



State of California  
California Environmental Protection Agency  
AIR RESOURCES BOARD

**Report on Ambient Pesticide Air Monitoring  
For Propyzamide  
In Monterey, San Benito and Santa Clara Counties  
During July and August of 2009**

Prepared by

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This report has been reviewed by the staff of the California Air Resources Board (CARB) 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

**Report Title:** Report on Ambient Pesticide Air Monitoring for Propyzamide in Monterey, San Benito and Santa Clara Counties during July and August of 2009

**Project Lead:** Jack Romans, Air Pollution Specialist

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

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## Executive Summary

### Report on Ambient Pesticide Air Monitoring For Propyzamide in Monterey, San Benito and Santa Clara Counties during July and August of 2009

At the request of the Department of Pesticide Regulation (DPR), the Air Resources Board (ARB) conducted ambient air monitoring within Monterey, San Benito and Santa Clara Counties to help determine airborne concentrations of 3,5-dichloro-*N*-(1,1-dimethyl-propynyl) benzamide, commonly known as Propyzamide. Propyzamide is a systemic herbicide typically used for control of grasses and some broad-leaved weeds prior to the planting of lettuce crops. According to the DPR, approximately 7,500 pounds of active ingredient were used each month in Monterey County alone during June, July and August 2007. This monitoring was performed from July 1 through August 20, 2009.

As DPR had also requested that the ARB perform ambient monitoring for the pesticide Diazinon in these same areas and season, ARB determined that the same sampling method could be used for both Propyzamide and Diazinon. Therefore, both of these compounds were simultaneously collected on a single sample (sorbent) tube and separate analyses were performed by the lab. Results of the Diazinon monitoring are presented in a separate report entitled, Ambient Pesticide Air Monitoring for Diazinon and Diazoxon in Monterey, San Benito and Santa Clara Counties During July and August of 2009, dated August 5, 2010.

Monitoring was performed at six locations; one site each in the cities of Soledad, Salinas, Chualar, Hollister, King City and Gilroy. A total of 192 ambient air samples, including 48 collocated pairs and an additional 19 quality control samples, were collected by staff of the ARB's Monitoring and Laboratory Division (MLD), Air Quality Surveillance Branch, Special Purpose Monitoring Section.

A single air sampler, consisting of plumbing, rotameter and pump, was installed at each selected sampling location. Daily samples were collected on XAD-2 resin sorbent tubes using a sample flow rate of three (3) liters per minute over a nominal 23-hour sampling period. The sorbent tubes were analyzed for Propyzamide using gas chromatography/mass spectrometry (GC/MS) in the selected ion-monitoring mode (SIM) by the MLD's Northern Laboratory Branch, Special Analysis Section in Sacramento.

Analytical results from each of the 192 ambient samples indicated concentrations of Propyzamide less than the analytical method detection limit (MDL) of 0.057 micrograms per sample (ug/sample) which equates to 0.014ug/m<sup>3</sup> based on the target sample flow rate of 3.0 LPM and nominal collection duration of 23 hours.

Results from each of the eight (8) Trip Blanks also indicated concentrations less than the MDL.

Results from all seven (7) Field Spikes indicated recovery rates ranging from 82% to 95% with an average recovery rate of 91.7%.

Results from all four (4) Trip Spikes indicated recovery rates ranging from 64.8% to 97.9% with an average recovery rate of 88%. The laboratory results report remarked that the Trip Spike having 64.8% recovery may have received an insufficient spike in the laboratory.

Data completeness for this study was 100%. No samples were lost or invalidated and there were no known deviations from the Sampling Protocol.

## Table of Contents

| <b>Section</b>   | <b>Page</b> |
|--|-------------|
| MONITORING REPORT APPROVAL.....                          | ii          |
| EXECUTIVE SUMMARY.....                                   | iii         |
| TABLE OF CONTENTS.....                                   | iv-v        |
| 1.0 INTRODUCTION.....                                    | 1           |
| 2.0 DEVIATIONS FROM PROTOCOL.....                        | 1           |
| 3.0 SAMPLING SITES.....                                  | 2-6         |
| 4.0 METHODS.....   | 6, 7        |
| 5.0 AMBIENT RESULTS.....                                 | 8-14        |
| 6.0 QUALITY CONTROL RESULTS.....                         | 15-18       |
| 7.0 DISCUSSION.....                                      | 19          |
| <b>TABLES:</b>   |             |
| Table 1: Sampler Waypoints.....                          | 2           |
| Table 2: Propyzamide Ambient Monitoring Results.....     | 8-14        |
| Table 3: Propyzamide Ambient QC Collocated Results.....  | 15,16       |
| Table 4: Propyzamide Ambient QC Field Spike Results..... | 17          |
| Table 5: Propyzamide Ambient QC Trip Spike Results.....  | 18          |
| Table 6: Propyzamide Ambient QC Trip Blank Results.....  | 18          |
| <b>FIGURES:</b>  |             |
| Figure 1: Aerial Photo Overview of Monitored Area.....   | 3           |
| Figure 2: Aerial Photo Overview of the GIL Site.....     | 3           |
| Figure 3: Aerial Photo Overview of the KCY Site.....     | 4           |
| Figure 4: Aerial Photo Overview of the SOL Site.....     | 4           |
| Figure 5: Aerial Photo Overview of the CHU Site.....     | 5           |
| Figure 6: Aerial Photo Overview of the SAL Site.....     | 5           |
| Figure 7: Aerial Photo Overview of the HOL Site.....     | 6           |

**APPENDICES:**

APPENDIX A: Sampling Protocol for Diazinon and Propyzamide Ambient Study

APPENDIX B: Aerial and Site Photographs

APPENDIX C: Lab Report: Propyzamide Method Development and Analytical Results

APPENDIX D: Propyzamide Ambient Field Log Sheets

APPENDIX E: Calibration and Certification Reports

## 1.0 Introduction

At the request of the Department of Pesticide Regulation (DPR), in a January 2009 Memorandum, Warmerdam to Goldstene, the Air Resources Board (ARB) conducted ambient air monitoring for the pesticide 3,5-dichloro-*N*-(1,1-dimethyl-propynyl) benzamide, Chemical Abstract Service (CAS) Registry Number 23950-58-5 and commonly known as Propyzamide. Propyzamide is used as a systemic herbicide for control of grasses and some broad-leaf weeds on lettuce fields prior to planting.

Propyzamide is used throughout the State of California and throughout the calendar year. Data generated by DPR for 2007 indicated that Monterey County had the highest, second and third-highest monthly use in the State during June, July and August (6,652, 7,948 and 7,698 pounds of active ingredient per month respectively). DPR requested that the ARB perform ambient air monitoring for Propyzamide in and around Monterey County during these summer months.

As DPR had also requested that the ARB perform ambient monitoring for the pesticide Diazinon in this same general area and season, ARB determined that the same sampling method could be used for both Propyzamide and Diazinon. Therefore, both of these compounds were collected on a single sample (sorbent) tube and a separate analysis was performed by the lab. Results of the Diazinon monitoring are presented in a separate report entitled, Ambient Pesticide Air Monitoring for Diazinon and Diazoxon in Monterey, San Benito and Santa Clara Counties During July and August of 2009, dated August 5, 2010.

Staff from ARB's Monitoring and Laboratory Division, Special Purpose Monitoring Section (SPM) collected one hundred and ninety-two (192) ambient air samples and nineteen (19) quality control (QC) samples from six (6) separate sites in Monterey, San Benito and Santa Clara Counties over an eight-week period from July 1 through August 20 of 2009. Monitoring was conducted to coincide with the peak use of Propyzamide as a herbicide on lettuce and other food crops and in accordance with the "Sampling Protocol for Diazinon and Propyzamide Ambient Study" dated July 7, 2009, and presented in **Appendix A** of this report. Sample analyses were performed by the Special Analysis Section of ARB's Monitoring and Laboratory Division and are presented in **Appendix C**, "Propyzamide Method Development and Analytical Results...", dated October 30, 2009.

This monitoring was performed under the requirements of the California Code of Regulation, Food and Agriculture Code, Section 14022(c) which requires the ARB, "...to document the level of airborne emissions...of pesticides that may be determined to pose a present or potential hazard...", when requested by DPR.

## 2.0 Deviations from Protocol

No deviations from the sampling protocol occurred during this study. There were no samples lost or invalidated and data completeness was 100%.

### 3.0 Sampling Sites

Sampling sites were selected by SPM staff based upon historical pesticide use information supplied by DPR's 2009 monitoring recommendations and logistical considerations such as safety, security and access. All six (6) selected sites were located in relatively high-population areas and/or areas frequented by people such as schools or school district offices, fire stations or other public buildings. Each air monitoring site, except the urban background site in Gilroy which was expected to indicate the lowest ambient concentrations, was located in areas with historically high rates of Propyzamide use. DPR requested that the background site be located in Gilroy and at least one of the air monitoring sites be in Hollister.

Exact location of each sampling site is indicated by coordinates presented in **Table 1**, Sampler Waypoints, and also indicated by aerial photos presented in **Figures 1-7**. Soledad's aerial photo was taken prior to building of the school that served as a sampling site. There were no farmed fields adjacent to any sampling site and details of any nearby Propyzamide applications during sampling periods are unknown without further investigation. For more detailed views of the monitoring sites, please see **Appendix B**, Aerial and Site Photographs.

**TABLE 1: SAMPLER WAYPOINTS**

| Site ID                      | Site Location Name and Address  | Waypoints   |
|------------------------------|---|---|
| GIL (Gilroy)<br>(Background) | BAAQMD Station @ Glen View Elementary School, 695 9 <sup>th</sup> Street.<br>Elevation = 206', Inlet = 11.9'        | N 36 <sup>o</sup> 59' 57.8"<br>W 121 <sup>o</sup> 34' 28.9" |
| KCY (King City)              | MBUAPCD Station @ San Lorenzo Elementary School, 421 Pearl Street.<br>Elevation = 318', Inlet = 14.5'               | N 36 <sup>o</sup> 12' 32.1"<br>W 121 <sup>o</sup> 07' 33.7" |
| SOL (Soledad)                | Roof of Cafeteria @ Jack Franscioni Elementary School, 779 Orchard Lane.<br>Elevation = 369', Inlet = 16.8'         | N 36 <sup>o</sup> 26' 10.8"<br>W 121 <sup>o</sup> 18' 52.0" |
| CHU (Chualar)                | Roof of Salinas Rural Fire Station, 24281 Washington Street.<br>Elevation = 138', Inlet = 24.0'                     | N 36 <sup>o</sup> 34' 17.3"<br>W 121 <sup>o</sup> 31' 03.3" |
| SAL (Salinas)                | Roof of Cafeteria @ La Joya Elementary School, 56 Rogge Road, Bolsa Knolls area.<br>Elevation = 143', Inlet = 17.4' | N 36 <sup>o</sup> 43' 57.8"<br>W 121 <sup>o</sup> 38' 02.7" |
| HOL (Hollister)              | Roof of classrooms @ R.O. Hardin K-5 School, 761 South Street.<br>Elevation = 287', Inlet = 16.6'                   | N 36 <sup>o</sup> 50' 53.1"<br>W 121 <sup>o</sup> 24' 39.3" |

Note: Elevation is Topo map ground level and inlet is feet above ground level.

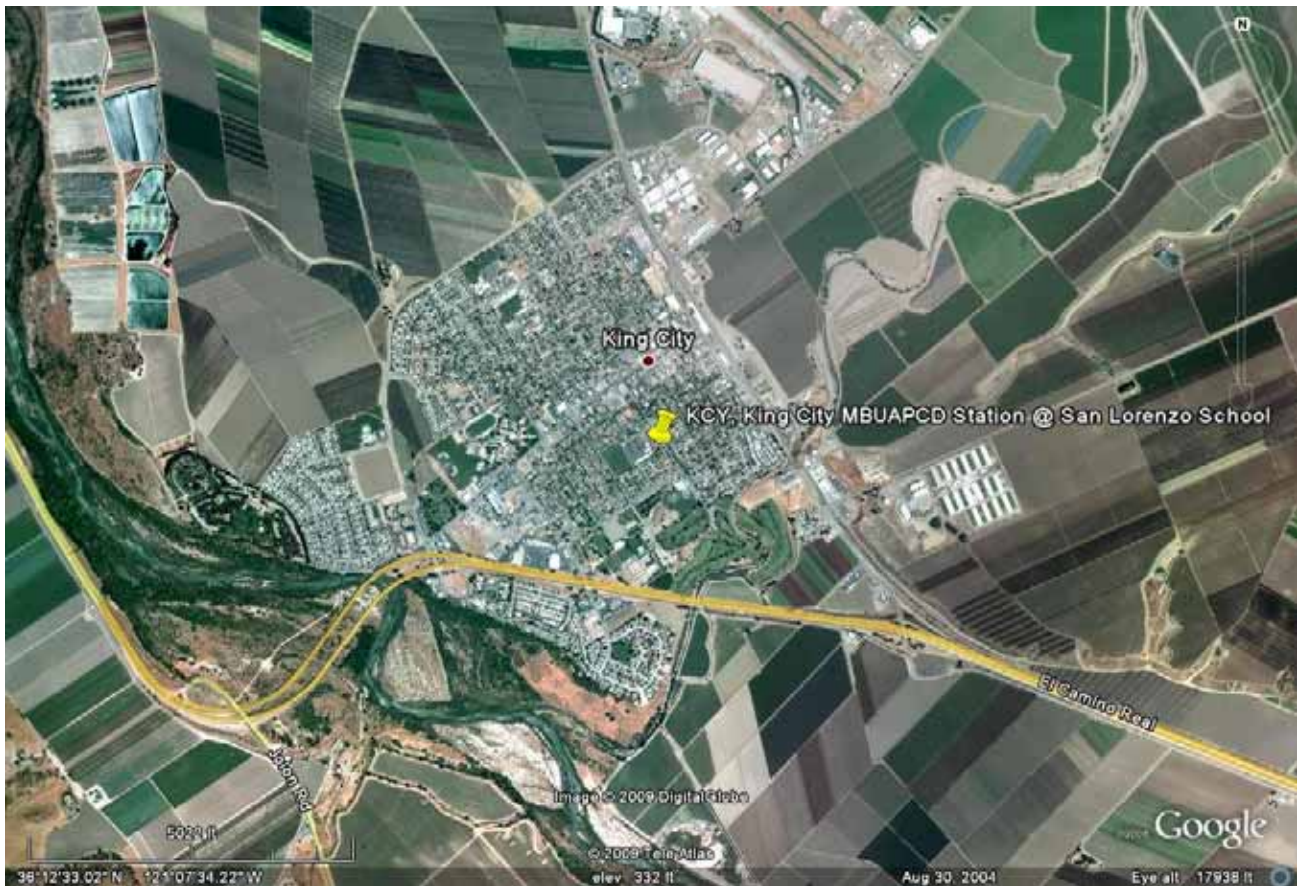


**FIGURE 1: AERIAL PHOTO OVERVIEW OF MONITORED AREA**



**FIGURE 2: AERIAL PHOTO OVERVIEW OF THE GILROY SITE**

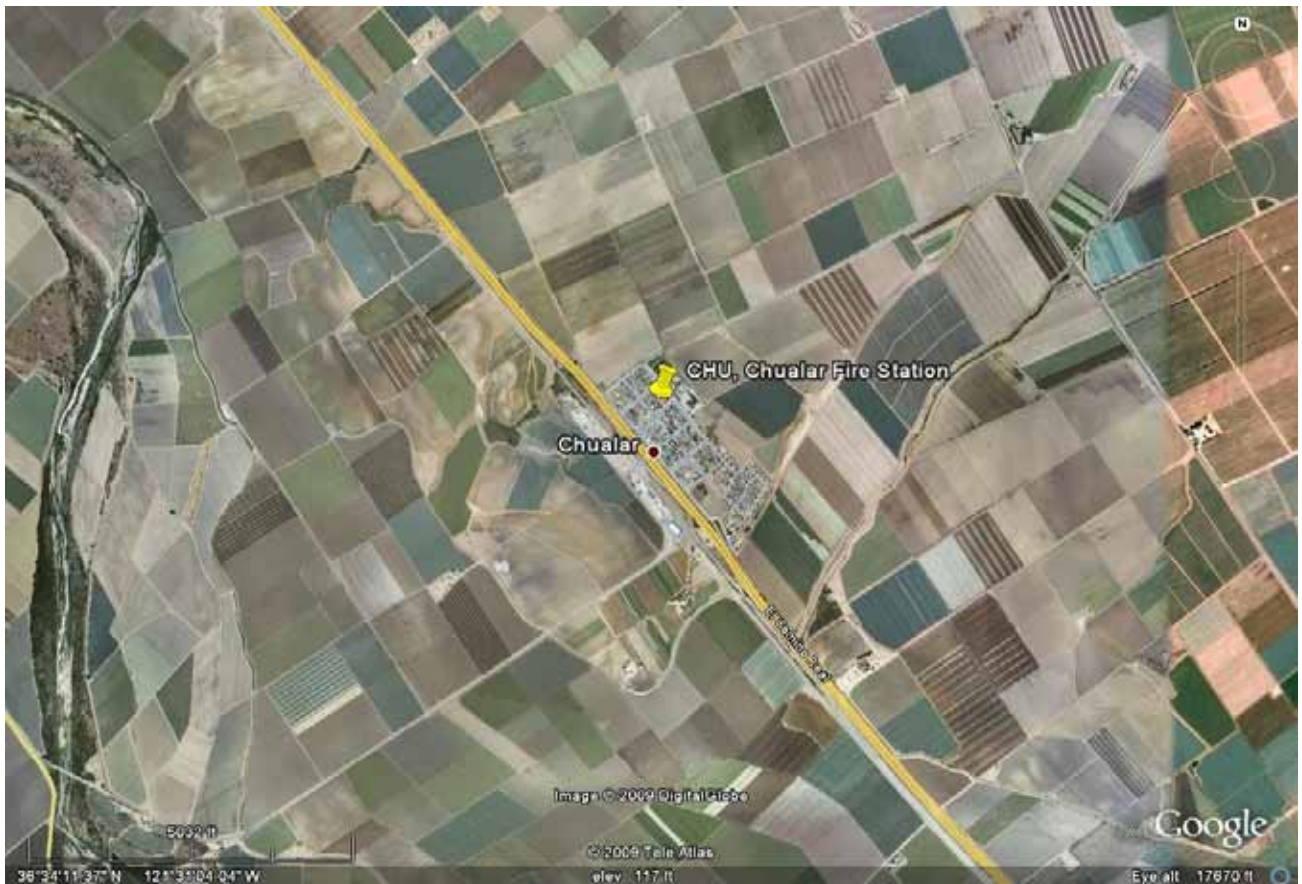




**FIGURE 3: AERIAL PHOTO OVERVIEW OF THE KING CITY SITE**



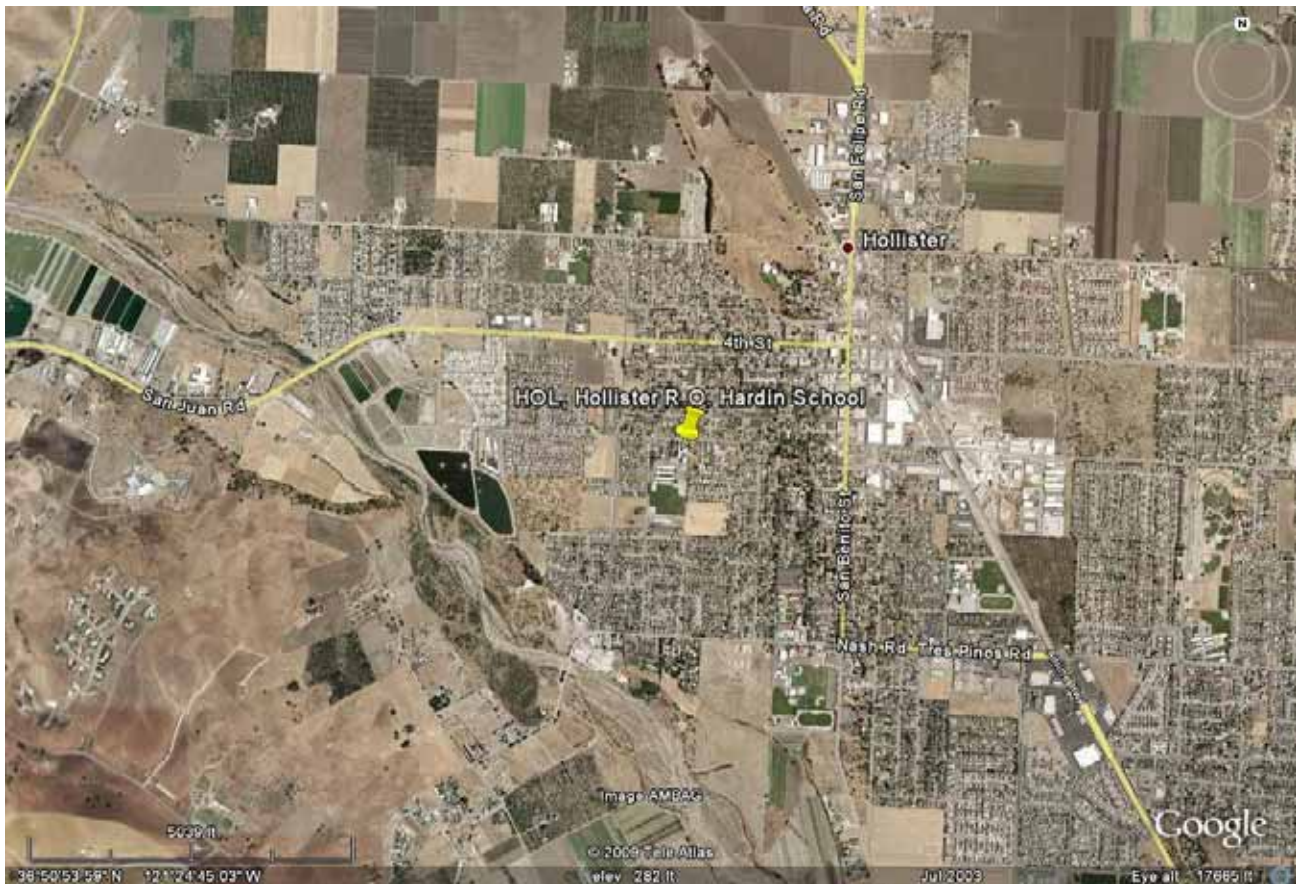
**FIGURE 4: AERIAL PHOTO OVERVIEW OF THE SOLEDAD SITE**



**FIGURE 5: AERIAL PHOTO OVERVIEW OF THE CHUALAR SITE**



**FIGURE 6: AERIAL PHOTO OVERVIEW OF THE SALINAS SITE**



**FIGURE 7: AERIAL PHOTO OVERVIEW OF THE HOLLISTER SITE**

#### **4.0 Methods**

Typical ambient air pesticide studies collect four (4) 24-hour samples per calendar week from each sampling site for eight weeks. Due to furlough and overtime policies then in effect, all but the fifth week of sampling collected three (3) 23-hour samples per week. The first sample of the week was started at midday on Monday and collected 23 hours later. This procedure was repeated for each subsequent (daily) sample until the final sample of the week was retrieved on Thursday, again about midday, in time for ARB staff to return to Sacramento without incurring overtime.

