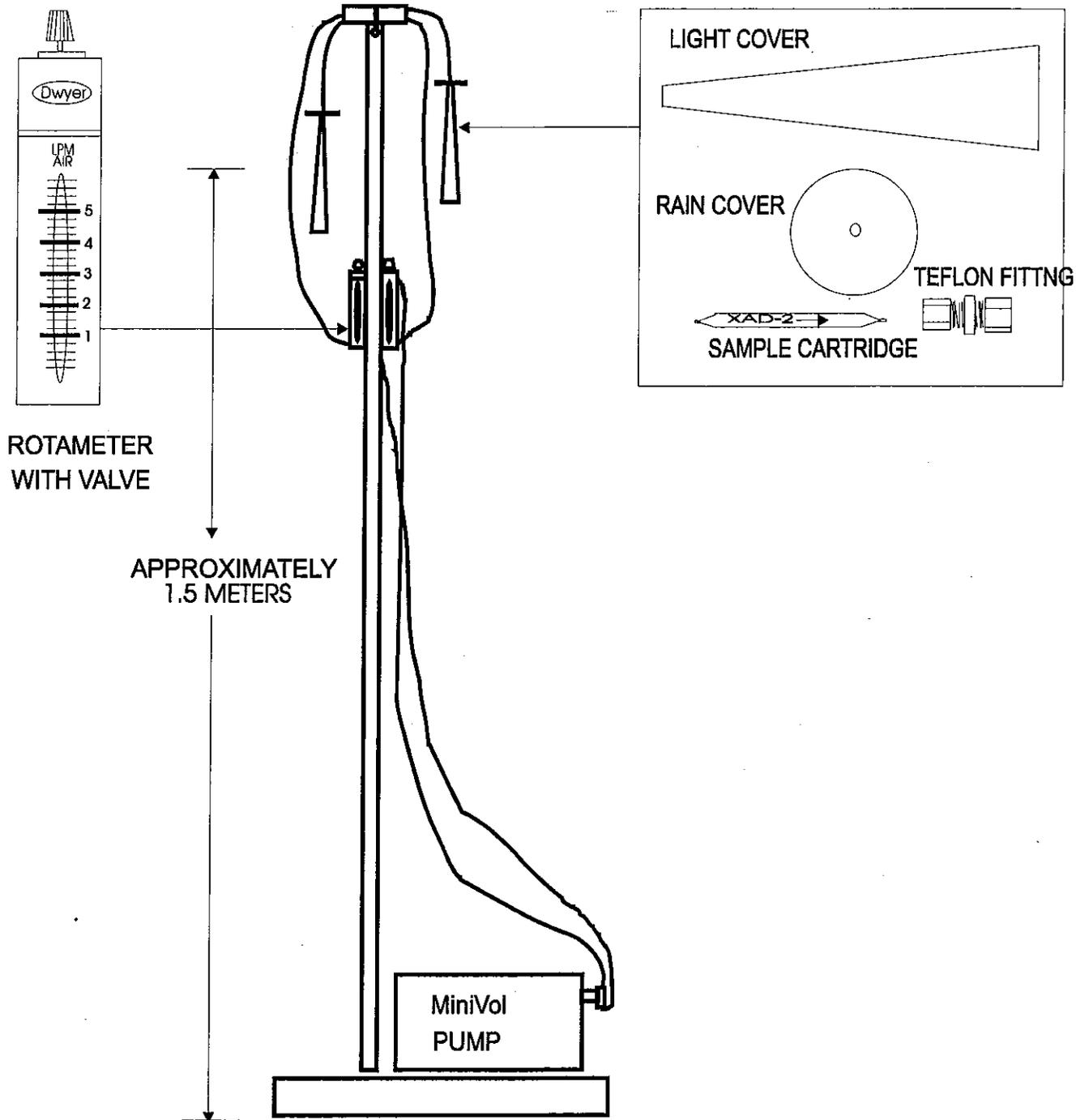


Table 6. Propargite Application Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Time (min)	Time (hours)	Volume (m3)	Propargite (ng/sample)	(ng/m3)	*(pptv)
1	EB	07/13/99 1110	07/14/99 1110	1440	24.0	3.60	2.18E+2	6.1E+01	4.2E+00
3	NB	07/13/99 1120	07/14/99 1120	1440	24.0	3.60	2.47E+2	6.9E+01	4.8E+00
5	WB	07/13/99 1125	07/14/99 1125	1440	24.0	3.60	4.08E+2	1.1E+02	7.9E+00
7	SB	07/13/99 1130	NA	NA	NA	NA	NA	NA	NA
9	E1	07/14/99 2020	07/14/99 2135	75	1.3	0.19	5.41E+2	2.9E+03	2.0E+02
10	E1D	07/14/99 2020	07/14/99 2135	75	1.3	0.19	6.34E+2	3.4E+03	2.4E+02
11	N1	07/14/99 2025	07/14/99 2140	75	1.3	0.19	<MDL	<MDL	<MDL
12	W1	07/14/99 2030	07/14/99 2145	75	1.3	0.19	9.97E+1	5.3E+02	3.7E+01
13	S1	07/14/99 2020	07/14/99 2150	90	1.5	0.23	7.86E+2	3.5E+03	2.4E+02
14	E2	07/14/99 2135	07/15/99 0705	570	9.5	1.43	5.96E+2	4.2E+02	2.9E+01
15	E2D	07/14/99 2135	07/15/99 0705	570	9.5	1.43	5.32E+2	3.7E+02	2.6E+01
16	N2	07/14/99 2140	07/15/99 0710	570	9.5	1.42	4.12E+2	2.9E+02	2.0E+01
17	W2	07/14/99 2145	07/15/99 0715	570	9.5	1.43	3.48E+2	2.4E+02	1.7E+01
18	S2	07/14/99 2150	07/15/99 0720	570	9.5	1.43	3.94E+2	2.8E+02	1.9E+01
19	E3	07/15/99 0705	NA	NA	NA	NA	NA	NA	NA
20	E3D	07/15/99 0705	07/15/99 1915	730	12.2	1.83	1.94E+3	1.1E+03	7.4E+01
21	N3	07/15/99 0710	07/15/99 1925	735	12.3	1.84	5.02E+2	2.7E+02	1.9E+01
22	W3	07/15/99 0715	07/15/99 1930	735	12.2	1.84	3.26E+2	1.8E+02	1.2E+01
23	S3	07/15/99 0720	07/15/99 1935	735	12.2	1.84	8.71E+2	4.7E+02	3.3E+01
24	E4	07/15/99 1915	07/16/99 0700	705	11.7	1.76	6.42E+2	3.6E+02	2.5E+01
25	E4D	07/15/99 1915	07/16/99 0700	705	11.7	1.76	6.55E+2	3.7E+02	2.6E+01
26	N4	07/15/99 1925	07/16/99 0705	700	11.7	1.75	2.22E+2	1.3E+02	8.9E+00
27	W4	07/15/99 1930	07/16/99 0710	700	11.7	1.75	1.87E+2	1.1E+02	7.5E+00
28	S4	07/15/99 1935	07/16/99 0720	705	11.8	1.76	4.19E+2	2.4E+02	1.7E+01
29	E5	07/16/99 0700	07/17/99 0700	1440	24.0	3.60	1.44E+3	4.0E+02	2.8E+01
30	E5D	07/16/99 0700	NA	NA	NA	NA	NA	NA	NA
31	N5	07/16/99 0705	07/17/99 0710	1445	24.1	3.61	3.65E+2	1.0E+02	7.0E+00
32	W5	07/16/99 0710	07/17/99 0715	1445	24.1	3.61	3.33E+2	9.2E+01	6.4E+00
33	S5	07/16/99 0720	NA	NA	NA	NA	NA	NA	NA

MDL = 16.7 ng/sample

Det = Value was below the EQL of 83.5 ng/sample but \geq MDL

NA = Not Applicable

*pptv at 1 atm and 20 C

Table 7. Summary of Propargite Application Results (ng/m3)

Sampling Period	Hours Sampled	East	East Collocated	North	West	South
Background	24	6.1E+01	NA	6.9E+01	1.1E+02	NA
1	1 1/4	2.9E+03	3.4E+03	<MDL	5.3E+02	3.5E+03
2	9 1/2	4.2E+02	3.7E+02	2.9E+02	2.4E+02	2.8E+02
3	12 1/4	NA	1.1E+03	2.7E+02	1.8E+02	4.7E+02
4	11 3/4	3.6E+02	3.7E+02	1.3E+02	1.1E+02	2.4E+02
5	24	4.0E+02	NA	1.0E+02	9.2E+01	NA

Table 8. Propargite Application Collocated Results (ng/m3)

Sampling Period	East	East Collocated	Average	Relative Difference
1	2.9E+03	3.4E+03	3.2E+03	16%
2	4.2E+02	3.7E+02	4.0E+02	13%
3	NA	1.1E+03	NA	NA
4	3.6E+02	3.7E+02	3.7E+02	3%
5	4.0E+02	NA	NA	NA

MDL = 16.7 ng/sample

Det = Value was below the EQL of 83.5 ng/sample but \geq MDL

NA = Not Applicable

Table 9. Bifenthrin Application Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Time (min)	Time (hours)	Volume (m3)	Bifenthrin (ng/sample)	(ng/m3)	*(pptv)
1	NB	07/17/99 1220	07/18/99 0210	830	13.8	2.41	7.06E+1	2.9E+01	1.7E+00
3	WB	07/17/99 1230	07/18/99 0215	825	13.7	2.39	6.35E+1	2.7E+01	1.5E+00
5	SB	07/17/99 1235	07/18/99 0220	825	13.7	2.39	5.58E+1	2.3E+01	1.3E+00
7	EB	07/17/99 1240	07/18/99 0225	825	13.7	2.39	<MDL	<MDL	<MDL
9	N1	07/18/99 0210	07/18/99 0450	160	2.7	0.46	<MDL	<MDL	<MDL
10	W1	07/18/99 0215	07/18/99 0455	160	2.7	0.46	6.36E+1	1.4E+02	7.9E+00
11	S1	07/18/99 0220	07/18/99 0500	160	2.7	0.46	9.91E+1	2.1E+02	1.2E+01
12	E1	07/18/99 0225	07/18/99 0505	160	2.7	0.46	1.25E+2	2.7E+02	1.6E+01
13	E1D	07/18/99 0225	07/18/99 0505	160	2.7	0.46	1.12E+2	2.4E+02	1.4E+01
14	N2	07/18/99 0450	07/18/99 0700	130	2.2	0.38	<MDL	<MDL	<MDL
15	W2	07/18/99 0455	07/18/99 0705	130	2.2	0.38	<MDL	<MDL	<MDL
16	S2	07/18/99 0500	07/18/99 0710	130	2.2	0.38	6.46E+1	1.7E+02	9.9E+00
17	E2	07/18/99 0505	07/18/99 0715	130	2.2	0.38	<MDL	<MDL	<MDL
18	E2D	07/18/99 0505	07/18/99 0715	130	2.2	0.38	<MDL	<MDL	<MDL
19	N3	07/18/99 0700	07/18/99 1000	180	3.0	0.52	<MDL	<MDL	<MDL
20	W3	07/18/99 0705	07/18/99 1005	180	3.0	0.52	<MDL	<MDL	<MDL
21	S3	07/18/99 0710	07/18/99 1010	180	3.0	0.52	Det	Det	Det
22	E3	07/18/99 0715	07/18/99 1015	180	3.0	0.52	<MDL	<MDL	<MDL
23	E3D	07/18/99 0715	07/18/99 1015	180	3.0	0.52	<MDL	<MDL	<MDL
24	N4	07/18/99 1000	NA	NA	NA	NA	NA	NA	NA
25	W4	07/18/99 1005	07/18/99 1925	560	9.3	1.62	<MDL	<MDL	<MDL
26	S4	07/18/99 1010	07/18/99 1930	560	9.3	1.62	Det	Det	Det
27	E4	07/18/99 1015	07/18/99 1935	560	9.3	1.62	Det	Det	Det
28	E4D	07/18/99 1015	07/18/99 1935	560	9.3	1.62	Det	Det	Det
29	N5	07/18/99 1920	NA	NA	NA	NA	NA	NA	NA
30	W5	07/18/99 1925	07/19/99 0725	720	12.0	2.09	<MDL	<MDL	<MDL
31	S5	07/18/99 1930	07/19/99 0730	720	12.0	2.09	Det	Det	Det

MDL = 6.7 ng/sample

Det = Value was below the EQL of 33.5 ng/sample but \geq MDL

NA = Not Applicable (sampling problem)

*pptv at 1 atm and 20 C

Table 9. Bifenthrin Application Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Time (min)	Time (hours)	Volume (m3)	Bifenthrin (ng/sample)	(ng/m3)	*(pptv)
32	E5	07/18/99 1935	07/19/99 0735	720	12.0	2.09	Det	Det	Det
33	E5D	07/18/99 1935	07/19/99 0735	720	12.0	2.09	Det	Det	Det
34	N6	07/19/99 0720	07/19/99 1905	705	11.8	2.04	Det	Det	Det
35	W6	07/19/99 0725	07/19/99 1915	710	11.8	2.06	<MDL	<MDL	<MDL
36	S6	07/19/99 0730	07/19/99 1925	715	11.9	2.07	Det	Det	Det
37	E6	07/19/99 0735	NA	NA	NA	NA	NA	NA	NA
38	E6D	07/19/99 0735	07/19/99 1935	720	12.0	2.09	Det	Det	Det
39	N7	07/19/99 1905	07/20/99 0705	720	12.0	2.09	<MDL	<MDL	<MDL
40	W7	07/19/99 1915	07/20/99 0715	720	12.0	2.09	<MDL	<MDL	<MDL
41	S7	07/19/99 1925	NA	NA	NA	NA	NA	NA	NA
42	E7	07/19/99 1935	07/20/99 0735	720	12.0	2.09	Det	Det	Det
43	E7D	07/19/99 1935	07/20/99 0735	720	12.0	2.09	Det	Det	Det
44	N8	07/20/99 0705	07/21/99 0705	1440	24.0	4.18	Det	Det	Det
45	W8	07/20/99 0715	NA	NA	NA	NA	NA	NA	NA
46	S8	07/20/99 0725	07/21/99 0725	1440	24.0	4.18	Det	Det	Det
47	E8	07/20/99 0735	NA	NA	NA	NA	NA	NA	NA
48	E8D	07/20/99 0735	07/21/99 0735	1440	24.0	4.18	3.55E+1	8.5E+00	4.9E-01

