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Agency Secretary

Air Resources Board

Alan C. Lloyd, Ph.D.
Chairman

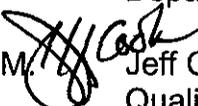
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Gray Davis
Governor

MEMORANDUM

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

FROM:  Jeff Cook, Chief
Quality Management Branch
Monitoring and Laboratory Division

DATE: November 6, 2003

SUBJECT: FINAL REPORT FOR THE 2002 AMBIENT AIR MONITORING FOR
CHLOROTHALONIL IN FRESNO COUNTY

Attached is the final report "Ambient Air Monitoring for Chlorothalonil in Fresno County –Summer 2002." The report and separate volume of appendices for the report have also been forwarded to Randy Segawa and Shifang Fan of your staff. We received your June 24, 2003 comments and have made the appropriate changes.

If you or your staff have questions or need further information, please contact me at 322-3726 or via e-mail at jcook@arb.ca.gov or Kevin Mongar at 322-2449 or at kmongar@arb.ca.gov.

Attachment/Separate Appendices

cc: See next page

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 **Air Resources Board**

**Ambient Air Monitoring for Chlorothalonil
In Fresno County – Summer 2002**

Prepared by
Operations Planning and Assessment Section
Quality Management Branch
Monitoring and Laboratory Division

Project No. P-02-002

Date: November 3, 2003

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.

Monitoring Report Approval

Title: Ambient Air Monitoring for Chlorothalonil in Fresno County – Summer 2002

Project Lead: Kevin Mongar, Air Pollution Specialist

Prepared by: Yun Pan-Huang, Air Pollution Specialist

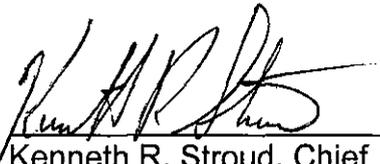
Approval: The following monitoring report has been reviewed and approved by the Monitoring and Laboratory Division.

Signatures:



Jeffrey R. Cook, Chief
Quality Management Branch

11.04.03
DATE



Kenneth R. Stroud, Chief
Air Quality Surveillance Branch

11-05-03
DATE



Michael Poore, Chief
Northern Laboratory Branch

11/5/03
DATE



William V. Lescutoff, Chief
Monitoring and Laboratory Division

11.5.03
DATE

Executive Summary

Ambient Air Monitoring for Chlorothalonil in Fresno County - Summer 2002

In January 2002 the California Department of Pesticide Regulation (DPR) requested that the Air Resources Board (ARB) conduct ambient air monitoring for the pesticide chlorothalonil in Fresno County during summer of 2002. Monitoring was conducted in Fresno County from May 28 through July 3, 2002, to coincide with the use of chlorothalonil as a fungicide. California growers primarily use chlorothalonil on tomatoes, potatoes, onions, celery, carrots, and garlic.

Five sampling sites were selected in relatively high-population areas or in areas frequented by people (e.g., schools or school district offices, fire stations, or other public buildings). At each site, 21 discrete 24-hour samples were collected, Monday through Friday (4 samples/week), during the 6-week sampling period. Background samples were collected at the ARB's regular air monitoring site in Fresno. Collocated (replicate) samples were collected for six dates (each Wednesday) at each sampling location.

The sites were selected by ARB personnel from areas in Fresno County where chlorothalonil was used in the past. Sites were selected for their proximity to the prior use areas with considerations for both accessibility and security of the sampling equipment. ARB understands that DPR staff will verify and quantify the actual use of chlorothalonil that takes place during the study when the information becomes available.

Chlorothalonil Results

Daily concentrations of chlorothalonil ranged from <MDL to 14 nanograms per cubic meter of sampled air (ng/m^3) (1.3 parts per trillion by volume (pptv)). The highest concentration was measured at the ARB's Fresno Air Monitoring Site (FRS).

Six-week average concentrations ranged from $0.39 \text{ ng}/\text{m}^3$ (0.036 pptv) to $2.2 \text{ ng}/\text{m}^3$ (0.20 pptv). The highest average was measured at the Cantua Creek Elementary School (CES) site.

Of the 121 valid ambient samples, 17 contained concentrations of chlorothalonil above the estimated quantitation limit (EQL) of $2.3 \text{ ng}/\text{m}^3$, 55 were found to have results of "detected," 49 were below the method detection limit (MDL).

Acknowledgments

Assistance in sampling site selection was provided by Mr. Cliff Francone and Mr. Chuck Francone of the Fresno County Agricultural Commissioner's Office. Staff of the Air Resources Board (ARB) Air Quality Surveillance Branch (AQSB) collected the ambient samples. Mr. Steve Rider of the AQSB coordinated the field sampling. Mr. Mike Orbanosky, Ms. Theresa Houston, and Mr. Jim Omand of the ARB Special Analysis Section laboratory performed the method development and chemical analyses. Ms. Yun Pan-Huang of the Operations Planning & Assessment Section prepared the monitoring report. Mr. Lynn Baker of the ARB Stationary Source Division provided comments on the monitoring protocol and report.

TABLE OF CONTENTS

<u>Content</u>	<u>Page</u>
I. Introduction	1
II. Sampling	1
A. Sampling Method	1
B. Sampling Site Selection	2
III. Analytical Methodology	4
IV. Monitoring Results	5
V. Quality Control (QC).....	6
VI. Quality Control Results.....	6
A. Trip Blank Results	6
B. Collocated Sample Results	6
C. Laboratory, Trip, and Field Spikes	6
VII. Method Development	7
A. Collection and Extraction Efficiency	7
B. Storage Stability	7
C. Breakthrough	8

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Ambient Sampling Sites	2
2. Chlorothalonil Ambient Monitoring Results	10-20
3. Summary of Chlorothalonil Results	21
4. Chlorothalonil Collocated Results	22
5. Chlorothalonil Laboratory Spike Results	23
6. Chlorothalonil Trip Spike Results	23
7. Chlorothalonil Field Spike Results.....	23

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1. Ambient Monitoring Area.....	9

LIST OF APPENDICES (Contained in a separate volume)

<u>Appendix</u>	<u>Page</u>
I. Monitoring Protocol	1
II. Laboratory Report	16
III. Field Data Sheets.....	46

Ambient Air Monitoring
For Chlorothalonil in Fresno County – Summer 2002

I. Introduction

At the request (January 2, 2002, Memorandum, Helliker to Lloyd) of the California Department of Pesticide Regulation (DPR), the Air Resources Board (ARB) staff determined airborne concentrations of the pesticide chlorothalonil in Fresno County over a six week ambient monitoring program. This monitoring was done to fulfill the requirements of Assembly Bill 1807/3219 (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. Monitoring was conducted in Fresno County from May 28 through July 03, 2002, to coincide with the use of chlorothalonil as a fungicide. Chlorothalonil is available for both home-garden and agricultural use in California. California growers primarily use chlorothalonil on tomatoes, potatoes, onions, celery, carrots and garlic. Application site monitoring conducted during summer 2002 for chlorothalonil will be described in a separate report.

The ARB Special Analysis Section of the Northern Laboratory Branch conducted the method development and sample analyses. The ARB Air Quality Surveillance Branch staff conducted sample collections for the ambient study.