A total of 211 air samples were collected from July 1 through August 20, 2009. These included 67 quality control (QC) XAD resin tube samples which consisted of seven (7) field spikes, four (4) trip spikes, eight (8) trip blanks and 48 collocated pairs. At least one (1) collocated sample pair was collected each week from each sampling site. This was performed using the same sampling platform but with an independent, yet identical, sample train.

The sampling process was designed to collect Propyzamide, Diazinon and Diazoxon on a single XAD resin sorbent tube. The Laboratory extracted and analyzed for each of these compounds from each sample tube. Collected resin sorbent tube samples were analyzed using the laboratory method titled, "Standard Operating Procedure Sampling and Analysis of O,O-diethyl O-2-isopropyl-6-methylpyrimidin-4-yl phosphorothioate (Diazinon) and the Oxygen Analog (Diazoxon)", presented in **Appendix A** as part of, "Sampling Protocol for Diazinon and Propyzamide Ambient Study". **Appendix C** contains the laboratory results report entitled, "Propyzamide Method Development and Analytical Results for Ambient Air Monitoring Samples in Monterey, Santa Clara, and San Benito Counties" (October 2009).

#### 4.0 Methods (continued)

Samples were collected by passing a measured volume of ambient air through a single XAD resin sorbent tube (SKC #226-30-06) installed on the sampling device, commonly known as the “tree sampler”. A nominal sample flow rate of 3.0 liters per minute (LPM) was controlled by the sampler’s inline rotameter metering valve (flow range of 0-5 LPM) and measured by connecting a certified digital mass flow meter (MFM) to the sorbent tube.

At the beginning of each sampling period, the ends of a sealed-glass sorbent tube were snipped off and the tube installed on the sampler. With the MFM connected to the sorbent tube, the sample flow rate was measured and set (adjusted to 3.0 LPM) according to the MFM display. At the end of the sampling period, the MFM was again connected and the as-found flow rate measured and recorded. If the average of the beginning and end flow rates were within  $\pm 20\%$  of 3.0 LPM ( $\pm 0.6$  LPM or 2.4–3.6 LPM), the sample was considered valid with respect to flow rate.

The sampling system was operated continuously for 23 hours,  $\pm 1$  hour as measured by the sampler’s in-line elapsed electrical timer and start/stop times were verified ( $\pm 1$  minute) by cell phone display. The operating duration and measured flow rates of each sample were recorded onto the field log sheets and are presented in **Appendix D** of this report.

Please note that a target flow rate of 3.0 LPM for 23 hours will result in a total collected sample volume of 4,140 liters or 4.14 cubic meters ( $m^3$ ).

After removal from the sampler, the sorbent tube was capped at both ends, placed in a culture tube with an identification label affixed and stored in a cooler containing dry ice. At least once per week, collected samples were transported on dry ice to ARB’s Monitoring and Laboratory Division in Sacramento for analysis. The exposed XAD-2 resin sorbent tubes were stored in a freezer at the laboratory until extracted and analyzed by the laboratory.

For additional details of the monitoring method, please refer to **Appendix A**, “Sampling Protocol for Diazinon and Propyzamide Ambient Study” dated July 7, 2009.

## 5.0 Ambient Results

Ambient Propyzamide concentration results are presented in **Table 2**, Propyzamide Ambient Results, Pages 8 through 14 of this report. These results, arranged chronologically by sampling site, were obtained from laboratory analytical results presented in **Appendix C**, Standard Operating Procedure, Sampling and Analysis of Propyzamide as well as sample volumes calculated from sample information recorded on the field log sheets and presented in **Appendix D**, Propyzamide Ambient Field Log Sheets.

Data completeness for this study was 100%. Each of the 192 ambient samples, collocated included, indicated concentrations of Propyzamide less than the Method Detection Limit (MDL) of 0.057 ug/sample. The actual limit of detection for each sample is calculated by dividing the MDL of 0.057 ug/sample by each sample's respective total sample volume according to the following equation:

$$\text{SampleLimitofDetection} / m^3 = \frac{\text{MDL}(0.057\text{ug/sample})}{\text{TotalSampleVolume}(m^3)}$$

Additional information can be found in **Appendix E** which presents the calibration/certification reports of measurement standards.

Sample tube nomenclature for this study was based upon the location of each site and the run number. Additional letters were added after inserting a dash to identify the specific type of sample collected, e.g., collocated, blank or spike.

### Examples:

|         |                                |
|---------|--------------------------------|
| GIL3    | = Gilroy run 3                 |
| GIL3-FS | = Gilroy run 3 Field Spike     |
| KCY3    | = King City run 3              |
| SOL3    | = Soledad run 3                |
| CHU3    | = Chualar run 3                |
| SAL3    | = Salinas (Bolsa Knolls) run 3 |
| HOL3    | = Hollister run 3              |
| TB2     | = Trip Blank 2                 |
| TS2     | = Trip Spike 2                 |
| GIL4-C  | = Gilroy run 4 collocated      |

## 5.0 Ambient Results (continued)

**Table 2: Propyzamide Ambient Results (Chualar)**

| Log # | Sample Name | Start Date and Time | Elapsed Time<br>(Hours) | Avg. Flow<br>(LPM) | Total Volume<br>(m <sup>3</sup> ) | Propyzamide<br>ug/sample | Propyzamide<br>ug/m <sup>3</sup> |
|-------|-------------|---------------------|-------------------------|--------------------|-----------------------------------|--------------------------|----------------------------------|
| 003   | CHU1        | 7-1-09 11:25        | 23.00                   | 3.12               | 4.302                             | < 0.057                  | < 0.0133                         |
| 012   | CHU2        | 7-2-09 10:35        | 23.20                   | 3.00               | 4.179                             | < 0.057                  | < 0.0136                         |
| 013   | CHU2-C      | 7-2-09 10:35        | 23.24                   | 3.02               | 4.214                             | < 0.057                  | < 0.0135                         |
| 024   | CHU3        | 7-6-09 12:09        | 23.23                   | 2.98               | 4.156                             | < 0.057                  | < 0.0137                         |
| 035   | CHU4        | 7-7-09 11:24        | 23.01                   | 2.98               | 4.110                             | < 0.057                  | < 0.0139                         |
| 036   | CHU4-C      | 7-7-09 11:24        | 23.01                   | 2.99               | 4.124                             | < 0.057                  | < 0.0138                         |
| 044   | CHU5        | 7-8-09 10:26        | 23.01                   | 2.98               | 4.110                             | < 0.057                  | < 0.0139                         |
| 053   | CHU6        | 7-13-09 10:53       | 23.45                   | 2.97               | 4.181                             | < 0.057                  | < 0.0136                         |
| 054   | CHU6-C      | 7-13-09 10:53       | 23.45                   | 2.96               | 4.167                             | < 0.057                  | < 0.0137                         |
| 062   | CHU7        | 7-14-09 10:22       | 22.96                   | 3.02               | 4.163                             | < 0.057                  | < 0.0137                         |
| 068   | CHU8        | 7-15-09 09:40       | 23.40                   | 2.98               | 4.187                             | < 0.057                  | < 0.0136                         |
| 074   | CHU9        | 7-20-09 13:00       | 23.41                   | 3.00               | 4.210                             | < 0.057                  | < 0.0135                         |
| 082   | CHU10       | 7-21-09 12:25       | 23.47                   | 3.01               | 4.242                             | < 0.057                  | < 0.0134                         |
| 083   | CHU10-C     | 7-21-09 12:25       | 23.48                   | 3.01               | 4.236                             | < 0.057                  | < 0.0135                         |
| 093   | CHU11       | 7-22-09 12:00       | 23.01                   | 3.04               | 4.193                             | < 0.057                  | < 0.0136                         |
| 106   | CHU12       | 7-27-09 11:49       | 23.00                   | 3.19               | 4.404                             | < 0.057                  | < 0.0129                         |
| 107   | CHU12-C     | 7-27-09 11:49       | 23.00                   | 3.19               | 4.404                             | < 0.057                  | < 0.0129                         |
| 115   | CHU13       | 7-28-09 10:51       | 23.50                   | 3.00               | 4.233                             | < 0.057                  | < 0.0135                         |
| 121   | CHU14       | 7-29-09 10:21       | 23.40                   | 3.02               | 4.236                             | < 0.057                  | < 0.0135                         |
| 128   | CHU15       | 7-30-09 09:45       | 23.36                   | 3.01               | 4.222                             | < 0.057                  | < 0.0135                         |
| 137   | CHU16       | 8-3-09 12:12        | 23.15                   | 3.01               | 4.177                             | < 0.057                  | < 0.0136                         |
| 149   | CHU17       | 8-4-09 11:24        | 23.04                   | 3.02               | 4.171                             | < 0.057                  | < 0.0137                         |
| 150   | CHU17-C     | 8-4-09 11:24        | 23.04                   | 3.02               | 4.171                             | < 0.057                  | < 0.0137                         |
| 156   | CHU18       | 8-5-09 10:30        | 22.98                   | 3.02               | 4.160                             | < 0.057                  | < 0.0137                         |
| 165   | CHU19       | 8-10-09 12:08       | 23.00                   | 3.02               | 4.164                             | < 0.057                  | < 0.0137                         |
| 166   | CHU19-C     | 8-10-09 12:08       | 23.00                   | 3.02               | 4.164                             | < 0.057                  | < 0.0137                         |
| 174   | CHU20       | 8-11-09 11:10       | 23.00                   | 3.00               | 4.136                             | < 0.057                  | < 0.0138                         |
| 180   | CHU21       | 8-12-09 10:10       | 23.08                   | 3.01               | 4.164                             | < 0.057                  | < 0.0137                         |
| 188   | CHU22       | 8-17-09 14:05       | 23.40                   | 3.01               | 4.222                             | < 0.057                  | < 0.0135                         |
| 201   | CHU23       | 8-18-09 13:35       | 23.18                   | 3.00               | 4.168                             | < 0.057                  | < 0.0137                         |
| 202   | CHU23-C     | 8-18-09 13:35       | 23.21                   | 3.01               | 4.188                             | < 0.057                  | < 0.0136                         |
| 209   | CHU24       | 8-19-09 12:55       | 23.05                   | 3.01               | 4.159                             | < 0.057                  | < 0.0137                         |

## 5.0 Ambient Results (continued)

**Table 2: Propyzamide Ambient Results (Gilroy)**

| Log # | Sample Name | Start Date and Time | Elapsed Time (Hours) | Avg. Flow (LPM) | Total Volume (m <sup>3</sup> ) | Propyzamide ug/sample | Propyzamide ug/m <sup>3</sup> |
|-------|-------------|---------------------|----------------------|-----------------|--------------------------------|-----------------------|-------------------------------|
| 007   | GIL1        | 7-1-09 14:25        | 23.47                | 3.27            | 4.609                          | < 0.057               | < 0.0124                      |
| 017   | GIL2        | 7-2-09 13:55        | 23.00                | 2.99            | 4.122                          | < 0.057               | < 0.0138                      |
| 018   | GIL2-C      | 7-2-09 13:55        | 23.00                | 2.99            | 4.129                          | < 0.057               | < 0.0138                      |
| 020   | GIL3        | 7-6-09 08:50        | 23.50                | 2.97            | 4.190                          | < 0.057               | < 0.0136                      |
| 029   | GIL4        | 7-7-09 08:25        | 22.99                | 3.02            | 4.162                          | < 0.057               | < 0.0137                      |
| 030   | GIL4-C      | 7-7-09 08:25        | 22.99                | 3.00            | 4.141                          | < 0.057               | < 0.0138                      |
| 041   | GIL5        | 7-8-09 07:28        | 22.99                | 2.96            | 4.086                          | < 0.057               | < 0.0140                      |
| 047   | GIL6        | 7-13-09 08:15       | 23.16                | 2.97            | 4.130                          | < 0.057               | < 0.0138                      |
| 048   | GIL6-C      | 7-13-09 08:15       | 23.16                | 3.00            | 4.165                          | < 0.057               | < 0.0137                      |
| 059   | GIL7        | 7-14-09 07:26       | 23.25                | 3.00            | 4.188                          | < 0.057               | < 0.0136                      |
| 065   | GIL8        | 7-15-09 06:42       | 23.77                | 3.03            | 4.317                          | < 0.057               | < 0.0132                      |
| 077   | GIL9        | 7-20-09 15:15       | 23.55                | 3.01            | 4.256                          | < 0.057               | < 0.0134                      |
| 088   | GIL10       | 7-21-09 14:15       | 23.55                | 3.00            | 4.235                          | < 0.057               | < 0.0135                      |
| 089   | GIL10-C     | 7-21-09 14:15       | 23.58                | 3.00            | 4.240                          | < 0.057               | < 0.0134                      |
| 097   | GIL11       | 7-22-09 14:30       | 23.00                | 3.06            | 4.225                          | < 0.057               | < 0.0135                      |
| 100   | GIL12       | 7-27-09 09:00       | 23.00                | 3.04            | 4.198                          | < 0.057               | < 0.0136                      |
| 101   | GIL12-C     | 7-27-09 09:00       | 23.00                | 3.03            | 4.184                          | < 0.057               | < 0.0136                      |
| 112   | GIL13       | 7-28-09 08:05       | 23.42                | 3.00            | 4.212                          | < 0.057               | < 0.0135                      |
| 118   | GIL14       | 7-29-09 07:30       | 23.40                | 3.00            | 4.215                          | < 0.057               | < 0.0135                      |
| 125   | GIL15       | 7-30-09 06:55       | 23.38                | 3.01            | 4.225                          | < 0.057               | < 0.0135                      |
| 131   | GIL16       | 8-3-09 09:00        | 23.04                | 3.01            | 4.157                          | < 0.057               | < 0.0137                      |
| 145   | GIL17       | 8-4-09 08:06        | 22.99                | 3.02            | 4.162                          | < 0.057               | < 0.0137                      |
| 146   | GIL17-C     | 8-4-09 08:06        | 22.99                | 3.02            | 4.162                          | < 0.057               | < 0.0137                      |
| 153   | GIL18       | 8-5-09 07:09        | 23.00                | 3.00            | 4.136                          | < 0.057               | < 0.0138                      |
| 159   | GIL19       | 8-10-09 09:14       | 23.00                | 3.05            | 4.212                          | < 0.057               | < 0.0135                      |
| 160   | GIL19-C     | 8-10-09 09:14       | 23.00                | 3.06            | 4.218                          | < 0.057               | < 0.0135                      |
| 171   | GIL20       | 8-11-09 08:17       | 23.00                | 3.01            | 4.150                          | < 0.057               | < 0.0137                      |
| 177   | GIL21       | 8-12-09 07:17       | 23.08                | 3.01            | 4.171                          | < 0.057               | < 0.0137                      |
| 184   | GIL22       | 8-17-09 10:58       | 23.17                | 3.02            | 4.194                          | < 0.057               | < 0.0136                      |
| 195   | GIL23       | 8-18-09 10:15       | 23.13                | 3.01            | 4.180                          | < 0.057               | < 0.0136                      |
| 196   | GIL23-C     | 8-18-09 10:15       | 23.17                | 3.01            | 4.180                          | < 0.057               | < 0.0136                      |
| 206   | GIL24       | 8-19-09 09:27       | 23.31                | 3.00            | 4.192                          | < 0.057               | < 0.0136                      |

## 5.0 Ambient Results (continued)

**Table 2: Propyzamide Ambient Results (Hollister)**

| Log # | Sample Name | Start Date and Time | Elapsed Time (Hours) | Avg. Flow (LPM) | Total Volume (m <sup>3</sup> ) | Propyzamide ug/sample | Propyzamide ug/m <sup>3</sup> |
|-------|-------------|---------------------|----------------------|-----------------|--------------------------------|-----------------------|-------------------------------|
| 005   | HOL1        | 7-1-09 13:30        | 23.18                | 3.08            | 4.280                          | <0.057                | < 0.0133                      |
| 006   | HOL1-C      | 7-2-09 13:30        | 23.21                | 3.13            | 4.362                          | <0.057                | < 0.0131                      |
| 016   | HOL2        | 7-2-09 12:50        | 23.00                | 2.99            | 4.129                          | <0.057                | < 0.0138                      |
| 026   | HOL3        | 7-6-09 14:06        | 23.01                | 2.98            | 4.117                          | <0.057                | < 0.0138                      |
| 039   | HOL4        | 7-7-09 13:09        | 23.01                | 2.96            | 4.089                          | <0.057                | < 0.0139                      |
| 040   | HOL4-C      | 7-7-09 13:09        | 22.99                | 2.97            | 4.099                          | <0.057                | < 0.0139                      |
| 046   | HOL5        | 7-8-09 12:11        | 22.99                | 3.00            | 4.134                          | <0.057                | < 0.0138                      |
| 057   | HOL6        | 7-13-09 12:04       | 23.65                | 3.01            | 4.274                          | <0.057                | < 0.0133                      |
| 058   | HOL6-C      | 7-13-09 12:04       | 23.65                | 2.98            | 4.231                          | <0.057                | < 0.0135                      |
| 064   | HOL7        | 7-14-09 11:45       | 23.11                | 3.03            | 4.197                          | <0.057                | < 0.0136                      |
| 070   | HOL8        | 7-15-09 10:55       | 22.96                | 3.02            | 4.163                          | <0.057                | < 0.0137                      |
| 076   | HOL9        | 7-20-09 14:28       | 23.51                | 3.01            | 4.242                          | <0.057                | < 0.0134                      |
| 086   | HOL10       | 7-21-09 14:00       | 23.75                | 2.99            | 4.264                          | <0.057                | < 0.0134                      |
| 087   | HOL10-C     | 7-21-09 14:00       | 23.79                | 3.00            | 4.278                          | <0.057                | < 0.0133                      |
| 096   | HOL11       | 7-22-09 13:45       | 22.97                | 3.02            | 4.158                          | <0.057                | < 0.0137                      |
| 110   | HOL12       | 7-27-09 13:05       | 23.00                | 3.39            | 4.678                          | <0.057                | < 0.0122                      |
| 111   | HOL12-C     | 7-27-09 03:05       | 23.00                | 3.36            | 4.637                          | <0.057                | < 0.0123                      |
| 117   | HOL13       | 7-28-09 12:08       | 23.42                | 3.00            | 4.219                          | <0.057                | < 0.0135                      |
| 123   | HOL14       | 7-29-09 11:33       | 23.41                | 3.01            | 4.231                          | <0.057                | < 0.0135                      |
| 130   | HOL15       | 7-30-09 10:58       | 23.37                | 3.00            | 4.203                          | <0.057                | < 0.0136                      |
| 141   | HOL16       | 8-3-09 13:43        | 23.32                | 2.99            | 4.187                          | <0.057                | < 0.0136                      |
| 142   | HOL16-C     | 8-4-09 13:43        | 23.32                | 2.96            | 4.138                          | <0.057                | < 0.0138                      |
| 152   | HOL17       | 8-4-09 13:05        | 23.03                | 3.02            | 4.169                          | <0.057                | < 0.0137                      |
| 158   | HOL18       | 8-5-09 12:10        | 22.99                | 3.01            | 4.148                          | <0.057                | < 0.0137                      |
| 169   | HOL19       | 8-10-09 13:36       | 23.00                | 3.01            | 4.157                          | <0.057                | < 0.0137                      |
| 170   | HOL19-C     | 8-10-09 13:36       | 23.00                | 3.01            | 4.150                          | <0.057                | < 0.0137                      |
| 176   | HOL20       | 8-11-09 12:38       | 23.00                | 2.99            | 4.122                          | <0.057                | < 0.0138                      |
| 182   | HOL21       | 8-12-09 11:38       | 23.08                | 3.00            | 4.157                          | <0.057                | < 0.0137                      |
| 192   | HOL22       | 8-17-09 15:30       | 23.66                | 3.01            | 4.276                          | <0.057                | < 0.0133                      |
| 193   | HOL22-C     | 8-18-09 15:30       | 23.66                | 3.01            | 4.276                          | <0.057                | < 0.0133                      |
| 204   | HOL23       | 8-18-09 15:15       | 23.56                | 2.99            | 4.223                          | <0.057                | < 0.0135                      |
| 211   | HOL24       | 8-19-09 14:54       | 23.01                | 2.96            | 4.083                          | <0.057                | < 0.0140                      |