MDL = 6.7 ng/sample

Det = Value was below the EQL of 33.5 ng/sample but \geq MDL

NA = Not Applicable (sampling problem)

*pptv at 1 atm and 20 C

Table 10. Summary of Bifenthrin Application Results (ng/m3)

Sampling Period	Hours Sampled	East	East Collocated	North	West	South
Background	13 3/4	<MDL	NA	2.9E+01	2.7E+01	2.3E+01
1	2 3/4	2.7E+02	2.4E+02	<MDL	1.4E+02	2.1E+02
2	2 1/4	<MDL	<MDL	<MDL	<MDL	1.7E+02
3	3	<MDL	<MDL	<MDL	<MDL	Det
4	9 1/4	Det	Det	NA	<MDL	Det
5	12	Det	Det	NA	<MDL	Det
6	11 3/4	NA	Det	Det	<MDL	Det
7	12	Det	Det	<MDL	<MDL	NA
8	24	NA	8.5E+00	Det	NA	Det

Table 11. Bifenthrin Application Collocated Results (ng/m3)

Sampling Period	East	East Collocated	Average	Relative Difference
1	2.7E+02	2.4E+02	2.6E+02	12%
2	<MDL	<MDL	<MDL	NA
3	<MDL	<MDL	<MDL	NA
4	Det	Det	Det	NA
5	Det	Det	Det	NA
6	NA	Det	NA	NA
7	Det	Det	Det	NA
8	NA	8.5E+00	NA	NA

MDL = 6.7 ng/sample

Det = Value was below the EQL of 33.5 ng/sample but \geq MDL

NA = Not Applicable

Table 12. Propargite and Bifenthrin Ambient Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Time (hours)	Volume (m3)	Propargite			Bifenthrin			Data Flags
						(ng/sample)	(ng/m3)	*(pptv)	(ng/sample)	(ng/m3)	*(pptv)	
1	KHS1	06/24/99 0850	06/25/99 0845	23.9	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	2
2	KHS1D	06/24/99 0850	06/25/99 0845	23.9	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	2,4
3	SJE1	06/24/99 0945	06/25/99 0950	24.1	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	2
4	SJE1D	06/24/99 0945	06/25/99 0950	24.1	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	2
5	HES1	06/24/99 1020	06/25/99 1020	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	2
6	HES1D	06/24/99 1020	06/25/99 1020	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	2
7	HUR1	06/24/99 1100	06/25/99 1100	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	2
8	HUR1D	06/24/99 1100	06/25/99 1100	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	2
9	SES1	06/24/99 1155	06/25/99 1155	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	2
10	SES1D	06/24/99 1155	06/25/99 1155	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	2
11	KBB1	06/24/99 1320	06/25/99 1320	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	2
12	KBB1D	06/24/99 1320	06/25/99 1320	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	2
13	ALV1	06/24/99 1410	06/25/99 1410	24.0	3.6	1.39E+2	3.9E+01	2.7E+00	<MDL	<MDL	<MDL	2
14	ALV1D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8
15	ARB1	06/24/99 1500	06/25/99 1500	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	2
16	ARB1D	06/24/99 1500	06/25/99 1500	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	2
18	KHS2	06/28/99 1030	06/29/99 1035	24.1	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
19	SJE2	06/28/99 1105	06/29/99 1110	24.1	3.6	<MDL	<MDL	<MDL	Det	Det	Det	
20	HES2	06/28/99 1125	06/29/99 1125	24.0	3.6	<MDL	<MDL	<MDL	Det	Det	Det	
21	HUR2	06/28/99 1200	06/29/99 1200	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
22	SES2	06/28/99 1230	06/29/99 1235	24.1	3.4	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	3
23	KBB2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8
24	ALV2	06/28/99 1345	06/29/99 1350	24.1	3.4	3.27E+2	9.6E+01	6.7E+00	Det	Det	Det	3
25	ARB2	06/28/99 1425	06/29/99 1425	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
26	KHS3	06/29/99 1035	06/30/99 1040	24.1	3.9	Det	Det	Det	<MDL	<MDL	<MDL	3
27	SJE3	06/29/99 1110	06/30/99 1110	24.0	3.6	<MDL	<MDL	<MDL	Det	Det	Det	
28	HES3	06/29/99 1130	06/30/99 1200	24.5	3.7	<MDL	<MDL	<MDL	Det	Det	Det	
29	HUR3	06/29/99 1200	06/30/99 1210	24.2	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
30	SES3	06/29/99 1235	06/30/99 1305	24.5	3.7	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
31	KBB3	06/29/99 1320	06/30/99 1405	24.8	3.7	1.54E+2	4.1E+01	2.9E+00	<MDL	<MDL	<MDL	

MDL = 16.7 ng/sample for propargite

Det = Value was below the EQL of 83.5 ng/sample but ≥MDL

*pptv at 1 atm and 20 C

MDL = 6.7 ng/sample for bifenthrin

Det = Value was below the EQL of 33.5 ng/sample but >MDL

NA = Not Applicable

Table 12. Propargite and Bifenthrin Ambient Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Time (hours)	Volume (m3)	Propargite			Bifenthrin			Data Flags
						(ng/sample)	(ng/m3)	*(pptv)	(ng/sample)	(ng/m3)	*(pptv)	
32	ALV3	06/29/99 1350	06/30/99 1525	25.6	3.8	5.17E+3	1.3E+03	9.4E+01	<MDL	<MDL	<MDL	1
33	ARB3	06/29/99 1425	06/30/99 1550	25.4	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	1,3
34	KHS4	06/30/99 1040	07/01/99 1040	24.0	3.6	8.53E+1	2.4E+01	1.7E+00	<MDL	<MDL	<MDL	
35	KHS4D	06/30/99 1040	07/01/99 1040	24.0	3.6	9.49E+1	2.6E+01	1.8E+00	<MDL	<MDL	<MDL	
36	SJE4	06/30/99 1110	07/01/99 1155	24.8	3.3	<MDL	<MDL	<MDL	Det	Det	Det	3
37	SJE4D	06/30/99 1110	07/01/99 1155	24.8	3.3	<MDL	<MDL	<MDL	Det	Det	Det	1,3
38	HES4	06/30/99 1135	07/01/99 1310	25.6	3.4	<MDL	<MDL	<MDL	Det	Det	Det	1,3
39	HES4D	06/30/99 1135	07/01/99 1310	25.6	3.3	<MDL	<MDL	<MDL	Det	Det	Det	1,3
40	HUR4	06/30/99 1205	07/01/99 1340	25.6	3.4	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	1,3
41	HUR4D	06/30/99 1205	07/01/99 1340	25.6	3.3	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	1,3
42	SES4	06/30/99 1305	07/01/99 1425	25.3	3.3	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	1,3
43	SES4D	06/30/99 1305	07/01/99 1425	25.3	3.3	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	1,3
44	KBB4	06/30/99 1405	07/01/99 1515	25.2	3.3	1.50E+2	4.6E+01	3.2E+00	<MDL	<MDL	<MDL	1,3
45	KBB4D	06/30/99 1405	07/01/99 1515	25.2	3.3	1.39E+2	4.3E+01	3.0E+00	<MDL	<MDL	<MDL	1,3
46	ALV4	06/30/99 1440	07/01/99 1555	25.3	3.2	1.74E+3	5.4E+02	3.7E+01	<MDL	<MDL	<MDL	1,3
47	ALV4D	06/30/99 1440	07/01/99 1555	25.3	3.3	1.38E+3	4.2E+02	2.9E+01	<MDL	<MDL	<MDL	3
48	ARB4	06/30/99 1550	07/01/99 1635	24.8	2.8	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	3
49	ARB4D	06/30/99 1550	07/01/99 1635	24.8	3.7	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	7
50	KHS5	07/01/99 1045	07/02/99 1045	24.0	2.4	1.34E+2	5.6E+01	3.9E+00	<MDL	<MDL	<MDL	7
51	SJE5	07/01/99 1200	07/02/99 1200	24.0	3.0	<MDL	<MDL	<MDL	Det	Det	Det	7
52	HES5	07/01/99 1210	07/02/99 1215	24.1	2.7	<MDL	<MDL	<MDL	Det	Det	Det	7
53	HUR5	07/01/99 1340	07/02/99 1340	24.0	3.5	Det	Det	Det	<MDL	<MDL	<MDL	7
54	SES5	07/01/99 1425	07/02/99 1425	24.0	2.8	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	7
55	KBB5	07/01/99 1515	07/02/99 1515	24.0	2.5	1.33E+2	5.3E+01	3.7E+00	<MDL	<MDL	<MDL	7
56	ALV5	07/01/99 1555	07/02/99 1555	24.0	2.9	1.05E+3	3.7E+02	2.6E+01	<MDL	<MDL	<MDL	7
57	ARB5	07/01/99 1635	07/02/99 1635	24.0	3.5	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	7
59	KHS6	07/06/99 1100	07/07/99 1057	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
60	SJE6	07/06/99 1145	07/07/99 1135	23.8	3.6	Det	Det	Det	Det	Det	Det	
61	HES6	07/06/99 1205	07/07/99 1205	24.0	3.6	Det	Det	Det	Det	Det	Det	
62	HUR6	07/06/99 1245	07/07/99 1244	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	

MDL = 16.7 ng/sample for propargite

Det = Value was below the EQL of 83.5 ng/sample but ≥MDL

*pptv at 1 atm and 20 C

MDL = 6.7 ng/sample for bifenthrin

Det = Value was below the EQL of 33.5 ng/sample but >MDL

NA = Not Applicable

Table 12. Propargite and Bifenthrin Ambient Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Time (hours)	Volume (m3)	Propargite			Bifenthrin			Data Flags
						(ng/sample)	(ng/m3)	*(pptv)	(ng/sample)	(ng/m3)	*(pptv)	
63	SES6	07/06/99 1325	07/07/99 1335	24.2	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
64	KBB6	07/06/99 1415	07/07/99 1426	24.2	3.6	1.35E+2	3.7E+01	2.6E+00	<MDL	<MDL	<MDL	
65	ALV6	07/06/99 1440	Counter	21.5	3.0	3.52E+2	1.2E+02	8.1E+00	<MDL	<MDL	<MDL	6
66	ARB6	07/06/99 1510	07/07/99 1540	24.5	3.7	Det	Det	Det	<MDL	<MDL	<MDL	
67	KHS7	07/07/99 1102	07/08/99 1100	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
68	KHS7D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8
69	SJE7	07/07/99 1144	07/08/99 1145	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
70	SJE7D	07/07/99 1140	07/08/99 1145	24.1	3.6	1.03E+2	2.9E+01	2.0E+00	<MDL	<MDL	<MDL	
71	HES7	07/07/99 1208	07/08/99 1210	24.0	3.6	Det	Det	Det	Det	Det	Det	4
72	HES7D	07/07/99 1211	07/08/99 1210	24.0	3.6	Det	Det	Det	Det	Det	Det	4
73	HUR7	07/07/99 1250	07/08/99 1250	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	4
74	HUR7D	07/07/99 1252	07/08/99 1250	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	4
75	SES7	07/07/99 1342	07/08/99 1345	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	4
76	SES7D	07/07/99 1344	07/08/99 1345	24.0	3.6	NA	NA	NA	NA	NA	NA	10
77	KBB7	07/07/99 1450	Counter	23.9	3.6	1.75E+2	4.9E+01	3.4E+00	<MDL	<MDL	<MDL	4,5
78	KBB7D	07/07/99 1432	Counter	23.9	3.6	1.03E+2	2.9E+01	2.0E+00	<MDL	<MDL	<MDL	4,5
79	ALV7	07/07/99 1504	Counter	23.8	3.6	4.48E+2	1.3E+02	8.8E+00	<MDL	<MDL	<MDL	4,5
80	ALV7D	07/07/99 1504	Counter	23.9	3.6	4.28E+2	1.2E+02	8.3E+00	<MDL	<MDL	<MDL	4,5
81	ARB7	07/07/99 1543	07/08/99 1540	24.0	3.6	Det	Det	Det	Det	Det	Det	4
82	ARB7D	07/07/99 1544	07/08/99 1450	23.1	3.5	Det	Det	Det	<MDL	<MDL	<MDL	4
83	KHS8	07/08/99 1100	07/09/99 1100	24.0	3.6	1.97E+2	5.5E+01	3.8E+00	<MDL	<MDL	<MDL	
84	SJE8	07/08/99 1145	07/09/99 1145	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
85	HES8	07/08/99 1210	07/09/99 1210	24.0	3.4	<MDL	<MDL	<MDL	Det	Det	Det	4
86	HUR8	07/08/99 1250	07/09/99 1250	24.0	3.4	Det	Det	Det	<MDL	<MDL	<MDL	4
87	SES8	07/08/99 1345	07/09/99 1345	24.0	3.2	<MDL	<MDL	<MDL	Det	Det	Det	4
88	KBB8	07/08/99 1450	07/09/99 1450	24.0	3.3	2.15E+2	6.5E+01	4.5E+00	<MDL	<MDL	<MDL	4
89	ALV8	07/08/99 1505	07/09/99 1505	24.0	3.5	4.94E+2	1.4E+02	1.0E+01	<MDL	<MDL	<MDL	4
90	ARB8	07/08/99 1540	07/09/99 1540	24.0	3.2	Det	Det	Det	<MDL	<MDL	<MDL	4
92	KHS9	07/12/99 1015	07/13/99 1015	24.0	3.6	2.61E+2	7.3E+01	5.1E+00	<MDL	<MDL	<MDL	
93	SJE9	07/12/99 1110	07/13/99 1109	24.0	3.6	1.66E+2	4.6E+01	3.2E+00	<MDL	<MDL	<MDL	