The protocol for the ambient air monitoring for chlorothalonil is enclosed separately as Appendix I (page 1 of the Appendices to this report). The protocol Attachments I, II, and IV have not been included in Appendix I, but are available upon request. The laboratory report, "2,4,5,6-tetrachloro-1,3-benzenedicarbonitrile (Chlorothalonil) Method Development and Analytical Results for Ambient Air Monitoring Samples," is enclosed separately as Appendix II (page 16 of the Appendices to this report). The Standard Operating Procedure (SOP) and method validation data for chlorothalonil are also enclosed as Appendix II (page 32 and 42 of the Appendices to this report). The field data sheets for Chlorothalonil are enclosed separately as Appendix III (page 46 of the Appendices to this report).

II. Sampling

A. Sampling Method

Air 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 dichloromethane. The tubes are 8 mm x 110 mm with 400 mg XAD-2 in the primary section and 200 mg in the secondary section. The flow rate of 3.0 standard liters per minute (slpm) was accurately measured and the sampling system operated continuously for 24 hours with the exact operating interval recorded in the logbook. The tubes were protected from direct sunlight and positioned 1.5 meters above roof tops for the ambient monitoring. At the end of each sampling period, the tubes were 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 laboratory for analysis. The samples were stored in the freezer or extracted/analyzed immediately.

Each sample train consisted of an adsorbent tube, Teflon fittings and tubing, rain/sun shield, rotameter (or needle valve), train support, and either a 12 volt DC or a 115 volt AC vacuum pump. Tubes were prepared for use by breaking off the sealed glass ends and immediately inserting the tube into the Teflon fitting. The tubes were oriented in the sample train according to a small arrow printed on the side indicating the direction of flow. A needle valve with a range of 0-5 slpm was used to control sample flow rate. The flow rates were set using a calibrated digital mass flow meter (MFM), scaled from 0-5 slpm, before the start of each sampling period. The flow rate was also checked and recorded, using the MFM, at the end of each sampling period. Samplers were leak checked prior to each sampling period, with the sampling tubes installed. Any change in flow rates was recorded on the field log sheet. The pesticide sampling procedures for adsorbent tubes are included in Appendix I (page 12 of the Appendices to this report).

The ambient monitoring study included 126 individual sampling periods (6 sites x 21 sampling days). Collocated (duplicate) samples were collected for one day/week (each Wednesday) at each sampling location. Trip blanks were submitted once per week.

B. Sampling Site Selection

Historic use patterns for chlorothalonil (1997-2000) suggested that monitoring should occur in Fresno County during the month of June to coincide with the use of chlorothalonil. Monitoring was conducted in Fresno County from May 28, through July 3, 2002. Five sampling sites were selected by ARB personnel in populated areas or in areas frequented by people. Site selection was based upon considerations for accessibility, security of the sampling equipment, and compliance with technical siting requirements. Urban background samples were collected at the ARB's Fresno Ambient Air Monitoring Station in Fresno. The six sites are listed in Table 1. Although the sampling sites are near areas of prior use of chlorothalonil it is understood that DPR staff will verify and quantify the actual use of chlorothalonil that occurred during the study when the information becomes available.

Table 1
Ambient Sampling Sites

FRS	ARB Fresno - First Air Monitoring Station 3425 North First Street Fresno CA 93726 Section/Township/Range: SE.22/T.13S/R.20E GPS Coordinates: N. 36° 46.906' W. 119°46.328'	(559) 228-1825 Pat Seames, Operator
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HES	Helm Elementary School 13883 South Lassen Avenue Helm, CA 93627 Section/Township/Range: SE.15/T.16S/R.17E GPS Coordinates: N. 36° 31.977' W. 120°05.903'	(559) 866-5683 Sylvia Grider Principal
CES	Cantua Creek Elementary School 19288 West Clarkson Avenue Cantua Creek, CA 93608 Section/Township/Range: SE.27/T.16S/R.15E GPS Coordinates: N. 36° 30.0935' W. 120°19.192'	(559) 829-3331 Rubin V. Castillo Principal
WES	Westside Elementary School 19191 Excelsior Avenue Five Points, CA 93624 Section/Township/Range: NE.5/T.18S/R.17E GPS Coordinates: N. 36° 23.931' W. 120°08.444'	(559) 884-2492 Baldomero Hernandez Principal/Superintendent
WRS	West Side Research and Extension 17353 W. Oakland Avenue Five Points, CA 93624 Section/Township/Range: NE.27/T.18S/R.19E GPS Coordinates: N. 36° 20.494' W. 120°06.515'	(559) 884-2412 Jimmie H. Ross Superintendent
HUS	Huron Elementary School 36131 N. Street Huron, CA 93234 Section/Township/Range: NW.11/T.20S/R.17E GPS Coordinates: N. 36° 12.426' W. 120°05.851'	(559) 647-6968 Ramon Dominques Garage Supervisor

FRS

The urban background site was located at ARB's ambient air monitoring station in the city of Fresno. This station monitors concentrations and collects samples of most criteria gas and particulate pollutants as well as meteorological data. The site is located relatively close to the center of the metropolitan Fresno city limits in a mix of business offices, parks, and residences. Fresno has a population of approximately 450,000. The pesticide samplers were operated on top of the two story building housing ARB's air monitoring station. The sample inlets were 34.5 ±0.5 feet above ground level. The site met all technical siting requirements. Elevation of the site is 350 ±10 feet above mean sea level (MSL). No agricultural fields were noted within a 3-mile radius.

HES

The Helm Elementary School was located in a rural agricultural/residential mixed area in the town of Helm which has a population of approximately 200. The pesticide samplers were operated on the roof of one of the school buildings and their inlets were 18 ±0.5 feet above ground level. The site met all technical siting requirements. Elevation of the site is 200 ±10

feet above MSL. No fields were noted within a 1.5 mile radius that might use Chlorothalonil.

CES

The Cantua Creek Elementary School site was located in a rural, agricultural/residential mixed area in the town of Cantua Creek which has a population of approximately 300. The pesticide samplers were operated on the roof of one of the school buildings and their inlets were 17 \pm 0.5 feet above ground level. The site met all technical siting requirements. Elevation of the site is 310 \pm 10 feet above MSL. Multiple tomato fields were located within a 1.5-mile radius.

WES

The Westside Elementary School site was located in a rural, agricultural/residential mixed area in the community of Westside which has a population of approximately 50. The pesticide samplers were operated on the roof of one of the schools storage sheds and their inlets were 12 \pm 0.5 feet above ground level. The site met all technical siting requirements. Elevation of the site is 300 \pm 10 feet above MSL. No tomato or melon fields were located within a 1.5-mile radius.

WRS

The West Side Research & Extension site was located in a rural, agricultural/residential mixed area at the west end of the community of Calflax which has a population of approximately 50. The pesticide samplers were operated on the roof of one of the complex's buildings, which at one time was a PM10 site, and their inlets were 16.5 \pm 0.5 feet above ground level. The site met all technical siting requirements. Elevation of the site is 325 \pm 10 feet above MSL. Several tomato, squash, or melon fields were located within a 1.5-mile radius.

HUS

The Huron Elementary School site was located in an urban, residential/agricultural mixed area in the town of Huron which has a population of approximately 6,200. The pesticide samplers were operated on the roof of one of the school buildings and their inlets were 18 \pm 0.5 feet above ground level. The site met all technical siting requirements. Elevation of the site is 390 \pm 10 feet above MSL. Several Tomato fields were located within a 1.5-mile radius.

III. Analytical Methodology

The standard operating procedures for sampling and analysis of chlorothalonil are enclosed in Appendix II.