## 5.0 Ambient Results (continued)

**Table 2: Propyzamide Ambient Results (King City)**

| Log # | Sample Name | Start Date and Time | Elapsed Time (Hours) | Avg. Flow (LPM) | Total Volume (m <sup>3</sup> ) | Propyzamide ug/sample | Propyzamide ug/m |
|-------|-------------|---------------------|----------------------|-----------------|--------------------------------|-----------------------|------------------|
| 001   | KCY1        | 7-1-09 09:30        | 23.25                | 2.94            | 4.097                          | <0.057                | < 0.0139         |
| 008   | KCY2        | 7-2-09 09:00        | 23.29                | 3.05            | 4.265                          | <0.057                | < 0.0134         |
| 009   | KCY2-C      | 7-2-09 09:00        | 23.29                | 3.02            | 4.216                          | <0.057                | < 0.0135         |
| 022   | KCY3        | 7-6-09 10:29        | 23.39                | 2.98            | 4.177                          | <0.057                | < 0.0136         |
| 031   | KCY4        | 7-7-09 09:56        | 23.00                | 3.08            | 4.254                          | <0.057                | < 0.0134         |
| 032   | KCY4-C      | 7-7-09 09:56        | 23.00                | 3.05            | 4.212                          | <0.057                | < 0.0135         |
| 042   | KCY5        | 7-8-09 08:58        | 23.01                | 2.98            | 4.109                          | <0.057                | < 0.0139         |
| 049   | KCY6        | 7-13-09 09:45       | 23.17                | 2.96            | 4.111                          | <0.057                | < 0.0139         |
| 050   | KCY6-C      | 7-13-09 09:45       | 23.17                | 2.99            | 4.152                          | <0.057                | < 0.0137         |
| 060   | KCY7        | 7-14-09 08:57       | 23.17                | 3.00            | 4.165                          | <0.057                | < 0.0137         |
| 066   | KCY8        | 7-15-09 08:06       | 23.63                | 3.01            | 4.271                          | <0.057                | < 0.0133         |
| 072   | KCY9        | 7-20-09 11:20       | 23.28                | 3.06            | 4.270                          | <0.057                | < 0.0133         |
| 078   | KCY10       | 7-21-09 10:45       | 23.27                | 3.02            | 4.212                          | <0.057                | < 0.0135         |
| 079   | KCY10-C     | 7-21-09 10:45       | 23.27                | 3.04            | 4.240                          | <0.057                | < 0.0134         |
| 091   | KCY11       | 7-22-09 10:20       | 23.00                | 3.02            | 4.164                          | <0.057                | < 0.0137         |
| 102   | KCY12       | 7-27-09 10:27       | 23.00                | 3.17            | 4.376                          | <0.057                | < 0.0130         |
| 103   | KCY12-C     | 7-27-09 10:27       | 23.00                | 3.11            | 4.287                          | <0.057                | < 0.0133         |
| 113   | KCY13       | 7-28-09 09:29       | 23.45                | 3.02            | 4.244                          | <0.057                | < 0.0134         |
| 119   | KCY14       | 7-29-09 08:56       | 23.42                | 3.01            | 4.225                          | <0.057                | < 0.0135         |
| 126   | KCY15       | 7-30-09 08:21       | 23.37                | 3.01            | 4.223                          | <0.057                | < 0.0135         |
| 133   | KYC16       | 8-3-09 10:35        | 23.45                | 2.98            | 4.196                          | <0.057                | < 0.0136         |
| 134   | KYC16-C     | 8-3-09 10:35        | 23.45                | 3.09            | 4.343                          | <0.057                | < 0.0131         |
| 147   | KYC17       | 8-4-09 10:07        | 22.99                | 3.02            | 4.161                          | <0.057                | < 0.0137         |
| 154   | KYC18       | 8-5-09 09:09        | 23.00                | 3.02            | 4.163                          | <0.057                | < 0.0137         |
| 161   | KYC19       | 8-10-09 10:46       | 23.00                | 3.05            | 4.205                          | <0.057                | < 0.0136         |
| 162   | KYC19-C     | 8-10-09 10:46       | 23.00                | 3.05            | 4.212                          | <0.057                | < 0.0135         |
| 172   | KYC20       | 8-11-09 09:49       | 23.00                | 3.01            | 4.150                          | <0.057                | < 0.0137         |
| 178   | KYC21       | 8-12-09 08:49       | 23.08                | 3.01            | 4.171                          | <0.057                | < 0.0137         |
| 186   | KCY22       | 8-17-09 12:25       | 23.40                | 3.02            | 4.236                          | <0.057                | < 0.0135         |
| 197   | KCY23       | 8-18-09 11:50       | 23.06                | 3.01            | 4.167                          | <0.057                | < 0.0137         |
| 198   | KCY23-C     | 8-18-09 11:50       | 23.06                | 3.01            | 4.167                          | <0.057                | < 0.0137         |
| 207   | KCY24       | 8-19-09 11:00       | 23.35                | 3.01            | 4.213                          | <0.057                | < 0.0135         |

## 5.0 Ambient Results (continued)

**Table 2: Propyzamide Ambient Results (Salinas)**

| Log # | Sample Name | Start Date and Time | Elapsed Time (Hours) | Avg. Flow (LPM) | Total Volume (m <sup>3</sup> ) | Propyzamide ug/sample | Propyzamide ug/m <sup>3</sup> |
|-------|-------------|---------------------|----------------------|-----------------|--------------------------------|-----------------------|-------------------------------|
| 004   | SAL1        | 7-1-09 14:25        | 23.38                | 3.13            | 4.394                          | <0.057                | < 0.0130                      |
| 014   | SAL-2       | 7-2-09 13:55        | 23.05                | 3.01            | 4.166                          | <0.057                | < 0.0137                      |
| 015   | SAL2-C      | 7-2-09 13:55        | 23.08                | 3.01            | 4.171                          | <0.057                | < 0.0137                      |
| 025   | SAL3        | 7-6-09 08:50        | 23.11                | 3.03            | 4.204                          | <0.057                | < 0.0136                      |
| 037   | SAL4        | 7-7-09 08:25        | 23.00                | 2.74            | 3.776                          | <0.057                | < 0.0151                      |
| 038   | SAL4-C      | 7-7-09 08:25        | 23.00                | 2.76            | 3.804                          | <0.057                | < 0.0150                      |
| 045   | SAL5        | 7-8-09 07:28        | 22.99                | 2.97            | 4.099                          | <0.057                | < 0.0139                      |
| 055   | SAL6        | 7-13-09 08:15       | 23.60                | 3.00            | 4.251                          | <0.057                | < 0.0134                      |
| 056   | SAL6-C      | 7-13-09 08:15       | 23.60                | 3.00            | 4.244                          | <0.057                | < 0.0134                      |
| 063   | SAL7        | 7-14-09 07:26       | 23.10                | 2.96            | 4.098                          | <0.057                | < 0.0139                      |
| 069   | SAL8        | 7-15-09 06:42       | 23.25                | 3.04            | 4.243                          | <0.057                | < 0.0134                      |
| 075   | SAL9        | 7-20-09 15:15       | 23.43                | 3.01            | 4.227                          | <0.057                | < 0.0135                      |
| 084   | SAL10       | 7-21-09 14:15       | 23.66                | 3.00            | 4.255                          | <0.057                | < 0.0134                      |
| 085   | SAL10-C     | 7-21-09 14:15       | 22.97                | 3.00            | 4.138                          | <0.057                | < 0.0138                      |
| 095   | SAL11       | 7-22-09 14:30       | 23.00                | 2.98            | 4.109                          | <0.057                | < 0.0139                      |
| 108   | SAL12       | 7-27-09 09:00       | 23.00                | 3.26            | 4.493                          | <0.057                | < 0.0127                      |
| 109   | SAL12-C     | 7-27-09 09:00       | 23.00                | 3.28            | 4.527                          | <0.057                | < 0.0126                      |
| 116   | SAL13       | 7-28-09 08:05       | 23.40                | 3.01            | 4.222                          | <0.057                | < 0.0135                      |
| 122   | SAL14       | 7-29-09 07:30       | 23.42                | 3.02            | 4.240                          | <0.057                | < 0.0134                      |
| 129   | SAL15       | 7-30-09 06:55       | 23.37                | 3.01            | 4.217                          | <0.057                | < 0.0135                      |
| 139   | SAL16       | 8-3-09 09:00        | 23.09                | 3.02            | 4.180                          | <0.057                | < 0.0136                      |
| 140   | SAL16-C     | 8-4-09 08:06        | 23.09                | 2.99            | 4.139                          | <0.057                | < 0.0138                      |
| 151   | SAL17       | 8-4-09 08:06        | 23.01                | 3.01            | 4.158                          | <0.057                | < 0.0137                      |
| 157   | SAL18       | 8-5-09 07:09        | 22.98                | 3.01            | 4.146                          | <0.057                | < 0.0137                      |
| 167   | SAL19       | 8-10-09 09:14       | 23.00                | 3.02            | 4.164                          | <0.057                | < 0.0137                      |
| 168   | SAL19-C     | 8-10-09 09:14       | 23.04                | 3.01            | 4.164                          | <0.057                | < 0.0137                      |
| 175   | SAL20       | 8-11-09 08:17       | 22.99                | 3.00            | 4.141                          | <0.057                | < 0.0138                      |
| 181   | SAL21       | 8-12-09 07:17       | 23.09                | 3.02            | 4.180                          | <0.057                | < 0.0136                      |
| 190   | SAL22       | 8-17-09 10:58       | 23.46                | 3.00            | 4.226                          | <0.057                | < 0.0135                      |
| 191   | SAL22-C     | 8-18-09 10:15       | 23.46                | 3.02            | 4.254                          | <0.057                | < 0.0134                      |
| 203   | SAL23       | 8-18-09 10:15       | 23.40                | 2.99            | 4.201                          | <0.057                | < 0.0136                      |
| 210   | SAL24       | 8-19-09 09:27       | 23.05                | 2.99            | 4.138                          | <0.057                | < 0.0138                      |

## 5.0 Ambient Results (continued)

**Table 2: Propyzamide Ambient Results (Soledad)**

| Log # | Sample Name | Start Date and Time | Elapsed Time (Hours) | Avg. Flow (LPM) | Total Volume (m <sup>3</sup> ) | Propyzamide ug/sample | Propyzamide ug/m <sup>3</sup> |
|-------|-------------|---------------------|----------------------|-----------------|--------------------------------|-----------------------|-------------------------------|
| 002   | SOL1        | 7-1-09 10:40        | 23.08                | 3.13            | 4.338                          | <0.057                | < 0.0131                      |
| 010   | SOL2        | 7-2-09 09:50        | 23.28                | 2.97            | 4.143                          | <0.057                | < 0.0138                      |
| 011   | SOL2-C      | 7-2-09 09:50        | 23.30                | 3.00            | 4.196                          | <0.057                | < 0.0136                      |
| 023   | SOL3        | 7-6-09 11:28        | 23.28                | 2.98            | 4.165                          | <0.057                | < 0.0137                      |
| 033   | SOL4        | 7-7-09 10:47        | 23.00                | 2.97            | 4.101                          | <0.057                | < 0.0139                      |
| 034   | SOL4-C      | 7-7-09 10:47        | 23.00                | 3.05            | 4.212                          | <0.057                | < 0.0135                      |
| 043   | SOL5        | 7-8-09 09:50        | 23.03                | 3.06            | 4.223                          | <0.057                | < 0.0135                      |
| 051   | SOL6        | 7-13-09 10:26       | 23.26                | 3.01            | 4.203                          | <0.057                | < 0.0136                      |
| 052   | SOL6-C      | 7-13-09 10:26       | 23.26                | 3.01            | 4.203                          | <0.057                | < 0.0136                      |
| 061   | SOL7        | 7-14-09 09:44       | 23.17                | 3.01            | 4.180                          | <0.057                | < 0.0136                      |
| 067   | SOL8        | 7-15-09 08:51       | 23.45                | 3.00            | 4.216                          | <0.057                | < 0.0135                      |
| 073   | SOL9        | 7-20-09 12:20       | 23.37                | 2.99            | 4.195                          | <0.057                | < 0.0136                      |
| 080   | SOL10       | 7-21-09 11:45       | 23.50                | 3.00            | 4.233                          | <0.057                | < 0.0135                      |
| 081   | SOL10-C     | 7-21-09 11:45       | 23.50                | 3.01            | 4.247                          | <0.057                | < 0.0134                      |
| 092   | SOL11       | 7-22-09 11:20       | 23.00                | 3.02            | 4.170                          | <0.057                | < 0.0137                      |
| 104   | SOL12       | 7-27-09 11:08       | 23.00                | 3.22            | 4.445                          | <0.057                | < 0.0128                      |
| 105   | SOL12-C     | 7-27-09 11:08       | 23.00                | 3.20            | 4.417                          | <0.057                | < 0.0129                      |
| 114   | SOL13       | 7-28-09 10:10       | 23.43                | 3.02            | 4.241                          | <0.057                | < 0.0134                      |
| 120   | SOL14       | 7-29-09 09:36       | 23.42                | 3.04            | 4.267                          | <0.057                | < 0.0134                      |
| 127   | SOL15       | 7-30-09 09:01       | 23.37                | 3.01            | 4.223                          | <0.057                | < 0.0135                      |
| 135   | SOL16       | 8-3-09 11:29        | 23.29                | 3.01            | 4.208                          | <0.057                | < 0.0135                      |
| 136   | SOL16-C     | 8-3-09 11:29        | 23.29                | 3.00            | 4.195                          | <0.057                | < 0.0136                      |
| 148   | SOL17       | 8-4-09 10:50        | 23.01                | 3.02            | 4.165                          | <0.057                | < 0.0137                      |
| 155   | SOL18       | 8-5-09 09:53        | 22.99                | 3.00            | 4.142                          | <0.057                | < 0.0138                      |
| 163   | SOL19       | 8-10-09 11:35       | 23.00                | 3.06            | 4.226                          | <0.057                | < 0.0135                      |
| 164   | SOL19-C     | 8-10-09 11:35       | 23.00                | 3.06            | 4.226                          | <0.057                | < 0.0135                      |
| 173   | SOL20       | 8-11-09 10:37       | 23.00                | 3.00            | 4.136                          | <0.057                | < 0.0138                      |
| 179   | SOL21       | 8-12-09 09:37       | 23.08                | 3.01            | 4.165                          | <0.057                | < 0.0137                      |
| 187   | SOL22       | 8-17-09 13:30       | 23.28                | 3.01            | 4.208                          | <0.057                | < 0.0135                      |
| 199   | SOL23       | 8-18-09 12:50       | 23.25                | 3.01            | 4.202                          | <0.057                | < 0.0136                      |
| 200   | SOL23-C     | 8-18-09 12:50       | 23.29                | 3.00            | 4.196                          | <0.057                | < 0.0136                      |
| 208   | SOL24       | 8-19-09 12:10       | 23.03                | 3.01            | 4.161                          | <0.057                | < 0.0137                      |

## 6.0 Quality Control Results

Field samples collected for quality control purposes included 48 collocated pairs, seven (7) field spikes, four (4) trip spikes and eight (8) trip blanks.

Ambient concentration results from collocated pairs are presented in **Table 3: Propyzamide Ambient QC Collocated Concentration Results**. Calculating the Relative Percent Difference (RPD) between the primary and collocated samples was not performed because all reported concentration results were less than the MDL of 0.057 ug/sample. The formula for calculating the RPD for Table three (3) would have been as follows:

$$RPD = \frac{(Collocated.ug/m^3 - Sample.ug/m^3)}{[(Collocated.ug/m^3 + Sample.ug/m^3) \div 2]} \times 100$$

| <b>Table 3: Propyzamide Ambient QC Collocated Concentration Results</b> |                            |                               |                       |                      |                        |                           |
|---|----------------------------|-------------------------------|-----------------------|----------------------|------------------------|---------------------------|
| <b>Prim &amp; Colloc Log Numbers</b>                                    | <b>Primary Sample Name</b> | <b>Collocated Sample Name</b> | <b>Date Collected</b> | <b>Date Analyzed</b> | <b>Primary (ug/m3)</b> | <b>Collocated (ug/m3)</b> |
| 012 & 013   | CHU2                       | CHU2-C                        | 7/3/2009              | 7/7/2009             | <0.0136                | <0.0135                   |
| 035 & 036   | CHU4                       | CHU4-C                        | 7/8/2009              | 7/14/2009            | <0.0139                | <0.0138                   |
| 053 & 054   | CHU6                       | CHU6-C                        | 7/14/2009             | 7/20/2009            | <0.0136                | <0.0137                   |
| 082 & 083   | CHU10                      | CHU10-C                       | 7/22/2009             | 7/28/2009            | <0.0134                | <0.0135                   |
| 106 & 107   | CHU12                      | CHU12-C                       | 7/28/2009             | 8/3/2009             | <0.0129                | <0.0129                   |
| 149 & 150   | CHU17                      | CHU17-C                       | 8/5/2009              | 8/11/2009            | <0.0137                | <0.0137                   |
| 165 & 166   | CHU19                      | CHU19-C                       | 8/11/2009             | 8/17/2009            | <0.0137                | <0.0137                   |
| 201 & 202   | CHU23                      | CHU23-C                       | 8/19/2009             | 8/25/2009            | <0.0137                | <0.0136                   |
| 017 & 018   | GIL2                       | GIL2-C                        | 7/3/2009              | 7/7/2009             | <0.0138                | <0.0138                   |
| 029 & 030   | GIL4                       | GIL4-C                        | 7/8/2009              | 7/14/2009            | <0.0137                | <0.0138                   |
| 047 & 048   | GIL6                       | GIL6-C                        | 7/14/2009             | 7/20/2009            | <0.0138                | <0.0137                   |
| 088 & 089   | GIL10                      | GIL10-C                       | 7/22/2009             | 7/28/2009            | <0.0135                | <0.0134                   |
| 100 & 101   | GIL12                      | GIL12-C                       | 7/28/2009             | 8/3/2009             | <0.0136                | <0.0136                   |
| 145 & 146   | GIL17                      | GIL17-C                       | 8/5/2009              | 8/11/2009            | <0.0137                | <0.0137                   |
| 159 & 160   | GIL19                      | GIL19-C                       | 8/11/2009             | 8/17/2009            | <0.0135                | <0.0135                   |
| 195 & 196   | GIL23                      | GIL23-C                       | 8/19/2009             | 8/25/2009            | <0.0136                | <0.0136                   |

## 6.0 Quality Control Results (continued)

| <b>Table 3: Propyzamide Ambient QC Collocated Concentration Results</b> |                            |                               |                       |                      |                        |                           |
|---|----------------------------|-------------------------------|-----------------------|----------------------|------------------------|---------------------------|
| <b>Prim &amp; Colloc Log Numbers</b>                                    | <b>Primary Sample Name</b> | <b>Collocated Sample Name</b> | <b>Date Collected</b> | <b>Date Analyzed</b> | <b>Primary (ug/m3)</b> | <b>Collocated (ug/m3)</b> |
| 005 & 006   | HOL1                       | HOL1-C                        | 7/2/2009              | 7/6/2009             | <0.0133                | <0.0131                   |
| 039 & 040   | HOL4                       | HOL4-C                        | 7/8/2009              | 7/15/2009            | <0.0139                | <0.0139                   |
| 057 & 058   | HOL6                       | HOL6-C                        | 7/14/2009             | 7/20/2009            | <0.0133                | <0.0135                   |
| 086 & 087   | HOL10                      | HOL10-C                       | 7/22/2009             | 7/28/2009            | <0.0134                | <0.0133                   |
| 110 & 111   | HOL12                      | HOL12-C                       | 7/28/2009             | 8/3/2009             | <0.0122                | <0.0123                   |
| 141 & 142   | HOL16                      | HOL16-C                       | 8/4/2009              | 8/10/2009            | <0.0136                | <0.0131                   |
| 169 & 170   | HOL19                      | HOL19-C                       | 8/11/2009             | 8/17/2009            | <0.0137                | <0.0137                   |
| 192 & 193   | HOL22                      | HOL22-C                       | 8/18/2009             | 8/25/2009            | <0.0133                | <0.0133                   |
| 008 & 009   | KCY2                       | KCY2-C                        | 7/3/2009              | 7/7/2009             | <0.0134                | <0.0135                   |
| 031 & 032   | KCY4                       | KCY4-C                        | 7/8/2009              | 7/14/2009            | <0.0134                | <0.0135                   |
| 049 & 050   | KCY6                       | KCY-C                         | 7/14/2009             | 7/20/2009            | <0.0139                | <0.0137                   |
| 078 & 079   | KCY10                      | KCY10-C                       | 7/22/2009             | 7/27/2009            | <0.0135                | <0.0134                   |
| 102 & 103   | KCY12                      | KCY12-C                       | 7/28/2009             | 7/20/2009            | <0.0130                | <0.0133                   |
| 133 & 134   | KYC16                      | KYC16-C                       | 8/4/2009              | 8/10/2009            | <0.0136                | <0.0131                   |
| 161 & 162   | KYC19                      | KYC19-C                       | 8/11/2009             | 8/17/2009            | <0.0136                | <0.0135                   |
| 197 & 198   | KCY23                      | KCY23-C                       | 8/19/2009             | 8/25/2009            | <0.0137                | <0.0137                   |
| 014 & 015   | SAL2                       | SAL2-C                        | 7/3/2009              | 7/7/2009             | <0.0137                | <0.0137                   |
| 037 & 038   | SAL4                       | SAL4-C                        | 7/8/2009              | 7/15/2009            | <0.0151                | <0.0150                   |
| 055 & 056   | SAL6                       | SAL6-C                        | 7/14/2009             | 7/20/2009            | <0.0134                | <0.0134                   |
| 084 & 085   | SAL10                      | SAL10-C                       | 7/22/2009             | 7/28/2009            | <0.0134                | <0.0138                   |
| 108 & 109   | SAL12                      | SAL12-C                       | 7/28/2009             | 8/3/2009             | <0.0127                | <0.0126                   |
| 139 & 140   | SAL16                      | SAL16-C                       | 8/4/2009              | 8/10/2009            | <0.0136                | <0.0138                   |
| 167 & 168   | SAL1-C                     | SAL19-C                       | 8/10/2009             | 8/17/2009            | <0.0137                | <0.0137                   |
| 190 & 191   | SAL22                      | SAL22-C                       | 8/18/2009             | 8/25/2009            | <0.0135                | <0.0134                   |
| 010 & 011   | SOL2                       | SOL2-C                        | 7/3/2009              | 7/7/2009             | <0.0138                | <0.0136                   |
| 033 & 034   | SOL4                       | SOL4-C                        | 7/8/2009              | 7/14/2009            | <0.0139                | <0.0135                   |
| 051 & 052   | SOL6                       | SOL6-C                        | 7/14/2009             | 7/20/2009            | <0.0136                | <0.0136                   |
| 080 & 081   | SOL10                      | SOL10-C                       | 7/22/2009             | 7/27/2009            | <0.0135                | <0.0134                   |
| 104 & 105   | SOL12                      | SOL12-C                       | 7/28/2009             | 8/3/2009             | <0.0128                | <0.0129                   |
| 135 & 136   | SOL16                      | SOL16-C                       | 8/4/2009              | 8/10/2009            | <0.0135                | <0.0136                   |
| 163 & 164   | SOL19                      | SOL19-C                       | 8/11/2009             | 8/17/2009            | <0.0135                | <0.0135                   |
| 199 & 200   | SOL23                      | SOL23-C                       | 8/19/2009             | 8/25/2009            | <0.0136                | <0.0136                   |

## 6.0 Quality Control Results (continued)

Spiked XAD resin sorbent tubes were prepared by the laboratory each Thursday and kept in refrigerated storage until used for the following week's sampling as either field or trip spikes. Laboratory spike values were 3.0 ug of propyzamide per sample for each of the seven (7) field spikes and four (4) trip spikes prepared. Field spikes were only collected at either the Chualar or Gilroy monitoring sites.

Percent recoveries for the propyzamide field spikes are presented in **Table 4**, Propyzamide Ambient QC Field Spike Results. Recoveries ranged from 82% to 95% with an average recovery of 91.7% and a standard deviation of 4.8%. Recovery concentration values ranged from 2.58 to 2.91 ug/sample.