MDL = 16.7 ng/sample for propargite

Det = Value was below the EQL of 83.5 ng/sample but ≥MDL

*pptv at 1 atm and 20 C

MDL = 6.7 ng/sample for bifenthrin

Det = Value was below the EQL of 33.5 ng/sample but >MDL

NA = Not Applicable

Table 12. Propargite and Bifenthrin Ambient Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Time (hours)	Volume (m3)	Propargite			Bifenthrin			Data Flags
						(ng/sample)	(ng/m3)	*(pptv)	(ng/sample)	(ng/m3)	*(pptv)	
94	HES9	07/12/99 1130	07/13/99 1130	24.0	3.6	1.03E+2	2.9E+01	2.0E+00	5.48E+1	1.5E+01	8.8E-01	
95	HUR9	07/12/99 1210	07/13/99 1211	24.0	3.6	Det	Det	Det	4.41E+1	1.2E+01	7.1E-01	
96	SES9	07/12/99 1240	07/13/99 1242	24.0	3.6	<MDL	<MDL	<MDL	4.37E+1	1.2E+01	7.0E-01	
97	KBB9	07/12/99 1330	07/13/99 1330	24.0	3.6	1.12E+2	3.1E+01	2.2E+00	<MDL	<MDL	<MDL	
98	ALV9	07/12/99 1405	07/13/99 1405	24.0	3.0	4.18E+2	1.4E+02	9.6E+00	<MDL	<MDL	<MDL	4
99	ARB9	07/12/99 1440	07/13/99 1450	24.2	3.5	Det	Det	Det	<MDL	<MDL	<MDL	4
100	KHS10	07/13/99 1015	07/14/99 1015	24.0	3.6	2.85E+2	7.9E+01	5.5E+00	<MDL	<MDL	<MDL	
101	SJE10	07/13/99 1109	07/14/99 1110	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
102	HES10	07/13/99 1130	07/14/99 1128	24.0	3.6	1.12E+2	3.1E+01	2.2E+00	<MDL	<MDL	<MDL	
103	HUR10	07/13/99 1211	07/14/99 1210	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
104	SES10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8
105	KBB10	07/13/99 1330	07/14/99 1335	24.1	3.6	1.68E+2	4.7E+01	3.2E+00	<MDL	<MDL	<MDL	
106	ALV10	07/13/99 1405	07/14/99 1405	24.0	3.6	3.92E+2	1.1E+02	7.6E+00	4.49E+1	1.2E+01	7.2E-01	
107	ARB10	07/13/99 1450	07/14/99 1450	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
110	KHS11	07/14/99 1015	07/15/99 1020	24.1	3.6	2.41E+2	6.7E+01	4.7E+00	<MDL	<MDL	<MDL	
111	KHS11D	07/14/99 1015	07/15/99 1015	24.0	3.6	1.62E+2	4.5E+01	3.1E+00	<MDL	<MDL	<MDL	
112	SJE11	07/14/99 1110	07/15/99 1105	23.9	4.0	Det	Det	Det	<MDL	<MDL	<MDL	3
113	SJ11D	07/14/99 1110	07/15/99 1105	23.9	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
114	HES11	07/14/99 1129	07/15/99 1130	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
115	HES11D	07/14/99 1130	07/15/99 1130	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
116	HUR11	07/14/99 1210	07/15/99 1210	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
117	HUR11D	07/14/99 1210	07/15/99 1210	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
118	SES11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8
119	SES11D	07/14/99 1245	07/15/99 1245	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
120	KBB11	07/14/99 1335	07/15/99 1335	24.0	3.6	1.73E+2	4.8E+01	3.4E+00	<MDL	<MDL	<MDL	
121	KBB11D	07/14/99 1335	07/15/99 1335	24.0	3.6	1.65E+2	4.6E+01	3.2E+00	<MDL	<MDL	<MDL	
122	ALV11	07/14/99 1405	07/15/99 1405	24.0	3.6	3.84E+2	1.1E+02	7.4E+00	<MDL	<MDL	<MDL	
123	ALV11D	07/14/99 1405	07/15/99 1405	24.0	3.6	4.07E+2	1.1E+02	7.9E+00	<MDL	<MDL	<MDL	
124	ARB11	07/14/99 1450	07/15/99 1450	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
125	ARB11D	07/14/99 1450	07/15/99 1450	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	

MDL = 16.7 ng/sample for propargite

Det = Value was below the EQL of 83.5 ng/sample but ≥MDL

*pptv at 1 atm and 20 C

MDL = 6.7 ng/sample for bifenthrin

Det = Value was below the EQL of 33.5 ng/sample but >MDL

NA = Not Applicable

Table 12. Propargite and Bifenthrin Ambient Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Time (hours)	Volume (m3)	Propargite			Bifenthrin			Data Flags
						(ng/sample)	(ng/m3)	*(pptv)	(ng/sample)	(ng/m3)	*(pptv)	
126	KHS12	07/15/99 1020	07/16/99 1030	24.2	3.6	2.05E+2	5.7E+01	3.9E+00	<MDL	<MDL	<MDL	
127	SJE12	07/15/99 1110	07/16/99 1115	24.1	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
128	HES12	07/15/99 1130	07/16/99 1130	24.0	3.6	Det	Det	Det	6.04E+1	1.7E+01	9.7E-01	
129	HUR12	07/15/99 1210	07/16/99 1210	24.0	3.6	<MDL	<MDL	<MDL	3.56E+1	9.9E+00	5.7E-01	
130	SES12	07/15/99 1245	07/16/99 1245	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
131	KBB12	07/15/99 1335	07/16/99 1335	24.0	3.6	1.96E+2	5.4E+01	3.8E+00	<MDL	<MDL	<MDL	
132	ALV12	07/15/99 1405	07/16/99 1405	24.0	3.6	3.38E+2	9.4E+01	6.6E+00	4.89E+1	1.4E+01	7.9E-01	
133	ARB12	07/15/99 1450	07/16/99 1450	24.0	3.6	Det	Det	Det	4.64E+1	1.3E+01	7.5E-01	
136	KHS13	07/19/99 0908	07/20/99 0910	24.0	3.6	1.77E+2	4.9E+01	3.4E+00	<MDL	<MDL	<MDL	
137	SJE13	07/19/99 0945	07/20/99 0950	24.1	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
138	HES13	07/19/99 1007	07/20/99 1010	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
139	HUR13	07/19/99 1125	07/20/99 1130	24.1	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
140	SES13	07/19/99 1207	07/20/99 1225	24.3	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
141	KBB13	07/19/99 1345	07/20/99 1350	24.1	3.6	1.56E+2	4.3E+01	3.0E+00	<MDL	<MDL	<MDL	
142	ALV13	07/19/99 1414	07/20/99 1425	24.2	3.6	1.71E+2	4.7E+01	3.3E+00	<MDL	<MDL	<MDL	
143	ARB13	07/19/99 1503	07/20/99 1505	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	4
144	KHS14	07/20/99 0910	07/21/99 0910	24.0	3.6	1.56E+2	4.3E+01	3.0E+00	<MDL	<MDL	<MDL	
145	SJE14	07/20/99 0950	07/21/99 0955	24.1	3.6	<MDL	<MDL	<MDL	3.77E+1	1.0E+01	6.0E-01	
146	HES14	07/20/99 1010	07/21/99 1015	24.1	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
147	HUR14	07/20/99 1130	07/21/99 1130	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
148	SES14	07/20/99 1225	07/21/99 1230	24.1	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
149	KBB14	07/20/99 1350	07/21/99 1255	23.1	3.5	1.01E+2	2.9E+01	2.0E+00	<MDL	<MDL	<MDL	
150	ALV14	07/20/99 1425	07/21/99 1425	24.0	3.6	1.66E+2	4.6E+01	3.2E+00	<MDL	<MDL	<MDL	
151	ARB14	07/20/99 1505	Counter	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	4,5
152	KHS15	07/21/99 0910	07/22/99 0915	24.1	3.6	1.82E+2	5.0E+01	3.5E+00	<MDL	<MDL	<MDL	
153	KHS15D	07/21/99 0910	07/22/99 0915	24.1	3.6	1.62E+2	4.5E+01	3.1E+00	<MDL	<MDL	<MDL	
154	SJE15	07/21/99 0955	07/22/99 0955	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
155	SJE15D	07/21/99 0955	07/22/99 0955	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
156	HES15	07/21/99 1015	07/22/99 1015	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
157	HES15D	07/21/99 1015	07/22/99 1015	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	

MDL = 16.7 ng/sample for propargite

Det = Value was below the EQL of 83.5 ng/sample but ≥MDL

*pptv at 1 atm and 20 C

MDL = 6.7 ng/sample for bifenthrin

Det = Value was below the EQL of 33.5 ng/sample but >MDL

NA = Not Applicable

Table 12. Propargite and Bifenthrin Ambient Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Time (hours)	Volume (m3)	Propargite			Bifenthrin			Data Flags
						(ng/sample)	(ng/m3)	*(pptv)	(ng/sample)	(ng/m3)	*(pptv)	
158	HUR15	07/21/99 1130	07/22/99 1125	23.9	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
159	HUR15D	07/21/99 1130	07/22/99 1125	23.9	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
160	SES15	07/21/99 1230	07/22/99 1230	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
161	SES15D	07/21/99 1230	07/22/99 1230	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
162	KBB15	07/21/99 1355	07/22/99 1350	23.9	3.6	1.16E+2	3.2E+01	2.3E+00	<MDL	<MDL	<MDL	
163	KBB15D	07/21/99 1355	07/22/99 1350	23.9	3.6	1.16E+2	3.2E+01	2.3E+00	<MDL	<MDL	<MDL	
164	ALV15	07/21/99 1425	07/22/99 1425	24.0	3.6	2.03E+2	5.6E+01	3.9E+00	<MDL	<MDL	<MDL	
165	ALV15D	07/21/99 1425	07/22/99 1425	24.0	3.6	NA	NA	NA	NA	NA	NA	9
166	ARB15	07/21/99 1500	07/22/99 1500	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
167	ARB15D	07/21/99 1500	07/22/99 1500	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
168	KHS16	07/22/99 0915	07/23/99 0915	24.0	3.6	2.15E+2	6.0E+01	4.2E+00	<MDL	<MDL	<MDL	4
169	SJE16	07/22/99 0955	07/23/99 0955	24.0	3.6	<MDL	<MDL	<MDL	5.24E+1	1.5E+01	8.4E-01	
170	HES16	07/22/99 1015	07/23/99 1015	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	4
171	HUR16	07/22/99 1125	07/23/99 1125	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	4
172	SES16	07/22/99 1230	07/23/99 1230	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	4
173	KBB16	07/22/99 1350	07/23/99 1350	24.0	3.6	1.70E+2	4.7E+01	3.3E+00	<MDL	<MDL	<MDL	4
174	ALV16	07/22/99 1425	07/23/99 1425	24.0	3.6	2.56E+2	7.1E+01	5.0E+00	<MDL	<MDL	<MDL	4
175	ARB16	07/22/99 1500	07/23/99 1500	24.0	3.6	8.55E+1	2.4E+01	1.7E+00	<MDL	<MDL	<MDL	4
176	KHS16	07/26/99 0915	07/27/99 0915	24.0	3.6	1.72E+2	4.8E+01	3.3E+00	<MDL	<MDL	<MDL	
177	SJE17	07/26/99 0955	07/27/99 0955	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
178	HES17	07/26/99 1015	07/27/99 1015	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
179	HUR17	07/26/99 1130	07/27/99 1135	24.1	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
180	SES17	07/26/99 1230	07/27/99 1230	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
181	KBB17	07/26/99 1350	07/27/99 1350	24.0	3.6	1.70E+2	4.7E+01	3.3E+00	<MDL	<MDL	<MDL	
182	ALV17	07/26/99 1425	07/27/99 1425	24.0	3.6	3.15E+2	8.8E+01	6.1E+00	<MDL	<MDL	<MDL	
183	ARB17	07/26/99 1520	07/27/99 1515	23.9	3.6	8.83E+1	2.5E+01	1.7E+00	<MDL	<MDL	<MDL	
184	KHS18	07/27/99 0915	07/28/99 0915	24.0	3.6	2.13E+2	5.9E+01	4.1E+00	<MDL	<MDL	<MDL	
185	SJE18	07/27/99 0955	07/28/99 0955	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
186	HES18	07/27/99 1015	07/28/99 1015	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
187	HUR18	07/27/99 1135	07/28/99 1130	23.9	3.6	Det	Det	Det	<MDL	<MDL	<MDL	

