



Air Resources Board



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Pete Wilson
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MEMORANDUM

TO: Douglas Y. Okumura, Chief
Environmental Monitoring and Pest
Management Branch
Department of Pesticide Regulation

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

DATE: April 23, 1998

SUBJECT: FINAL REPORT FOR THE 1997 DIAZINON MONITORING IN FRESNO
COUNTY

Attached is the final "Report for the Ambient Air Monitoring of Diazinon in Fresno County During Winter, 1997." This report contains revisions suggested by your staff which were provided to us on March 3, 1998.

These results are intended for identifying the presence of diazinon in ambient air. Additional air monitoring near the use of diazinon may be necessary to determine if there is a need for mitigation.

We conducted application monitoring for diazinon in January of this year. At the same time we repeated the ambient monitoring for three weeks in Fresno County. As decided at the November 13, 1997 meeting between members of our staff, the ambient monitoring was repeated because diazinon use in 1997 may not have been "normal" due to the heavy rainfall. Also, the minimum detection limit was reduced significantly for the 1998 monitoring. The results of the 1998 monitoring will be submitted for your review.

If you or your staff have questions or need further information, please contact me at (916) 263-1630 or Mr. Kevin Mongar at (916) 263-2063.

Attachment

cc: Ray Menebroker, SSD w/Attachment
Doug Edwards, Fresno County Agricultural Commissioner's Office
David L. Crow, SJVUAPCD
Sharon Seidel, OEHHA w/Attachment
Roger Sava, DPR w/Attachment

State of California
California Environmental Protection Agency
AIR RESOURCES BOARD

**Report for the Ambient Air Monitoring
of Diazinon
in Fresno County During Winter, 1997**

Engineering and Laboratory Branch
Monitoring and Laboratory Division

Project No. C96-036

Date: April 6, 1998

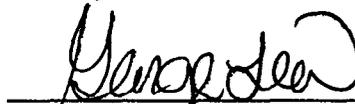
APPROVED:



Kevin Mongar, Project Engineer



Cynthia L. Castronovo, Manager
Testing Section



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 Ambient Air Monitoring of Diazinon in Fresno County During Winter, 1997

This report presents the results of ambient air monitoring in Fresno County for diazinon during the peak use period of January and February. Monitoring was conducted to coincide with the use of diazinon as an insecticide on dormant orchards. The results of the ambient monitoring are listed in Table 2. A summary of the ambient concentrations at each sampling site is listed in Table 3. The limit of detection (LOD) was calculated using the equation; $LOD = X_{int} + 3(S)$. The limit of quantitation (LOQ) was calculated as; $LOQ = 3.3 \times (LOD)$. Sample results greater than the LOQ are reported to 2 significant figures. Sample results greater than the LOD but less than the LOQ are reported as "detected". An initial batch of 20 samples was run with an associated LOD and LOQ of 100 and 331 ng per sample respectively. All remaining sample analyses had a corresponding LOD and LOQ of 65 and 215 ng per sample respectively. Assuming an air sampling rate of 2.0 Lpm for 24 hours, the corresponding air concentrations at the LOD and LOQ would be 23 ng/m^3 (1.8 pptv) and 75 ng/m^3 (6.0 pptv) respectively. As the sample time (total volume) varies slightly from sample to sample, the air concentration associated with the LOD and LOQ will also vary. Both field sampling and laboratory analyses were conducted by staff of the Testing Section, ARB.

Of the 121 ambient samples taken (spikes, blanks and collocated samples excluded), 26 (21.5%) were found to be above the LOQ, 57 (47.1%) were found to be at a level between the LOD and LOQ ("detected" but not quantitated) and 38 (31.4%) were found to be below the LOD. At the urban background (ARB) site none of the 25 samples collected had diazinon results above the LOQ, 14 were found to be at a level between the LOD and LOQ and 11 were found to be below the LOD. The highest value observed for the study was 290 ng/m^3 (23 pptv) at the Kings Canyon Unified School District Office in Reedley on January 30, 1997.

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Report for the Ambient Air Monitoring
of Diazinon
in Fresno County During Winter, 1997

I. Introduction

At the request (October 31, 1995 Memorandum, Sanders to Lew) of the California Department of Pesticide Regulation (DPR), the Air Resources Board (ARB) staff determined airborne concentrations of the pesticide diazinon [O,O-Diethyl O-(6-methyl-2-(1-methylethyl)-4-pyrimidinyl) phosphorothioate] over a six week ambient monitoring program in populated areas of Fresno County. This monitoring was conducted in accordance with Section 14022 of the Food and Agriculture Code 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 "Final Protocol for the 1997 Diazinon Ambient Monitoring in Fresno County" is enclosed as Appendix I.

The DPR's "Monitoring Recommendations for Diazinon" are enclosed as Appendix II.

"The Standard Operating Procedures for Sampling and Analysis of Diazinon" are enclosed as Appendix III.

II. Chemical Properties of Diazinon

Pure diazinon (CAS:333-41-5) is a clear colorless liquid with a faint ester-like odor. Technical grades are yellow. Diazinon has a molecular formula of $C_{12}H_{21}N_2O_3PS$, a formula weight of 304.35 g/mole, and a specific density of 1.116-1.118 at 20 °C. It has a water solubility of 71.1, 53.5, and 43.7 mg/L at 10, 20, and 30 °C respectively, a Henry's Constant of 1.13×10^{-7} atm·m³/mol at 20 °C, and a vapor pressure of 8.47×10^{-5} mmHg at 20 °C. Diazinon is miscible with a variety of organic solvents.

The hydrolysis half-life ($t_{1/2}$) of diazinon in water (20°C) is 11.8 hours (pH 3.1); 185 days (pH 7.4); 136 days (pH 9.0) and 6 days (pH 10.4). Reported soil half-lives following incubation of 10 ppm diazinon are 12.5 weeks (sterile sand loam); 6.5 weeks (sterile organic soil); < 1 week (non-sterile sand loam); and 2 weeks (non-sterile organic soil). Exposure of diazinon to UV light produces hydroxydiazinon. The photolytic $t_{1/2}$ for this reaction, in aqueous buffer solution (25 °C and pH 7.0), has been calculated to be 15 days. The $t_{1/2}$ of diazinon is approximately 3.2 weeks in a neutral solution at room temperature. Diazinon and its oxidative product diazoxon, have been found in fogwater. The distribution of diazinon (1.6 ng/m³) was 76.1% (vapor phase); 19.8% (dissolved phase); 3.7% (air particles); and 0.4% (water particles). The distribution of diazoxon was 13.4%, 81.7%, 4.9%, and 0.02% respectively.

The acute oral LD₅₀ of diazinon for rats ranges from 240 to 480 mg/kg. The LC₅₀ (96 hour)

for rainbow trout is 16 mg/L, and 2.6 to 3.2 mg/L for bluegill sunfish. The OSHA 8-hour time weighted average for a personal exposure limit is 0.1 mg/m³. Diazinon has entered the risk assessment process at DPR under the SB 950 (Birth Defect Prevention Act of 1984) based on its potential for reproductive and mutagenic adverse health effects.