Please reference the following equations used to calculate the field spike recovery results presented in **Table 4**:

$$FieldSpike \frac{ug}{m^3} = Field Recovery \left( \frac{ug}{sample} \right) \div TotalVolume \left( \frac{m^3}{sample} \right)$$

$$NetSpike \frac{ug}{m^3} = FieldSpikeConcentration \left( \frac{ug}{m^3} \right) - PrimarySample \left( \frac{ug}{m^3} \right)$$

$$NetSpike \frac{ug}{sample} = NetSpike \left( \frac{ug}{m^3} \right) \times TotalVolume \left( \frac{m^3}{sample} \right)$$

$$SpikePercent Recovery \frac{ug}{sample} = NetSpike \left( \frac{ug}{sample} \right) \div LabSpikeValue \left( \frac{ug}{sample} \right) \times 100\%$$

**Table 4: Propyzamide Ambient QC Field Spike Results**

| Sample ID | Field Recovery (ug/sample) | Total Volume (m <sup>3</sup> ) | Field Spike Concentration (ug/m <sup>3</sup> ) | Primary Sample (ug/m <sup>3</sup> ) | Net Spike (ug/m <sup>3</sup> ) | Net Spike (ug/sample) | Lab Spike Value (ug/sample) | Spike Percent Recovery |
|-----------|----------------------------|--------------------------------|--|-------------------------------------|--------------------------------|-----------------------|-----------------------------|------------------------|
| GIL3      | <0.057                     | 4.190                          | N.A.   | <0.0136                             | N.A.                           | N.A.                  | N.A.                        | N.A.                   |
| GIL3-FS   | 2.839                      | 4.197                          | 0.676  | N.A.                                | 0.663                          | 2.782                 | 3                           | 93%                    |
| CHU11     | <0.057                     | 4.193                          | N.A.   | <0.0136                             | N.A.                           | N.A.                  | N.A.                        | N.A.                   |
| CHU11-FS  | 2.613                      | 4.110                          | 0.636  | N.A.                                | 0.622                          | 2.558                 | 3                           | 82%                    |
| GIL11     | <0.057                     | 4.225                          | N.A.   | <0.0135                             | N.A.                           | N.A.                  | N.A.                        | N.A.                   |
| GIL11-FS  | 2.914                      | 4.232                          | 0.689  | N.A.                                | 0.675                          | 2.857                 | 3                           | 95%                    |
| GIL16     | <0.057                     | 4.157                          | N.A.   | <0.0137                             | N.A.                           | N.A.                  | N.A.                        | N.A.                   |
| GIL16-FS  | 2.815                      | 4.171                          | 0.675  | N.A.                                | 0.661                          | 2.758                 | 3                           | 92%                    |
| CHU16     | <0.057                     | 4.177                          | N.A.   | <0.0136                             | N.A.                           | N.A.                  | N.A.                        | N.A.                   |
| CHU16-FS  | 2.621                      | 4.170                          | 0.629  | N.A.                                | 0.615                          | 2.564                 | 3                           | 85%                    |
| GIL22     | <0.057                     | 4.194                          | N.A.   | <0.0136                             | N.A.                           | N.A.                  | N.A.                        | N.A.                   |
| GIL22-FS  | 2.581                      | 4.187                          | 0.616  | N.A.                                | 0.603                          | 2.524                 | 3                           | 84%                    |
| CHU22     | <0.057                     | 4.222                          | N.A.   | <0.0135                             | N.A.                           | N.A.                  | N.A.                        | N.A.                   |
| CHU22-FS  | 2.888                      | 4.229                          | 0.683  | N.A.                                | 0.669                          | 2.831                 | 3                           | 94%                    |

## 6.0 Quality Control Results (continued)

Percent recoveries for the four (4) propyzamide trip spikes are presented in **Table 5**, Propyzamide Ambient QC Trip Spike Results. Propyzamide recoveries averaged 88% with a standard deviation of 15%. Recovery concentration values ranged from 1.94 to 2.94 ug/sample. In comparison, laboratory spike recoveries presented in **Appendix C**, Laboratory Results and Report, averaged 91% with a standard deviation of 12% and values ranging from 2.21 to 2.91 ug/sample.

Please reference the following equation used to calculate the trip spike and blank recovery results presented in **Table 5**, Trip Spike Results and **Table 6**, Trip Blank Results:

$$\% \text{ Recovery} = \left( \text{Measured} \left( \frac{\text{ug}}{\text{sample}} \right) \div \text{Expected} \left( \frac{\text{ug}}{\text{sample}} \right) \right) \times 100\%$$

**Table 5: Propyzamide Ambient QC Trip Spike Results**

| Log # | Sample Name | Date Collected | Date Analyzed | Expected (ug/sample) | Measured (ug/sample) | Recovery (%) |
|-------|-------------|----------------|---------------|----------------------|----------------------|--------------|
| 028   | TS1         | 7/7/2009       | 7/12/2009     | 3.0                  | 2.834                | 94.5%        |
| 099   | TS2         | 7/23/2009      | 7/29/2009     | 3.0                  | 1.944                | 64.8%        |
| 143   | TS3         | 8/3/2009       | 8/10/2009     | 3.0                  | 2.936                | 97.9%        |
| 205   | TS4         | 8/18/2009      | 8/24/2009     | 3.0                  | 2.843                | 94.8%        |

There were eight (8) designated trip blanks; one for each week of sampling. No propyzamide was detected (ND) in any trip blank and analytical results are presented in **Table 6**.

**Table 6: Propyzamide Ambient QC Trip Blank Results**

| Log # | Sample Name | Date Collected | Date Analyzed | MDL (ug/sample) | Measured (ng/sample) |
|-------|-------------|----------------|---------------|-----------------|----------------------|
| 019   | TB1         | 7/3/2009       | 7/6/2009      | 0.057ug/sample  | ND                   |
| 027   | TB2         | 7/7/2009       | 7/13/2009     | 0.057ug/sample  | ND                   |
| 071   | TB3         | 7/16/2009      | 7/21/2009     | 0.057ug/sample  | ND                   |
| 090   | TB4         | 7/21/2009      | 7/28/2009     | 0.057ug/sample  | ND                   |
| 124   | TB5         | 7/30/2009      | 8/5/2009      | 0.057ug/sample  | ND                   |
| 144   | TB6         | 8/3/2009       | 8/10/2009     | 0.057ug/sample  | ND                   |
| 183   | TB7         | 8/13/2009      | 8/18/2009     | 0.057ug/sample  | ND                   |
| 194   | TB8         | 8/17/2009      | 8/25/2009     | 0.057ug/sample  | ND                   |

Calculated values presented in QC Results Tables 4 through 6 were produced using original laboratory data to six (6) decimal places where available. QC results were all within expected values except for trip spike TS2 which had a low recovery of 64.8%. The lab results report indicated that this Trip Spike may have received an insufficient spike in the lab. There is no field-generated information that would account for, or suggest why, this low recovery may or might have occurred.

## 7.0 Discussion

The purpose of this Discussion Section is to present relevant or updated information that provides additional perspective or context to the results presented in this report. In summary, these results indicated that all 192 ambient samples had Propyzamide concentrations below the Method Detection Limit (MDL) of 0.014ug/m<sup>3</sup> (based on the target sample flow rate of 3.0 LPM and collection duration of 23 hours).

Air monitoring for ambient concentrations of Propyzamide was previously performed by the DPR in June and July 2000 at several sites within the city of Lompoc, Santa Barbara County also using sorbent-tube sample capture. Analytical results indicated detection of Propyzamide above the MDL of 0.0017ug/ m<sup>3</sup> but below the Estimated Quantitation Limit (EQL) of 0.0084ug/m<sup>3</sup> (based on the sample flow rate of 15.0 LPM and collection duration of 24 hours).

In August 2009, the ARB conducted ambient air monitoring for Propyzamide during an agricultural application in Monterey County. Results of all 50 sorbent-tube samples indicated concentrations below the MDL(s) ranging from 0.019 ug/m<sup>3</sup> to 0.248 ug/m<sup>3</sup> (based on 3.0 LPM and collection durations ranging from 16.4 hours to 1.1 hours, respectively).

This 2009 ARB study was designed, in part, using 2007 use-data supplied by the DPR. Use-data for subsequent years has been obtained from the DPR and is presented in the following table. Please note the substantial (16-56%) reductions in usage (lbs. of active ingredient per month) during the period of monitoring, July 1 through August 20, 2009 in Monterey County.

| <b>Monterey County</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> |
|------------------------|-------------|-------------|-------------|
| June                   | 6,652       | 5,450       | 5,547       |
| July                   | 7,948       | 7,999       | 5,894       |
| August                 | 7,698       | 6,930       | 3,396       |

In conclusion, the non-detect analytical results presented in this report are consistent with results from a prior ambient study performed in 2000 as well as an application study performed in 2009. Also, the reduced Propyzamide usage-levels subsequently reported for summer 2009 may also have contributed to the non-detect results cited in this report.



# **APPENDIX A**

## **Sampling Protocol for Diazinon and Propyzamide Ambient Study**



*California Environmental Protection Agency*

**AIR RESOURCES BOARD**

Monitoring and Laboratory Division  
Air Quality Surveillance Branch

**Sampling Protocol for Diazinon and Propyzamide Ambient Study**

July 7, 2009

Prepared by:

Steve Rider  
Air Pollution Specialist  
Special Purpose Monitoring Section

**Signatures:**

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Kenneth R. Stroud, Chief                      Date  
Air Quality Surveillance Branch  
Air Resources Board

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Cindy Castronovo, Chief                      Date  
Northern Laboratory Branch  
Air Resources Board

The following protocol has been reviewed and approved by staff of the Air Resources Board (ARB). Approval of this protocol does not necessarily reflect the views and policies of the ARB, nor does the mention of trade names or commercial products constitute endorsement or recommendation for use.

## Table of Contents

| <u>Section</u>   | <u>Page</u> |
|--|-------------|
| 1.0 INTRODUCTION.....                                    | 3           |
| 2.0 CHEMICAL PROPERTIES OF DIAZINON AND PROPYZAMIDE..... | 3-5         |
| 3.0 PROJECT GOALS AND OBJECTIVES.....                    | 5           |
| 4.0 CONTACTS.....  | 6           |
| 5.0 STUDY LOCATION AND DESIGN.....                       | 6-10        |
| 6.0 SAMPLING AND ANALYSIS PROCEDURES.....                | 11          |
| 7.0 LIST OF FIELD EQUIPMENT.....                         | 12          |
| 8.0 QUALITY CONTROL.....                                 | 12-13       |
| 9.0 DELIVERABLES.....                                    | 13-14       |

### Tables

|  |   |
|--|---|
| TABLE 1: PHYSICO-CHEMICAL PROPERTIES OF DIAZINON.....    | 4 |
| TABLE 2: PHYSICO-CHEMICAL PROPERTIES OF PROPYZAMIDE..... | 5 |

### Figures

|   |   |
|---|---|
| FIGURE 1: AIR SAMPLER TREE WITH PUMP..... | 8 |
| FIGURE 2: SAMPLE FIELD LOG SHEET.....     | 9 |

### Appendix

APPENDIX A: STANDARD OPERATING PROCEDURE FOR THE ANALYSIS OF DIAZINON AND ITS OXYGEN ANALOG IN AMBIENT AIR SAMPLES and STANDARD OPERATING PROCEDURE FOR THE ANALYSIS OF PROPYZAMIDE IN AMBIENT AIR SAMPLES

APPENDIX B: USE INFORMATION AND AIR MONITORING RECOMMENDATIONS FOR THE PESTICIDE ACTIVE INGREDIENT DIAZINON  
and  
USE INFORMATION AND AIR MONITORING RECOMMENDATIONS FOR THE PESTICIDE ACTIVE INGREDIENT PROPYZAMIDE

## 1.0 Introduction

At the request of the Department of Pesticide Regulation (DPR), the Air Resources Board (ARB) will conduct ambient air monitoring for the pesticides Diazinon and Propyzamide in Monterey, San Benito and Santa Clara Counties. Ambient Air monitoring for these pesticides will occur over a period of eight weeks. This monitoring will be performed under the requirements of the California Code of Regulation, Food and Agriculture Code, Section 14022(c) which requires the ARB, "...to document the level of airborne emissions...of pesticides that may be determined to pose a present or potential hazard...", when requested by the DPR. Monitoring is being conducted to coincide with the use of Diazinon as an insecticide on lettuce and other food crops for human consumption and Propyzamide as an herbicide used primarily for controlling grasses and some broad-leafed weeds.

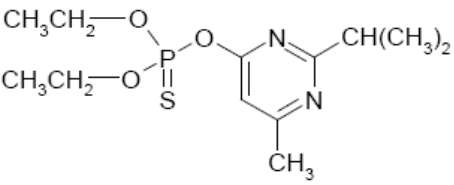
The "Standard Operating Procedure Sampling and Analysis of Diazinon" dated June 2009 and "Standard Operating Procedure Sampling and Analysis of Propyzamide" dated June 2009 are included as Appendix A.

## 2.0 Chemical Properties of Diazinon and Propyzamide

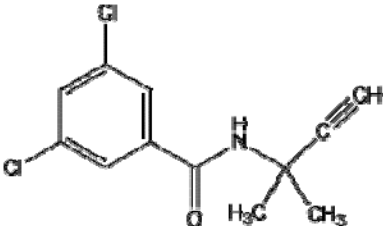
Diazinon: The following information on the physico-chemical properties of Diazinon (see Table 1) are obtained from DPR's, "Use Information and Air Monitoring Recommendations for the Pesticide Active Ingredient Diazinon", dated May 2009 and is included as Appendix B or from the <http://extoxnet.orst.edu/pips/diazinon.html> website. Diazinon is a nonsystemic organophosphate insecticide and is moderately toxic to humans, birds and laboratory animals. Its principle toxic effect is the inhibition of acetylcholinesterase (AChE). The inhibition of AChE can lead to central nervous system and neuromuscular dysfunction, but its toxic effects are reversible and tend to dissipate after exposure ceases. Diazinon is available in dust, granules, seed dressings, wettable powder and emulsifiable solution formulations. It is generally used on farms to control sucking and leaf eating insects.

Propyzamide: The following information on the physico-chemical properties of Propyzamide (see Table 2) are obtained from DPR's, "Use Information and Air Monitoring Recommendations for the Pesticide Active Ingredient Propyzamide", dated April 2009 and is included as Appendix B or from the <http://extoxnet.orst.edu/pips/diazinon.html> website. Propyzamide is a white or off-white crystalline solid with no odor. It is relatively stable and is noncorrosive. Propyzamide is practically non-toxic to birds, mammals and warm water fish. It is slightly toxic to cold water fish.

**TABLE 1: PHYSICO-CHEMICAL PROPERTIES OF DIAZINON**

| Property             | Information  |
|----------------------|--|
| Chemical Name        | O,O-Diethyl O-(2-isopropyl-6-methyl-4-pyrimidinyl) phosphorothioate                |
| Chemical Formula     | C <sub>12</sub> H <sub>21</sub> N <sub>2</sub> O <sub>3</sub> PS                   |
| Chemical Structure   |  |
| Molecular Weight     | 304.35   |
| CAS Registry         | 333-41-5   |
| Color                | Colorless  |
| Physical State       | Liquid   |
| Odor                 | Faint ester-like odor  |
| Solubility           | 40 mg/l @ 20° C  |
| Vapor Pressure       | 9.01X10 <sup>-5</sup> mm Hg @ 20° C<br>1.1X10 <sup>-3</sup> mm Hg @ 40° C          |
| Henry's Law Constant | 1.17 X10 <sup>-7</sup> atm-m <sup>3</sup> /mol                                     |
| Data Source          | Agency for Toxic Substances and Disease Registry (ATSDR, 2008)                     |

**TABLE 2: PHYSICO-CHEMICAL PROPERTIES OF PROPYZAMIDE**

| Property             | Information  |
|----------------------|--|
| Chemical Name        | 3,5-dichloro- <i>N</i> -(1,1-dimethyl-2-propynyl)benzamide                         |
| Chemical Formula     | C <sub>12</sub> H <sub>11</sub> Cl <sub>2</sub> NO                                 |
| Chemical Structure   |  |
| Molecular Weight     | 256.1  |
| CAS Registry         | 23950-58-5   |
| Color                | Colorless  |
| Physical State       | Powder   |
| Odor                 | Odorless   |
| Solubility           | 15 mg/L (ppm) (at 25 °C)   |
| Vapor Pressure       | 0.058 mPa (at 25 °C)<br>8.5 x 10 <sup>-5</sup> mmHg (at 25 °C)                     |
| Henry's Law Constant | 9.8 x 10 <sup>-9</sup> (at 25 °C)  |
| Data Source          | CDPR, BCPC 2000 and Extoxnet   |

### 3.0 Project Goals and Objectives

The goal of this monitoring project is to measure the concentrations of both Diazinon and Propyzamide in ambient air throughout Monterey, San Benito and Santa Clara Counties.

To achieve the project goals, the following objectives should be met:

1. Identification of monitoring sites that mutually satisfies criteria for ambient air sampling and DPR's requirements.
2. Appropriate application of sampling/monitoring equipment to determine ambient Diazinon and Propyzamide concentrations.
3. Application of relevant field quality assurance/quality control practices to ensure the integrity of field samples.
4. At the conclusion of the project, MLD will provide DPR with a final report containing all relevant information, data and execution of this project.

## 4.0 Contacts

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## 5.0 Study Location and Design

Diazinon and Propyzamide are used throughout the State of California and throughout the calendar year. 2007 data shows that Monterey County has the highest Diazinon and Propyzamide use by a factor of three (3) over the second highest use counties of Fresno (Diazinon) and Santa Barbara (Propyzamide). In Monterey County, use of both pesticides is highest during the months of June through August. Propyzamide usage drops off tremendously in the month of September. DPR has requested that ARB perform ambient air monitoring for Diazinon and Propyzamide during the summer months.

### Ambient Air Monitoring

The sampling process is designed to collect both Diazinon and Propyzamide on a single XAD resin sorbent tube. The Laboratory will extract both pesticides from each sample tube for analysis.

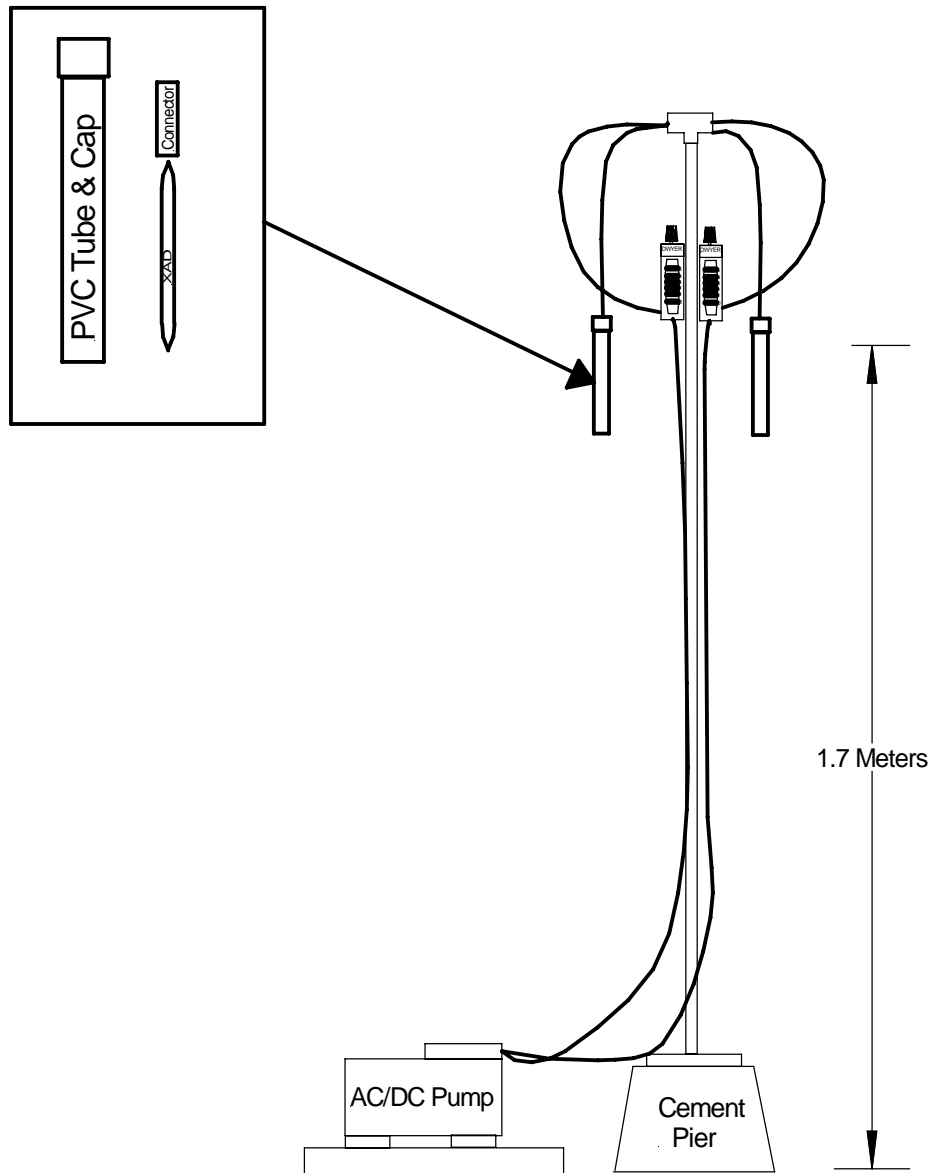
Samples will be collected by passing a measured volume of ambient air through one XAD resin sorbent tube that is mounted on a sampling tree as shown in Figure 1. The exposed XAD-2 resin sorbent tubes (SKC #226-30-06) with 400 and 200 mg of packing are stored in an ice chest (on dry ice) or in a freezer until extracted in the laboratory with organic solvent. The sampling flow rates of 3.0 liters per minute (LPM) for both pesticides will be accurately measured and the sampling system operated continuously

for 24 hours  $\pm$  1 with the exact operating interval recorded on the log sheet. The resin sorbent tubes will be protected from direct sunlight or rain and supported about 1.7 meters above the ground or roofline. Whether on the ground or a rooftop there shall not be any major obstructions and each site must meet generally accepted siting criteria for the ambient monitoring. At the end of each sampling period, the tubes will be placed in culture tubes with an identification label affixed. At least once a week, collected samples will be transported on dry ice to ARB's Monitoring and Laboratory Division laboratory for analysis. The samples will be stored in the freezer or extracted/analyzed immediately.