MDL = 16.7 ng/sample for propargite

Det = Value was below the EQL of 83.5 ng/sample but ≥MDL

*pptv at 1 atm and 20 C

MDL = 6.7 ng/sample for bifenthrin

Det = Value was below the EQL of 33.5 ng/sample but >MDL

NA = Not Applicable

Table 12. Propargite and Bifenthrin Ambient Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Time (hours)	Volume (m3)	Propargite			Bifenthrin			Data Flags
						(ng/sample)	(ng/m3)	*(pptv)	(ng/sample)	(ng/m3)	*(pptv)	
188	SES18	07/27/99 1230	07/28/99 1230	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
189	KBB18	07/27/99 1345	07/28/99 1345	24.0	3.6	1.70E+2	4.7E+01	3.3E+00	<MDL	<MDL	<MDL	
190	ALV18	07/27/99 1425	07/28/99 1425	24.0	3.6	2.71E+2	7.5E+01	5.3E+00	<MDL	<MDL	<MDL	
191	ARB18	07/27/99 1520	07/28/99 1520	24.0	3.6	Det	Det	Det	Det	Det	Det	
192	KHS19	07/28/99 0915	07/29/99 0915	24.0	3.6	1.59E+2	4.4E+01	3.1E+00	<MDL	<MDL	<MDL	
193	KHS19D	07/28/99 0915	07/29/99 0915	24.0	3.6	1.61E+2	4.5E+01	3.1E+00	<MDL	<MDL	<MDL	
194	SJE19	07/28/99 0955	07/29/99 0955	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
195	SJE19D	07/28/99 0955	07/29/99 0955	24.0	3.6	Det	Det	Det	Det	Det	Det	
196	HES19	07/28/99 1015	07/29/99 1015	24.0	3.6	1.02E+2	2.8E+01	2.0E+00	<MDL	<MDL	<MDL	
197	HES19D	07/28/99 1015	07/29/99 1015	24.0	3.6	Det	Det	Det	Det	Det	Det	
198	HUR19	07/28/99 1130	07/29/99 1130	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
199	HUR19D	07/28/99 1130	07/29/99 1130	24.0	3.6	<MDL	<MDL	<MDL	Det	Det	Det	
200	SES19	07/28/99 1230	07/29/99 1230	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
201	SES19D	07/28/99 1230	07/29/99 1230	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
202	KBB19	07/28/99 1345	07/29/99 1340	23.9	3.6	1.36E+2	3.8E+01	2.6E+00	<MDL	<MDL	<MDL	
203	KBB19D	07/28/99 1345	07/29/99 1340	23.9	3.6	1.48E+2	4.1E+01	2.9E+00	<MDL	<MDL	<MDL	
204	ALV19	07/28/99 1425	07/29/99 1425	24.0	3.6	2.27E+2	6.3E+01	4.4E+00	<MDL	<MDL	<MDL	
205	ALV19D	07/28/99 1425	07/29/99 1425	24.0	3.6	2.43E+2	6.8E+01	4.7E+00	<MDL	<MDL	<MDL	
206	ARB19	07/28/99 1520	07/29/99 1520	24.0	3.6	8.73E+1	2.4E+01	1.7E+00	<MDL	<MDL	<MDL	
207	ARB19D	07/28/99 1520	07/29/99 1520	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
208	KHS20	07/29/99 0915	07/30/99 0915	24.0	3.6	1.66E+2	4.6E+01	3.2E+00	<MDL	<MDL	<MDL	
209	SJE20	07/29/99 0955	07/30/99 0955	24.0	3.6	<MDL	<MDL	<MDL	3.43E+1	9.5E+00	5.5E-01	
210	HES20	07/29/99 1015	07/30/99 1015	24.0	3.6	2.39E+2	6.6E+01	4.6E+00	Det	Det	Det	
211	HUR20	07/29/99 1130	07/30/99 1130	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
212	SES20	07/29/99 1230	07/30/99 1230	24.0	3.6	<MDL	<MDL	<MDL	Det	Det	Det	
213	KBB20	07/29/99 1340	07/30/99 1345	24.1	3.6	1.37E+2	3.8E+01	2.6E+00	Det	Det	Det	
214	ALV20	07/29/99 1425	07/30/99 1425	24.0	3.6	2.26E+2	6.3E+01	4.4E+00	Det	Det	Det	
215	ARB20	07/29/99 1520	07/30/99 1520	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
216	KHS21	08/02/99 0915	08/03/99 0915	24.0	3.6	1.82E+2	5.1E+01	3.5E+00	<MDL	<MDL	<MDL	
217	SJE21	08/02/99 0955	08/03/99 0955	24.0	3.6	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	

MDL = 16.7 ng/sample for propargite

Det = Value was below the EQL of 83.5 ng/sample but ≥MDL

*pptv at 1 atm and 20 C

MDL = 6.7 ng/sample for bifenthrin

Det = Value was below the EQL of 33.5 ng/sample but >MDL

NA = Not Applicable

Table 12. Propargite and Bifenthrin Ambient Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Time (hours)	Volume (m3)	Propargite			Bifenthrin			Data Flags
						(ng/sample)	(ng/m3)	*(pptv)	(ng/sample)	(ng/m3)	*(pptv)	
218	HES21	08/02/99 1015	08/03/99 1020	24.1	3.6	2.97E+2	8.2E+01	5.7E+00	Det	Det	Det	
219	HUR21	08/02/99 1123	08/03/99 1125	24.0	3.6	Det	Det	Det	Det	Det	Det	
220	SES21	08/02/99 1230	08/03/99 1230	24.0	3.6	Det	Det	Det	Det	Det	Det	
221	KBB21	08/02/99 1350	08/03/99 1335	23.7	3.6	1.35E+2	3.8E+01	2.6E+00	Det	Det	Det	
222	ALV21	08/02/99 1425	08/03/99 1425	24.0	3.6	2.06E+2	5.7E+01	4.0E+00	<MDL	<MDL	<MDL	
223	ARB21	08/02/99 1505	08/03/99 1505	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
225	KHS22	08/03/99 0915	08/04/99 0915	24.0	3.6	2.01E+2	5.6E+01	3.9E+00	<MDL	<MDL	<MDL	
226	KHS22D	08/03/99 0915	08/04/99 0915	24.0	3.6	1.70E+2	4.7E+01	3.3E+00	<MDL	<MDL	<MDL	
227	SJE22	08/03/99 0955	08/04/99 0955	24.0	3.6	Det	Det	Det	Det	Det	Det	
228	SJE22D	08/03/99 0955	08/04/99 0955	24.0	3.6	Det	Det	Det	Det	Det	Det	
229	HES22	08/03/99 1020	08/04/99 1020	24.0	3.6	3.91E+2	1.1E+02	7.6E+00	Det	Det	Det	
230	HES22D	08/03/99 1020	08/04/99 1020	24.0	3.6	3.56E+2	9.9E+01	6.9E+00	Det	Det	Det	
231	HUR22	08/03/99 1125	08/04/99 1125	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
232	HUR22D	08/03/99 1125	08/04/99 1125	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
233	SES22	08/03/99 1230	08/04/99 1230	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
234	SES22D	08/03/99 1230	08/04/99 1230	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
235	KBB22	08/03/99 1335	08/04/99 1330	23.9	3.6	1.16E+2	3.2E+01	2.3E+00	<MDL	<MDL	<MDL	
236	KBB22D	08/03/99 1335	08/04/99 1330	23.9	3.6	1.25E+2	3.5E+01	2.4E+00	<MDL	<MDL	<MDL	
237	ALV22	08/03/99 1425	08/04/99 1425	24.0	3.6	2.57E+2	7.1E+01	5.0E+00	<MDL	<MDL	<MDL	
238	ALV22D	08/03/99 1425	08/04/99 1425	24.0	3.6	2.38E+2	6.6E+01	4.6E+00	<MDL	<MDL	<MDL	
239	ARB22	08/03/99 1305	08/04/99 1305	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	
240	ARB22D	08/03/99 1305	08/04/99 1305	24.0	3.6	Det	Det	Det	<MDL	<MDL	<MDL	

Data Flags:

1. Sample Duration was more than 5% >24 hours
2. Samples were not on dry ice on delivery
3. End flow rates were > 10% different from the start rate
4. Start or end flow rate was not recorded
5. Start or end sampling date/time were not recorded; counter time was used to calculate sampling time
6. Sample pump off at end; counter time was used to calculate sampling time
7. Start flow rate was not set at 2.5 cc/min, no end flow rate was recorded
8. Invalid sample due to field sampling problem
9. Sample was not analyzed by the laboratory
10. Sample result invalidated by laboratory

MDL = 16.7 ng/sample for propargite

Det = Value was below the EQL of 83.5 ng/sample but ≥MDL

*pptv at 1 atm and 20 C

MDL = 6.7 ng/sample for bifenthrin

Det = Value was below the EQL of 33.5 ng/sample but >MDL

NA = Not Applicable

Table 13. Summary of Propargite Ambient Monitoring Results (ng/m3)

Start Date	ALV	ARB	HES	HUR	KBB	KHS	SES	SJE
06/24/99	3.9E+01	<MDL	<MDL	<MDL	Det	<MDL	<MDL	<MDL
06/24/99	NA	<MDL	<MDL	<MDL	Det	<MDL	<MDL	<MDL
06/28/99	9.6E+01	<MDL	<MDL	Det	NA	Det	<MDL	<MDL
06/29/99	1.3E+03	<MDL	<MDL	<MDL	4.1E+01	Det	<MDL	<MDL
06/30/99	5.4E+02	<MDL	<MDL	<MDL	4.6E+01	2.4E+01	<MDL	<MDL
06/30/99	4.2E+02	<MDL	<MDL	<MDL	4.3E+01	2.6E+01	<MDL	<MDL
07/01/99	3.7E+02	<MDL	<MDL	Det	5.3E+01	5.6E+01	<MDL	<MDL
07/06/99	1.2E+02	Det	Det	<MDL	3.7E+01	<MDL	<MDL	Det
07/07/99	1.3E+02	Det	Det	Det	4.9E+01	<MDL	<MDL	Det
07/07/99	1.2E+02	Det	Det	Det	2.9E+01	NA	NA	2.9E+01
07/08/99	1.4E+02	Det	<MDL	Det	6.5E+01	5.5E+01	<MDL	Det
07/12/99	1.4E+02	Det	2.9E+01	Det	3.1E+01	7.3E+01	<MDL	4.6E+01
07/13/99	1.1E+02	Det	3.1E+01	Det	4.7E+01	7.9E+01	NA	Det
07/14/99	1.1E+02	Det	Det	<MDL	4.8E+01	6.7E+01	NA	Det
07/14/99	1.1E+02	Det	Det	<MDL	4.6E+01	4.5E+01	<MDL	<MDL
07/15/99	9.4E+01	Det	Det	<MDL	5.4E+01	5.7E+01	<MDL	<MDL
07/19/99	4.7E+01	Det	Det	Det	4.3E+01	4.9E+01	<MDL	<MDL
07/20/99	4.6E+01	Det	Det	Det	2.9E+01	4.3E+01	<MDL	<MDL
07/21/99	5.6E+01	Det	Det	Det	3.2E+01	5.0E+01	Det	Det
07/21/99	NA	Det	Det	Det	3.2E+01	4.5E+01	Det	Det
07/22/99	7.1E+01	2.4E+01	Det	Det	4.7E+01	6.0E+01	<MDL	<MDL
07/26/99	8.8E+01	2.5E+01	Det	Det	4.7E+01	4.8E+01	<MDL	Det
07/27/99	7.5E+01	Det	Det	Det	4.7E+01	5.9E+01	Det	Det
07/28/99	6.3E+01	2.4E+01	2.8E+01	<MDL	3.8E+01	4.4E+01	<MDL	<MDL
07/28/99	6.8E+01	Det	Det	<MDL	4.1E+01	4.5E+01	<MDL	Det
07/29/99	6.3E+01	Det	6.6E+01	<MDL	3.8E+01	4.6E+01	<MDL	<MDL
08/02/99	5.7E+01	Det	8.2E+01	Det	3.8E+01	5.1E+01	Det	<MDL
08/03/99	7.1E+01	Det	1.1E+02	Det	3.2E+01	5.6E+01	Det	Det
08/03/99	6.6E+01	Det	9.9E+01	Det	3.5E+01	4.7E+01	Det	Det

Maximum	1300	25	110	Det	65	79	Det	46
Average	170	13	23	10	42	43	5	10
# Samples	22	22	22	22	21	22	21	21
# >EQL	22	3	6	0	20	17	0	2
# Det	0	14	10	14	1	2	4	9
# <MDL	0	5	6	8	0	3	17	11

Only the higher value of each collocated pair was used to calculate the above statistics.

"Det" results were factored into the average as $(MDL+EQL)/2 = 14$ ng/m3.

<MDL results were factored into the average as $MDL/2 = 2.3$ ng/m3.

Assume a 3.6 m3 sample volume for the above MDL and EQL.

MDL = 16.7 ng/sample for propargite

Det = Value was below the EQL of 83.5 ng/sample but >MDL

NA = Not Applicable

Table 14. Summary of Bifenthrin Monitoring Results (ng/m3)

Start Date	ALV	ARB	HES	HUR	KBB	KHS	SES	SJE
06/24/99	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
06/24/99	NA	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
06/28/99	Det	<MDL	Det	<MDL	NA	<MDL	<MDL	Det
06/29/99	<MDL	<MDL	Det	<MDL	<MDL	<MDL	<MDL	Det
06/30/99	<MDL	<MDL	Det	<MDL	<MDL	<MDL	<MDL	Det
06/30/99	<MDL	<MDL	Det	<MDL	<MDL	<MDL	<MDL	Det
07/01/99	<MDL	<MDL	Det	<MDL	<MDL	<MDL	<MDL	Det
07/06/99	<MDL	<MDL	Det	<MDL	<MDL	<MDL	<MDL	Det
07/07/99	<MDL	Det	Det	<MDL	<MDL	<MDL	<MDL	<MDL
07/07/99	<MDL	<MDL	Det	<MDL	<MDL	NA	NA	<MDL
07/08/99	<MDL	<MDL	Det	<MDL	<MDL	<MDL	Det	<MDL
07/12/99	<MDL	<MDL	1.5E+01	1.2E+01	<MDL	<MDL	1.2E+01	<MDL
07/13/99	1.2E+01	<MDL	<MDL	<MDL	<MDL	<MDL	NA	<MDL
07/14/99	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	NA	<MDL
07/14/99	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
07/15/99	1.4E+01	1.3E+01	1.7E+01	9.9E+00	<MDL	<MDL	<MDL	<MDL
07/19/99	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
07/20/99	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	1.0E+01
07/21/99	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
07/21/99	NA	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
07/22/99	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	1.5E+01
07/26/99	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
07/27/99	<MDL	Det	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
07/28/99	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
07/28/99	<MDL	<MDL	Det	Det	<MDL	<MDL	<MDL	Det
07/29/99	Det	<MDL	Det	<MDL	Det	<MDL	Det	9.5E+00
08/02/99	<MDL	<MDL	Det	Det	Det	<MDL	Det	<MDL
08/03/99	<MDL	<MDL	Det	<MDL	<MDL	<MDL	<MDL	Det
08/03/99	<MDL	<MDL	Det	<MDL	<MDL	<MDL	<MDL	Det

Maximum	14	13	17	12	Det	<MDL	12	15
Average	2.5	1.9	4.6	2.3	1.4	0.9	2	3.9
# Samples	22	22	22	22	21	22	21	22
# >EQL	2	1	2	2	0	0	1	3
# Det	2	2	11	2	2	0	3	7
# <MDL	18	19	9	18	19	22	17	12

Only the higher value of each collocated pair was used to calculate the above statistics.

"Det" results were factored into the average as $(MDL+EQL)/2 = 5.6$ ng/m3.