Per 40 CFR, Part 136, Appendix B, the method detection limit (MDL) was determined by analysis of 7 replicate cartridge spikes (near the estimated detection limit) for Chlorothalonil. The MDL=(3.14) times standard deviation, calculated from the 7 replicate results. The analytical estimated quantitation limit (EQL)=(5) times MDL. The MDL achieved by the laboratory was 0.45 ng/m³, based on a 3-ml extraction volume and a sample collected for 24 hours at a flow rate of 3.0 slpm. The calculated EQL was 2.3 ng/m³, slightly higher than the DPR requested target EQL of 1.0 ng/m³.

The sampling and analytical methods used for this study are based on methods used to conduct similar monitoring for DPR in 1992. The "Standard Operating Procedure for the Analysis of 2,4,5,6-tetrachloro-1,3-benzenecarbonitrile (Chlorothalonil) in Ambient Air" (May 17, 2002 draft version) specifies that the ambient air is collected on XAD-2 cartridges for 24 hours at 3.0 slpm flow rate. The samples are stored in an ice chest on dry ice or in a refrigerator until extracted with 3 milliliters (ml) of dichloromethane. Sample extracts are analyzed on a gas chromatograph/mass selective detector (GC/MSD), which is operated in the selected ion-monitoring mode (SIM), using internal standard method.

IV. Monitoring Results

All samples were extracted and analyzed within 21 days of collection.

For chlorothalonil, results below the MDL are reported as <MDL, results equal to or above the MDL, but below the EQL, are reported as detected (DET). Laboratory results equal to or above the EQL are reported to 3 significant figures in units of ng/sample, final concentrations in sampled air are reported to 2 significant figures. No sample results have been adjusted or corrected for recoveries of quality assurance spike samples.

Table 2 presents the results of ambient air monitoring for chlorothalonil in units of ng/m³ and pptv. A summary of the ambient results for chlorothalonil is presented in Table 3. The monitoring period included 126 individual sampling periods (6 sites x 21 sampling days).

The equation used to convert chlorothalonil air concentration results from units of ng/m³ to units of pptv at 1 atmosphere and 25°C is shown below:

$$\text{pptv} = (\text{ng/m}^3) \times \frac{(0.0820575 \text{ liter-atm/mole-}^\circ\text{K})(298^\circ\text{K})}{(1 \text{ atm})(265.92 \text{ gram/mole})} = (0.0919567) \times (\text{ng/m}^3)$$

Daily concentrations of chlorothalonil ranged from <MDL to 14 ng/m³ (1.3 pptv). The highest concentration, 14 ng/m³, was measured at the ARB's Fresno Air Monitoring Site (FRS, urban background site) on June 19, 2002. The result of 14 ng/m³ was unexpectedly higher than the other samples. The data were verified by the laboratory staff and confirmed as correct. So the high concentration of chlorothalonil measured at the FRS site may be caused by the home use.

Six-week average concentrations ranged from 0.39 ng/m³ (0.036 pptv) to 2.2 ng/m³ (0.20 pptv). The highest average was measured at the Cantua Creek Elementary School (CES) site.

Of the 126 ambient samples collected (spikes, blanks, and the lower value of each collocated pair excluded), 17 contained a concentration of chlorothalonil above the EQL, 55 were found to have results of "DET", 49 were below the MDL, and 5 were invalidated due to sampling problems.

V. Quality Control (QC)

Field QC for the ambient monitoring included the following:

- 1) Six field spikes (same environmental and experimental conditions as those occurring at the time of ambient sampling) prepared by the Special Analysis Section staff. The field spikes were obtained by sampling ambient air at the background monitoring site for 24-hour periods (collocated with an ambient sample);
- 2) Six trip spikes;
- 3) Collocated (duplicate) samples taken once per week at each sampling location; and
- 4) 1 trip blank submitted per week;
- 5) The battery operated mass flow meters used to set and check the sampling flow rate were calibrated by the ARB's Program Evaluation and Standards Section.
- 6) A flow audit of each sampler was performed by the Quality Assurance Section (QAS) on August 30, 2002, at the MLD's 5th Street warehouse facility. All pesticide sampler flow rates were within the QAS's $\pm 10\%$ control limit.

For each sampler using cartridges, the flow rate was set and recorded at the start of every sampling period for every sample using a calibrated, battery operated, digital mass flow meter. The flow rates were also checked and recorded at the end of each sampling period using a calibrated mass flow meter.

VI. Quality Control Results

A. Trip Blank Results

Referring to Table 3, Appendix II (page 56 of the Appendices to this report), six trip blanks were analyzed for chlorothalonil and all trip blanks results were <MDL.

B. Collocated Sample Results

The relative percent difference (RPD) of the collocated results provides an indication of the precision of the monitoring method (i.e., the lower the RPD the better the precision). RPD is calculated as follows: $RPD = (| \text{difference} | / \text{average}) \times 100$.

Referring to Table 4, 3 collocated pairs of samples had both chlorothalonil results above the EQL. The RPD ranged from 2.4% to 8.8%. The results indicate acceptable precision for the method.

C. Laboratory, Trip, and Field Spikes

The purpose of collecting spiked samples is to assess the accuracy (% recovery) of the sampling and analytical methods. The field spikes are collected by sampling ambient air through the previously spiked cartridges at one of the sampling sites. Thus, the field spikes provide an assessment of the accuracy of the entire method and are collected under the same environmental and experimental conditions as those occurring at the

time of ambient sampling. The lab and trip spikes are used to confirm the field spike results or to help identify the source of losses (problems) when they occur in the field spikes.

Laboratory, trip, and field spikes were prepared by spiking a known amount of the target compound onto the appropriate cartridges. The spikes were made and collected in six separate sets, one every week for the six-week sampling period.

The laboratory spikes were placed immediately in a freezer and kept there until extraction and analysis. The trip and field spikes were kept in the lab freezer until transported to the field. The trip spikes were 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 log-in and labeling. Fifty-two ng of chlorothalonil was spiked onto a cartridge for all laboratory, trip, and field spikes. The extraction and analysis of each set of laboratory, trip and field spikes normally occurs at the same time. The collocated (unspiked) sample result, if above the EQL, was subtracted from the field spike sample result before calculation of percent recovery of the analytes.

The spike results for chlorothalonil are listed in Tables 5 through 7. The percent recoveries ranged from 41% to 108%. The lab and field spikes which were analyzed on June 17, 2002, had low recoveries, 41% & 46%, respectively. The laboratory report states (page 22 of the Appendices to this report):

"Laboratory staff analyzes six (6) sets of field spikes during this project. Although recoveries were generally good, it was noted that recoveries for the lab spike and field spike sampled during week three were much lower than expected, 40.85% and 45.75% respectively. It is suspected that either the cartridges were not spiked correctly or during sample extraction, analyte was lost. The trip spike for week three had a recovery of approximately 92%. Since all three spikes (laboratory, trip, and field) were extracted and analyzed in the same analytical batch, it is more likely that the cartridges were spiked incorrectly."

The lab, trip and field spike results indicate that the sampling and analysis method provide acceptable results for Chlorothalonil.

VII. Method Development

Refer to Appendix II for discussion and results of method development studies.

A. Collection and Extraction Efficiency

The average recoveries for low (20.2 ng/sample) and high (101 ng/sample) spike level were 89%.

B. Storage Stability

The storage stability study results show that chlorothalonil is stable for up to 24 days on the XAD-2 cartridge when stored in a freezer at -20⁰ C. All samples were extracted and analyzed within 21 days of collection for the current project.

C. Breakthrough

Three XAD-2 cartridges spiked with one microgram of chlorothalonil in the front tube were sampled at a flow rate of 3 slpm for 24 hours. The analytical results show that no chlorothalonil was detected in the back tube of cartridge.