Sample flow is controlled by an inline rotameter (flow range of 0-5 LPM). Each site will have one (1) collocated sample per week. Prior to each sampling period, the sampler is leak checked with an unopened sacrificial resin sorbent tube. After the sample resin sorbent tube is installed, the flow rate is set at 3.0 LPM using a digital mass flow meter. The flow rate will be checked at the end of each sampling period, the start/end flows are documented on the log sheet and resin sorbent tube label. The end flow must be within  $\pm$  20% of 3.0 LPM ( $\pm$  0.6 LPM or 2.4–3.6 LPM). The field log sheet (see Figure 2) and resin sorbent tube label will contain the following information: log #, sample name, sampler ID number, start and end date and time, start and end counter reading, start and end mass flow meter display reading, comments (if applicable), weather conditions and the start and end initials of the operator.



**FIGURE 1: AIR SAMPLER TREE WITH PUMP**





Six sampling sites (five air monitoring sites and one urban background site) 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). Each air monitoring site is located in proximity to fields which have Diazinon and Propyzamide applied. Pesticide air monitoring site locations are determined using historical pesticide use information supplied by the California Department of Pesticide Regulation's 2009 monitoring recommendations. Sites are located in areas with historically high Diazinon and Propyzamide pesticide use.

The ambient monitoring sites in Monterey and San Benito Counties are located at:

Gilroy – Background Site

Gilroy Monitoring Station – Bay Area AQMD  
Located at Glen View Elementary School  
695 9<sup>th</sup> Street  
Gilroy, CA

Hollister

R.O Hardin K-5 School  
761 South Street  
Hollister, CA

Salinas

Santa Rita School District – Maintenance Facility  
56 Rogge Road  
Salinas, CA

Chualar

Salinas Rural Fire District – Chualar Station  
24281 Washington Street  
Chualar, CA

Soledad

Jack Franscioni Elementary School  
779 Orchard Lane  
Soledad, CA

King City

King City Monitoring Station – Monterey Bay Unified APCD  
Located at San Lorenzo Elementary School  
421 Pearl Street  
King City, CA

Sampling schedules during this ambient monitoring project will reflect current furlough and overtime policies. ARB staff will continue to collect samples for an eight (8) week period (July – August '09). As agreed by the Department of Pesticide Regulations, alterations to the propyzamide recommendation will result in three (3) 23-hour samplers per week. Sampling will begin at the first site on Monday morning at approximately 11:00 am. Samples will be removed and new sample media installed 23 hours later on

Tuesday morning, and again 23 hours later on Wednesday morning. The third set of samples will be removed 23 hours later at approximately 8:00 on Thursday morning. All flow rates will be set to 3.0 LPM.

## 6.0 Sampling and Analysis Procedures

Special Purpose Monitoring Section (SPM) personnel will hand-carry samples to and from MLD's laboratory in Sacramento, and to and from the sampling location. The samples will not be exposed to extreme conditions or subjected to rough handling that might affect sample integrity.

At each sampling site, the operator will assure that all required sample collection information is recorded on the affixed XAD resin sorbent tube identification label and field log sheet. After removing samples from the sampling tree, samples are placed in a glass tube and stored in a cooler with dry ice at 4° C or less until returned to the laboratory. The sample tubes will be transported as soon as reasonably possible to ARB's Sacramento Monitoring and Laboratory Division laboratory for analysis. These samples will be stored in the freezer or extracted/analyzed immediately. Samples are collected in the field with a flow rate of 3.0 LPM.

All reported sampling times will be reported in Pacific Standard Time (PST).

The Northern Laboratory Branch (NLB) will supply SPM with XAD resin sorbent tubes and will perform analyses for Diazinon and Propyzamide on the collected ambient samples and report results to SPM.

Laboratory analyses will be performed in accordance with applicable standard operating procedures (Standard Operating Procedure Sampling and Analysis of (Diazinon) and (Propyzamide)) included as Appendix A.

The XAD resin sorbent tube sample validation and analytical quality control criteria are as follows.

1. **Sample Hold Time:** Sample hold time criteria will be established by the Laboratory. Samples not analyzed within the established holding time will be invalidated by the Laboratory.
2. **Replicate Analysis:** Laboratory to establish relative percent difference (RPD) criteria for replicate analysis. Replicate analysis shall be performed on every tenth sample (10%) per analytical batch sequence (excluding standards, controls and other quality control data). Lab to provide replicate analytical results and RPD.
3. **Method Detection Limit (MDL):** Sample analytical results less than the MDL shall be reported as a less than numerical value. This less than numerical value shall incorporate any dilutions/concentrations.
4. **Analytical Linear Range:** Any analytical result greater than the highest calibration standard shall be reanalyzed within the calibrated linear range.

## 7.0 List of Field Equipment

| <u>Quantity</u> | <u>Item Description</u>   |
|-----------------|---|
| (7)             | Pesticide stick samplers with 2 ea. rotameters and separate plumbing for use with two (2) pumps |
| (7)             | Cement piers for holding pesticide stick samplers   |
| (13)            | AC pumps  |
| (1)             | Global Positioning System (GPS) with backup batteries and carrying case                         |
| (1)             | Digital Camera with backup batteries and carrying case  |
| (2)             | Aalborg mass flow meter 0-5 LPM.  |
| (1)             | Dry ice chest   |
| (1)             | Ladder  |
| (7)             | Extension cords   |
| (7)             | Elapsed time meters   |

## 8.0 Quality Control

Quality control procedures will be observed to ensure the integrity of samples collected in the field. National Institute of Standards and Technology (NIST)-traceable transfer standards will be used to measure sample flow rates.

The sample flow rate of the passive flow controllers will be measured using mass flow meters having a current calibration certification and a range of 0-5 liters per minute (LPM).

Each XAD resin sorbent tube will be assigned a field sample number that provides for identification of site, sample ID number, operator, and sample information as well as sample transfer information.

**Field Spike (FS):** A field spike will be prepared by the laboratory by injecting a resin sorbent tube with 72 nanograms (ng) of Diazinon, 130 ng of Diazoxon and 1 microgram (ug) of Propyzamide. The field spike is installed onto a sampler and will be collocated with the primary sampler. There will be a minimum of four (4) field spikes throughout the study.

**Trip Spike (TS):** A trip spike will be prepared by the laboratory by injecting a XAD resin sorbent tube at the same level as the field spike. The trip spike will be transported and analyzed along with the field spike. The trip spike is treated the same as a field spike with exception that it is not installed onto a sampler.

**Trip Blank (TB):** Field Staff will prepare one trip blank per week of sampling. The trip blank resin sorbent tube accompanies the sample resin sorbent tubes from the lab to the field and returns but is not installed onto a sampler.

**Collocated (CO):** For ambient monitoring, collocated (side-by-side) air samplers will operate once per week at each site for all eight (8) weeks of the monitoring period.

## **Site/Sample Identification**

The Diazinon/Propyzamide sampling sites will be named accordingly for the locations, run and type of sample:

### **Ambient Site Naming:**

|          |                                   |
|----------|-----------------------------------|
| GIL1-24  | Gilroy ARB site Weeks 1 through 8 |
| HOL1-24  | Hollister site Weeks 1 through 8  |
| SAL1-24  | Salinas site Weeks 1 through 8    |
| CHU1-24  | Chualar site Weeks 1 through 8    |
| SOL 1-24 | Soledad site Weeks 1 through 8    |
| GRE1-24  | Greenfield site Weeks 1 through 8 |

### **Letter Abbreviations as follows**

FS = Field Spike

C = Collocated

TS = Trip Spike

TB = Trip Blank

Examples: SAL5 = Salinas run #5.

SAL5-C = Salinas, run #5 and it is a collocated sample.

Each sample will be assigned a unique and sequential log number.

Following the quality control procedures listed above will insure the quality and integrity of the samples collected in the field and will insure accurate field and lab data collection.

## **9.0 Deliverables**

### **9.1 Air Quality Surveillance Branch Deliverables**

Within 60 days from receipt of the final results report from the Northern Laboratory Branch (NLB), AQSB will provide DPR with a draft report for review containing the following topics:

- 1) Sampling Protocol.
- 2) Personnel Contact List.
- 3) Site Maps.
- 4) Site Photographs.
- 5) Site Descriptions and Measurements, GPS coordinates, inlet height.
- 6) A map of the monitoring site locations.
- 7) Sample Summary Table.
- 8) Field Sample Log.
- 9) Laboratory Analysis Reports with calculations in electronic format.
- 10) Transfer Standards' Certification Reports.
- 11) Disk containing electronic files of Report.

In addition, the Special Purpose Monitoring Section (SPM) will prepare a project binder containing the above information. This binder will remain with SPM though available for viewing and review as requested.

## 9.2 Northern Laboratory Branch (NLB) Deliverables

Within 60 days from the last day of analysis, The NLB will provide SPM with a report that will include the following topics:

- 1) Analytical result table(s) to include:
  - a. Sample identification (name).
  - b. Date sample received from field.
  - c. Date sample analyzed.
  - d. Dilution ratio.
  - e. Analytical results.
  - f. Quality control results.
- 2) All equations used in calculating analytical results.
- 3) Table of duplicate/replicate results including calculated relative percent difference (RPD).
- 4) Table of collocated results including calculated relative percent difference (RPD).
- 5) Table of analytical results from all field spikes.
- 6) Table of analytical results from all trip and laboratory spikes including percent recoveries.
- 7) Table of analytical results from all trip blanks.
- 8) Table of analytical results from all laboratory blanks, standards and control checks performed, including dates performed and relative percent recoveries if applicable.
- 9) Copy or location of analytical method or Standard Operating Procedures (SOP) used for analysis.
- 10) Section or provision listing or reporting any and all deviations from analytical SOP and this protocol.

## **APPENDIX A: Standard Operating Procedure Analyses for Diazinon and Propyzamide**

The Special Analysis Laboratory Section of MLD's Northern Laboratory Branch will perform the analyses for Diazinon collected by the XAD resin sorbent tube method. This analytical procedure is entitled, Standard Operating Procedure Sampling and Analysis of (Diazinon).

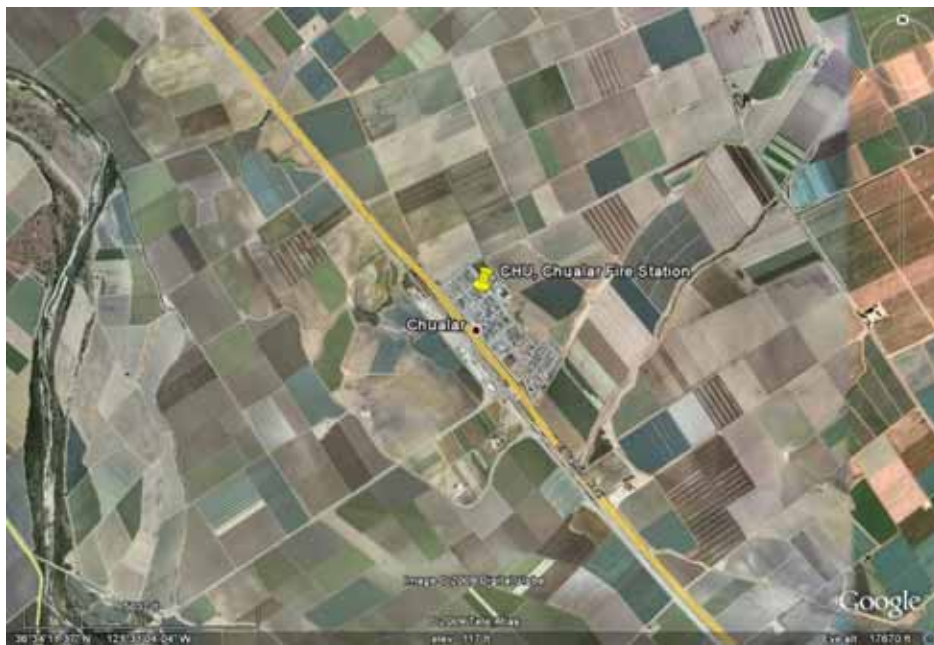
The Special Analysis Laboratory Section of MLD's Northern Laboratory Branch will perform the analyses for Propyzamide collected by the XAD resin sorbent tube method. This analytical procedure is entitled, Standard Operating Procedure Sampling and Analysis of (Propyzamide).



**APPENDIX B:**  
**Use Information and Air Monitoring Recommendations for the**  
**Pesticide Active Ingredient Diazinon**  
**and**  
**Use Information and Air Monitoring Recommendations for the**  
**Pesticide Active Ingredient Propyzamide**

# **APPENDIX B**

## **Aerial and Site Photographs**



**CHU, Chualar On Roof Of Fire Station  
View North**

CHU, Chualar On Top Of Fire Station  
View West



CHU, Chualar On Top Of Fire Station  
View South



CHU, Chualar On Top Of Fire Station  
View East Northeast



**GIL, Gilroy BAAQMD Station @ Glen View Elementary School  
Overview Looking Southwest**



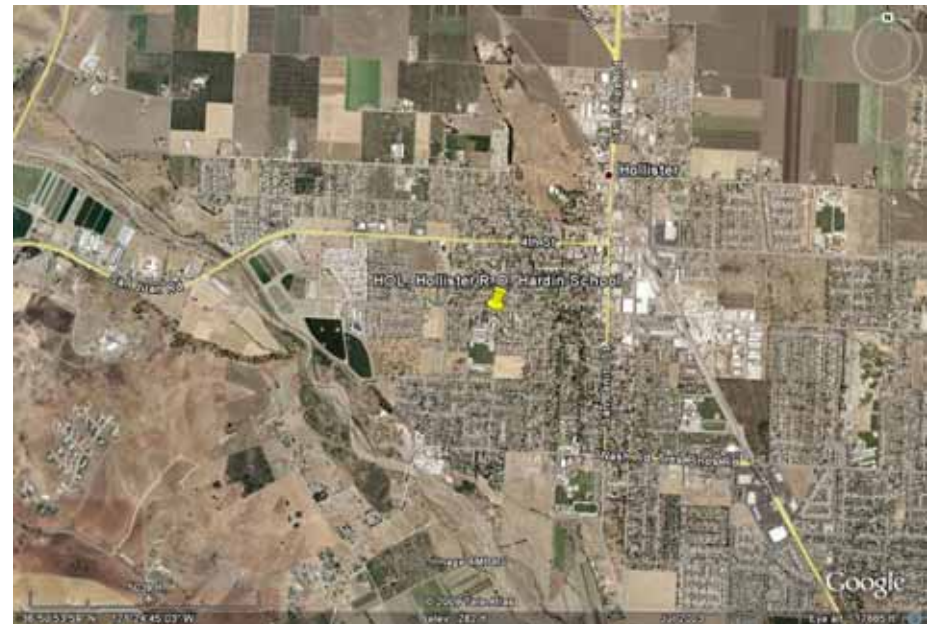
**GIL, Gilroy BAAQMD Station @ Glen View Elementary School  
View East Southeast**



GIL, Gilroy BAAQMD Station @ Glen View Elementary School, View South



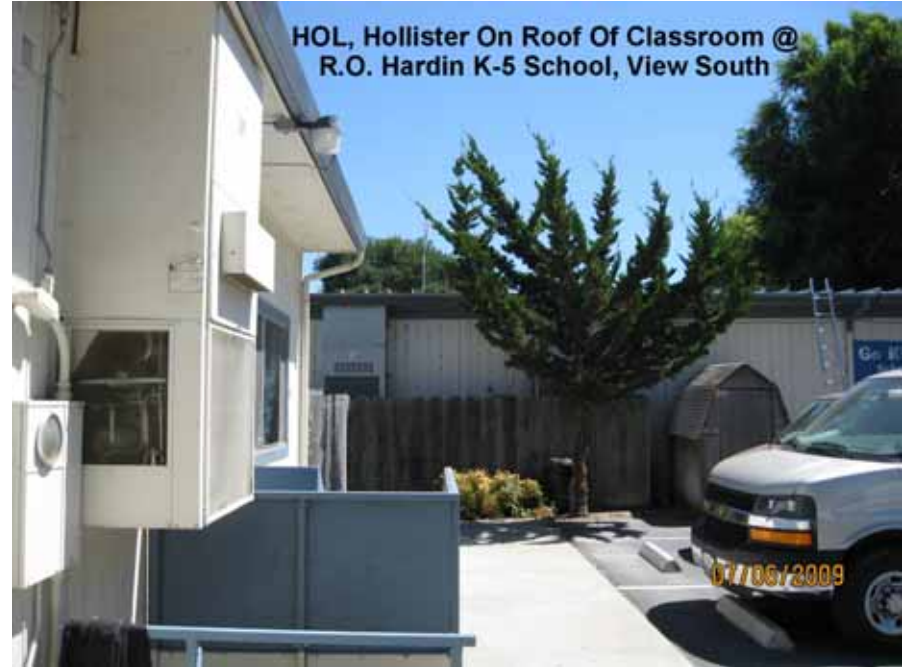
GIL, Gilroy BAAQMD Station @ Glen View Elementary School View West





HOL, Hollister On Roof Of Classroom @ R.O. Hardin K-5 School, Overview Looking South Southeast

07/06/2009



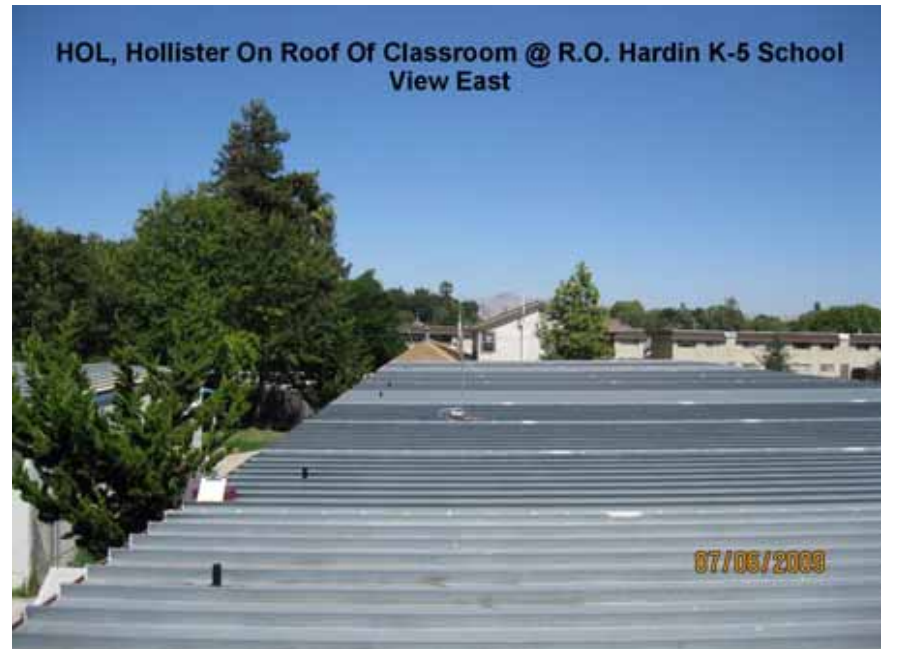
HOL, Hollister On Roof Of Classroom @ R.O. Hardin K-5 School, View South

07/06/2009



HOL, Hollister On Roof Of Classroom @ R.O. Hardin K-5 School View North

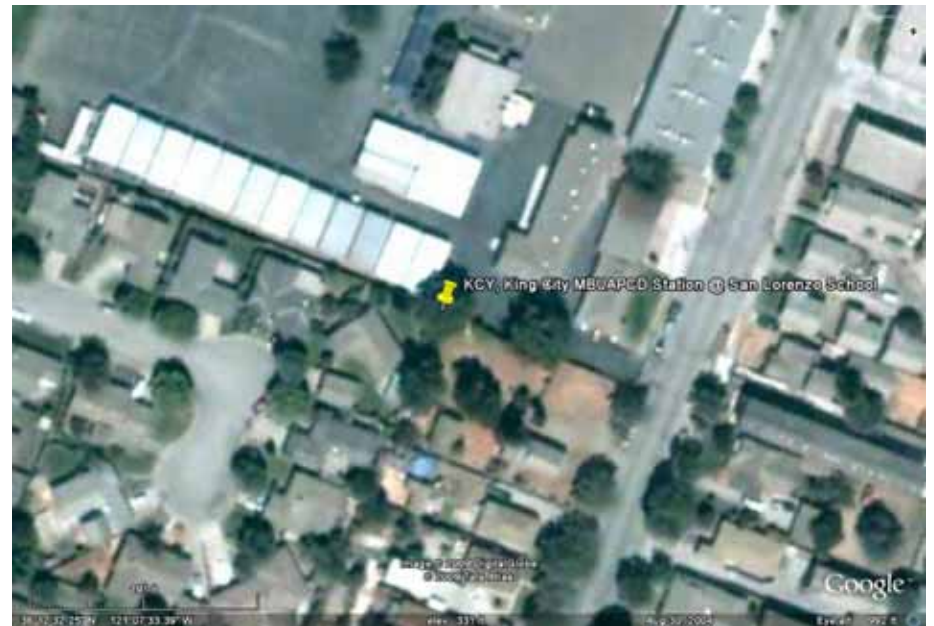
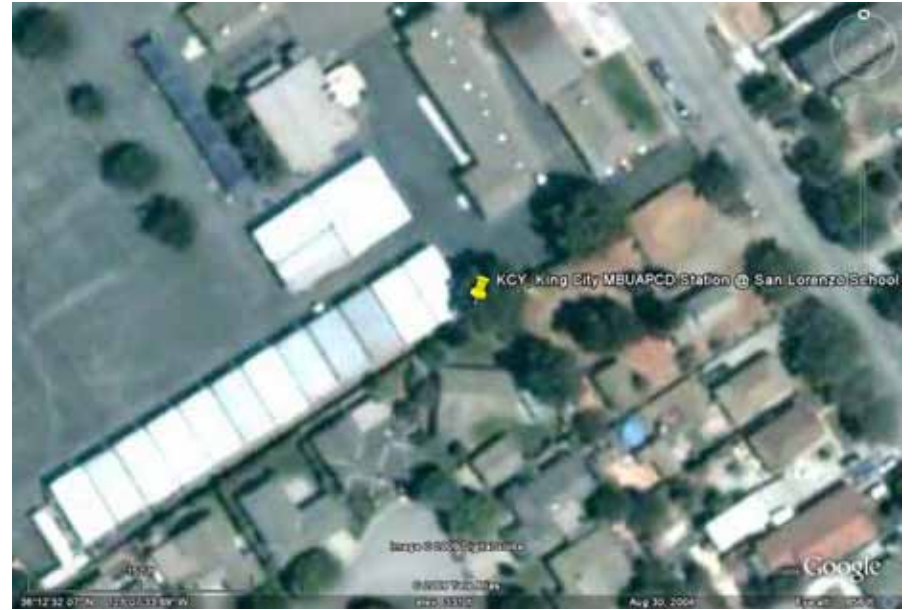
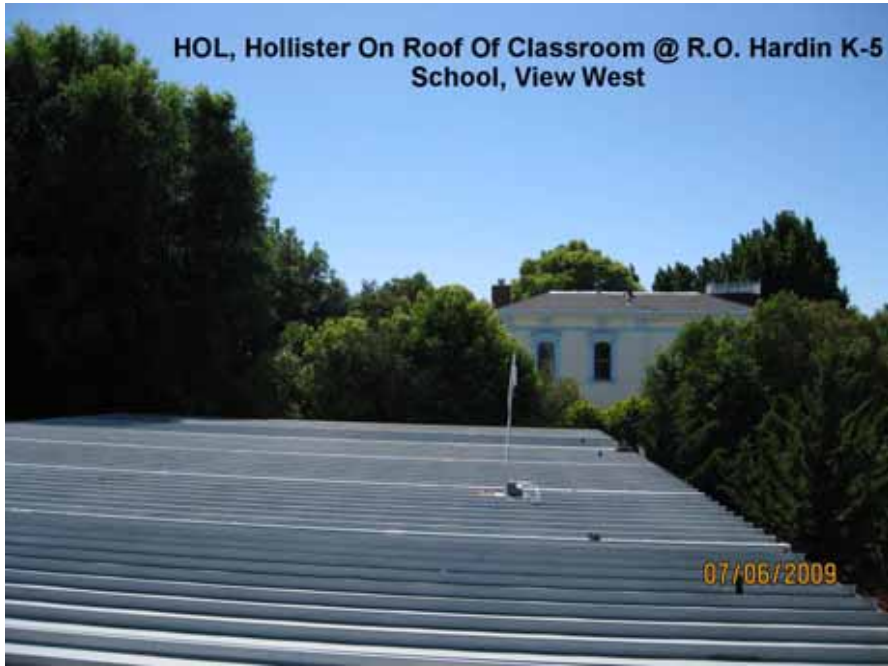
07/06/2009