III. Sampling

Samples were collected by passing a measured volume of ambient air through XAD-2 resin. The exposed XAD-2 resin tubes (SKC #226-30-06) were stored in an ice chest on dry ice or in a freezer until desorbed with 2.5 ml of ethyl acetate. The sampling flow rate of 2.0 liters per minute (Lpm) was accurately measured and the sampling system operated continuously with the exact operating interval noted. The resin tubes were protected from direct sunlight and supported about 1.5 meters above the ground 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. Subsequent to sampling, the sample tubes were transported on dry ice, as soon as reasonably possible, to the ARB Monitoring and Laboratory Division, Testing Section laboratory for analyses. The samples were stored in the freezer or analyzed immediately. Both field sampling and laboratory analyses were conducted by staff of the Testing Section, ARB.

A sketch of the sampling apparatus is shown in Figure 1 of Appendix I (Sampling Protocol). Calibrated rotameters were used to set and measure sample flow rates. Samplers were leak checked prior to and after each sampling period with the sampling cartridges installed. Any change in the flow rates was recorded in the field log book. The field log book was also used to record start and stop times, sample identifications and any other significant comments.

A. Ambient Monitoring

The use patterns for diazinon suggested that monitoring should occur over a 30- to 45-day sampling period in Fresno County during the months of January or February. Four sampling sites plus an urban background site were selected by ARB personnel from the areas of Fresno County where stone fruit farming is predominant. Sites were selected for their proximity to the orchards with considerations for both accessibility and security of the sampling equipment. The five sites were at the locations listed in Table 1. Refer to Figure 1 for their map locations.

TABLE 1. Ambient Sampling Sites	
REE	Kings Canyon Unified District Office (209) 637-1200 675 W. Manning Carl Campbell Reedley, CA 63654 Range/Township/Section: 23E/15S/27-NW1/4 of NE1/4
ARB	Air Resources Board, Ambient (209) 228-1825 Air Monitoring Station Pete Ouchida 3425 N First, Suite 205B Fresno, CA 228-1825 Range/Township/Section: 20E/13S/22-SE1/4 of SE1/4
CEN	Centerville School (209) 787-2511 48 S. Smith Rosemary Debillar, Principal Centerville, CA 93657 Range/Township/Section: 23E/14S/8-NW1/4 of NW1/4
SAN	Fairmont Elementary School (209) 875-6521 3095 N. Greenwood Richard Supelveda Sanger, CA 93657 Range/Township/Section: 22E/13S/22-SE1/4 of SW1/4
PAR	Parlier High School (209) 646-3573 601 3rd Street Glenn Bundy, Principal Parlier, CA 93648 Range/Township/Section: 22E/15S/24-SW1/4 of NE1/4

The Kings Canyon Unified District Office is in a residential and business area in Reedley. There are walnuts and stonefruit orchards 1 to 2 miles to the south and east. The sampler was placed on the roof of a 1-story maintenance building.

The Centerville School is on the west edge of the residential area of Centerville. Stonefruit orchards bordered the school on the south and west (across the street) sides. The sampler was on the roof of the 1-story high school office.

The Fairmont Elementary School is in a residential and agricultural area of Sanger. There are small plots of almonds and walnuts about ½ mile to the southwest, west and north of the school. The sampler was on the roof of a 1-story class room.

The Parlier High School is at the north edge of a residential area in Parlier. There are stonefruit orchards several hundred yards to the north and east and grapes to the west of the school. The sampler was on the roof of the 1-story high school office.

The background monitoring was conducted at the Air Resources Board Ambient Air Monitoring Station in downtown Fresno. The sampling apparatus was placed on a second story roof near other ARB monitoring equipment.

The samples were collected by ARB personnel over a six week period from January 13 - February 24, 1997. 24-hour samples were taken Monday through Friday (normally 4 samples/week).

IV. Analytical Methodology

"The Standard Operating Procedures for Sampling and Analysis of Diazinon" are enclosed as Appendix III. The procedures specify that the exposed XAD-2 resin tubes are stored in an ice chest on dry ice or freezer until desorbed with 2.5 mL of ethyl acetate. A gas chromatograph with a DB-35 capillary column and a mass selective detector is used for analysis.

V. Ambient Monitoring Results

The results of the ambient monitoring are listed in Table 2. A summary of the ambient concentrations at each sampling site is listed in Table 3. The limit of detection (LOD) was calculated using the equation; $LOD = X_{int} + 3(S)$. The limit of quantitation (LOQ) was calculated as; $LOQ = 3.3x(LOD)$. Sample results greater than the LOQ are reported to 2 significant figures. Sample results greater than the LOD but less than the LOQ are reported as "detected". An initial batch of 20 samples was run with an associated LOD and LOQ of 100 and 331 ng per sample respectively. All remaining sample analyses had a corresponding LOD and LOQ of 65 and 215 ng per sample respectively. Assuming an air sampling rate of 2.0 Lpm for 24 hours, the corresponding air concentrations at the LOD and LOQ would be 23 ng/m³ (1.8 pptv) and 75 ng/m³ (6.0 pptv) respectively. As the sample time (total volume) varies slightly from sample to sample, the air concentration associated with the LOD and LOQ will also vary. The equation used to convert air concentration from units of ng/m³ to air concentration units at 1 atmosphere and 25 °C is:

$$pptv = \frac{(ng/m^3) \times (0.0820575 \text{ liter-atm/mole} \cdot ^\circ K)(298^\circ K)}{(1 \text{ atm})(304.35 \text{ gram/mole})} = (0.0803) \times (ng/m^3)$$

Of the 121 ambient samples taken (spikes, blanks and collocated samples excluded), 26 (21.5%) were found to be above the LOQ, 57 (47.1%) were found to be at a level between the LOD and LOQ ("Detected" but not quantitated) and 38 (31.4%) were found to be below the LOD. At the urban background (ARB) site none of the 25 samples collected had diazinon results above the LOQ, 14 were found to be at a level between the LOD and LOQ and 11 were found to be below the LOD. The highest value observed for the study was 290 ng/m³ (23 pptv) at the Kings Canyon Unified School District Office in Reedley on January 30, 1997.

VI. Field Quality Assurance

Field quality control for the ambient monitoring included:

- 1) five field spikes (same environmental and experimental conditions as those occurring

at the time of ambient sampling) prepared by the Testing Section staff. The field spikes were obtained by sampling ambient air at the background monitoring site for 24 hour periods at 2 L/minute (collocated with an ambient sample).

2) five trip spikes

3) five lab spikes

4) replicate samples taken for six dates at each sampling location and

6) trip blanks.

The instrument dependent parameters (reproducibility, linearity and limit of detection) are discussed in the SOP (Appendix III). A chain of custody sheet accompanied all samples. Rotameters were calibrated with a digital flow meter prior to and after sampling in the field.