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

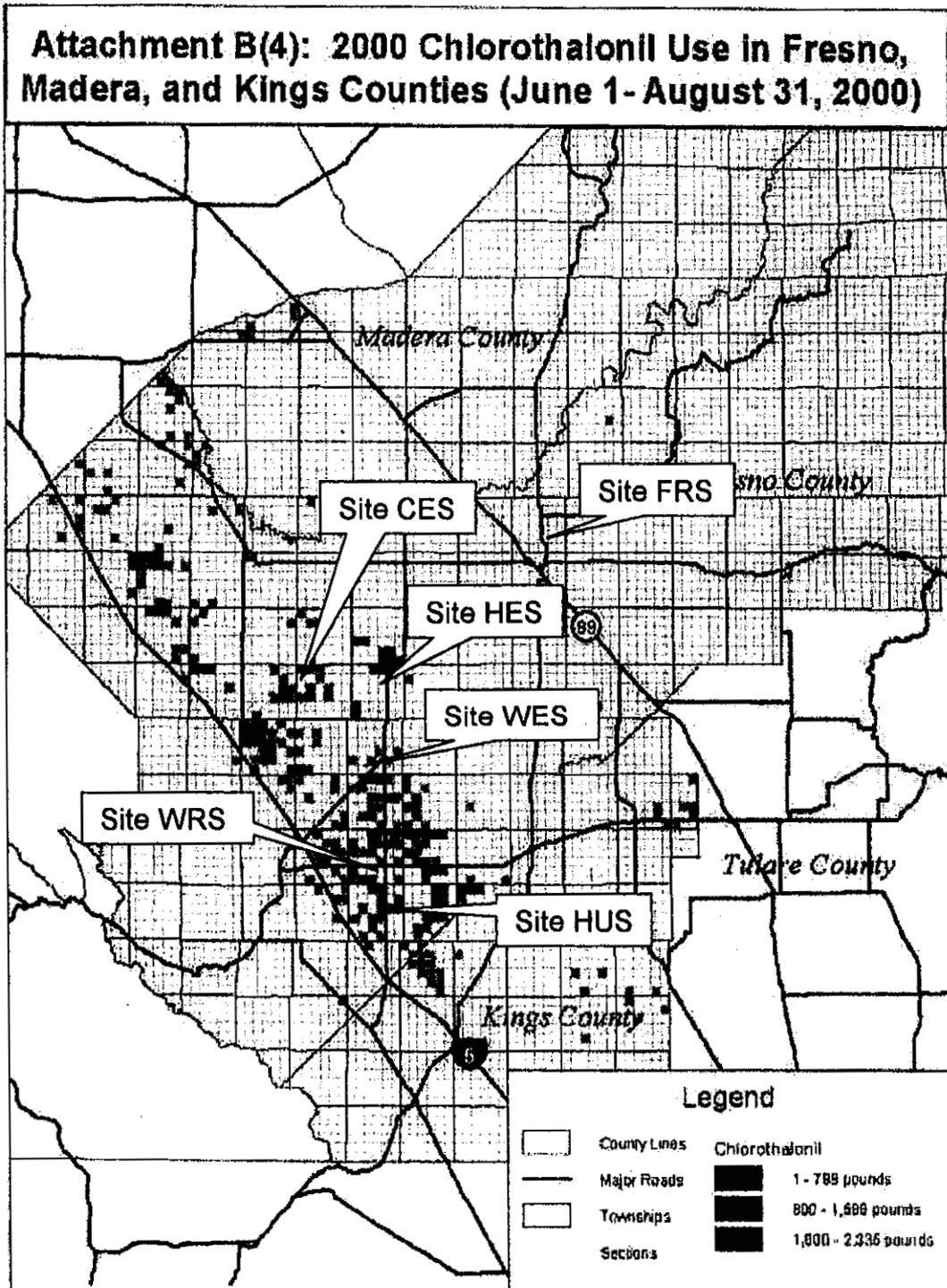


Table 2. Chlorothalonil Ambient Monitoring Results for Fresno County 2002

Log #	Sample ID	Date On	Time On	Time* (hours)	Volume (m ³)	Chlorothalonil		
		Off	Off			(ng/sample)	(ng/m ³)	** (pptv)
003	FRS-C-1	05/28/02	0717	23.2	4.18	<MDL	<MDL	<MDL
		05/29/02	0630					
005	HES-C-1	05/28/02	0818	23.2	4.18	<MDL	<MDL	<MDL
		05/29/02	0732					
006	CES-C-1	05/28/02	0901	23.3	4.19	<MDL	<MDL	<MDL
		05/29/02	0818					
007	WES-C-1	05/28/02	0936	23.3	4.20	DET	DET	DET
		05/29/02	0856					
008	WRS-C-1	05/28/02	0958	23.4	4.21	<MDL	<MDL	<MDL
		05/29/02	0920					
009	HUS-C-1	05/28/02	1030	23.4	4.21	DET	DET	DET
		05/29/02	0954					
010	FRS-C-2	05/29/02	0639	23.2	4.18	<MDL	<MDL	<MDL
		05/30/02	0553					
011	FRS-C-2C	05/29/02	0639	23.3	4.20	DET	DET	DET
		05/30/02	0558					
012	HES-C-2	05/29/02	0735	23.1	4.16	<MDL	<MDL	<MDL
		05/30/02	0644					
013	HES-C-2C	05/29/02	0740	23.2	4.17	<MDL	<MDL	<MDL
		05/30/02	0649					
014	CES-C-2	05/29/02	0821	23.1	4.16	<MDL	<MDL	<MDL
		05/30/02	0727					
015	CES-C-2C	05/29/02	0826	23.1	4.16	DET	DET	DET
		05/30/02	0733					
016	WES-C-2	05/29/02	0858	23.1	4.15	<MDL	<MDL	<MDL
		05/30/02	0803					
017	WES-C-2C	05/29/02	0902	23.1	4.16	<MDL	<MDL	<MDL
		05/30/02	0809					
018	WRS-C-2	05/29/02	0923	23.1	4.16	<MDL	<MDL	<MDL
		05/30/02	0829					

MDL=1.93 ng/sample for Chlorothalonil

DET=Value was below the EQL of 9.66 ng/sample but ≥MDL

NA= Not applicable due to sampling problem

*Time was calculated from ETM reading.

**pptv at 1 atm and 25°C

Table 2. Chlorothalonil Ambient Monitoring Results for Fresno County 2002

Log #	Sample ID	Date On	Time On	Time* (hours)	Volume (m ³)	Chlorothalonil		
		Off	Off			(ng/sample)	(ng/m ³)	** (pptv)
019	WRS-C-2C	05/29/02	0928	23.1	4.15	<MDL	<MDL	<MDL
		05/30/02	0834					
020	HUS-C-2	05/29/02	0957	23.0	4.14	<MDL	<MDL	<MDL
		05/30/02	0858					
021	HUS-C-2C	05/29/02	0959	23.1	4.15	<MDL	<MDL	<MDL
		05/30/02	0903					
022	FRS-C-3	05/30/02	0556	23.8	4.28	<MDL	<MDL	<MDL
		05/31/02	0541					
023	HES-C-3	05/30/02	0646	23.7	4.26	<MDL	<MDL	<MDL
		05/31/02	0627					
024	CES-C-3	05/30/02	0730	23.5	4.01	<MDL	<MDL	<MDL
		05/31/02	0659					
025	WES-C-3	05/30/02	0806	23.3	4.20	1.86E+01	4.4E+00	4.1E-01
		05/31/02	0725					
026	WRS-C-3	05/30/02	0832	23.2	4.17	<MDL	<MDL	<MDL
		05/31/02	0741					
027	HUS-C-3	05/30/02	0900	23.0	3.89	<MDL	<MDL	<MDL
		05/31/02	0804					
028	FRS-C-4	06/03/02	0719	23.3	4.20	<MDL	<MDL	<MDL
		06/04/02	0638					
030	HES-C-4	06/03/02	0816	23.4	4.85	NA	NA	NA
		06/04/02	0738					
031	CES-C-4	06/03/02	0901	23.4	4.20	DET	DET	DET
		06/04/02	0822					
032	WES-C-4	06/03/02	0946	23.3	4.20	DET	DET	DET
		06/04/02	0904					
033	WRS-C-4	06/03/02	1009	23.4	4.21	DET	DET	DET
		06/04/02	0932					
034	HUS-C-4	06/03/02	1040	23.4	4.21	<MDL	<MDL	<MDL
		06/04/02	1005					