<MDL results were factored into the average as $MDL/2 = 0.93$ ng/m3.

Assume a 3.6 m3 sample volume for the above MDL and EQL.

MDL = 6.7 ng/sample for bifenthrin

Det = Value was below the EQL of 33.5 ng/sample but >MDL

NA = Not Applicable

Table 15. Propargite and Bifenthrin Collocated Results

Sample ID	Propargite (ng/m3)	Average	Relative Difference	Bifenthrin (ng/m3)	Average	Relative Difference
HUR4	<MDL			<MDL		
HUR4D	<MDL	NA	NA	<MDL	NA	NA
HUR7	Det			<MDL		
HUR7D	Det	NA	NA	<MDL	NA	NA
HUR11	<MDL			<MDL		
HUR11D	<MDL	NA	NA	<MDL	NA	NA
HUR15	Det			<MDL		
HUR15D	Det	NA	NA	<MDL	NA	NA
HUR19	<MDL			<MDL		
HUR19D	<MDL	NA	NA	Det	NA	NA
HUR22	Det			<MDL		
HUR22D	Det	NA	NA	<MDL	NA	NA
KBB1	Det			<MDL		
KBB1D	Det	NA	NA	<MDL	NA	NA
KBB4	4.6E+01			<MDL		
KBB4D	4.3E+01	4.4E+01	7%	<MDL	NA	NA
KBB7	4.9E+01			<MDL		
KBB7D	2.9E+01	3.9E+01	52%	<MDL	NA	NA
KBB11	4.8E+01			<MDL		
KBB11D	4.6E+01	4.7E+01	5%	<MDL	NA	NA
KBB15	3.2E+01			<MDL		
KBB15D	3.2E+01	3.2E+01	0%	<MDL	NA	NA
KBB19	3.8E+01			<MDL		
KBB19D	4.1E+01	4.0E+01	8%	<MDL	NA	NA
KBB22	3.2E+01			<MDL		
KBB22D	3.5E+01	3.4E+01	7%	<MDL	NA	NA
KHS1	<MDL			<MDL		
KHS1D	<MDL	NA	NA	<MDL	NA	NA
KHS4	2.4E+01			<MDL		
KHS4D	2.6E+01	2.5E+01	11%	<MDL	NA	NA
KHS7	<MDL			<MDL		
KHS7D	NA	NA	NA	NA	NA	NA
KHS11	6.7E+01			<MDL		
KHS11D	4.5E+01	5.6E+01	39%	<MDL	NA	NA
KHS15	5.0E+01			<MDL		
KHS15D	4.5E+01	4.8E+01	12%	<MDL	NA	NA
KHS19	4.4E+01			<MDL		
KHS19D	4.5E+01	4.4E+01	1%	<MDL	NA	NA
KHS22	5.6E+01			<MDL		
KHS22D	4.7E+01	5.2E+01	17%	<MDL	NA	NA
SES1	<MDL			<MDL		
SES1D	<MDL	NA	NA	<MDL	NA	NA
SES4	<MDL			<MDL		
SES4D	<MDL	NA	NA	<MDL	NA	NA

Table 15. Propargite and Bifenthrin Collocated Results

Sample ID	Propargite (ng/m3)	Average	Relative Difference
SES7	<MDL		
SES7D	NA	NA	NA
SES11	NA		
SES11D	<MDL	NA	NA
SES15	Det		
SES15D	Det	NA	NA
SES19	<MDL		
SES19D	<MDL	NA	NA
SES22	Det		
SES22D	Det	NA	NA
SJE1	<MDL		
SJE1D	<MDL	NA	NA
SJE4	<MDL		
SJE4D	<MDL	NA	NA
SJE7	Det		
SJE7D	2.9E+01	NA	NA
SJE11	Det		
SJE11D	<MDL	NA	NA
SJE15	Det		
SJE15D	Det	NA	NA
SJE19	<MDL		
SJE19D	Det	NA	NA
SJE22	Det		
SJE22D	Det	NA	NA

AVE= 13%

Bifenthrin (ng/m3)	Average	Relative Difference
<MDL		
4.6E+02	NA	NA
NA		
<MDL	NA	NA
<MDL		
<MDL	NA	NA
<MDL		
<MDL	NA	NA
<MDL		
<MDL	NA	NA
<MDL		
Det		
Det	NA	NA
<MDL		
<MDL	NA	NA
<MDL		
<MDL	NA	NA
<MDL		
Det	NA	NA
Det		
Det	NA	NA

AVE= NA

Table 16. Propargite Application Lab Spike Results

Sample ID	Propargite Amount (ng)	Expected Amount (ng)	Percent Recovery
LS-1	196	200	98%
LS-2	211	200	106%
LS-3	233	200	117%
LS-4	210	200	105%
Ave.=			106%

Table 17. Propargite Application Trip Spike Results

Sample ID	Propargite Amount (ng)	Expected Amount (ng)	Percent Recovery
TS-1	196	200	98%
TS-2	221	200	111%
TS-3	223	200	112%
TS-4	196	200	98%
Ave.=			105%

Table 18. Propargite Application Field Spike Results

Sample ID	Propargite Amount (ng)	Background* Amount (ng)	Corrected Amount (ng)	Expected Amount (ng)	Percent Recovery
EFS1	376	218	158	200	79%
NFS2	294	247	47	200	24%
WFS3	504	408	96	200	48%
SFS4	246	NA	NA	200	NA
Ave.=					50%

*Amount of propargite found in the collocated background sample.

Table 19. Propargite Ambient Lab Spike Results

Sample ID	Propargite Amount (ng)	Expected Amount (ng)	Percent Recovery
LS-1	NA	200	NA
LS-2	231	200	116%
LS-3	188	200	94%
LS-4	214	200	107%
Ave.=			106%

Table 20. Propargite Ambient Trip Spike Results

Sample ID	Propargite Amount (ng)	Expected Amount (ng)	Percent Recovery
TS-1	191	200	96%
TS-2	198	200	99%
TS-3	221	200	111%
TS-4	230	200	115%
Ave.=			105%

Table 21. Propargite Ambient Field Spike Results

Sample ID	Propargite Amount (ng)	Background* Amount (ng)	Corrected Amount (ng)	Expected Amount (ng)	Percent Recovery
PBF708-1	250	Det	200	200	100%
PBF708-2	250	Det	200	200	100%
PBF708-3	222	Det	172	200	86%
PBF708-4	238	Det	188	200	94%
Ave.=					95%

*Amount of propargite found in the collocated background sample.

"Det" factored in as $(MDL+EQL)/2 = 50$ ng/sample

Table 22. Bifenthrin Application Lab Spike Results

Sample ID	Bifenthrin Amount (ng)	Expected Amount (ng)	Percent Recovery
LS-1	221	300	74%
LS-2	235	300	78%
LS-3	226	300	75%
LS-4	172	300	57%
Ave.=			71%

Table 23. Bifenthrin Application Trip Spike Results

Sample ID	Bifenthrin Amount (ng)	Expected Amount (ng)	Percent Recovery
TS-1	261	300	87%
TS-2	292	300	97%
TS-3	288	300	96%
TS-4	285	300	95%
Ave.=			94%

Table 24. Bifenthrin Application Field Spike Results

Sample ID	Bifenthrin Amount (ng)	Background* Amount (ng)	Corrected Amount (ng)	Expected Amount (ng)	Percent Recovery
NFS1	205	70.6	134	300	45%
WFS2	309	63.5	246	300	82%
SFS3	350	55.8	294	300	98%
EFS4	290	<MDL	290	300	97%
Ave.=					80%

*Amount of bifenthrin found in the collocated background sample.

Table 25. Bifenthrin Ambient Lab Spike Results

Sample ID	Bifenthrin Amount (ng)	Expected Amount (ng)	Percent Recovery
LS-1	NA	200	NA
LS-2	257	200	129%
LS-3	233	200	117%
LS-4	250	200	125%
Ave.=			123%

Table 26. Bifenthrin Ambient Trip Spike Results

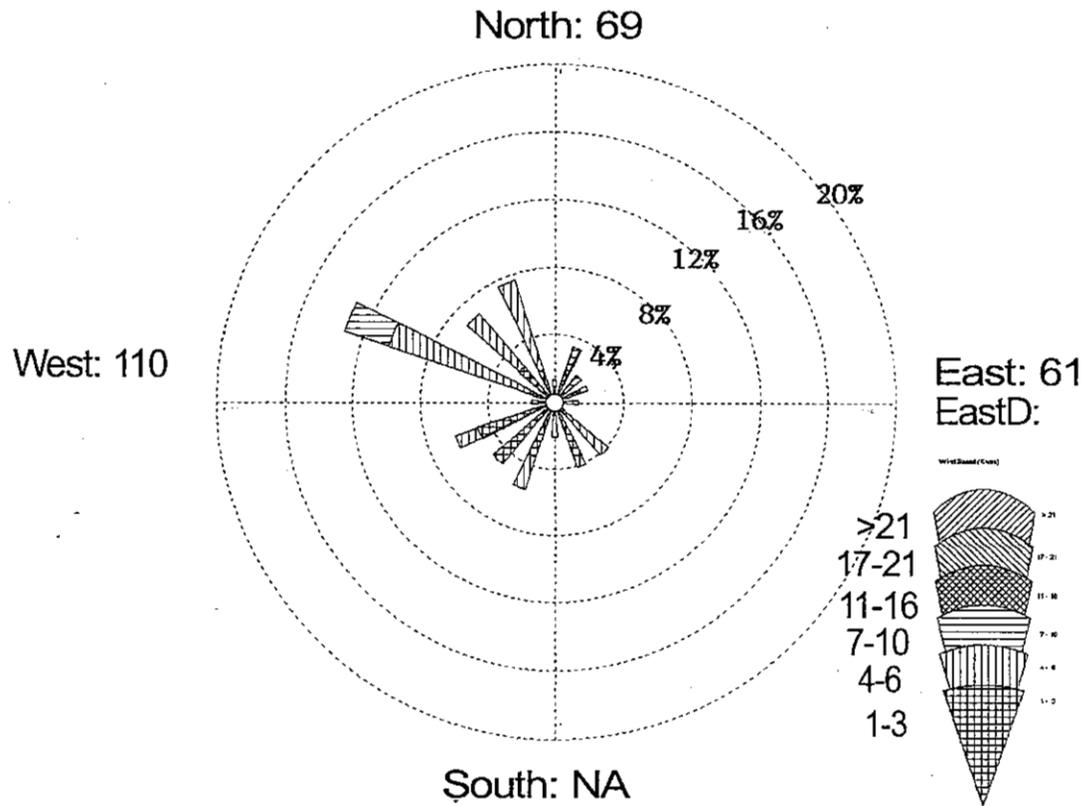
Sample ID	Bifenthrin Amount (ng)	Expected Amount (ng)	Percent Recovery
TS-1	204	200	102%
TS-2	204	200	102%
TS-3	203	200	102%
TS-4	211	200	106%
Ave.=			103%

Table 27. Bifenthrin Ambient Field Spike Results

Sample ID	Bifenthrin Amount (ng)	Background* Amount (ng)	Corrected Amount (ng)	Expected Amount (ng)	Percent Recovery
PBF708-1	164	<MDL	164	200	82%
PBF708-2	185	<MDL	185	200	93%
PBF708-3	207	<MDL	207	200	104%
PBF708-4	204	<MDL	204	200	102%
Ave.=					95%

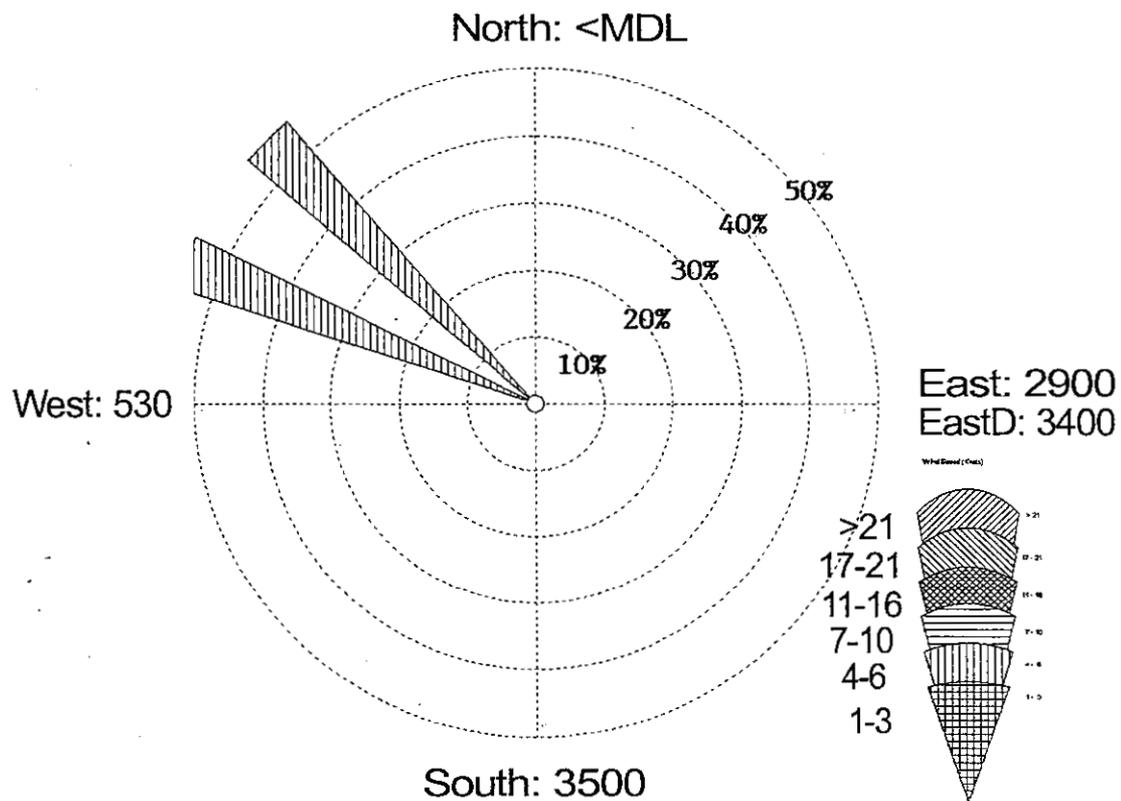
*Amount of bifenthrin found in the collocated ambient sample.