VII. Quality Assurance Results

A. Method Development

Refer to Appendix III, "Standard Operating Procedure for the Sampling and Analysis of Diazinon in Ambient Air (9/12/97 Version)", for discussion and results of method development studies.

B. Trip Blanks

All ambient trip blank results were less than the LOD.

C. Collocated Sample Results

The results of ambient collocated samples, with relative differences ($RD = (\text{diff.}/\text{ave.})100$), are listed in Table 4. There are no established acceptance criteria for collocated samples for this program. Generally though, relative difference results of up to 40% (i.e., the average $\pm 20\%$) are reasonable.

For the ambient study, 30 pairs of collocated samples were collected. Only 4 of the 30 pairs had results that could be compared (i.e., both results above the LOQ). The relative difference results of these 4 pairs were all less than 8%.

D. Laboratory Spikes

Laboratory spikes are prepared at the same time and at the same level as the trip spike and field spike sets. The laboratory spikes are kept in a freezer until extraction and analysis. The extraction and analysis of laboratory, trip and field spikes normally occurs at the same time. Laboratory spike sets for the ambient study were prepared by Testing Section staff.

Referring to Table 5, the average recovery of diazinon from cartridges spiked with 1540 ng of diazinon was 100% with a range from 98.7% to 101.5%. These results indicate that the sample storage and analytical procedures used in this study would produce acceptable results for diazinon at the spike level of 1540 ng. However, the concentrations found in the ambient samples were approximately 10 times less than the spike level. The percent recovery and precision may not be as good at the lower ambient levels. Future studies

should use spike levels of approximately 150 ng to more closely represent ambient conditions.

E. Trip Spikes

Trip spikes are prepared at the same time and at the same level as the laboratory spike and field spike sets. 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. Trip spikes for the ambient study were prepared by Testing Section staff.

Referring to Table 6, the average recovery of diazinon from cartridges spiked with 1540 ng of diazinon was 79.1% with a range of 76.3% to 80.5%. These results indicate that the sample transport, storage and analytical procedures used in this study would produce acceptable results for diazinon at the spike level of 1540 ng. However, the concentrations found in the ambient samples were approximately 10 times less than the spike level. The percent recovery and precision may not be as good at the lower ambient levels. Future studies should use spike levels of approximately 150 ng to more closely represent ambient conditions.

F. Field Spikes

Field spikes are prepared at the same time and at the same level as the laboratory spike and trip spike sets. 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) during transport to and from the field and at all times while in the field except for the 24 hour 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 a previously spiked cartridge, at the background monitoring site for 24 hour periods at 2.0 L/minute (i.e., collocated with an ambient background sample). The field spikes were collocated with ambient sample ARB25 which had a <LOD analysis result. The field spike set for the ambient study was prepared by Testing Section staff.

Referring to Table 7, the average recovery of diazinon from cartridges spiked with 1540 ng of diazinon was 76.2% with a range of 75.2% to 77.2%. These results indicate that the sampling, sample transport, storage and analytical procedures used in this study would produce acceptable results for diazinon at the spike level of 1540 ng. However, the concentrations found in the ambient samples were approximately 10 times less than the spike level. The percent recovery and precision may not be as good at the lower ambient levels. Future studies should use spike levels of approximately 50 to 150 ng to more closely represent ambient conditions.