MDL=1.93 ng/sample for Chlorothalonil
 DET=Value was below the EQL of 9.66 ng/sample but ≥MDL

NA= Not applicable due to sampling problem

*Time was calculated from ETM reading.

**pptv at 1 atm and 25°C

Table 2. Chlorothalonil Ambient Monitoring Results for Fresno County 2002

Log #	Sample ID	Date On	Time On	Time* (hours)	Volume (m ³)	Chlorothalonil		
		Off	Off			(ng/sample)	(ng/m ³)	** (pptv)
037	FRS-C-5	06/04/02	0645	23.5	4.23	DET	DET	DET
		06/05/02	0615					
038	FRS-C-5C	06/04/02	0645	23.5	4.23	DET	DET	DET
		06/05/02	0615					
039	HES-C-5	06/04/02	0743	23.4	4.22	<MDL	<MDL	<MDL
		06/05/02	0708					
040	HES-C-5C	06/04/02	0743	23.4	4.22	<MDL	<MDL	<MDL
		06/05/02	0708					
041	CES-C-5	06/04/02	0830	23.3	4.20	1.93E+01	4.6E+00	4.2E-01
		06/05/02	0749					
042	CES-C-5C	06/04/02	0830	23.3	4.20	1.82E+01	4.3E+00	4.0E-01
		06/05/02	0749					
043	WES-C-5	06/04/02	0908	23.4	4.21	DET	DET	DET
		06/05/02	0833					
044	WES-C-5C	06/04/02	0908	23.4	4.21	DET	DET	DET
		06/05/02	0833					
045	WRS-C-5	06/04/02	0935	23.4	4.21	DET	DET	DET
		06/05/02	0900					
046	WRS-C-5C	06/04/02	0935	23.4	4.21	DET	DET	DET
		06/05/02	0900					
047	HUS-C-5	06/04/02	1008	17.9	3.23	NA	NA	NA
		06/05/02	0929					
048	HUS-C-5C	06/04/02	1008	17.9	3.23	NA	NA	NA
		06/05/02	0929					
049	FRS-C-6	06/05/02	0620	23.8	4.29	DET	DET	DET
		06/06/02	0610					
050	HES-C-6	06/05/02	0711	23.9	4.29	<MDL	<MDL	<MDL
		06/06/02	0703					
051	CES-C-6	06/05/02	0754	23.8	4.28	1.24E+01	2.9E+00	2.7E-01
		06/06/02	0740					

MDL=1.93 ng/sample for Chlorothalonil

DET=Value was below the EQL of 9.66 ng/sample but ≥MDL

NA= Not applicable due to sampling problem

*Time was calculated from ETM reading.

**pptv at 1 atm and 25°C

Table 2. Chlorothalonil Ambient Monitoring Results for Fresno County 2002

Log #	Sample ID	Date On	Time On	Time* (hours)	Volume (m ³)	Chlorothalonil		
		Off	Off			(ng/sample)	(ng/m ³)	** (pptv)
052	WES-C-6	06/05/02	0837	23.6	4.25	DET	DET	DET
		06/06/02	0813					
053	WRS-C-6	06/05/02	0904	23.5	4.22	DET	DET	DET
		06/06/02	0832					
054	HUS-C-6	06/05/02	0935	23.4	4.21	DET	DET	DET
		06/06/02	0858					
055	FRS-C-7	06/06/02	0614	23.6	4.24	<MDL	<MDL	<MDL
		06/07/02	0548					
056	HES-C-7	06/06/02	0707	23.5	4.23	<MDL	<MDL	<MDL
		06/07/02	0636					
057	CES-C-7	06/06/02	0743	23.5	4.22	<MDL	<MDL	<MDL
		06/07/02	0711					
058	WES-C-7	06/06/02	0816	23.5	4.23	DET	DET	DET
		06/07/02	0744					
059	WRS-C-7	06/06/02	0836	23.4	4.22	DET	DET	DET
		06/07/02	0800					
060	HUS-C-7	06/06/02	0901	23.3	4.20	DET	DET	DET
		06/07/02	0826					
061	FRS-C-8	06/10/02	0704	23.3	4.20	<MDL	<MDL	<MDL
		06/11/02	0625					
063	HES-C-8	06/10/02	0756	23.3	4.20	<MDL	<MDL	<MDL
		06/11/02	0714					
064	CES-C-8	06/10/02	0828	23.4	4.22	1.37E+01	3.2E+00	3.0E-01
		06/11/02	0753					
065	WES-C-8	06/10/02	0856	23.5	4.23	DET	DET	DET
		06/11/02	0827					
066	WRS-C-8	06/10/02	0914	23.6	4.24	<MDL	<MDL	<MDL
		06/11/02	0849					
067	HUS-C-8	06/10/02	0937	23.8	4.29	<MDL	<MDL	<MDL
		06/11/02	0926					

MDL=1.93 ng/sample for Chlorothalonil
 DET=Value was below the EQL of 9.66 ng/sample but \geq MDL

NA= Not applicable due to sampling problem
 *Time was calculated from ETM reading.

**pptv at 1 atm and 25°C

Table 2. Chlorothalonil Ambient Monitoring Results for Fresno County 2002

Log #	Sample ID	Date On	Time On	Time* (hours)	Volume (m ³)	Chlorothalonil		
		Off	Off			(ng/sample)	(ng/m ³)	** (pptv)
070	FRS-C-9	06/11/02	0628	23.9	4.30	<MDL	<MDL	<MDL
		06/12/02	0623					
071	FRS-C-9-C	06/11/02	0628	23.9	4.30	<MDL	<MDL	<MDL
		06/12/02	0623					
072	HES-C-9	06/11/02	0717	23.9	4.31	<MDL	<MDL	<MDL
		06/12/02	0713					
073	HES-C-9-C	06/11/02	0717	23.9	4.31	<MDL	<MDL	<MDL
		06/12/02	0713					
074	CES-C-9	06/11/02	0755	23.9	4.31	<MDL	<MDL	<MDL
		06/12/02	0751					
075	CES-C-9-C	06/11/02	0755	23.9	4.31	<MDL	<MDL	<MDL
		06/12/02	0751					
076	WES-C-9	06/11/02	0829	23.9	4.31	<MDL	<MDL	<MDL
		06/12/02	0825					
077	WES-C-9-C	06/11/02	0829	23.9	4.31	<MDL	<MDL	<MDL
		06/12/02	0825					
078	WRS-C-9	06/11/02	0851	23.9	4.30	<MDL	<MDL	<MDL
		06/12/02	0844					
079	WRS-C-9-C	06/11/02	0851	23.9	4.30	<MDL	<MDL	<MDL
		06/12/02	0844					
080	HUS-C-9	06/11/02	0929	23.7	4.27	<MDL	<MDL	<MDL
		06/12/02	0912					
081	HUS-C-9-C	06/11/02	0929	23.7	4.27	<MDL	<MDL	<MDL
		06/12/02	0912					
082	FRS-C-10	06/12/02	0625	23.6	4.24	<MDL	<MDL	<MDL
		06/13/02	0557					
083	HES-C-10	06/12/02	0717	23.5	4.23	<MDL	<MDL	<MDL
		06/13/02	0648					
084	CES-C-10	06/12/02	0755	23.5	4.24	<MDL	<MDL	<MDL
		06/13/02	0727					

MDL=1.93 ng/sample for Chlorothalonil
 DET=Value was below the EQL of 9.66 ng/sample but ≥MDL

NA= Not applicable due to sampling problem

*Time was calculated from ETM reading.