HOL, Hollister On Roof Of Classroom @ R.O. Hardin K-5 School View East

07/06/2009

HOL, Hollister On Roof Of Classroom @ R.O. Hardin K-5 School, View West







KCY, King City MBUAPCD Station @ San Lorenzo Elementary School  
View South

KCY, King City MBUAPCD Station @ San Lorenzo Elementary School  
View East

KCY, King City MBUAPCD Station @  
San Lorenzo Elementary School,  
View West



KCY, King City MBUAPCD Station @ San Lorenzo Elementary School  
View North Atop Air Monitoring Platform

07/06/2009



KCY, King City MBUAPCD Station @ San Lorenzo Elementary School  
View West From Atop Air Monitoring Platform

07/06/2009



KCY, King City MBUAPCD Station @ San Lorenzo Elementary School  
View North

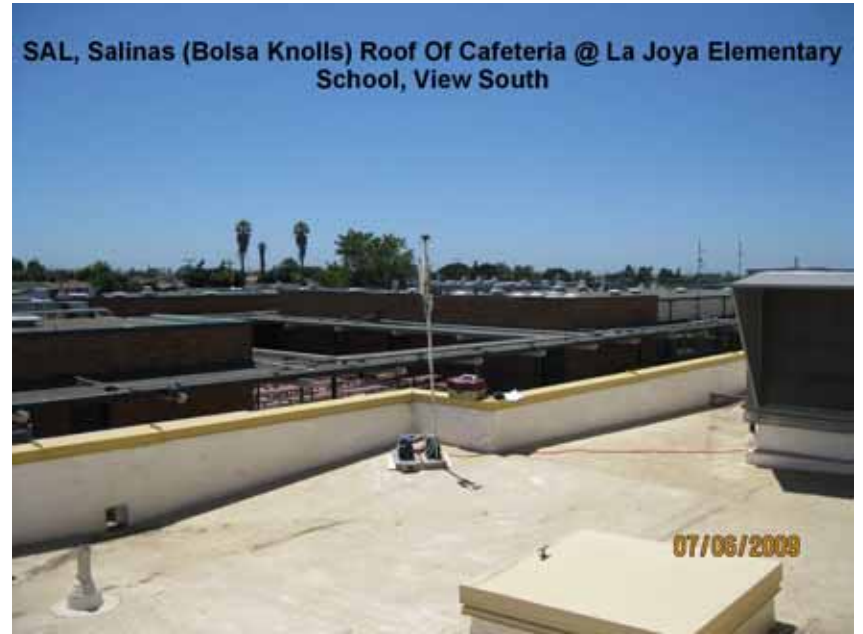
07/06/2009



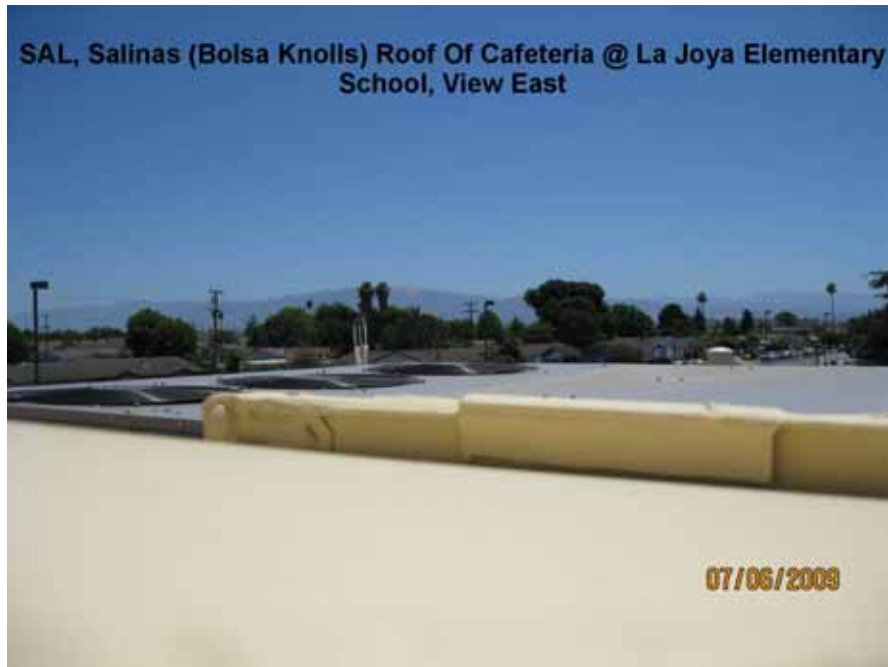
Bohls Knolls  
SAL Salinas Bohls Knolls area La Joya School



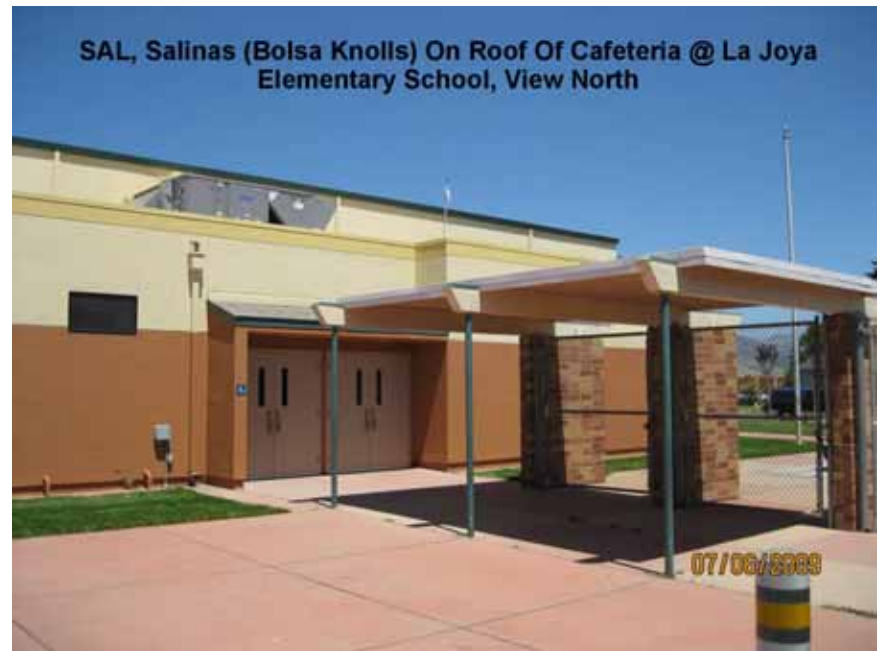
SAL, Salinas (Bolsa Knolls area) La Joya School



SAL, Salinas (Bolsa Knolls) Roof Of Cafeteria @ La Joya Elementary School, View South



SAL, Salinas (Bolsa Knolls) Roof Of Cafeteria @ La Joya Elementary School, View East

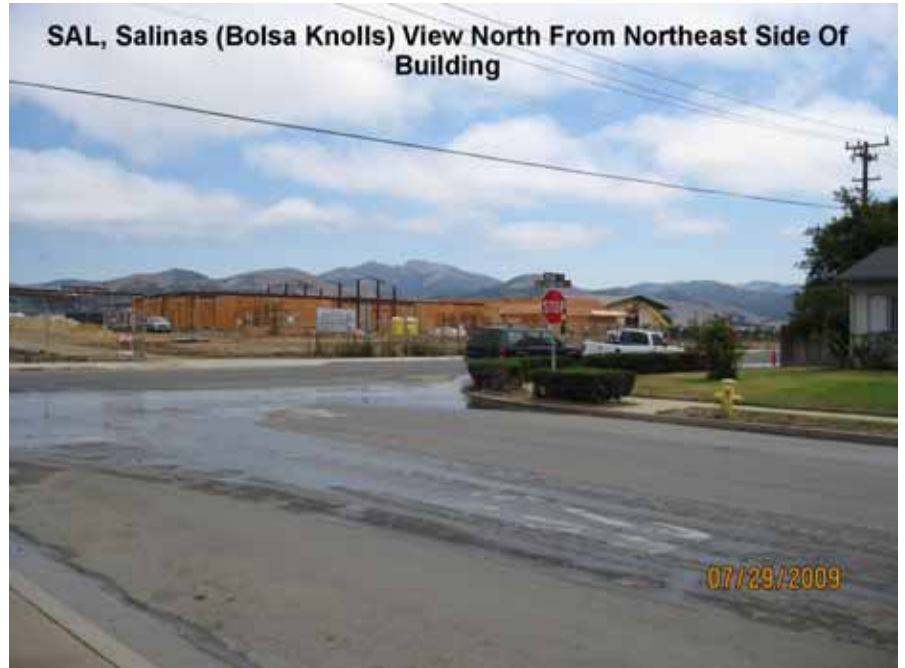


SAL, Salinas (Bolsa Knolls) On Roof Of Cafeteria @ La Joya Elementary School, View North

SAL, Salinas (Bolsa Knolls) View Northwest  
Taken From NE Side of Building

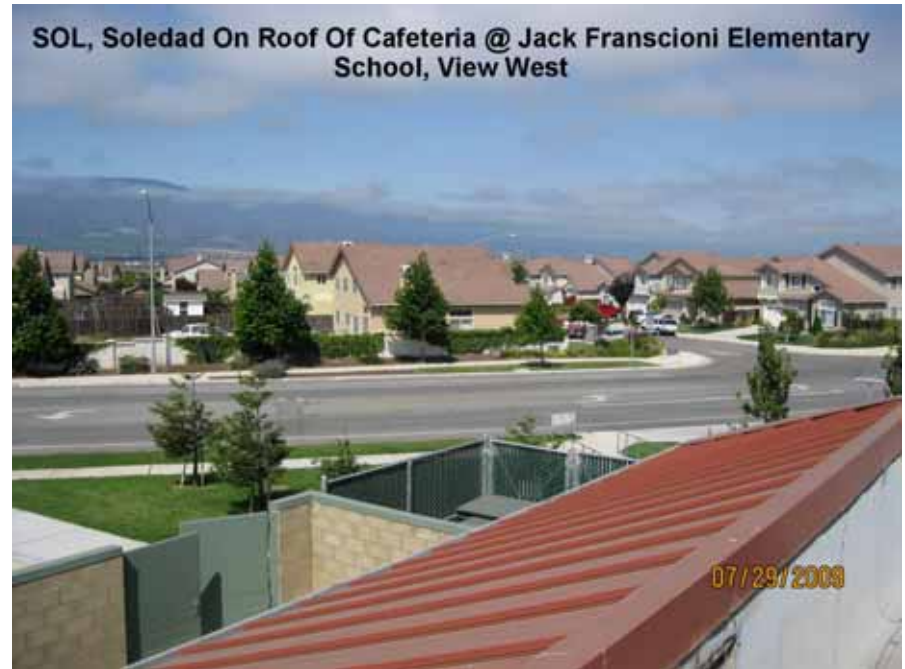
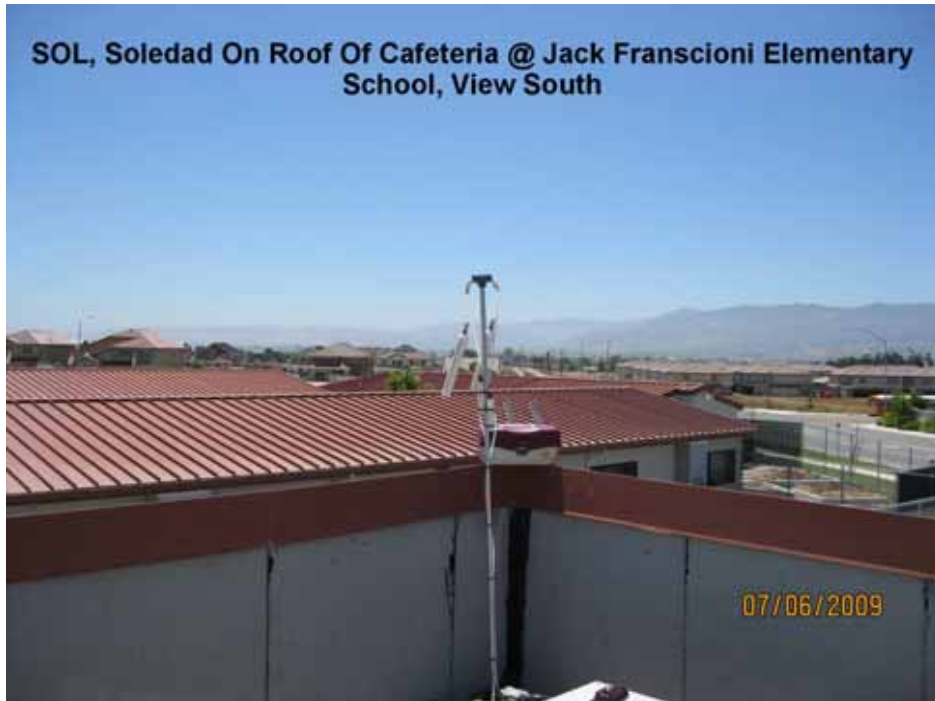
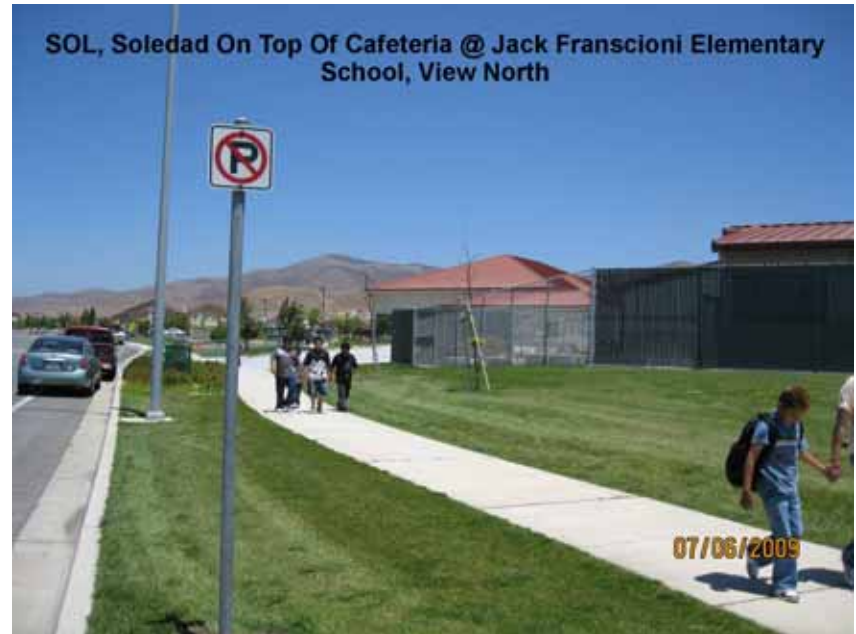


SAL, Salinas (Bolsa Knolls) View North From Northeast Side Of  
Building

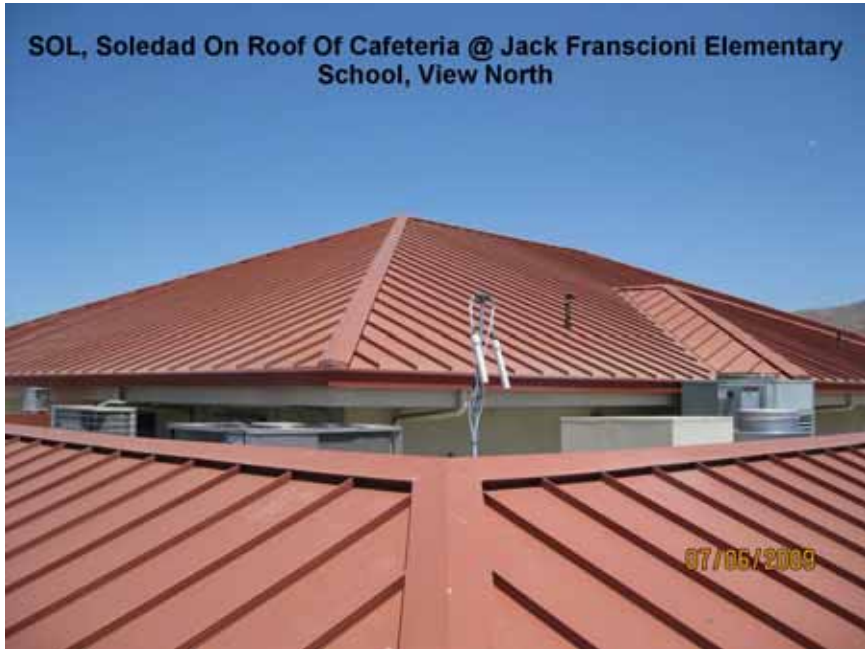


SAL, Salinas (Bolsa Knolls) Roof Of Cafeteria @ La Joya Elementary  
School, View West

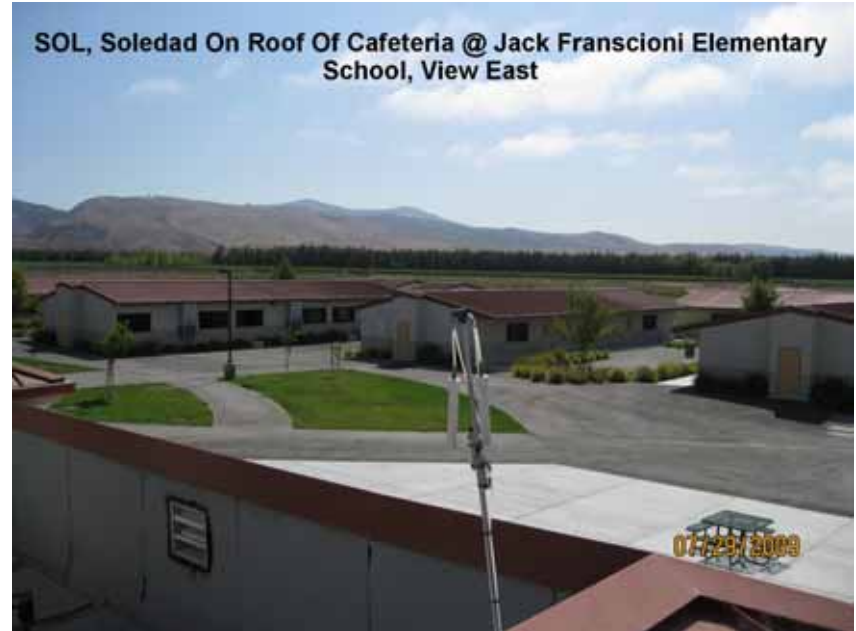




SOL, Soledad On Roof Of Cafeteria @ Jack Franscioni Elementary School, View North



SOL, Soledad On Roof Of Cafeteria @ Jack Franscioni Elementary School, View East



## **APPENDIX C**

### **Lab Report: Propyzamide Method Development and Results Report**

California Environmental Protection Agency

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 **Air Resources Board**

**Propyzamide Method Development and Analytical Results for Ambient Air  
Monitoring Samples in Monterey, Santa Clara, and San Benito Counties**

**DATE: October 30, 2009**

**Prepared by  
T.E. Houston, PhD  
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**Special Analysis Section  
Northern Laboratory Branch  
Monitoring and Laboratory Division**

**Reviewed and Approved by**

**Russell Grace, Manager  
Special Analysis Section**

This report has been reviewed by 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 of commercial products constitute endorsement or recommendation for use.