FIGURE 1. DIAZINON AMBIENT MONITORING SITES

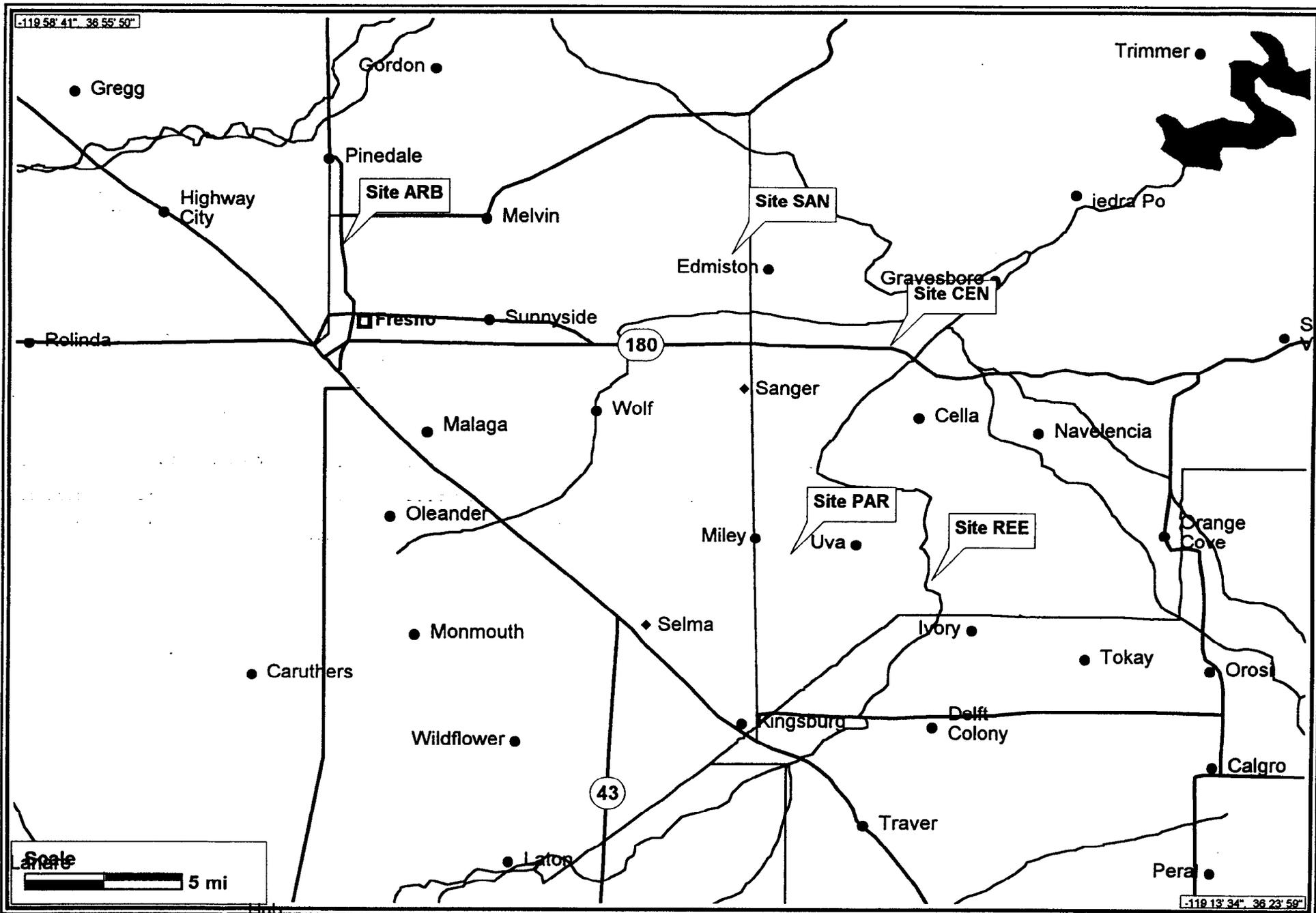


Table 2. Diazinon Ambient Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Sample Time (min)	Sample Volume (m3)	Date Analyzed	Diazinon (ng)	(ng/m3)	*(pptv)
1	ARB1	1/13/97 10:30	1/14/97 10:00	1410	2.82	2/12/97	<LOD'	<LOD'	<LOD'
2	PAR1	1/13/97 11:20	1/14/97 11:06	1426	2.85	2/12/97	Det.'	Det.'	Det.'
3	REE1	1/13/97 12:15	1/14/97 11:25	1390	2.78	2/12/97	Det.'	Det.'	Det.'
4	CEN1	1/13/97 13:20	1/14/97 11:45	1345	2.69	2/12/97	Det.'	Det.'	Det.'
5	SAN1	1/13/97 14:10	1/14/97 12:15	1325	2.65	2/12/97	<LOD'	<LOD'	<LOD'
6	ARB2	1/14/97 10:00	1/15/97 10:30	1470	2.94	2/12/97	Det.'	Det.'	Det.'
7	PAR2	1/14/97 11:06	1/15/97 11:05	1439	2.88	2/12/97	Det.'	Det.'	Det.'
8	REE2	1/14/97 11:25	1/15/97 11:30	1445	2.89	2/12/97	367	130	10
9	CEN2	1/14/97 11:45	1/15/97 12:05	1460	2.92	2/12/97	Det.'	Det.'	Det.'
10	SAN2	1/14/97 12:15	1/15/97 12:30	1455	2.91	2/12/97	Det.'	Det.'	Det.'
11	ARB03	1/15/97 10:30	1/16/97 10:30	1440	2.88	2/12/97	Det.'	Det.'	Det.'
12	ARB03D	1/15/97 10:30	1/16/97 10:30	1440	2.88	2/12/97	Det.'	Det.'	Det.'
13	PAR03	1/15/97 11:05	1/16/97 11:25	1460	2.92	2/12/97	Det.'	Det.'	Det.'
14	PAR03D	1/15/97 11:05	1/16/97 11:25	1460	2.92	2/12/97	Det.'	Det.'	Det.'
15	REE03	1/15/97 11:30	1/16/97 11:10	1420	2.84	2/12/97	Det.'	Det.'	Det.'
16	REE03D	1/15/97 11:30	1/16/97 11:10	1420	2.84	2/12/97	Det.'	Det.'	Det.'
17	CEN03	1/15/97 12:05	1/16/97 12:10	1445	2.89	2/12/97	Det.'	Det.'	Det.'
18	CEN03D	1/15/97 12:05	1/16/97 12:10	1445	2.89	2/12/97	Det.'	Det.'	Det.'
19	SAN03	1/15/97 12:30	1/16/97 12:45	1455	2.91	2/12/97	<LOD'	<LOD'	<LOD'
20	SAN03D	1/15/97 12:30	1/16/97 12:45	1455	2.91	2/12/97	<LOD'	<LOD'	<LOD'
21	ARB4	1/16/97 10:30	1/17/97 10:35	1445	2.89	2/12/97	<LOD'	<LOD'	<LOD'
22	PAR4	1/16/97 11:25	1/17/97 11:00	1415	2.83	2/12/97	Det.'	Det.'	Det.'
23	REE4	1/16/97 11:10	1/17/97 11:20	1450	2.90	2/12/97	Det.'	Det.'	Det.'
24	CEN4	1/16/97 12:10	1/17/97 11:45	1415	2.83	2/12/97	Det.'	Det.'	Det.'
25	SAN4	1/16/97 12:45	1/17/97 12:05	1400	2.80	2/13/97	<LOD'	<LOD'	<LOD'
27	ARB5	1/20/97 12:10	1/21/97 10:50	1360	2.72	2/24/97	Det.	Det.	Det.

LOD' = 100 ng per sample

LOD = 65 ng per sample

Det.' = <331 ng (LOQ) but > 100 ng (LOD)

Det. = <215 ng (LOQ) but > 65 ng (LOD)

NR - Not Reported due to loss of sample.

* pptv at 25 C and 1 atm

Table 2. Diazinon Ambient Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Sample Time (min)	Sample Volume (m3)	Date Analyzed	Diazinon (ng)	(ng/m3)	*(pptv)
28	PAR5	1/20/97 13:00	1/21/97 11:15	1335	2.67	2/24/97	Det.	Det.	Det.
29	REE5	1/20/97 13:20	1/21/97 11:35	1335	2.67	2/24/97	417	160	13
30	CEN5	1/20/97 14:00	1/21/97 12:00	1320	2.64	2/24/97	<LOD	<LOD	<LOD
31	SAN5	1/20/97 14:15	1/21/97 12:20	1325	2.65	2/25/97	Det.	Det.	Det.
32	ARB6	1/21/97 10:30	1/22/97 9:30	1380	2.76	2/25/97	Det.	Det.	Det.
33	PAR6	1/21/97 11:15	1/22/97 10:15	1380	2.76	2/25/97	275	100	8.0
34	REE6	1/21/97 11:35	1/22/97 10:45	1390	2.78	2/25/97	Det.	Det.	Det.
35	CEN6	1/21/97 12:00	1/22/97 11:10	1390	2.78	2/25/97	Det.	Det.	Det.
36	SAN6	1/21/97 12:20	1/22/97 11:30	1390	2.78	2/25/97	Det.	Det.	Det.
37	ARB07	1/22/97 9:30	1/23/97 9:00	1410	2.82	2/26/97	Det.	Det.	Det.
38	ARB07D	1/22/97 9:30	1/23/97 9:00	1410	2.82	2/25/97	Det.	Det.	Det.
39	PAR07	1/22/97 10:15	1/23/97 9:45	1410	2.82	2/25/97	288	100	8.0
40	PAR07D	1/22/97 10:15	1/23/97 9:45	1410	2.82	2/25/97	NR		
41	REE07	1/22/97 10:45	1/23/97 10:15	1410	2.82	2/25/97	Det.	Det.	Det.
42	REE07D	1/22/97 10:45	1/23/97 10:15	1410	2.82	2/25/97	Det.	Det.	Det.
43	CEN07	1/22/97 11:10	1/23/97 10:40	1410	2.82	2/25/97	<LOD	<LOD	<LOD
44	CEN07D	1/22/97 11:10	1/23/97 10:40	1410	2.82	2/25/97	<LOD	<LOD	<LOD
45	SAN07	1/22/97 11:30	1/23/97 11:10	1420	2.84	2/25/97	<LOD	<LOD	<LOD
46	SAN07D	1/22/97 11:30	1/23/97 11:10	1420	2.84	2/25/97	<LOD	<LOD	<LOD
47	ARB8	1/23/97 9:00	1/24/97 8:15	1395	2.79	2/25/97	Det.	Det.	Det.
48	PAR8	1/23/97 9:45	1/24/97 9:00	1395	2.79	2/25/97	307	110	8.9
49	REE8	1/23/97 10:15	1/24/97 9:30	1395	2.79	2/25/97	354	130	10
50	CEN8	1/23/97 10:40	1/24/97 10:00	1400	2.80	2/25/97	<LOD	<LOD	<LOD
51	SAN8	1/23/97 11:10	1/24/97 10:30	1400	2.80	2/25/97	<LOD	<LOD	<LOD
52	ARB9	1/27/97 12:30	1/28/97 10:30	1320	2.64	2/19/97	Det.	Det.	Det.
53	PAR9	1/27/97 13:15	1/28/97 11:15	1320	2.64	2/19/97	663	250	20

LOD' = 100 ng per sample

LOD = 65 ng per sample

Det.' = <331 ng (LOQ) but > 100 ng (LOD)

Det. = <215 ng (LOQ) but > 65 ng (LOD)

NR - Not Reported due to loss of sample.