**pptv at 1 atm and 25°C

Table 2. Chlorothalonil Ambient Monitoring Results for Fresno County 2002

Log #	Sample ID	Date On	Time On	Time* (hours)	Volume (m ³)	Chlorothalonil		
		Off	Off			(ng/sample)	(ng/m ³)	** (pptv)
085	WES-C-10	06/12/02	0828	23.5	4.23	<MDL	<MDL	<MDL
		06/13/02	0759					
086	WRS-C-10	06/12/02	0847	23.5	4.23	DET	DET	DET
		06/13/02	0816					
087	HUS-C-10	06/12/02	0915	23.5	4.22	DET	DET	DET
		06/13/02	0842					
088	FRS-C-11	06/13/02	0559	23.9	4.30	<MDL	<MDL	<MDL
		06/14/02	0553					
089	HES-C-11	06/13/02	0650	23.8	4.29	<MDL	<MDL	<MDL
		06/14/02	0638					
090	CES-C-11	06/13/02	0730	23.7	3.52	NA	NA	NA
		06/14/02	0710					
091	WES-C-11	06/13/02	0801	23.6	4.26	DET	DET	DET
		06/14/02	0740					
092	WRS-C-11	06/13/02	0818	23.6	4.25	DET	DET	DET
		06/14/02	0756					
093	HUR-C-11	06/13/02	0843	23.6	4.25	<MDL	<MDL	<MDL
		06/14/02	0818					
094	FRS-C-12	06/17/02	0658	23.8	4.28	DET	DET	DET
		06/18/02	0645					
096	HES-C-12	06/17/02	0748	23.8	4.29	<MDL	<MDL	<MDL
		06/18/02	0739					
097	CES-C-12	06/17/02	0823	24.0	4.31	<MDL	<MDL	<MDL
		06/18/02	0820					
098	WES-C-12	06/17/02	0902	23.9	4.31	DET	DET	DET
		06/18/02	0859					
099	WRS-C-12	06/17/02	0921	24.1	4.33	DET	DET	DET
		06/18/02	0925					
100	HUS-C-12	06/17/02	0952	24.1	4.35	DET	DET	DET
		06/18/02	0959					

MDL=1.93 ng/sample for Chlorothalonil
 DET=Value was below the EQL of 9.66 ng/sample but ≥MDL

NA= Not applicable due to sampling problem
 *Time was calculated from ETM reading.

**pptv at 1 atm and 25°C

Table 2. Chlorothalonil Ambient Monitoring Results for Fresno County 2002

Log #	Sample ID	Date On	Time On	Time* (hours)	Volume (m ³)	Chlorothalonil		
		Off	Off			(ng/sample)	(ng/m ³)	** (pptv)
103	FRS-C-13	06/18/02	0649	23.7	4.27	DET	DET	DET
		06/19/02	0631					
104	FRS-C-13C	06/18/02	0649	23.7	4.27	DET	DET	DET
		06/19/02	0631					
105	HES-C-13	06/18/02	0742	23.8	4.28	<MDL	<MDL	<MDL
		06/19/02	0729					
106	HES-C-13C	06/18/02	0742	23.8	4.28	<MDL	<MDL	<MDL
		06/19/02	0729					
107	CES-C-13	06/18/02	0824	23.8	4.28	<MDL	<MDL	<MDL
		06/19/02	0811					
108	CES-C-13C	06/18/02	0824	23.8	4.28	<MDL	<MDL	<MDL
		06/19/02	0811					
109	WES-C-13	06/18/02	0903	23.7	4.27	1.48E+01	3.5E+00	3.2E-01
		06/19/02	0848					
110	WES-C-13C	06/18/02	0903	23.7	4.27	1.72E+01	4.0E+00	3.7E-01
		06/19/02	0848					
111	WRS-C-13	06/18/02	0929	23.8	4.29	DET	DET	DET
		06/19/02	0919					
112	WRS-C-13C	06/18/02	0929	23.8	4.29	1.01E+01	2.4E+00	2.2E-01
		06/19/02	0919					
113	HUS-C-13	06/18/02	1002	23.8	4.28	DET	DET	DET
		06/19/02	0948					
114	HUS-C-13C	06/18/02	1002	23.8	4.28	DET	DET	DET
		06/19/02	0948					
115	FRS-C-14	06/19/02	0635	23.7	4.26	6.18E+01	1.4E+01	1.3E+00
		06/20/02	0616					
116	HES-C-14	06/19/02	0733	23.5	4.24	DET	DET	DET
		06/20/02	0706					
117	CES-C-14	06/19/02	0816	23.4	4.22	3.29E+01	7.8E+00	7.2E-01
		06/20/02	0741					

MDL=1.93 ng/sample for Chlorothalonil
 DET=Value was below the EQL of 9.66 ng/sample but ≥MDL

NA= Not applicable due to sampling problem
 *Time was calculated from ETM reading.
 **pptv at 1 atm and 25°C

Table 2. Chlorothalonil Ambient Monitoring Results for Fresno County 2002

Log #	Sample ID	Date On	Time On	Time* (hours)	Volume (m ³)	Chlorothalonil		
		Off	Off			(ng/sample)	(ng/m ³)	** (pptv)
118	WES-C-14	06/19/02	0854	23.3	4.20	1.42E+01	3.4E+00	3.1E-01
		06/20/02	0814					
119	WRS-C-14	06/19/02	0923	23.2	4.18	DET	DET	DET
		06/20/02	0836					
120	HUS-C-14	06/19/02	0953	23.2	4.17	DET	DET	DET
		06/20/02	0903					
121	FRS-C-15	06/20/02	0620	23.7	4.26	<MDL	<MDL	<MDL
		06/21/02	0601					
122	HES-C-15	06/20/02	0708	23.6	4.25	<MDL	<MDL	<MDL
		06/21/02	0646					
123	CES-C-15	06/20/02	0742	23.6	4.25	1.12E+01	2.6E+00	2.4E-01
		06/21/02	0718					
124	WES-C-15	06/20/02	0815	23.6	4.25	1.14E+01	2.7E+00	2.5E-01
		06/21/02	0750					
125	WRS-C-15	06/20/02	0838	23.5	4.23	DET	DET	DET
		06/21/02	0808					
126	HUS-C-15	06/20/02	0904	23.7	4.26	DET	DET	DET
		06/21/02	0844					
127	FRS-C-16	06/24/02	0650	23.5	4.23	DET	DET	DET
		06/25/02	0622					
129	HES-C-16	06/24/02	0741	23.5	4.24	<MDL	<MDL	<MDL
		06/25/02	0713					
130	CES-C-16	06/24/02	0816	23.6	4.25	1.58E+01	3.7E+00	3.4E-01
		06/25/02	0753					
131	WES-C-16	06/24/02	0844	23.7	4.27	DET	DET	DET
		06/25/02	0827					
132	WRS-C-16	06/24/02	0901	23.8	4.28	DET	DET	DET
		06/25/02	0850					
133	HUS-C-16	06/24/02	0919	23.9	4.31	DET	DET	DET
		06/25/02	0916					

MDL=1.93 ng/sample for Chlorothalonil

DET=Value was below the EQL of 9.66 ng/sample but ≥MDL

NA= Not applicable due to sampling problem

*Time was calculated from ETM reading.