Figure 6
 Propargite Air Monitoring Results (ng/m³)
 Background Period



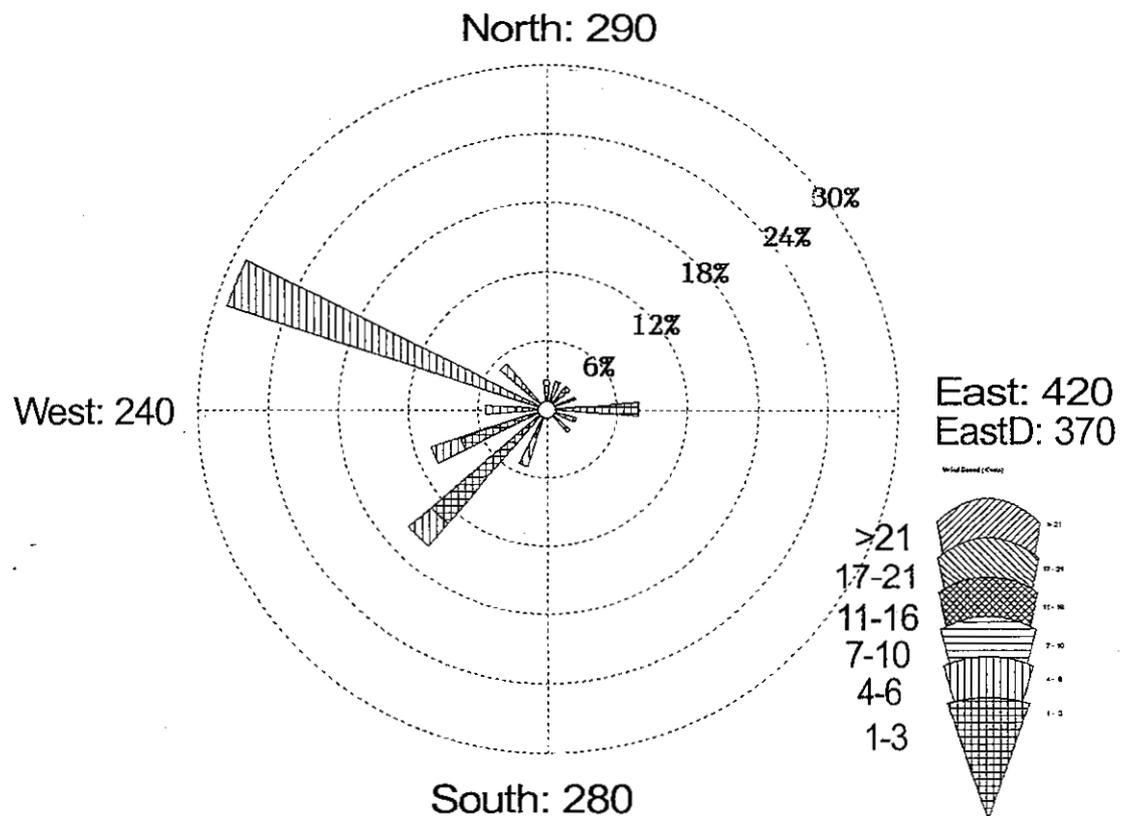
Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 3.99 Knots	Sample Date-Time 7/13/99 1115 to 7/14/99 1115
Display Wind Speed	Units Knots	Calm Winds 0.0%	Sample ID Background Period

Figure 7
 Propargite Air Monitoring Results (ng/m³)
 Period 1



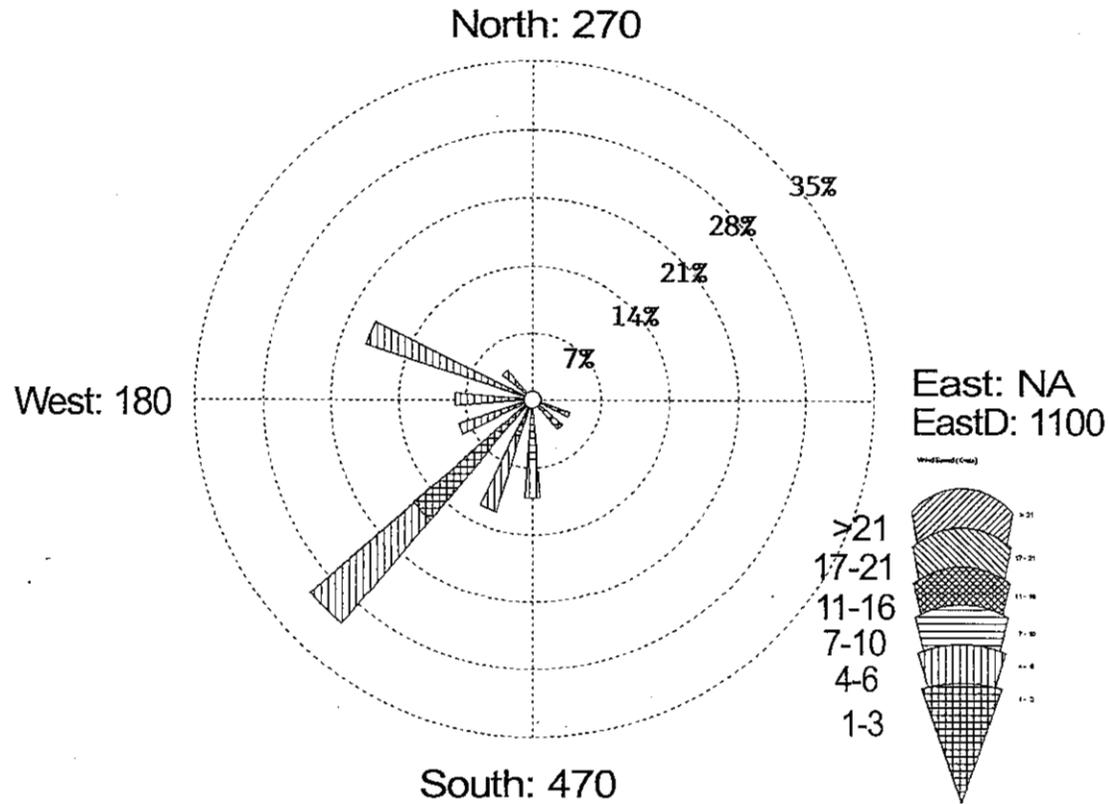
Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 5.98 Knots	Sample Date-Time 7/14/99 2015 to 7/14/99 2145
Display Wind Speed	Units Knots	Calm Winds 0.0%	Sample ID Period 1

Figure 8
 Propargite Air Monitoring Results (ng/m³)
 Period 2



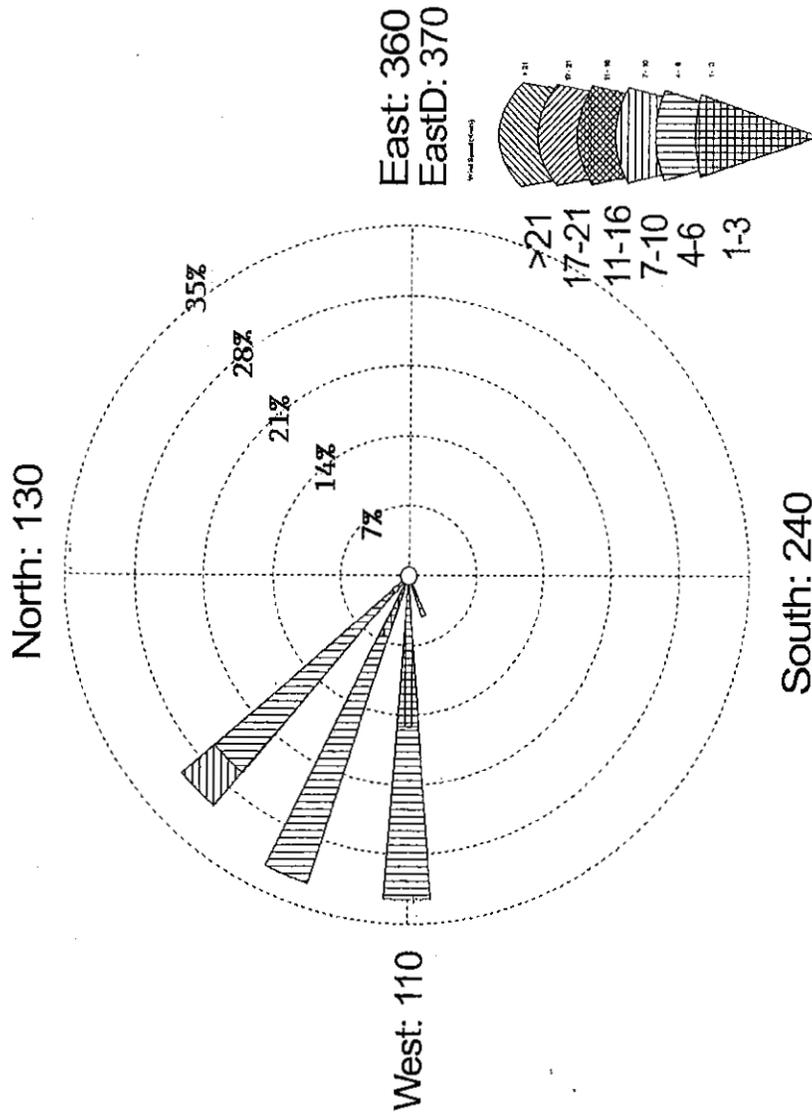
Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 3.45 Knots	Sample Date-Time 7/14/99 2145 to 7/15/99 0715
Display Wind Speed	Units Knots	Calm Winds 5.26	Sample ID Period 2

Figure 9
 Propargite Air Monitoring Results (ng/m³)
 Period 3



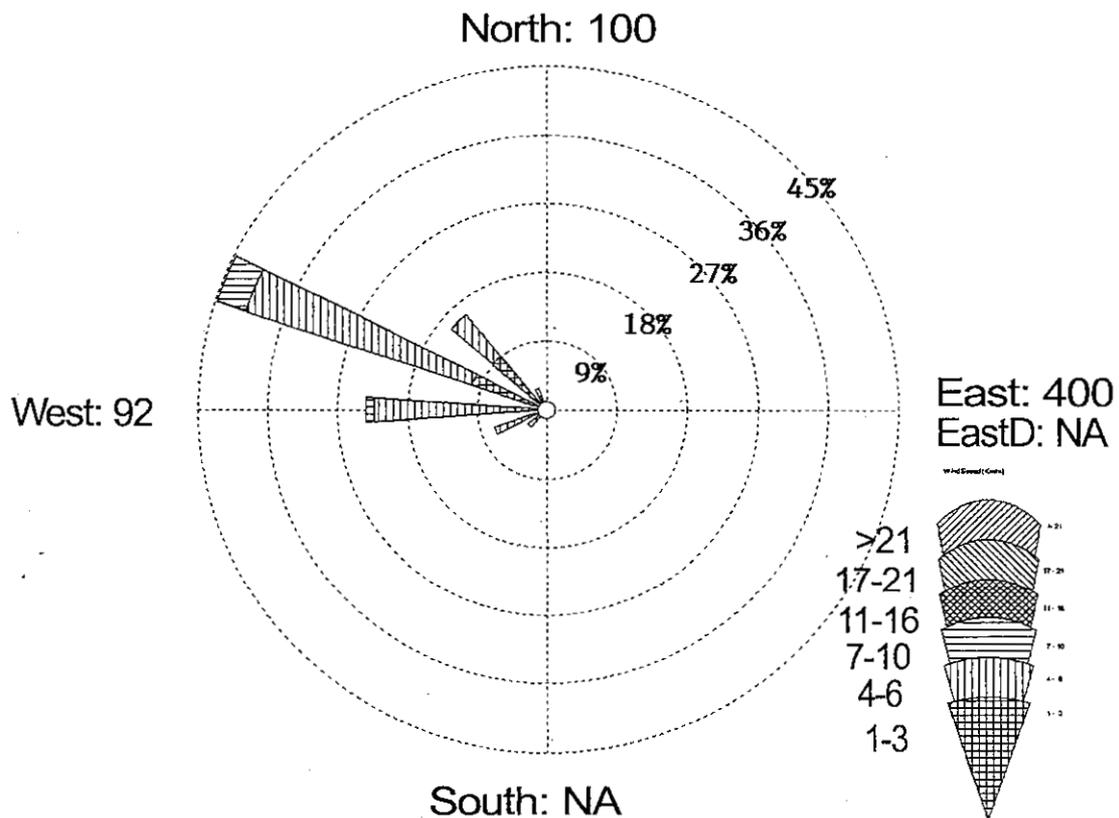
Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 3.74 Knots	Sample Date-Time 7/15/99 0715 to 7/15/99 1930
Display Wind Speed	Units Knots	Calm Winds 0.0%	Sample ID Period 3