* pptv at 25 C and 1 atm

Table 2. Diazinon Ambient Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Sample Time (min)	Sample Volume (m3)	Date Analyzed	Diazinon		
							(ng)	(ng/m3)	*(pptv)
54	REE9	1/27/97 13:40	1/28/97 11:40	1320	2.64	2/19/97	360	140	11
55	CEN9	1/27/97 14:15	1/28/97 12:10	1315	2.63	2/19/97	Det.	Det.	Det.
56	SAN9	1/27/97 15:00	1/28/97 12:35	1295	2.59	2/19/97	<LOD	<LOD	<LOD
57	ARB10	1/28/97 10:30	1/29/97 9:30	1380	2.76	2/19/97	Det.	Det.	Det.
58	PAR10	1/28/97 11:15	1/29/97 10:15	1380	2.76	2/19/97	674	240	19
59	REE10	1/28/97 11:40	1/29/97 10:40	1380	2.76	2/19/97	561	200	16
60	CEN10	1/28/97 12:10	1/29/97 11:15	1385	2.77	2/19/97	252	91	7.3
61	SAN10	1/28/97 12:35	1/29/97 11:45	1390	2.78	2/19/97	Det.	Det.	Det.
62	ARB11	1/29/97 9:30	1/30/97 8:30	1380	2.76	2/19/97	Det.	Det.	Det.
63	PAR11	1/29/97 10:15	1/30/97 9:10	1375	2.75	2/19/97	<LOD	<LOD	<LOD
64	REE11	1/29/97 10:40	1/30/97 9:40	1380	2.76	2/19/97	571	210	17
65	CEN11	1/29/97 11:15	1/30/97 10:10	1375	2.75	2/19/97	227	83	6.6
66	SAN11	1/29/97 11:45	1/30/97 10:45	1380	2.76	2/19/97	Det.	Det.	Det.
67	ARB12	1/30/97 8:30	1/31/97 8:45	1455	2.91	2/19/97	Det.	Det.	Det.
68	ARB12D	1/30/97 8:30	1/31/97 8:45	1455	2.91	2/19/97	Det.	Det.	Det.
69	PAR12	1/30/97 9:10	1/31/97 9:25	1455	2.91	2/19/97	824	280	23
70	PAR12D	1/30/97 9:10	1/31/97 9:25	1455	2.91	2/19/97	762	260	21
71	REE12	1/30/97 9:40	1/31/97 9:40	1440	2.88	2/19/97	774	270	22
72	REE12D	1/30/97 9:40	1/31/97 9:40	1440	2.88	2/19/97	825	290	23
73	CEN12	1/30/97 10:10	1/31/97 10:00	1430	2.86	2/19/97	241	84	6.8
74	CEN12D	1/30/97 10:10	1/31/97 10:00	1430	2.86	2/19/97	244	85	6.9
75	SAN12	1/30/97 10:45	1/31/97 10:10	1405	2.81	2/20/97	Det.	Det.	Det.
76	SAN12D	1/30/97 10:45	1/31/97 10:10	1405	2.81	2/20/97	217	77	6.2
77	ARB13	2/3/97 10:10	2/4/97 8:15	1325	2.65	2/20/97	Det.	Det.	Det.
78	PAR13	2/3/97 8:50	2/4/97 9:15	1465	2.93	2/20/97	230	79	6.3
79	REE13	2/3/97 9:00	2/4/97 9:35	1475	2.95	2/20/97	Det.	Det.	Det.

LOD' = 100 ng per sample

LOD = 65 ng per sample

Det.' = <331 ng (LOQ) but > 100 ng (LOD)

Det. = <215 ng (LOQ) but > 65 ng (LOD)

NR - Not Reported due to loss of sample.

* pptv at 25 C and 1 atm

Table 2. Diazinon Ambient Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Sample Time (min)	Sample Volume (m3)	Date Analyzed	Diazinon (ng)	(ng/m3)	*(pptv)
80	CEN13	2/3/97 9:20	2/4/97 9:50	1470	2.94	2/20/97	350	120	10
81	SAN13	2/3/97 9:35	2/4/97 10:05	1470	2.94	2/20/97	Det.	Det.	Det.
82	ARB14	2/4/97 8:15	2/5/97 8:20	1445	2.89	2/20/97	Det.	Det.	Det.
83	PAR14	2/4/97 9:15	2/5/97 8:55	1420	2.84	2/20/97	Det.	Det.	Det.
84	REE14	2/4/97 9:35	2/5/97 9:10	1415	2.83	2/20/97	Det.	Det.	Det.
85	CEN14	2/4/97 9:50	2/5/97 9:30	1420	2.84	2/20/97	261	92	7.4
86	SAN14	2/4/97 10:05	2/5/97 9:45	1420	2.84	2/20/97	Det.	Det.	Det.
87	ARB15	2/5/97 8:20	2/6/97 8:15	1435	2.87	2/20/97	Det.	Det.	Det.
88	ARB15D	2/5/97 8:20	2/6/97 8:15	1435	2.87	2/20/97	<LOD	<LOD	<LOD
89	PAR15	2/5/97 8:55	2/6/97 8:55	1440	2.88	2/20/97	277	96	7.7
90	PAR15D	2/5/97 8:55	2/6/97 8:55	1440	2.88	2/20/97	NR		
91	REE15	2/5/97 9:10	2/6/97 9:10	1440	2.88	2/20/97	Det.	Det.	Det.
92	REE15D	2/5/97 9:10	2/6/97 9:10	1440	2.88	2/20/97	219	76	6.1
93	CEN15	2/5/97 9:30	2/6/97 9:30	1440	2.88	2/20/97	221	77	6.2
94	CEN15D	2/5/97 9:30	2/6/97 9:30	1440	2.88	2/20/97	232	80	6.5
95	SAN15	2/5/97 9:45	2/6/97 9:45	1440	2.88	2/20/97	Det.	Det.	Det.
96	SAN15D	2/5/97 9:45	2/6/97 9:45	1440	2.88	2/20/97	Det.	Det.	Det.
97	ARB16	2/6/97 8:15	2/7/97 8:10	1435	2.87	2/20/97	<LOD	<LOD	<LOD
98	PAR16	2/6/97 8:55	2/7/97 8:45	1430	2.86	2/20/97	288	100	8.0
99	REE16	2/6/97 9:10	2/7/97 9:00	1430	2.86	2/20/97	Det.	Det.	Det.
100	CEN16	2/6/97 9:30	2/7/97 9:15	1425	2.85	2/20/97	Det.	Det.	Det.
101	SAN16	2/6/97 9:45	2/7/97 9:30	1425	2.85	2/20/97	Det.	Det.	Det.
102	ARB17	2/10/97 11:30	2/11/97 10:00	1350	2.70	2/21/97	<LOD	<LOD	<LOD
104	PAR17	2/10/97 12:45	2/11/97 11:00	1335	2.67	2/21/97	Det.	Det.	Det.
106	REE17	2/10/97 13:20	2/11/97 11:40	1340	2.68	2/21/97	Det.	Det.	Det.
108	CEN17	2/10/97 14:00	2/11/97 12:15	1335	2.67	2/21/97	Det.	Det.	Det.