**pptv at 1 atm and 25°C

Table 2. Chlorothalonil Ambient Monitoring Results for Fresno County 2002

Log #	Sample ID	Date On	Time On	Time* (hours)	Volume (m ³)	Chlorothalonil		
		Off	Off			(ng/sample)	(ng/m ³)	** (pptv)
136	FRS-C-17	06/25/02	0625	23.5	4.24	DET	DET	DET
		06/26/02	0557					
137	FRS-C-17-C	06/25/02	0625	23.5	4.24	DET	DET	DET
		06/26/02	0557					
138	HES-C-17	06/25/02	0716	23.7	4.26	<MDL	<MDL	<MDL
		06/26/02	0656					
139	HES-C-17-C	06/25/02	0716	23.7	4.26	<MDL	<MDL	<MDL
		06/26/02	0656					
140	CES-C-17	06/25/02	0756	23.6	4.26	2.49E+01	5.8E+00	5.4E-01
		06/26/02	0734					
141	CES-C-17-C	06/25/02	0756	23.6	4.26	2.72E+01	6.4E+00	5.9E-01
		06/26/02	0734					
142	WES-C-17	06/25/02	0829	0.4	0.07	NA	NA	NA
		06/26/02	0824					
143	WES-C-17-C	06/25/02	0829	0.4	0.07	NA	NA	NA
		06/26/02	0824					
144	WRS-C-17	06/25/02	0853	23.9	4.30	1.02E+01	2.4E+00	2.2E-01
		06/26/02	0846					
145	WRS-C-17-C	06/25/02	0853	23.9	4.30	9.93E+00	2.3E+00	2.1E-01
		06/26/02	0846					
146	HUS-C-17	06/25/02	0917	23.9	4.30	DET	DET	DET
		06/26/02	0910					
147	HUS-C-17-C	06/25/02	0917	23.9	4.30	DET	DET	DET
		06/26/02	0910					
148	FRS-C-18	06/26/02	0559	23.8	4.28	DET	DET	DET
		06/27/02	0547					
149	HES-C-18	06/26/02	0658	23.7	4.27	<MDL	<MDL	<MDL
		06/27/02	0641					
150	CES-C-18	06/26/02	0736	23.7	4.26	<MDL	<MDL	<MDL
		06/27/02	0716					

MDL=1.93 ng/sample for Chlorothalonil
 DET=Value was below the EQL of 9.66 ng/sample but ≥MDL

NA= Not applicable due to sampling problem

*Time was calculated from ETM reading.

**pptv at 1 atm and 25°C

Table 2. Chlorothalonil Ambient Monitoring Results for Fresno County 2002

Log #	Sample ID	Date On	Time On	Time* (hours)	Volume (m ³)	Chlorothalonil		
		Off	Off			(ng/sample)	(ng/m ³)	** (pptv)
151	WES-C-18	06/26/02	0827	23.3	4.20	DET	DET	DET
		06/27/02	0747					
152	WES-C-18-C	06/26/02	0827	23.3	4.20	1.04E+01	2.5E+00	2.3E-01
		06/27/02	0747					
153	WRS-C-18	06/26/02	0848	23.3	4.20	DET	DET	DET
		06/27/02	0807					
154	HUR-C-18	06/26/02	0913	23.3	4.19	DET	DET	DET
		06/27/02	0829					
155	FRS-C-19	06/27/02	0548	23.6	4.25	<MDL	<MDL	<MDL
		06/28/02	0524					
156	HES-C-19	06/27/02	0642	23.5	4.23	<MDL	<MDL	<MDL
		06/28/02	0612					
157	CES-C-19	06/27/02	0717	23.6	4.24	<MDL	<MDL	<MDL
		06/28/02	0651					
158	WES-C-19	06/27/02	0749	23.5	4.23	DET	DET	DET
		06/28/02	0718					
159	WRS-C-19	06/27/02	0809	23.5	4.22	DET	DET	DET
		06/28/02	0736					
160	HUR-C-19	06/27/02	0830	23.4	4.22	DET	DET	DET
		06/28/02	0756					
161	FRS-C-20	07/01/02	0701	23.6	4.24	DET	DET	DET
		07/02/02	0635					
165	HES-C-20	07/01/02	0802	23.4	4.22	DET	DET	DET
		07/02/02	0727					
166	CES-C-20	07/01/02	0835	23.5	4.24	2.56E+01	6.0E+00	5.6E-01
		07/02/02	0808					
167	WES-C-20	07/01/02	0906	23.6	4.25	1.69E+01	4.0E+00	3.7E-01
		07/02/02	0843					
168	WRS-C-20	07/01/02	0921	23.7	4.27	DET	DET	DET
		07/02/02	0905					

MDL=1.93 ng/sample for Chlorothalonil
 DET=Value was below the EQL of 9.66 ng/sample but ≥MDL

NA= Not applicable due to sampling problem
 *Time was calculated from ETM reading.
 **pptv at 1 atm and 25°C

Table 2. Chlorothalonil Ambient Monitoring Results for Fresno County 2002

Log #	Sample ID	Date On	Time On	Time* (hours)	Volume (m ³)	Chlorothalonil		
		Off	Off			(ng/sample)	(ng/m ³)	** (pptv)
169	HUR-C-20	07/01/02	0942	23.4	4.21	DET	DET	DET
		07/02/02	0934					
170	FRS-C-21	07/02/02	0639	23.2	4.17	DET	DET	DET
		07/03/02	0548					
171	FRS-C-21-C	07/02/02	0639	23.2	4.17	DET	DET	DET
		07/03/02	0548					
172	HES-C-21	07/02/02	0730	23.2	4.17	DET	DET	DET
		07/03/02	0640					
173	HES-C-21-C	07/02/02	0730	23.2	4.17	DET	DET	DET
		07/03/02	0640					
174	CES-C-21	07/02/02	0811	23.2	4.17	DET	DET	DET
		07/03/02	0722					
175	CES-C-21-C	07/02/02	0811	23.2	4.17	DET	DET	DET
		07/03/02	0722					
176	WES-C-21	07/02/02	0846	23.2	4.18	DET	DET	DET
		07/03/02	0800					
177	WES-C-21-C	07/02/02	0846	23.2	4.18	DET	DET	DET
		07/03/02	0800					
178	WRS-C-21	07/02/02	0909	23.6	4.25	DET	DET	DET
		07/03/02	0846					
179	WRS-C-21-C	07/02/02	0909	23.6	4.25	DET	DET	DET
		07/03/02	0846					
180	HUR-C-21	07/02/02	0937	3.4	0.62	NA	NA	NA
		07/03/02	0922					
181	HUR-C-21-C	07/02/02	0937	3.4	0.62	NA	NA	NA
		07/03/02	0922					

MDL=1.93 ng/sample for Chlorothalonil
 DET=Value was below the EQL of 9.66 ng/sample but ≥MDL

NA= Not applicable due to sampling problem

*Time was calculated from ETM reading.