Figure 10
 Propargite Air Monitoring Results (ng/m³)
 Period 4



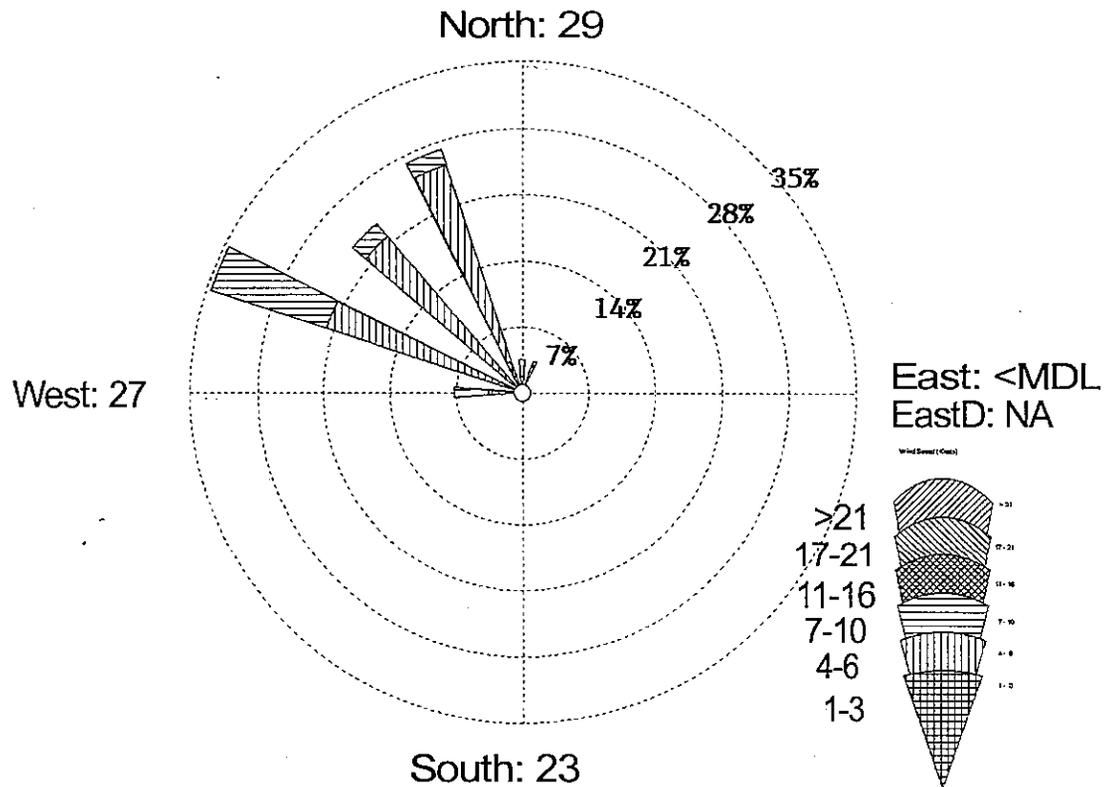
Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 4.35 Knots	Sample Date-Time 7/15/99 1930 to 7/16/99 0700
Display Wind Speed	Units Knots	Calm Winds 0.0%	Sample ID Period 4

Figure 11
 Propargite Air Monitoring Results (ng/m³)
 Period 5



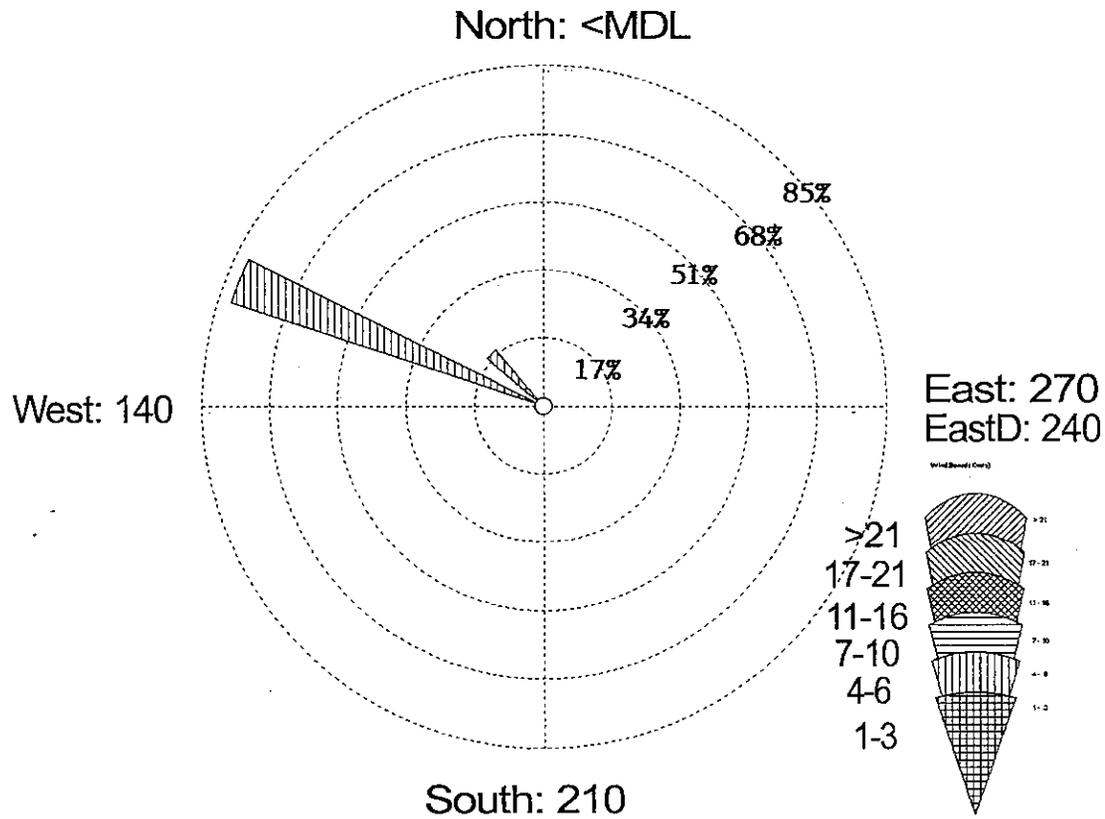
Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 4.25 Knots	Sample Date-Time 7/16/99 0700 to 7/17/99 0715
Display Wind Speed	Units Knots	Calm Winds 0.0%	Sample ID Period 5

Figure 12
 Bifenthrin Air Monitoring Results (ng/m³)
 Background Period



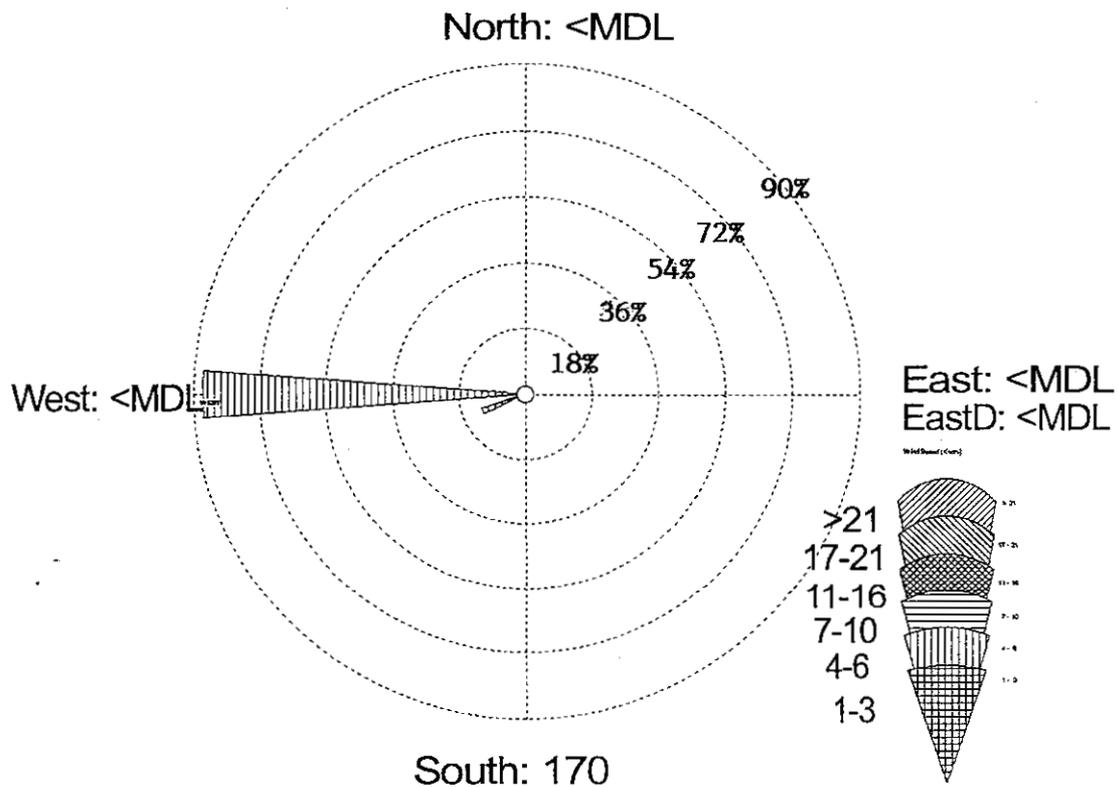
Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 5.62 Knots	Sample Date-Time 7/17/99 1230 to 7/18/99 0215
Display Wind Speed	Units Knots	Calm Winds 0.0%	Sample ID Background Period

Figure 13
 Bifenthrin Air Monitoring Results (ng/m³)
 Period 1



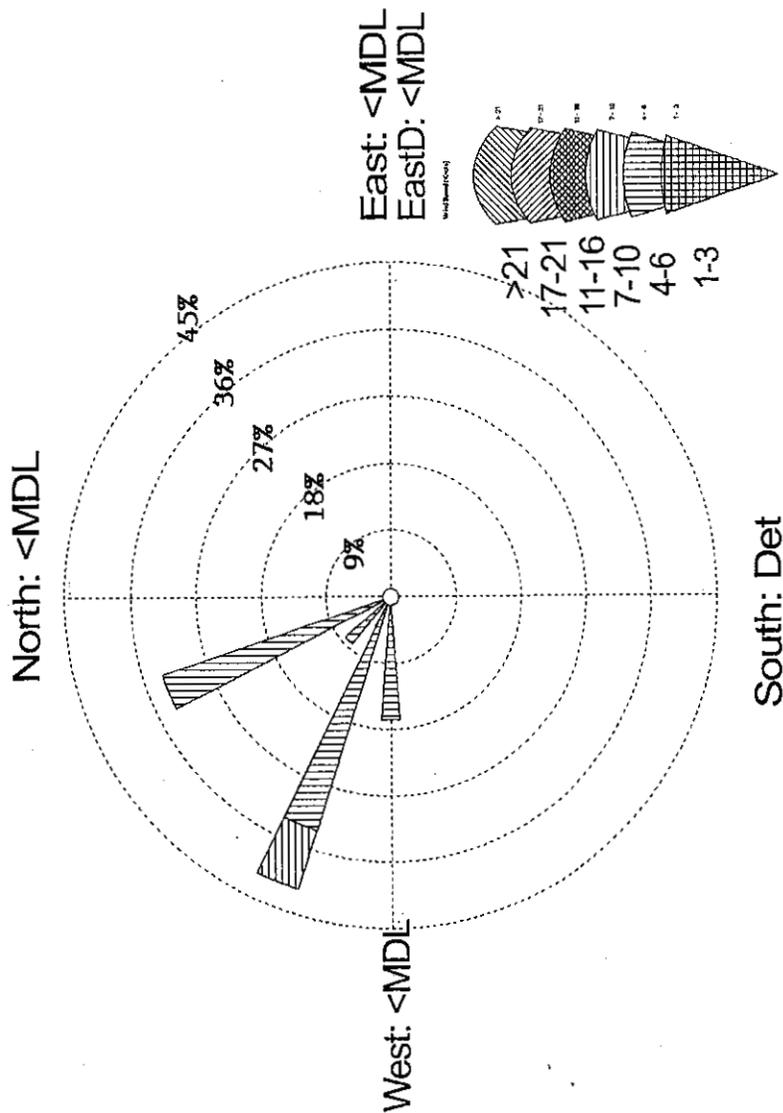
Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 5.05 Knots	Sample Date-Time 7/18/99 0215 to 7/18/99 0500
Display Wind Speed	Units Knots	Calm Winds 0.0%	Sample ID Period 1

Figure 14
 Bifenthrin Air Monitoring Results (ng/m³)
 Period 2



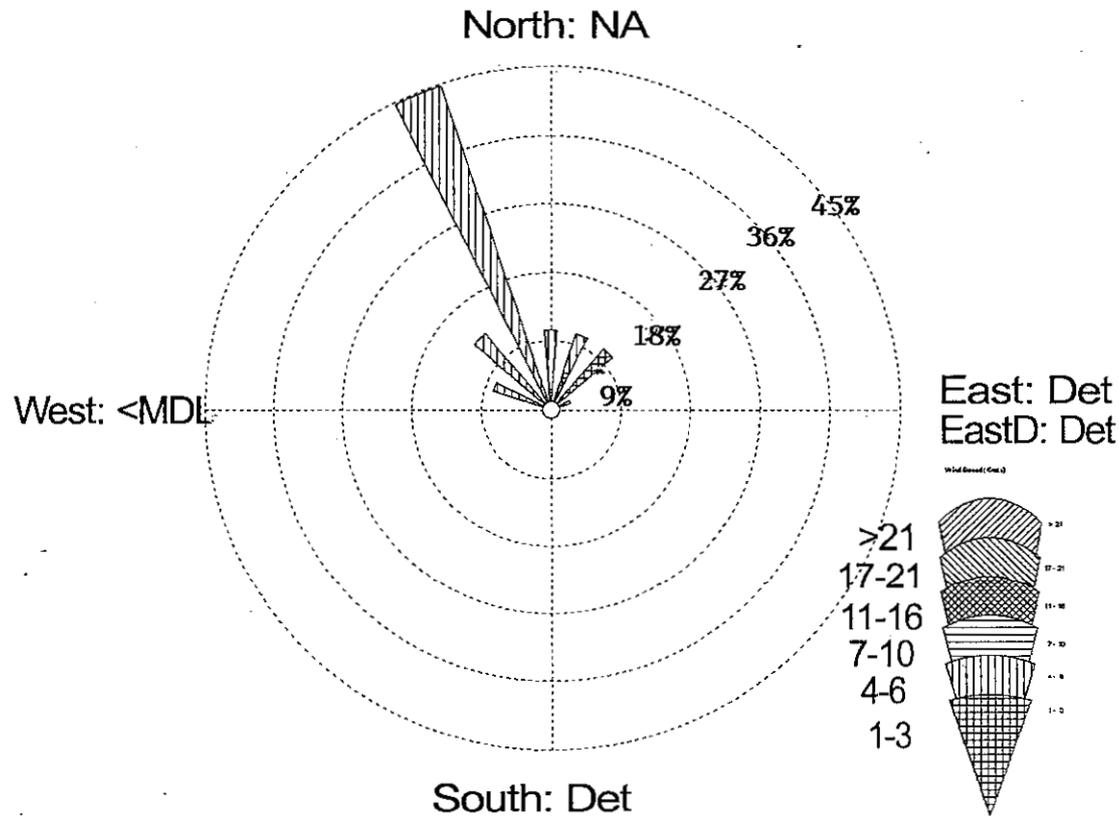
Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 4.86 Knots	Sample Date-Time 7/18/99 0500 to 7/18/99 0700
Display Wind Speed	Units Knots	Calm Winds 0.0%	Sample ID Period 2