LOD' = 100 ng per sample

LOD = 65 ng per sample

Det.' = <331 ng (LOQ) but > 100 ng (LOD)

Det. = <215 ng (LOQ but > 65 ng (LOD)

NR - Not Reported due to loss of sample.

* pptv at 25 C and 1 atm

Table 2. Diazinon Ambient Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Sample Time (min)	Sample Volume (m3)	Date Analyzed	Diazinon (ng)	(ng/m3)	*(pptv)
110	SAN17	2/10/97 14:30	2/11/97 13:00	1350	2.70	2/21/97	<LOD	<LOD	<LOD
112	ARB18	2/11/97 10:00	2/12/97 9:00	1380	2.76	2/21/97	<LOD	<LOD	<LOD
113	PAR18	2/11/97 11:00	2/12/97 10:00	1380	2.76	2/21/97	233	84	6.8
114	REE18	2/11/97 11:40	2/12/97 10:40	1380	2.76	2/21/97	<LOD	<LOD	<LOD
115	CEN18	2/11/97 12:15	2/12/97 11:15	1380	2.76	2/21/97	<LOD	<LOD	<LOD
116	SAN18	2/11/97 13:00	2/12/97 11:40	1360	2.72	2/21/97	<LOD	<LOD	<LOD
117	ARB19	2/12/97 9:00	2/13/97 8:30	1410	2.82	2/21/97	<LOD	<LOD	<LOD
118	ARB19D	2/12/97 9:00	2/13/97 8:30	1410	2.82	2/21/97	<LOD	<LOD	<LOD
119	PAR19	2/12/97 10:00	2/13/97 9:30	1410	2.82	2/21/97	Det.	Det.	Det.
120	PAR19D	2/12/97 10:00	2/13/97 9:30	1410	2.82	2/21/97	Det.	Det.	Det.
121	REE19	2/12/97 10:40	2/13/97 10:00	1400	2.80	2/21/97	Det.	Det.	Det.
122	REE19D	2/12/97 10:40	2/13/97 10:00	1400	2.80	2/21/97	Det.	Det.	Det.
123	CEN19	2/12/97 11:15	2/13/97 10:30	1395	2.79	2/21/97	Det.	Det.	Det.
124	CEN19D	2/12/97 11:15	2/13/97 10:30	1395	2.79	2/21/97	Det.	Det.	Det.
125	SAN19	2/12/97 11:40	2/13/97 10:50	1390	2.78	2/21/97	<LOD	<LOD	<LOD
126	SAN19D	2/12/97 11:40	2/13/97 10:50	1390	2.78	2/21/97	<LOD	<LOD	<LOD
127	ARB20	2/13/97 8:30	2/14/97 8:15	1425	2.85	2/21/97	<LOD	<LOD	<LOD
128	PAR20	2/13/97 9:30	2/14/97 9:15	1425	2.85	2/21/97	215	75	6.1
129	REE20	2/13/97 10:00	2/14/97 9:45	1425	2.85	2/21/97	Det.	Det.	Det.
130	CEN20	2/13/97 10:30	2/14/97 10:15	1425	2.85	2/21/97	Det.	Det.	Det.
131	SAN20	2/13/97 10:50	2/14/97 10:45	1435	2.87	2/21/97	<LOD	<LOD	<LOD
132	ARB21	2/17/97 11:45	2/18/97 10:00	1335	2.67	2/26/97	Det.	Det.	Det.
133	PAR21	2/17/97 12:45	2/18/97 10:50	1325	2.65	2/26/97	Det.	Det.	Det.
134	REE21	2/17/97 13:20	2/18/97 11:20	1320	2.64	2/26/97	Det.	Det.	Det.
135	CEN21	2/17/97 14:00	2/18/97 11:50	1310	2.62	2/26/97	<LOD	<LOD	<LOD
136	SAN21	2/17/97 14:30	2/18/97 12:30	1320	2.64	2/26/97	<LOD	<LOD	<LOD

LOD' = 100 ng per sample

LOD = 65 ng per sample

Det.' = <331 ng (LOQ) but > 100 ng (LOD)

Det. = <215 ng (LOQ but > 65 ng (LOD)

NR - Not Reported due to loss of sample.

* pptv at 25 C and 1 atm

Table 2. Diazinon Ambient Monitoring Results

Log #	Sample ID	Start Date/Time	End Date/Time	Sample Time (min)	Sample Volume (m3)	Date Analyzed	Diazinon (ng)	(ng/m3)	*(pptv)
137	ARB22	2/18/97 10:00	2/19/97 9:30	1410	2.82	2/26/97	<LOD	<LOD	<LOD
138	PAR22	2/18/97 10:50	2/19/97 10:30	1420	2.84	2/26/97	<LOD	<LOD	<LOD
139	REE22	2/18/97 11:20	2/19/97 11:00	1420	2.84	2/26/97	Det.	Det.	Det.
140	CEN22	2/18/97 11:50	2/19/97 11:25	1415	2.83	2/26/97	<LOD	<LOD	<LOD
141	SAN22	2/18/97 12:30	2/19/97 12:00	1410	2.82	2/26/97	<LOD	<LOD	<LOD
142	ARB23	2/19/97 9:30	2/20/97 9:00	1410	2.82	2/26/97	<LOD	<LOD	<LOD
143	ARB23D	2/19/97 9:30	2/20/97 9:00	1410	2.82	2/26/97	<LOD	<LOD	<LOD
144	PAR23	2/19/97 10:30	2/20/97 10:00	1410	2.82	2/26/97	Det.	Det.	Det.
145	PAR23D	2/19/97 10:30	2/20/97 10:00	1410	2.82	2/26/97	Det.	Det.	Det.
146	REE23	2/19/97 11:00	2/20/97 10:25	1405	2.81	2/26/97	<LOD	<LOD	<LOD
147	REE23D	2/19/97 11:00	2/20/97 10:25	1405	2.81	2/26/97	<LOD	<LOD	<LOD
148	CEN23	2/19/97 11:25	2/20/97 10:50	1405	2.81	2/26/97	<LOD	<LOD	<LOD
149	CEN23D	2/19/97 11:25	2/20/97 10:50	1405	2.81	2/26/97	<LOD	<LOD	<LOD
150	SAN23	2/19/97 12:00	2/20/97 11:15	1395	2.79	2/26/97	<LOD	<LOD	<LOD
151	SAN23D	2/19/97 12:00	2/20/97 11:15	1395	2.79	2/26/97	<LOD	<LOD	<LOD
152	ARB24	2/20/97 9:00	2/21/97 7:30	1350	2.70	2/26/97	<LOD	<LOD	<LOD
153	PAR24	2/20/97 10:00	2/21/97 8:40	1360	2.72	2/26/97	Det.	Det.	Det.
154	REE24	2/20/97 10:25	2/21/97 9:15	1370	2.74	2/26/97	<LOD	<LOD	<LOD
155	CEN24	2/20/97 10:50	2/21/97 9:40	1370	2.74	2/26/97	<LOD	<LOD	<LOD
156	SAN24	2/20/97 11:15	2/21/97 10:10	1375	2.75	2/26/97	<LOD	<LOD	<LOD
157	ARB25	2/24/97 11:10	2/25/97 10:30	1400	2.80	2/28/97	<LOD	<LOD	<LOD