**pptv at 1 atm and 25°C

**Table 3. Summary of Chlorothalonil Results
for Fresno County 2002 (ng/m³)**

Start Date	CES	FRS	HES	HUS	WES	WRS
5/28/2002	<MDL	<MDL	<MDL	DET	DET	<MDL
5/29/2002	DET	DET	<MDL	<MDL	<MDL	<MDL
5/30/2002	<MDL	<MDL	<MDL	<MDL	4.4E+00	<MDL
6/3/2002	DET	<MDL	NA	<MDL	DET	DET
6/4/2002	4.6E+00	DET	<MDL	NA	DET	DET
6/5/2002	2.9E+00	DET	<MDL	DET	DET	DET
6/6/2002	<MDL	<MDL	<MDL	DET	DET	DET
6/10/2002	3.2E+00	<MDL	<MDL	<MDL	DET	<MDL
6/11/2002	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
6/12/2002	<MDL	<MDL	<MDL	DET	<MDL	DET
6/13/2002	NA	<MDL	<MDL	<MDL	DET	DET
6/17/2002	<MDL	DET	<MDL	DET	DET	DET
6/18/2002	<MDL	DET	<MDL	DET	4.0E+00	2.4E+00
6/19/2002	7.8E+00	1.4E+01	DET	DET	3.4E+00	DET
6/20/2002	2.6E+00	<MDL	<MDL	DET	2.7E+00	DET
6/24/2002	3.7E+00	DET	<MDL	DET	DET	DET
6/25/2002	6.4E+00	DET	<MDL	DET	NA	2.4E+00
6/26/2002	<MDL	DET	<MDL	DET	2.5E+00	DET
6/27/2002	<MDL	<MDL	<MDL	DET	DET	DET
7/1/2002	6.0E+00	DET	DET	DET	4.0E+00	DET
7/2/2002	DET	DET	DET	NA	DET	DET

	CES	FRS	HES	HUS	WES	WRS
Maximum	7.8E+00	1.4E+01			4.4E+00	2.4E+00
Average	2.2E+00	1.4E+00	3.9E-01	9.9E-01	1.8E+00	1.2E+00
# Sample	20	21	20	19	20	21
# >EQL	8	1	0	0	6	2
# DET	3	10	3	13	11	14
# <MDL	9	10	17	6	3	5

Only the higher value of each collocated pair was listed in the table.

<MDL results were factored in as MDL/2= 0.225 ng/m³

DET results were factored in as (EQL+MDL)/2= 1.35 ng/m³

**Table 4. Chlorothalonil Collocated Results
for Fresno County 2002**

Sample ID	Chlorothalonil			Sample ID	Chlorothalonil		
	(ng/m ³)	Ave.	Rel % D		(ng/m ³)	Ave.	Rel % D
FRS-C-2	<MDL	DET	NA	FRS-C-13	DET	DET	NA
FRS-C-2C	DET			FRS-C-13C	DET		
HES-C-2	<MDL	<MDL	NA	HES-C-13	<MDL	<MDL	NA
HES-C-2C	<MDL			HES-C-13C	<MDL		
CES-C-2	<MDL	DET	NA	CES-C-13	<MDL	<MDL	NA
CES-C-2C	DET			CES-C-13C	<MDL		
WES-C-2	<MDL	<MDL	NA	WES-C-13	3.5E+00	3.7E+00	14.8%
WES-C-2C	<MDL			WES-C-13C	4.0E+00		
WRS-C-2	<MDL	<MDL	NA	WRS-C-13	DET	DET	NA
WRS-C-2C	<MDL			WRS-C-13C	2.4E+00		
HUS-C-2	<MDL	<MDL	NA	HUS-C-13	DET	DET	NA
HUS-C-2C	<MDL			HUS-C-13C	DET		
FRS-C-5	DET	DET	NA	FRS-C-17	DET	DET	NA
FRS-C-5C	DET			FRS-C-17-C	DET		
HES-C-5	<MDL	<MDL	NA	HES-C-17	<MDL	<MDL	NA
HES-C-5C	<MDL			HES-C-17-C	<MDL		
CES-C-5	4.6E+00	4.5E+00	5.9%	CES-C-17	5.8E+00	6.1E+00	8.8%
CES-C-5C	4.3E+00			CES-C-17-C	6.4E+00		
WES-C-5	DET	DET	NA	WRS-C-17	2.4E+00	2.3E+00	2.4%
WES-C-5C	DET			WRS-C-17-C	2.3E+00		
WRS-C-5	DET	DET	NA	HUS-C-17	DET	DET	NA
WRS-C-5C	DET			HUS-C-17-C	DET		
HUS-C-5	NA	NA	NA	WES-C-18	DET	DET	NA
HUS-C-5C	NA			WES-C-18-C	2.5E+00		
FRS-C-9	<MDL	<MDL	NA	FRS-C-21	DET	DET	NA
FRS-C-9-C	<MDL			FRS-C-21-C	DET		
HES-C-9	<MDL	<MDL	NA	HES-C-21	DET	DET	NA
HES-C-9-C	<MDL			HES-C-21-C	DET		
CES-C-9	<MDL	<MDL	NA	CES-C-21	DET	DET	NA
CES-C-9-C	<MDL			CES-C-21-C	DET		
WES-C-9	<MDL	<MDL	NA	WES-C-21	DET	DET	NA
WES-C-9-C	<MDL			WES-C-21-C	DET		
WRS-C-9	<MDL	<MDL	NA	WRS-C-21	DET	DET	NA
WRS-C-9-C	<MDL			WRS-C-21-C	DET		
HUS-C-9	<MDL	<MDL	NA				
HUS-C-9-C	<MDL						

Table 5. Chlorothalonil Lab Spike Results

LAB ID	Analysis Date	Expected (ng/sample)	Actual (ng/sample)	Percent Recovery
L6302	06/05/02	52	45.5	88%
L610	06/11/02	52	49.4	95%
L617	06/17/02	52	21.2	41%
L701	07/03/02	52	56.0	108%
L0703B	07/09/02	52	59.2	114%
L0708B	07/11/02	52	50.8	98%
			Ave.=	90%

Table 6. Chlorothalonil Trip Spike Results

Sample ID	Analysis Date	Expected (ng/sample)	Actual (ng/sample)	Percent Recovery
FRS-C-1-TS	06/05/02	52	52.7	101%
FRS-C-4-TS	06/11/02	52	45.5	87%
FRS-C-8-TS	06/17/02	52	47.6	92%
FRS-C-12TS	07/03/02	52	56.3	108%
FRS-C-16TS	07/09/02	52	53.5	103%
FRS-C-20TS	07/11/02	52	52.4	101%
			Ave.=	99%

Table 7. Chlorothalonil Field Spike Results

Sample ID	Analysis Date	Expected (ng/sample)	Actual (ng/sample)*	Percent Recovery
FRS-C-1-FS	06/05/02	52	38.9	75%
FRS-C-4-FS	06/11/02	52	44.1	85%
FRS-C-8-FS	06/17/02	52	23.8	46%
FRS-C-12FS	07/03/02	52	53.3	103%
FRS-C-16FS	07/09/02	52	50.9	98%
FRS-C-20FS	07/11/02	52	52.4	101%
			Ave.=	84%

*No Correction was made because all corresponding collocated sample results were below EQL.