Figure 15
 Bifenthrin Air Monitoring Results (ng/m³)
 Period 3



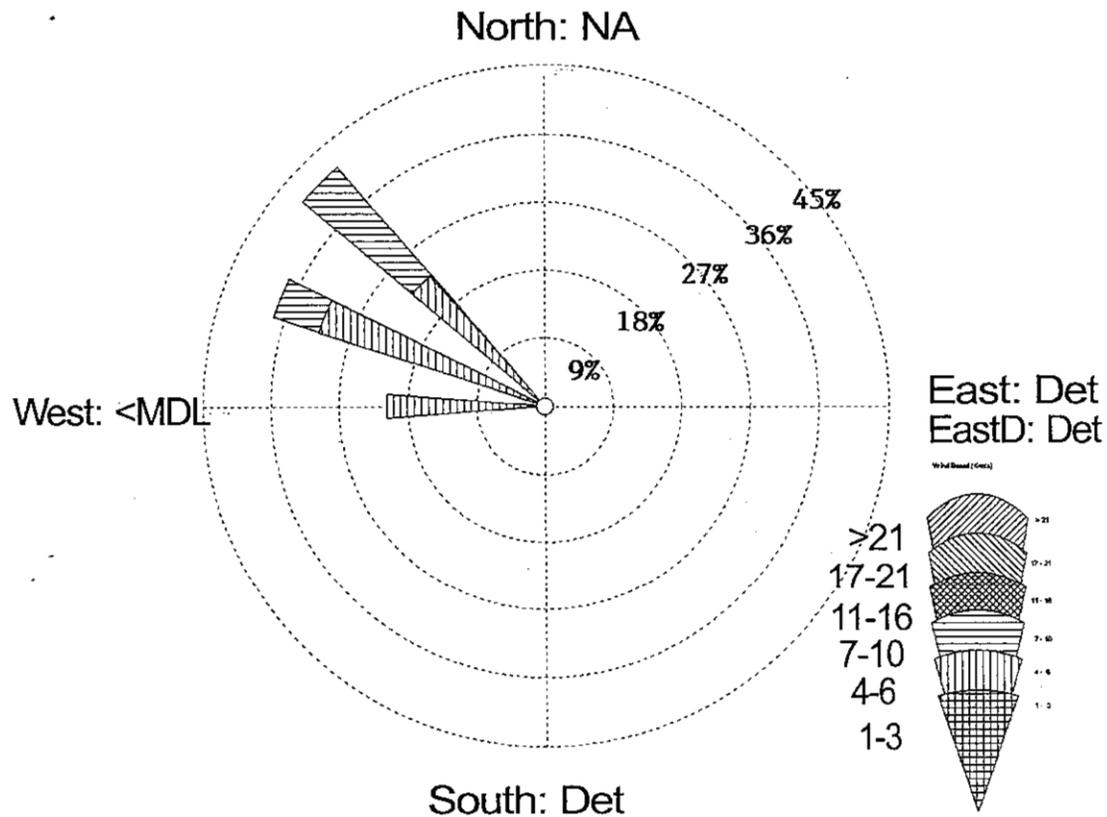
Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 5.44 Knots	Sample Date-Time 7/18/99 0700 to 7/18/99 1000
Display Wind Speed	Units Knots	Calm Winds 0.0%	Sample ID Period 3

Figure 16
 Bifenthrin Air Monitoring Results (ng/m³)
 Period 4



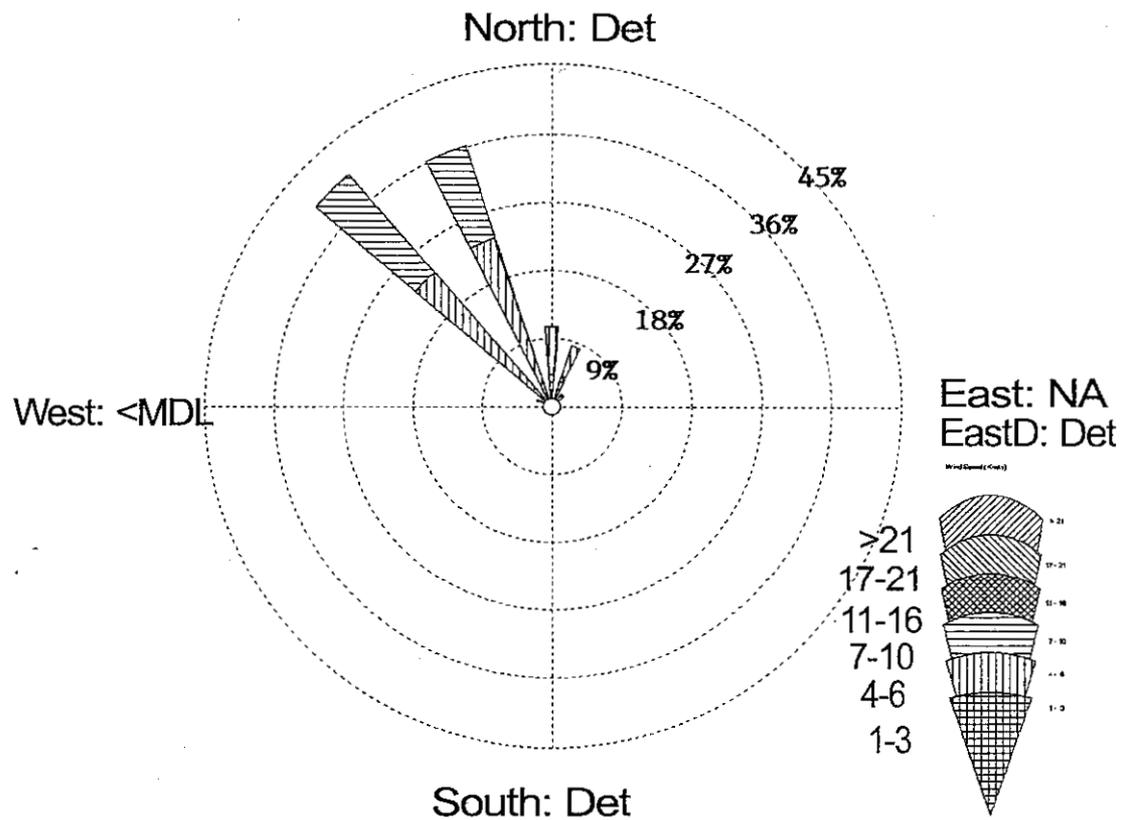
Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 4.34 Knots	Sample Date-Time 7/18/99 1000 to 7/18/99 1930
Display Wind Speed	Units Knots	Calm Winds 0.0%	Sample ID Period 4

Figure 17
 Bifenthrin Air Monitoring Results (ng/m³)
 Period 5



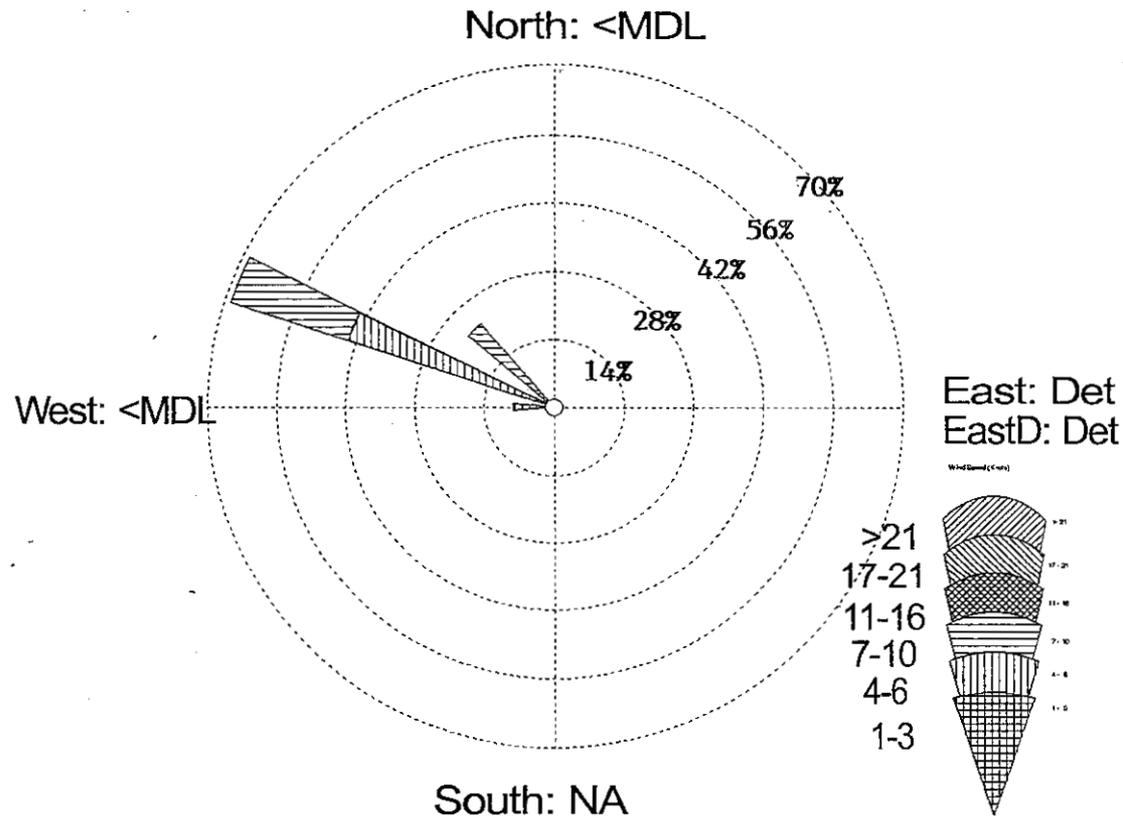
Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 5.97 Knots	Sample Date-Time 7/18/99 1930 to 7/19/99 0730
Display Wind Speed	Units Knots	Calm Winds 0.0%	Sample ID Period 5

Figure 18
 Bifenthrin Air Monitoring Results (ng/m³)
 Period 6



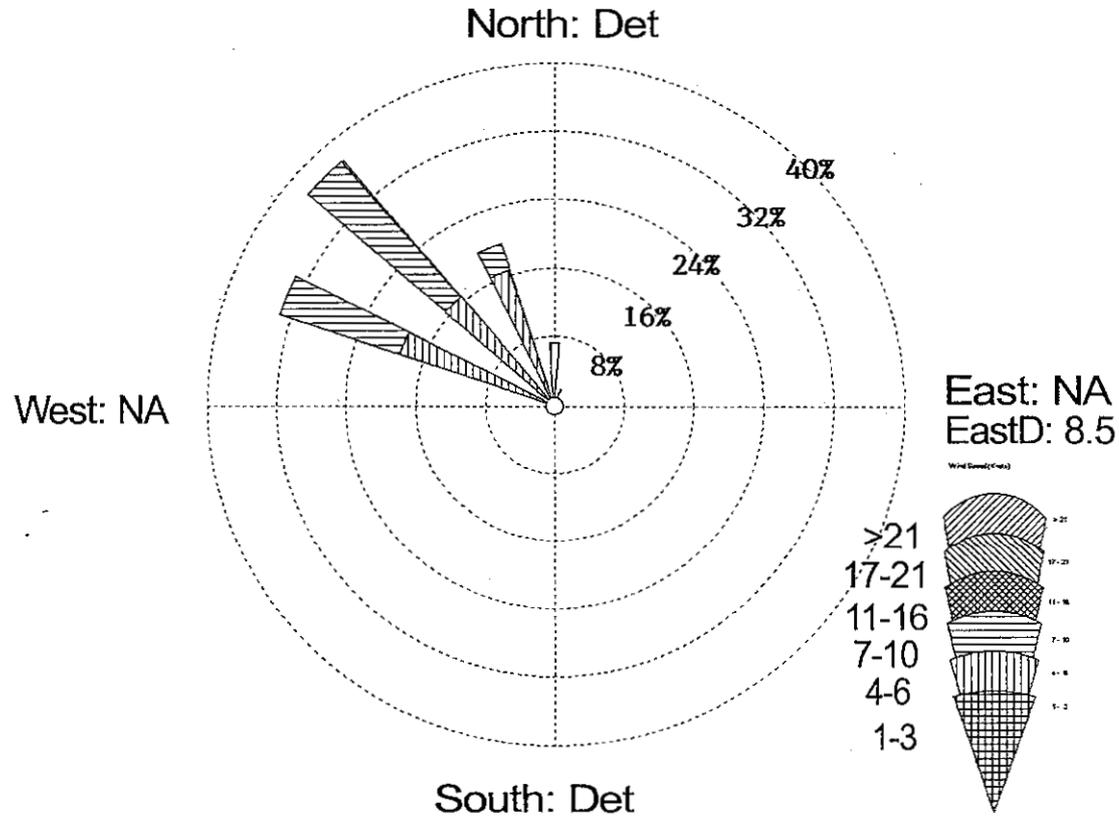
Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 5.64 Knots	Sample Date-Time 7/19/99 0730 to 7/19/99 1915
Display Wind Speed	Units Knots	Calm Winds 0.0%	Sample ID Period 6

Figure 19
 Bifenthrin Air Monitoring Results (ng/m³)
 Period 7



Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 6.31 Knots	Sample Date-Time 7/19/99 1915 to 7/20/99 0715
Display Wind Speed	Units Knots	Calm Winds 0.00%	Sample ID Period 7

Figure 20
 Bifenthrin Air Monitoring Results (ng/m³)
 Period 8



Company Name ARB	Orientation Direction (blowing from)	Avg. Wind Speed 6.26 Knots	Sample Date-Time 7/20/99 0715 to 7/21/99 0715
Display Wind Speed	Units Knots	Calm Winds 0.00%	Sample ID Period 8