LOD' = 100 ng per sample

LOD = 65 ng per sample

Det.' = <331 ng (LOQ) but > 100 ng (LOD)

Det. = <215 ng (LOQ) but > 65 ng (LOD)

NR - Not Reported due to loss of sample.

* pptv at 25 C and 1 atm

Table 3. Summary of Diazinon Ambient Monitoring Results (ng/m3)

Start Date	ARB	CEN	PAR	REE	SAN
1/13/97	<LOD'	Det.'	Det.'	Det.'	<LOD'
1/14/97	Det.'	Det.'	Det.'	130	Det.'
1/15/97	Det.'	Det.'	Det.'	Det.'	<LOD'
1/15/97	Det.'	Det.'	Det.'	Det.'	<LOD'
1/16/97	<LOD'	Det.'	Det.'	Det.'	<LOD'
1/20/97	Det.	<LOD	Det.	160	Det.
1/21/97	Det.	Det.	100	Det.	Det.
1/22/97	Det.	<LOD	100	Det.	<LOD
1/22/97	Det.	<LOD	NR	Det.	<LOD
1/23/97	Det.	<LOD	110	130	<LOD
1/27/97	Det.	Det.	250	140	<LOD
1/28/97	Det.	91	240	200	Det.
1/29/97	Det.	83	<LOD	210	Det.
1/30/97	Det.	84	280	270	Det.
1/30/97	Det.	85	260	290	77
2/3/97	Det.	120	79	Det.	Det.
2/4/97	Det.	92	Det.	Det.	Det.
2/5/97	Det.	77	96	Det.	Det.
2/5/97	<LOD	80	NR	76	Det.
2/6/97	<LOD	Det.	100	Det.	Det.
2/10/97	<LOD	Det.	Det.	Det.	<LOD
2/11/97	<LOD	<LOD	84	<LOD	<LOD
2/12/97	<LOD	Det.	Det.	Det.	<LOD
2/12/97	<LOD	Det.	Det.	Det.	<LOD
2/13/97	<LOD	Det.	75	Det.	<LOD
2/17/97	Det.	<LOD	Det.	Det.	<LOD
2/18/97	<LOD	<LOD	<LOD	Det.	<LOD
2/19/97	<LOD	<LOD	Det.	<LOD	<LOD
2/19/97	<LOD	<LOD	Det.	<LOD	<LOD
2/20/97	<LOD	<LOD	Det.	<LOD	<LOD
2/24/97	<LOD				

Maximum	Det.	120	280	290	77
Mean	Det.	Det.	98	98	Det.
# Samples	25	24	24	24	24
# > LOQ	0	6	11	8	1
# > LOD	14	16	22	21	10

only the higher value of each collocated pair was used for the above statistics

Det. values (<LOQ but >LOD) were factored in as $(LOD+LOQ)/2$; assume 2.88 m3 sample volume values <LOD were not used to calculate the mean

LOD' = 100 ng per sample

LOD = 65 ng per sample

Det.' = <331 ng (LOQ) but >100 ng (LOD)

Det. = <215 ng (LOQ) but >65 ng (LOD)

NR - Not Reported due to loss of sample.

Table 4. Collocated Sample Results

Sample ID	Start Date/Time	Finish Date/Time	Date Analyzed	Diazinon Air Conc. (ng/m3)	Average (ng/m3)	Relative Difference
arb03	1/15/97 10:30	1/16/97 10:30	2/12/97	Det.'		
arb03d	1/15/97 10:30	1/16/97 10:30	2/12/97	Det.'	Det.'	Det.'
arb07d	1/22/97 9:30	1/23/97 9:00	2/25/97	Det.		
arb07	1/22/97 9:30	1/23/97 9:00	2/25/97	Det.	Det.	Det.
arb12	1/30/97 8:30	1/31/97 8:45	2/19/97	Det.		
arb12d	1/30/97 8:30	1/31/97 8:45	2/19/97	Det.	Det.	Det.
arb15	2/5/97 8:20	2/6/97 8:15	2/20/97	Det.		
arb15d	2/5/97 8:20	2/6/97 8:15	2/20/97	<LOD	<LOD	<LOD
arb19	2/12/97 9:00	2/13/97 8:30	2/21/97	<LOD		
arb19d	2/12/97 9:00	2/13/97 8:30	2/21/97	<LOD	<LOD	<LOD
arb23	2/19/97 9:30	2/20/97 9:00	2/26/97	<LOD		
arb23d	2/19/97 9:30	2/20/97 9:00	2/26/97	<LOD	<LOD	<LOD
cen03	1/15/97 12:05	1/16/97 12:10	2/12/97	Det.'		
cen03d	1/15/97 12:05	1/16/97 12:10	2/12/97	Det.'	Det.'	Det.'
cen07	1/22/97 11:10	1/23/97 10:40	2/25/97	<LOD		
cen07d	1/22/97 11:10	1/23/97 10:40	2/25/97	<LOD	<LOD	<LOD

LOD' = 100 ng per sample

LOD = 65 ng per sample

Det.' = <331 ng (LOQ) but >100 ng (LOD)

Det. = <215 ng (LOQ) but >65 ng (LOD)

NR - Not Reported due to loss of sample.