## Table of Contents

|   |           |
|---|-----------|
| <b>1.0 INTRODUCTION</b> .....   | <b>3</b>  |
| <b>2.0 METHOD DEVELOPMENT</b> .....   | <b>3</b>  |
| 2.1 OVERVIEW .....  | 3         |
| 2.2 INSTRUMENT REPRODUCIBILITY.....   | 3         |
| 2.3 CALIBRATION CURVE .....   | 3         |
| 2.4. MINIMUM DETECTION LIMIT (MDL).....   | 4         |
| 2.5. COLLECTION AND EXTRACTION EFFICIENCY (RECOVERY) .....  | 4         |
| 2.6. STORAGE STABILITY .....  | 4         |
| 2.7. BREAKTHROUGH .....   | 5         |
| <b>3.0 PROPYZAMIDE AMBIENT AIR MONITORING SAMPLE RESULTS</b> .....  | <b>5</b>  |
| <b>4.0 ANALYTICAL QUALITY CONTROL SAMPLES</b> .....   | <b>5</b>  |
| 4.1 SYSTEM BLANKS .....   | 5         |
| 4.2 METHOD BLANKS.....  | 5         |
| 4.3 LABORATORY CONTROL SAMPLE (LCS).....  | 5         |
| 4.4 CONTINUING CALIBRATION VERIFICATION STANDARDS (CCV) .....   | 5         |
| 4.5 LABORATORY DUPLICATES.....  | 6         |
| <b>5.0 FIELD, TRIP, AND LABORATORY SPIKES AND TRIP BLANKS</b> .....   | <b>6</b>  |
| 5.1 FIELD SPIKES .....  | 6         |
| 5.2 TRIP SPIKES AND LABORATORY SPIKES .....   | 6         |
| 5.3 TRIP BLANKS.....  | 6         |
| <b>6.0 DISCUSSION</b> .....   | <b>6</b>  |
| <b>TABLE 1: INSTRUMENT REPRODUCIBILITY</b> .....  | <b>3</b>  |
| <b>TABLE 2: STORAGE STABILITY</b> .....   | <b>4</b>  |
| <b>TABLE 3: PROPYZAMIDE AMBIENT AIR MONITORING RESULTS BY SITE FOR<br/>MONTEREY, SANTA CLARA, AND SAN BENITO COUNTY 2009.</b> ..... | <b>7</b>  |
| <b>TABLE 4: QUALITY CONTROL DATA XAD SPIKES FOR FIELD, TRIP, AND<br/>LABORATORY.</b> .....  | <b>14</b> |
| <b>APPENDIX A:</b> .....  | <b>15</b> |

## 1.0 INTRODUCTION

The Department of Pesticide Regulation (DPR) requested the Air Resources Board (ARB) conduct ambient air monitoring for propyzamide. This report covers the method development, analytical and quality assurance results for propyzamide during an eight-week ambient study in Monterey, Santa Clara, and San Benito Counties in 2009. DPR requested a method estimated quantitation limit (EQL) of 5.0 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). The EQL achieved during this project was  $0.35 \mu\text{g}/\text{m}^3$  based on 24-hour collection at three liters per minute (LPM).

## 2.0 METHOD DEVELOPMENT

### 2.1 Overview

Ambient air samples are collected on XAD-2 sorbent tubes. Sampled tubes are stored at four (4) degrees centigrade ( $^{\circ}\text{C}$ ) or lower prior to extraction. Sample tubes are extracted using pesticide grade ethyl acetate. Sample analysis is performed using a gas chromatograph/electron capture detector. Analysis and quantitation uses external standard method for instrument calibration. Estimated quantitation level for this method is  $0.35 \mu\text{g}/\text{m}^3$  prior to any sample dilution for sampling at three LPM and a three milliliter (ml) extraction volume.

### 2.2 Instrument Reproducibility

Five individual injections of 1.0 microliters ( $\mu\text{l}$ ) each were made of propyzamide at three concentrations (low, medium, and high) in order to establish the reproducibility of the instrument. Table 1 summarizes the results for the three levels with the average and standard deviation.

**Table 1: Instrument reproducibility**

|                             | Low   | Medium | High  |
|-----------------------------|-------|--------|-------|
| Average                     | 0.490 | 2.957  | 5.148 |
| Standard Deviation          | 0.003 | 0.074  | 0.273 |
| Relative Standard Deviation | 0.547 | 2.490  | 5.300 |

### 2.3 Calibration Curve

Laboratory staff used standard concentrations of 0.5, 1.0, 2.0, 3.0 and 5.0  $\mu\text{g}/\text{ml}$  for a five-point calibration curve. All calibration curves performed have an  $r^2$  (variance) greater than or equal to 0.995. External calibration was run for each sample set and was linear in this range.

#### 2.4. Minimum Detection Limit (MDL)

The MDL calculation follows the United States Environmental Protection Agency (USEPA) procedures for calculating MDL's. Using the analysis of seven low-level matrix spikes (0.5 µg/ml), the MDL and EQL for a three-ml extract is calculated as follows:

*s* = the standard deviation of the concentration calculated for the seven replicate spikes.  
For propyzamide:  $s = 0.006 \mu\text{g/ml}$   
 $MDL = (3.14) \times (s) = (3.14) \times (0.006) = 0.018 \mu\text{g/ml}$   
 $MDL \text{ for total } \mu\text{g/sample} = 0.057 \mu\text{g/sample}^*$   
 $EQL = (5) \times (MDL) = (5) \times (0.018) = 0.089 \mu\text{g/ml}$   
 $EQL \text{ for total } \mu\text{g/sample} = 0.267 \mu\text{g/sample}^*$

\* assuming a three-ml final extract volume

Based on a total collection volume of 4.32 m<sup>3</sup> the EQL would be 0.06 µg/m<sup>3</sup>. While a lower EQL is theoretically possible based on the above results, the low standard of the calibration (0.5 µg/ml) will be used corresponding to an EQL of 0.35 µg/m<sup>3</sup>. Staff report results above the EQL to two significant figures. Results below the EQL but greater than or equal to the MDL are reported to one significant figure. Results less than MDL are reported as the calculated MDL to one significant figure.

#### 2.5. Collection and Extraction Efficiency (Recovery)

Spiked XAD tubes were used to determine method field recovery. The tubes were spiked with 1.5 µg and 15 µg of propyzamide standard. A spiked tube was placed on a field sampler and sampled at approximately three LPM for 24 hours at ambient temperature. The recoveries for propyzamide were 98% at 0.5 µg and 93% at 5 µg.

#### 2.6. Storage Stability

Laboratory staff completed a storage stability study which ran for 21 days with XAD tubes being tested at 0, 7, 14, and 21 days. Table 2 summarizes the results of the storage stability test. Laboratory staff analyzed all field samples within 14 days of collection.

**Table 2: Storage stability**

| Day | Average low % Recovery | Average high % Recovery |
|-----|------------------------|-------------------------|
| 0   | 96.9                   | 94.8                    |
| 7   | 100.6                  | 91.2                    |
| 14  | 106.3                  | 89.4                    |
| 21  | 102.7                  | 88.4                    |

## 2.7. Breakthrough

Propyzamide was spiked at 10 µg/ml and placed on sampler. Recovery was 87% and 92%, with no detection in the back section of the tubes.

## 3.0 PROPYZAMIDE AMBIENT AIR MONITORING SAMPLE RESULTS

The laboratory received a total of 211 ambient samples including seven field spikes, four trip spikes, and eight trip blanks. There was no propyzamide detected in any of the samples submitted. Table 3 presents the results of the analysis by site.

## 4.0 ANALYTICAL QUALITY CONTROL SAMPLES

### 4.1 System Blanks

Laboratory staff analyzes a system blank with each analytical batch, before the calibration, after the control and check samples, and after every tenth sample, and after samples containing high levels of propyzamide or co-extracted contaminants. Staff defines the analytical batch as all the samples extracted together, but not to exceed 20 samples. The system blank is run to insure the solvent and instrument do not contribute interferences to the analysis, and to minimize carryover from high level samples. All system blanks were less than the MDL.

### 4.2 Method Blanks

Laboratory staff analyzed a method blank with each analytical batch. This is an XAD tube prepared and analyzed as described for the ambient samples. All method blanks were less than the MDL.

### 4.3 Laboratory Control Sample (LCS)

Laboratory staff analyzed a LCS with each analytical batch. The LCS is an XAD tube spiked with 3.0 µg/sample of propyzamide. The LCS is extracted and analyzed as described for the samples. The LCS recoveries averaged 88% with a standard deviation of 4.9%.

### 4.4 Continuing Calibration Verification Standards (CCV)

Following standard lab procedures, laboratory staff analyzed a CCV after every calibration curve, after every tenth sample and at the end of an analytical batch. The CCV must be within  $\pm 25\%$  of the expected value. If any of the CCVs are outside this limit, the affected samples are re-analyzed. The CCV standard for each analytical batch is 1.0 µg/ml.

#### 4.5 *Laboratory Duplicates*

Laboratory duplicate was a replicate of one of the extracted samples for a given analytical batch.

### **5.0 FIELD, TRIP, AND LABORATORY SPIKES AND TRIP BLANKS**

Seven field spikes, four trip spikes, eight trip banks, and four laboratory spikes were analyzed. Laboratory staff prepared the spikes at 3.0 µg of propyzamide per sample. Table 4 presents the results for the quality control data.

#### 5.1 *Field Spikes*

The average propyzamide recovery was 91.7% with a standard deviation of 4.8%. Values ranged 2.58-2.91 µg/sample. Field spike sampling was at the Chualar or Gilroy monitoring sites.

#### 5.2 *Trip Spikes and Laboratory Spikes*

The trip spikes recoveries averaged 88% with a standard deviation of 15%. The values ranged 1.94-2.94 µg/sample. The low value in one of the trips may be a result of a poor spike. The laboratory spikes recoveries averaged 91% with a standard deviation of 12%. Values ranged 2.21-3.01 µg/sample.

#### 5.3 *Trip Blanks*

There were eight trip blanks, one designated per week for analysis. No propyzamide was detected in any of the samples.

### **6.0 DISCUSSION**

The Laboratory received 211 field samples, including seven field spikes, four trip spikes, and eight trip blanks. Four laboratory spikes were prepared and held at the laboratory at the same time the field/trip spikes were prepared and sent. There was no propyzamide detected in any of the field samples at an EQL over ten times lower than that requested. Recovery of the field spikes was as expected for the amounts and all the quality control samples were in established parameters.

**Table 3: Propyzamide Ambient Air Monitoring Results by Site for Monterey, Santa Clara, and San Benito Counties 2009.**

| Site      | No      | Client ID | Date Analyzed | ug/ml | ug/sample |
|-----------|---------|-----------|---------------|-------|-----------|
| King City | 1       | KCY1      | 7/6/2009      | ND    | ND        |
|           | 8       | KCY2      | 7/7/2009      | ND    | ND        |
|           | 9       | KCY2-C    | 7/7/2009      | ND    | ND        |
|           | 22      | KCY3      | 7/13/2009     | ND    | ND        |
|           | 31      | KCY4      | 7/14/2009     | ND    | ND        |
|           | 32      | KCY4-C    | 7/14/2009     | ND    | ND        |
|           | 42      | KCY5      | 7/15/2009     | ND    | ND        |
|           | 49      | KCY6      | 7/20/2009     | ND    | ND        |
|           | 50      | KCY6-C    | 7/20/2009     | ND    | ND        |
|           | 60      | KCY7      | 7/21/2009     | ND    | ND        |
|           | 66      | KCY8      | 7/21/2009     | ND    | ND        |
|           | 72      | KCY9      | 7/27/2009     | ND    | ND        |
|           | 78      | KCY10     | 7/27/2009     | ND    | ND        |
|           | 79      | KCY10-C   | 7/27/2009     | ND    | ND        |
|           | 91      | KCY11     | 7/29/2009     | ND    | ND        |
|           | 102     | KCY12     | 8/3/2009      | ND    | ND        |
|           | 103     | KCY12-C   | 8/3/2009      | ND    | ND        |
|           | 113     | KCY13     | 8/4/2009      | ND    | ND        |
|           | 119     | KCY14     | 8/4/2009      | ND    | ND        |
|           | 126     | KCY15     | 8/5/2009      | ND    | ND        |
|           | 133     | KCY16     | 8/10/2009     | ND    | ND        |
|           | 134     | KCY16-C   | 8/10/2009     | ND    | ND        |
|           | 147     | KCY17     | 8/11/2009     | ND    | ND        |
|           | 154     | KCY18     | 8/11/2009     | ND    | ND        |
| 161       | KCY19   | 8/17/2009 | ND            | ND    |           |
| 162       | KCY19-C | 8/17/2009 | ND            | ND    |           |
| 172       | KCY20   | 8/18/2009 | ND            | ND    |           |
| 178       | KCY21   | 8/18/2009 | ND            | ND    |           |
| 186       | KCY22   | 8/24/2009 | ND            | ND    |           |
| 197       | KCY23   | 8/25/2009 | ND            | ND    |           |
| 198       | KCY23-C | 8/25/2009 | ND            | ND    |           |
| 207       | KCY24   | 8/25/2009 | ND            | ND    |           |

| Site    | No      | Client ID | Date Analyzed | ug/ml | ug/sample |
|---------|---------|-----------|---------------|-------|-----------|
| Soledad | 2       | SOL1      | 7/6/2009      | ND    | ND        |
|         | 10      | SOL2      | 7/7/2009      | ND    | ND        |
|         | 11      | SOL2-C    | 7/7/2009      | ND    | ND        |
|         | 23      | SOL3      | 7/13/2009     | ND    | ND        |
|         | 33      | SOL4      | 7/14/2009     | ND    | ND        |
|         | 34      | SOL4-C    | 7/14/2009     | ND    | ND        |
|         | 43      | SOL5      | 7/15/2009     | ND    | ND        |
|         | 51      | SOL6      | 7/20/2009     | ND    | ND        |
|         | 52      | SOL6-C    | 7/20/2009     | ND    | ND        |
|         | 61      | SOL7      | 7/21/2009     | ND    | ND        |
|         | 67      | SOL8      | 7/21/2009     | ND    | ND        |
|         | 73      | SOL9      | 7/27/2009     | ND    | ND        |
|         | 80      | SOL10     | 7/27/2009     | ND    | ND        |
|         | 81      | SOL10-C   | 7/27/2009     | ND    | ND        |
|         | 92      | SOL11     | 7/29/2009     | ND    | ND        |
|         | 104     | SOL12     | 8/3/2009      | ND    | ND        |
|         | 105     | SOL12-C   | 8/3/2009      | ND    | ND        |
|         | 114     | SOL13     | 8/4/2009      | ND    | ND        |
|         | 120     | SOL14     | 8/4/2009      | ND    | ND        |
|         | 127     | SOL15     | 8/5/2009      | ND    | ND        |
|         | 135     | SOL16     | 8/10/2009     | ND    | ND        |
|         | 136     | SOL16-C   | 8/10/2009     | ND    | ND        |
|         | 148     | SOL17     | 8/11/2009     | ND    | ND        |
|         | 155     | SOL18     | 8/11/2009     | ND    | ND        |
| 163     | SOL19   | 8/17/2009 | ND            | ND    |           |
| 164     | SOL19-C | 8/17/2009 | ND            | ND    |           |
| 173     | SOL20   | 8/18/2009 | ND            | ND    |           |
| 179     | SOL21   | 8/18/2009 | ND            | ND    |           |
| 187     | SOL22   | 8/24/2009 | ND            | ND    |           |
| 199     | SOL23   | 8/25/2009 | ND            | ND    |           |
| 200     | SOL23-C | 8/25/2009 | ND            | ND    |           |
| 208     | SOL24   | 8/25/2009 | ND            | ND    |           |

| Site    | No      | Client ID | Date Analyzed | ug/ml | ug/sample |
|---------|---------|-----------|---------------|-------|-----------|
| Chualar | 3       | CHU1      | 7/6/2009      | ND    | ND        |
|         | 12      | CHU2      | 7/7/2009      | ND    | ND        |
|         | 13      | CHU2-C    | 7/7/2009      | ND    | ND        |
|         | 24      | CHU3      | 7/13/2009     | ND    | ND        |
|         | 35      | CHU4      | 7/14/2009     | ND    | ND        |
|         | 36      | CHU4-C    | 7/14/2009     | ND    | ND        |
|         | 44      | CHU5      | 7/15/2009     | ND    | ND        |
|         | 53      | CHU6      | 7/20/2009     | ND    | ND        |
|         | 54      | CHU6-C    | 7/20/2009     | ND    | ND        |
|         | 62      | CHU7      | 7/21/2009     | ND    | ND        |
|         | 68      | CHU8      | 7/21/2009     | ND    | ND        |
|         | 74      | CHU9      | 7/27/2009     | ND    | ND        |
|         | 82      | CHU10     | 7/28/2009     | ND    | ND        |
|         | 83      | CHU10-C   | 7/28/2009     | ND    | ND        |
|         | 93      | CHU11     | 7/29/2009     | ND    | ND        |
|         | 106     | CHU12     | 8/3/2009      | ND    | ND        |
|         | 107     | CHU12-C   | 8/3/2009      | ND    | ND        |
|         | 115     | CHU13     | 8/4/2009      | ND    | ND        |
|         | 121     | CHU14     | 8/5/2009      | ND    | ND        |
|         | 128     | CHU15     | 8/5/2009      | ND    | ND        |
|         | 137     | CHU16     | 8/10/2009     | ND    | ND        |
|         | 149     | CHU17     | 8/11/2009     | ND    | ND        |
|         | 150     | CHU17-C   | 8/11/2009     | ND    | ND        |
|         | 156     | CHU18     | 8/11/2009     | ND    | ND        |
| 165     | CHU19   | 8/17/2009 | ND            | ND    |           |
| 166     | CHU19-C | 8/17/2009 | ND            | ND    |           |
| 174     | CHU20   | 8/18/2009 | ND            | ND    |           |
| 180     | CHU21   | 8/18/2009 | ND            | ND    |           |
| 188     | CHU22   | 8/24/2009 | ND            | ND    |           |
| 201     | CHU23   | 8/25/2009 | ND            | ND    |           |
| 202     | CHU23-C | 8/25/2009 | ND            | ND    |           |
| 209     | CHU24   | 8/25/2009 | ND            | ND    |           |



| Site    | No      | Client ID | Date Analyzed | ug/ml | ug/sample |
|---------|---------|-----------|---------------|-------|-----------|
| Salinas | 4       | SAL1      | 7/6/2009      | ND    | ND        |
|         | 14      | SAL2      | 7/7/2009      | ND    | ND        |
|         | 15      | SAL2-C    | 7/7/2009      | ND    | ND        |
|         | 25      | SAL3      | 7/13/2009     | ND    | ND        |
|         | 37      | SAL4      | 7/14/2009     | ND    | ND        |
|         | 38      | SAL4-C    | 7/15/2009     | ND    | ND        |
|         | 45      | SAL5      | 7/15/2009     | ND    | ND        |
|         | 55      | SAL6      | 7/20/2009     | ND    | ND        |
|         | 56      | SAL6-C    | 7/20/2009     | ND    | ND        |
|         | 63      | SAL7      | 7/21/2009     | ND    | ND        |
|         | 69      | SAL8      | 7/21/2009     | ND    | ND        |
|         | 75      | SAL9      | 7/27/2009     | ND    | ND        |
|         | 84      | SAL10     | 7/28/2009     | ND    | ND        |
|         | 85      | SAL10-C   | 7/28/2009     | ND    | ND        |
|         | 95      | SAL11     | 7/29/2009     | ND    | ND        |
|         | 108     | SAL12     | 8/3/2009      | ND    | ND        |
|         | 109     | SAL12-C   | 8/3/2009      | ND    | ND        |
|         | 116     | SAL13     | 8/4/2009      | ND    | ND        |
|         | 122     | SAL14     | 8/5/2009      | ND    | ND        |
|         | 129     | SAL15     | 8/5/2009      | ND    | ND        |
|         | 139     | SAL16     | 8/10/2009     | ND    | ND        |
|         | 140     | SAL16-C   | 8/10/2009     | ND    | ND        |
|         | 151     | SAL17     | 8/11/2009     | ND    | ND        |
|         | 157     | SAL18     | 8/11/2009     | ND    | ND        |
| 167     | SAL19   | 8/17/2009 | ND            | ND    |           |
| 168     | SAL19-C | 8/17/2009 | ND            | ND    |           |
| 175     | SAL20   | 8/18/2009 | ND            | ND    |           |
| 181     | SAL21   | 8/18/2009 | ND            | ND    |           |
| 190     | SAL22   | 8/24/2009 | ND            | ND    |           |
| 191     | SAL22-C | 8/24/2009 | ND            | ND    |           |
| 203     | SAL23   | 8/25/2009 | ND            | ND    |           |
| 210     | SAL24   | 8/25/2009 | ND            | ND    |           |

| Site      | No      | Client ID | Date Analyzed | ug/ml | ug/sample |
|-----------|---------|-----------|---------------|-------|-----------|
| Hollister | 5       | HOL1      | 7/6/2009      | ND    | ND        |
|           | 6       | HOL1-C    | 7/6/2009      | ND    | ND        |
|           | 16      | HOL2      | 7/7/2009      | ND    | ND        |
|           | 26      | HOL3      | 7/13/2009     | ND    | ND        |
|           | 39      | HOL4      | 7/15/2009     | ND    | ND        |
|           | 40      | HOL4-C    | 7/15/2009     | ND    | ND        |
|           | 46      | HOL5      | 7/15/2009     | ND    | ND        |
|           | 57      | HOL6      | 7/20/2009     | ND    | ND        |
|           | 58      | HOL6-C    | 7/20/2009     | ND    | ND        |
|           | 64      | HOL7      | 7/21/2009     | ND    | ND        |
|           | 70      | HOL8      | 7/21/2009     | ND    | ND        |
|           | 76      | HOL9      | 7/27/2009     | ND    | ND        |
|           | 86      | HOL10     | 7/28/2009     | ND    | ND        |
|           | 87      | HOL10-C   | 7/28/2009     | ND    | ND        |
|           | 96      | HOL11     | 7/29/2009     | ND    | ND        |
|           | 110     | HOL12     | 8/3/2009      | ND    | ND        |
|           | 111     | HOL12-C   | 8/3/2009      | ND    | ND        |
|           | 117     | HOL13     | 8/4/2009      | ND    | ND        |
|           | 123     | HOL14     | 8/5/2009      | ND    | ND        |
|           | 130     | HOL15     | 8/5/2009      | ND    | ND        |
|           | 141     | HOL16     | 8/10/2009     | ND    | ND        |
|           | 142     | HOL16-C   | 8/10/2009     | ND    | ND        |
|           | 152     | HOL17     | 8/11/2009     | ND    | ND        |
|           | 158     | HOL18     | 8/11/2009     | ND    | ND        |
| 169       | HOL19   | 8/17/2009 | ND            | ND    |           |
| 170       | HOL19-C | 8/17/2009 | ND            | ND    |           |
| 176       | HOL20   | 8/18/2009 | ND            | ND    |           |
| 182       | HOL21   | 8/18/2009 | ND            | ND    |           |
| 192       | HOL22   | 8/24/2009 | ND            | ND    |           |
| 193       | HOL22-C | 8/24/2009 | ND            | ND    |           |
| 204       | HOL23   | 8/25/2009 | ND            | ND    |           |
| 211       | HOL24   | 8/25/2009 | ND            | ND    |           |

| Site   | No      | Client ID | Date Analyzed | ug/ml | ug/sample |
|--------|---------|-----------|---------------|-------|-----------|
| Gilroy | 7       | GIL1      | 7/6/2009      | ND    | ND        |
|        | 17      | GIL2      | 7/7/2009      | ND    | ND        |
|        | 18      | GIL2-C    | 7/7/2009      | ND    | ND        |
|        | 20      | GIL3      | 7/13/2009     | ND    | ND        |
|        | 29      | GIL4      | 7/14/2009     | ND    | ND        |
|        | 30      | GIL4-C    | 7/14/2009     | ND    | ND        |
|        | 41      | GIL5      | 7/15/2009     | ND    | ND        |
|        | 47      | GIL6      | 7/20/2009     | ND    | ND        |
|        | 48      | GIL6-C    | 7/20/2009     | ND    | ND        |
|        | 59      | GIL7      | 7/21/2009     | ND    | ND        |
|        | 65      | GIL8      | 7/21/2009     | ND    | ND        |
|        | 77      | GIL9      | 7/27/2009     | ND    | ND        |
|        | 88      | GIL10     | 7/28/2009     | ND    | ND        |
|        | 89      | GIL10-C   | 7/28/2009     | ND    | ND        |
|        | 97      | GIL11     | 7/29/2009     | ND    | ND        |
|        | 100     | GIL12     | 8/3/2009      | ND    | ND        |
|        | 101     | GIL12-C   | 8/3/2009      | ND    | ND        |
|        | 112     | GIL13     | 8/4/2009      | ND    | ND        |
|        | 118     | GIL14     | 8/4/2009      | ND    | ND        |
|        | 125     | GIL15     | 8/5/2009      | ND    | ND        |
|        | 131     | GIL16     | 8/10/2009     | ND    | ND        |
|        | 145     | GIL17     | 8/11/2009     | ND    | ND        |
|        | 146     | GIL17-C   | 8/11/2009     | ND    | ND        |
|        | 153     | GIL18     | 8/11/2009     | ND    | ND        |
| 159    | GIL19   | 8/17/2009 | ND            | ND    |           |
| 160    | GIL19-C | 8/17/2009 | ND            | ND    |           |
| 171    | GIL20   | 8/18/2009 | ND            | ND    |           |
| 177    | GIL21   | 8/18/2009 | ND            | ND    |           |
| 184    | GIL22   | 8/24/2009 | ND            | ND    |           |
| 195    | GIL23   | 8/25/2009 | ND            | ND    |           |
| 196    | GIL23-C | 8/25/2009 | ND            | ND    |           |
| 206    | GIL24   | 8/25/2009 | ND            | ND    |           |

**Table 3 Notes: Ambient Monitoring Results for Monterey, Santa Clara, and San Benito Counties 2009.**

Site location identification:

|     |           |  |
|-----|-----------|--|
| KCY | King City | King City Monitoring Station Monterey Bay Unified APCD       |
| SOL | Soledad   | Kjack Franscioni Elementary School                           |
| CHU | Chualar   | Salina Rural Fire District                                   |
| SAL | Salinas   | Santa Rita School District                                   |
| HOL | Hollister | R O Hardin K-5 School (San Benito County)                    |
| GIL | Gilroy    | Gilroy Monitoring Station Bay Area AQMD (Santa Clara County) |

Sample ID numbers followed by the letters C are collocated samples.