Table 4. Collocated Sample Results

Sample ID	Start Date/Time	Finish Date/Time	Date Analyzed	Diazinon Air Conc. (ng/m3)	Average (ng/m3)	Relative Difference
cen12	1/30/97 10:10	1/31/97 10:00	2/19/97	84		
cen12d	1/30/97 10:10	1/31/97 10:00	2/19/97	85	85	1.2%
cen15	2/5/97 9:30	2/6/97 9:30	2/20/97	77		
cen15d	2/5/97 9:30	2/6/97 9:30	2/20/97	80	79	4.7%
cen19	2/12/97 11:15	2/13/97 10:30	2/21/97	Det.		
cen19d	2/12/97 11:15	2/13/97 10:30	2/21/97	Det.	Det.	Det.
cen23	2/19/97 11:25	2/20/97 10:50	2/26/97	<LOD		
cen23d	2/19/97 11:25	2/20/97 10:50	2/26/97	<LOD	<LOD	<LOD
par03	1/15/97 11:05	1/16/97 11:25	2/12/97	Det.'		
par03d	1/15/97 11:05	1/16/97 11:25	2/12/97	Det.'	Det.'	Det.'
par07	1/22/97 10:15	1/23/97 9:45	2/25/97	100		
par07d	1/22/97 10:15	1/23/97 9:45	2/25/97	NR	NR	NR
par12	1/30/97 9:10	1/31/97 9:25	2/19/97	280		
par12d	1/30/97 9:10	1/31/97 9:25	2/19/97	260	270	7.4%
par15	2/5/97 8:55	2/6/97 8:55	2/20/97	96		
par15d	2/5/97 8:55	2/6/97 8:55	2/20/97	NR	NR	NR

LOD' = 100 ng per sample

LOD = 65 ng per sample

Det.' = <331 ng (LOQ) but > 100 ng (LOD)

Det. = <215 ng (LOQ) but > 65 ng (LOD)

NR - Not Reported due to loss of sample.

Table 4. Collocated Sample Results

Sample ID	Start Date/Time	Finish Date/Time	Date Analyzed	Diazinon Air Conc. (ng/m3)	Average (ng/m3)	Relative Difference
par19	2/12/97 10:00	2/13/97 9:30	2/21/97	Det.		
par19d	2/12/97 10:00	2/13/97 9:30	2/21/97	Det.	Det.	Det.
par23	2/19/97 10:30	2/20/97 10:00	2/26/97	Det.		
par23d	2/19/97 10:30	2/20/97 10:00	2/26/97	Det.	Det.	Det.
ree03	1/15/97 11:30	1/16/97 11:10	2/12/97	Det.'		
ree03d	1/15/97 11:30	1/16/97 11:10	2/12/97	Det.'	Det.'	Det.'
ree07	1/22/97 10:45	1/23/97 10:15	2/25/97	Det.		
ree07d	1/22/97 10:45	1/23/97 10:15	2/25/97	Det.	Det.	Det.
ree12	1/30/97 9:40	1/31/97 9:40	2/19/97	270		
ree12d	1/30/97 9:40	1/31/97 9:40	2/19/97	290	280	7.14%
ree15	2/5/97 9:10	2/6/97 9:10	2/20/97	Det.		
ree15d	2/5/97 9:10	2/6/97 9:10	2/20/97	76	Det.	Det.
ree19	2/12/97 10:40	2/13/97 10:00	2/21/97	Det.		
ree19d	2/12/97 10:40	2/13/97 10:00	2/21/97	Det.	Det.	Det.
ree23	2/19/97 11:00	2/20/97 10:25	2/26/97	<LOD		
ree23d	2/19/97 11:00	2/20/97 10:25	2/26/97	<LOD	<LOD	<LOD

LOD' = 100 ng per sample

LOD = 65 ng per sample

Det.' = <331 ng (LOQ) but > 100 ng (LOD)

Det. = <215 ng (LOQ) but > 65 ng (LOD)

NR - Not Reported due to loss of sample.

Table 4. Collocated Sample Results

Sample ID	Start Date/Time	Finish Date/Time	Date Analyzed	Diazinon Air Conc. (ng/m3)	Average (ng/m3)	Relative Difference
san03	1/15/97 12:30	1/16/97 12:45	2/12/97	<LOD'		
san03d	1/15/97 12:30	1/16/97 12:45	2/12/97	<LOD'	<LOD'	<LOD'
san07	1/22/97 11:30	1/23/97 11:10	2/25/97	<LOD		
san07d	1/22/97 11:30	1/23/97 11:10	2/25/97	<LOD	<LOD	<LOD
san12	1/30/97 10:45	1/31/97 10:10	2/20/97	ND		
san12d	1/30/97 10:45	1/31/97 10:10	2/20/97	77	ND	ND
san15	2/5/97 9:45	2/6/97 9:45	2/20/97	Det.		
san15d	2/5/97 9:45	2/6/97 9:45	2/20/97	Det.	Det.	Det.
san19	2/12/97 11:40	2/13/97 10:50	2/21/97	<LOD		
san19d	2/12/97 11:40	2/13/97 10:50	2/21/97	<LOD	<LOD	<LOD
san23	2/19/97 12:00	2/20/97 11:15	2/26/97	<LOD		
san23d	2/19/97 12:00	2/20/97 11:15	2/26/97	<LOD	<LOD	<LOD

LOD' = 100 ng per sample

LOD = 65 ng per sample

Det.' = <331 ng (LOQ) but > 100 ng (LOD)

Det. = <215 ng (LOQ) but > 65 ng (LOD)

NR - Not Reported due to loss of sample.

Table 5. Diazinon Laboratory Spike Results

Sample ID	Date Analyzed	Diazinon Mass (ng)	Expected Amount (ng)	Percent Recovery
LSD1	2/28/97	1566	1542	102%
LSD2	2/28/97	1522	1542	98.7%
LSD3	2/28/97	1560	1542	101%
LSD4	2/28/97	1523	1542	98.8%
LSD5	2/28/97	1535	1542	99.6%

Table 6. Diazinon Trip Spike Results

Sample ID	Date Analyzed	Diazinon Mass (ng)	Expected Amount (ng)	Percent Recovery
TSD1	2/28/97	1234	1542	80.0%
TSD2	2/28/97	1240	1542	80.4%
TSD3	2/28/97	1177	1542	76.3%
TSD4	2/28/97	1242	1542	80.5%
TSD5	2/28/97	1207	1542	78.3%

Table 7. Diazinon Field Spike Results

Sample ID	Start Date/Time	Finish Date/Time	Sample Time (min)	Sample Volume (m3)	Date Analyzed	Diazinon Mass (ng)	Expected Amount (ng)	Percent Recovery
FSD1	2/24/97 11:10	2/25/97 10:30	1400	2.80	2/28/97	1159	1542	75.2%
FSD2	2/24/97 11:10	2/25/97 10:30	1400	2.80	2/28/97	1190	1542	77.2%
FSD3	2/24/97 11:10	2/25/97 10:30	1400	2.80	2/28/97	1169	1542	75.8%
FSD4	2/24/97 11:10	2/25/97 10:30	1400	2.80	2/28/97	1181	1542	76.6%
FSD5	2/24/97 11:10	2/25/97 10:30	1400	2.80	2/28/97	NR	1542	NR

NR - Not Reported due to loss of sample.