**Table 4: Quality Control Data XAD Spikes for Field, Trip, and Laboratory.**

|             | <b>Analysis Date</b> | <b>Lab ID</b> | <b>Client ID</b> | <b>ug/sample</b> |
|-------------|----------------------|---------------|------------------|------------------|
| Field Spike | Jul 13               | 21            | GIL3-FS          | 2.839            |
|             | Jul 29               | 94            | CHU11-FS         | 2.613            |
|             | Jul 29               | 98            | GIL11-FS         | 2.914            |
|             | Aug 10               | 132           | GIL16-FS         | 2.815            |
|             | Aug 10               | 138           | CHU16-FS         | 2.621            |
|             | Aug 24               | 185           | GIL22-FS         | 2.581            |
|             | Aug 24               | 189           | CHU22-FS         | 2.888            |
|             | Trip Spike           | Jul 12        | 28               | TS-1             |
| Jul 29      |                      | 99            | TS-2             | 1.944            |
| Aug 10      |                      | 143           | TS-3             | 2.936            |
| Aug 24      |                      | 205           | TS-4             | 2.843            |
| Laboratory  | Jul 13               | --            | Lab Spike#1      | 2.765            |
|             | Jul 29               | --            | Lab Spike#2      | 3.008            |
|             | Aug 10               | --            | Lab Spike#3      | 2.901            |
|             | Aug 24               | --            | Lab Spike #4     | 2.209            |

Notes:  
All spikes were at 3.0 µg/sample.

**Appendix A:**  
**Standard Operating Procedure for Propyzamide**

California Environmental Protection Agency

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# Air Resources Board

**Standard Operating Procedure  
Sampling and Analysis of Propyzamide**

**Special Analysis Section  
Northern Laboratory Branch  
Monitoring and Laboratory Division**

**June 2009**

**Version 1**

**Approved by:**

**Russell Grace, Manager  
Special Analysis Section**

## 1. SCOPE

This is a gas chromatography/electron capture detector (GC/ECD) method for the determination of propyzamide in ambient and application air sampling.

## 2. SUMMARY OF METHOD

Ambient and application air samples are collected on XAD-2 sorbent tubes. Sampled tubes are stored at four (4) degrees centigrade (°C) or lower prior to extraction. Sample tubes are extracted using pesticide grade ethyl acetate. Sample analysis is performed using a GC/ECD. Sample analysis and quantitation uses external standard method for instrument calibration. Estimated quantitation level (EQL) for this method is approximately 5.0 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) prior to any sample dilution.

## 3. INTERFERENCES / LIMITATIONS

Method interference may be caused by contaminants in solvents, reagents, glassware and the XAD-2 tubes that can lead to discrete artifacts or elevated baselines. Analysis of samples containing high concentrations of early eluting components may cause significant contamination of the analytical equipment. Both a system blank and method blank must be analyzed with each batch of samples to detect any possible method or instrument interference.

## 4. EQUIPMENT AND CONDITIONS

### A. Instrumentation

- Agilent Technologies 7890 Series gas chromatograph with Agilent Model 7683B injector.
- Column: Agilent HP-5, 30 meter, 0.32mm I.D., 0.25 micron film thickness, with helium as carrier gas at constant flow and nitrogen as the makeup gas at 25 ml/min.
- GC temperature program: initial 100° C, initial time 2 minutes, to 260° C @ 12° C/min, hold 2 minutes.
- Inlet temperature 260° C; splitless.
- Detector temperature 325° C.

### B. Auxiliary Apparatus

- XAD-2 tubes (400/200 mg) (SKC cat # 226-30-6) or equivalent
- Glass amber vials, 2-ml capacity with septum caps.



## C. Reagents

- Ethyl Acetate(EtAc) (B&J brand HPLC grade or equivalent)
- Propyzamide 98.1%, Chem Services PS-349

## 5. SAMPLE COLLECTION

- a) Samples are collected in the field with a maximum flow rate of three (3) liters per minute (lpm).
- b) After collection the samples are placed in a glass tube and stored in a cooler at 4° C or less until returned to the laboratory.
- c) Samples are stored at 4° C or less until ready for analysis.

## 6. SAMPLE EXTRACTON

- a) Prepare a method blank and laboratory control sample (LCS) tube with every batch of field samples not to exceed twenty (20) samples in an analytical batch. The LCS is spiked with 3 µg of propyzamide before extraction.
- b) Carefully score and break the sample XAD-2 tube just in front of the glass wool plug on the primary section.
- c) Remove the glass wool plug using forceps. Pour the XAD-2 resin from the primary section into an 8 ml glass vial.
- d) Score the tube just in front of the secondary section glass wool. Retain the secondary section for later analysis to check for breakthrough.
- e) Using three (3.0) ml of EtAc carefully rinse the inside of the primary section into the glass vial. Cap securely.
- f) The extracts are allowed to sit at room temperature for 1 hour. The extracts are ready for analysis or if not analyzed are stored in a refrigerator at 4° C.

## 7. ANALYSIS OF SAMPLES

- a) Transfer approximately 0.25 ml of the sample extract into a 1.5-ml autosampler vial equipped with a 0.25 ml insert. Sample extract is now ready for analysis.
- b) A 1-µl injection volume will be used for all analyses.
- c) Perform a calibration curve using concentrations at or near the EQL to approximately 10 times higher. At least five (5) points must be analyzed to establish a calibration curve.

- d) Prepare a sample sequence for the GC/ECD. The sequence should include a system blank and a calibration control standard, for every ten (10) samples analyzed. If this batch of samples includes a method blank and /or LCS, they should be run prior to field samples to verify that QC criteria have been met.
- e) Because of the nature of the XAD-2 tube, extraneous components will be extracted along with the analytes of interest. To minimize excessive carry over of these contaminants from one analysis to the next, a system blank should be run after every ten (10) to twenty (20) samples or more frequently if indicated by sample chromatograms. In no case should a sample contaminant interfere with the peaks of interest. This will be verified by the absence of a peak in the analyte retention time window during the system blank analysis.
- f) Review and edit the quantitation reports as needed.
- g) The samples must be diluted if the analytical results are not within the calibration curve. Every attempt should be made to have the diluted results fall within the upper half of the calibration curve.
- h) The final results will be adjusted by an appropriate dilution factor and reported in µg/ml.
- i) The atmospheric concentration is calculated according to:
 
$$\text{Ambient Sample Conc. } (\mu\text{g}/\text{m}^3) = \frac{\text{Extract Conc. } (\mu\text{g}/\text{ml}) \times 3 \text{ ml}}{\text{Air Volume Sampled } (\text{m}^3)}$$
- j) Given instrument sensitivity and a maximum sample volume of 4.32 m<sup>3</sup> the EQL for this method will be approximately 0.35 µg/m<sup>3</sup>.

## 8. QUALITY ASSURANCE

- a) A system blank must be analyzed with each batch of samples. The system blank is an aliquot of the solvent used to extract the samples. The analyte concentration must be below the method detection limit (MDL) established for the method. A system blank is run at the beginning of the analytical batch, after the calibration curve, or just prior to sample analysis.
- b) A minimum five point calibration will be run with each sample batch.
- c) A calibration control will be run after the calibration, every tenth sample and at the end of the sample batch to verify system linearity. The calibration control values must be within 25% of the actual value.
- d) A method blank will be run with each sample batch. The method blank is a blank solvent that is run through the entire method. The analyte concentration must be below the MDL established for the method.
- e) A LCS will be run with every sample batch. The LCS analyte concentration should fall within the lower half of the calibration curve. The

LCS stock standard should come from a different source or lot than the daily calibration standards. If not available then this should be prepared separately from the calibration curve. The analytical value of the LCS must be within three standard deviations of its historical mean. If the LCS is outside these limits then the samples in the analytical batch must be reanalyzed.

- f) Run specific quality control samples, such as field spikes, trip spikes, and laboratory spikes prior to the field samples. A system blank should be run after the spiked samples to ensure that spiked analyte does not carry over.

## **9. Safety**

This procedure does not address all of the safety concerns associated with chemical analysis. It is the responsibility of the analyst to establish appropriate safety and health practices. For hazard information and guidance refer to the material safety data sheets (MSDS) of any chemicals used in this procedure.

# **APPENDIX D**

## **Propyzamide Ambient Field Log Sheets**

## RESIN SORBENT TUBE FIELD LOG SHEET

Project: Diazinon and Propyzamide Ambient Air Monitoring

Start Flow Set: 3.0 ±0.1lpm    End Flow Criteria: 3.0 lpm ±20%

| Log # | Sample Name | Sampler ID Number | Date & Time  |              | Elapsed Time In<br>Hours:Mins | Counter |        | Elapsed Time In<br>Hours | Mass Flow Meter Display |      | Corrected Average Flow | Comment Number | Weather<br>K,P,C,F&R |      | Initials |      |
|-------|-------------|-------------------|--------------|--------------|-------------------------------|---------|--------|--------------------------|-------------------------|------|------------------------|----------------|----------------------|------|----------|------|
|       |             |                   | Start        | End          |                               | Start   | End    |                          | Start                   | End  |                        |                | Start                | End  | Start    | End  |
| 001   | KCY1        | PS-12A            | 7/1/09 9:30  | 7/2/09 8:50  | 23:20                         | 47.0    | 1442.0 | 23.25                    | 2.98                    | 2.84 | 2.94                   |                | C                    | C    | JR       | JR   |
| 002   | SOL1        | PS11A             | 7/1/09 10:40 | 7/2/09 9:45  | 23:05                         | 57.0    | 1442.0 | 23.08                    | 2.97                    | 3.24 | 3.13                   |                | C                    | C    | JR       | JR   |
| 003   | CHU1        | PS14A             | 7/1/09 11:25 | 7/2/09 10:30 | 23:05                         | 5118.3  | 5141.3 | 23.00                    | 2.98                    | 3.20 | 3.12                   |                | C                    | C    | JR       | JR   |
| 004   | SAL1        | PS03A             | 7/1/09 12:15 | 7/2/09 11:40 | 23:25                         | 3814.8  | 3838.1 | 23.38                    | 2.98                    | 3.23 | 3.13                   |                | C                    | C    | JR       | JR   |
| 005   | HOL1        | PS02A             | 7/1/09 13:30 | 7/2/09 12:40 | 23:10                         | 612.7   | 635.8  | 23.18                    | 2.85                    | 3.25 | 3.08                   |                | C                    | C    | JR       | JR   |
| 006   | HOL1-C      | PS02B             | 7/1/09 13:30 | 7/2/09 12:45 | 23:15                         | 612.7   | 635.9  | 23.21                    | 2.97                    | 3.24 | 3.13                   |                | C                    | C    | JR       | JR   |
| 007   | GIL1        | PS01A             | 7/1/09 14:25 | 7/2/09 13:50 | 23:25                         | 76.6    | 1484.9 | 23.47                    | 2.95                    | 3.54 | 3.27                   |                | C                    | C    | JR       | JR   |
| 008   | KCY2        | PS12A             | 7/2/09 9:00  | 7/3/09 8:17  | 23:17                         | 1451.0  | 2848.5 | 23.29                    | 2.99                    | 3.06 | 3.05                   |                | C                    | C    | JR       | JR   |
| 009   | KCY2-C      | PS12B             | 7/2/09 9:00  | 7/3/09 8:18  | 23:18                         | 1451.0  | 2848.3 | 23.29                    | 2.98                    | 3.00 | 3.02                   |                | C                    | C    | JR       | JR   |
| 010   | SOL2        | PS11A             | 7/2/09 9:50  | 7/3/09 9:08  | 23:18                         | 1448.0  | 2844.5 | 23.28                    | 2.98                    | 2.90 | 2.97                   |                | C                    | C    | JR       | JR   |
| 011   | SOL2-C      | PS11B             | 7/2/09 9:50  | 7/3/09 9:09  | 23:19                         | 1448.0  | 2845.8 | 23.30                    | 2.98                    | 2.97 | 3.00                   |                | C                    | C    | JR       | JR   |
| 012   | CHU2        | PS14A             | 7/2/09 10:35 | 7/3/09 9:49  | 23:14                         | 5141.4  | 5164.6 | 23.20                    | 2.98                    | 2.97 | 3.00                   |                | C                    | C    | JR       | JR   |
| 013   | CHU2-C      | PS14B             | 7/2/09 10:35 | 7/3/09 9:52  | 23:17                         | 5141.4  | 5164.7 | 23.24                    | 2.99                    | 3.00 | 3.02                   |                | C                    | C    | JR       | JR   |
| 014   | SAL-2       | PS03A             | 7/2/09 11:45 | 7/3/09 10:50 | 23:05                         | 3838.3  | 3861.3 | 23.05                    | 2.99                    | 2.98 | 3.01                   |                | C                    | C    | JR       | JR   |
| 015   | SAL2-C      | PS03B             | 7/2/09 11:45 | 7/3/09 10:52 | 23:07                         | 3838.3  | 3861.3 | 23.08                    | 2.98                    | 2.99 | 3.01                   |                | C                    | C    | JR       | JR   |
| 016   | HOL2        | PS02A             | 7/2/09 12:50 | 7/3/09 11:53 | 23:03                         | 636.0   | 659.0  | 23.00                    | 2.99                    | 2.94 | 2.99                   |                | C                    | C    | JR       | JR   |
| 017   | GIL2        | PS01A             | 7/2/09 13:55 | 7/3/09 12:55 | 23:00                         | 1490.0  | 2870.0 | 23.0                     | 2.98                    | 2.94 | 2.99                   |                | C                    | C    | JR       | JR   |
| 018   | GIL2-C      | PS01B             | 7/2/09 13:55 | 7/3/09 12:56 | 23:01                         | 1490.0  | 2870.0 | 23.0                     | 2.98                    | 2.95 | 2.99                   |                | C                    | C    | JR       | JR   |
| 019   | TB1         | N.A.              | 7/3/09 0:00  | N.A.         | #VALUE!                       | N.A.    | N.A.   | #VALUE!                  | N.A.                    | N.A. | #VALUE!                |                | C                    | N.A. | JR       | N.A. |
| 020   | GIL3        | PS01A             | 7/6/09 8:50  | 7/7/09 8:20  | 23:30                         | 2870.0  | 4279.9 | 23.50                    | 2.97                    | 2.92 | 2.97                   |                | K                    | K    | SRR      | SRR  |
| 021   | GIL3-FS1    | PS01B             | 7/6/09 8:50  | 7/7/09 8:20  | 23:30                         | 2870.0  | 4279.9 | 23.50                    | 2.97                    | 2.93 | 2.98                   |                | K                    | K    | SRR      | SRR  |
| 022   | KCY3        | PS12A             | 7/6/09 10:29 | 7/7/09 9:52  | 23:23                         | 2849.7  | 4252.9 | 23.39                    | 2.97                    | 2.93 | 2.98                   | 2              | K                    | K    | SRR      | SRR  |

MFM Used #: 2-5063    Slope: 1.003

Intercept: 0.018

*Italicized counter entries are in minutes instead of hours.*

2. Counter in minutes instead of hours and tenths of an hour.

## RESIN SORBENT TUBE FIELD LOG SHEET

Project: Diazinon and Propyzamide Ambient Air Monitoring

Start Flow Set: 3.0 ±0.1lpm    End Flow Criteria: 3.0 lpm ±20%

| Log # | Sample Name | Sampler ID Number | Date & Time  |              | Elapsed Time In<br>Hours:Minutes | Counter |         | Elapsed Time In<br>Hours | Mass Flow Meter Display |      | Corrected Average Flow | Comment Number | Weather<br>K,P,C,F&R |      | Initials |      |
|-------|-------------|-------------------|--------------|--------------|----------------------------------|---------|---------|--------------------------|-------------------------|------|------------------------|----------------|----------------------|------|----------|------|
|       |             |                   | Start        | End          |                                  | Start   | End     |                          | Start                   | End  |                        |                | Start                | End  | Start    | End  |
| 023   | SOL3        | PS11A             | 7/6/09 11:28 | 7/7/09 10:46 | 23:18                            | 2847.1  | 4244.0  | 23.28                    | 2.97                    | 2.94 | 2.98                   | 3              | K                    | K    | SRR      | SRR  |
| 024   | CHU3        | PS14A             | 7/6/09 12:09 | 7/7/09 11:22 | 23:13                            | 5164.7  | 5187.9  | 23.23                    | 2.97                    | 2.94 | 2.98                   | 4              | K                    | K    | SRR      | SRR  |
| 025   | SAL3        | PS02A             | 7/6/09 13:03 | 7/7/09 12:10 | 23:07                            | 13861.4 | 13884.5 | 23.11                    | 2.97                    | 3.04 | 3.03                   |                | K                    | K    | SRR      | SRR  |
| 026   | HOL3        | PS02A             | 7/6/09 14:06 | 7/7/09 13:06 | 23:00                            | 659.0   | 682.0   | 23.01                    | 2.97                    | 2.94 | 2.98                   |                | K                    | K    | SRR      | SRR  |
| 027   | TB2         | N.A.              | 7/7/09 7:30  | N.A.         | #VALUE!                          | N.A.    | N.A.    | #VALUE!                  | N.A.                    | N.A. | #VALUE!                |                | K                    | N.A. | SRR      | N.A. |
| 028   | TS1         | N.A.              | 7/7/09 7:31  | N.A.         | #VALUE!                          | N.A.    | N.A.    | #VALUE!                  | N.A.                    | N.A. | #VALUE!                |                | K                    | N.A. | SRR      | N.A. |
| 029   | GIL4        | PS01A             | 7/7/09 8:25  | 7/8/09 7:25  | 23:00                            | 576.9   | 599.9   | 22.99                    | 2.98                    | 3.00 | 3.02                   | 1              | K                    | F    | SRR      | SRR  |
| 030   | GIL4-C      | PS01B             | 7/7/09 8:25  | 7/8/09 7:25  | 23:00                            | 576.9   | 599.9   | 22.99                    | 2.97                    | 2.98 | 3.00                   |                | K                    | F    | SRR      | SRR  |
| 031   | KCY4        | PS12A             | 7/7/09 9:56  | 7/8/09 8:56  | 23:00                            | 4252.9  | 5633.0  | 23.00                    | 2.97                    | 3.14 | 3.08                   | 5              | K                    | P    | SRR      | SRR  |
| 032   | KCY4-C      | PS12B             | 7/7/09 9:56  | 7/8/09 8:56  | 23:00                            | 4252.9  | 5633.0  | 23.00                    | 2.97                    | 3.08 | 3.05                   |                | K                    | P    | SRR      | SRR  |
| 033   | SOL4        | PS11A             | 7/7/09 10:47 | 7/8/09 9:47  | 23:00                            | 4244.0  | 5624.0  | 23.00                    | 2.97                    | 2.92 | 2.97                   |                | K                    | P    | SRR      | SRR  |
| 034   | SOL4-C      | PS11B             | 7/7/09 10:47 | 7/8/09 9:47  | 23:00                            | 4244.0  | 5624.0  | 23.00                    | 2.97                    | 3.08 | 3.05                   |                | K                    | P    | SRR      | SRR  |
| 035   | CHU4        | PS14A             | 7/7/09 11:24 | 7/8/09 10:24 | 23:00                            | 5187.9  | 5210.9  | 23.01                    | 2.97                    | 2.93 | 2.98                   |                | K                    | K    | SRR      | SRR  |
| 036   | CHU4-C      | PS14B             | 7/7/09 11:24 | 7/8/09 10:24 | 23:00                            | 5187.9  | 5210.9  | 23.01                    | 2.97                    | 2.95 | 2.99                   |                | K                    | K    | SRR      | SRR  |
| 037   | SAL4        | PS03A             | 7/7/09 12:11 | 7/8/09 11:11 | 23:00                            | 13884.5 | 13907.5 | 23.00                    | 2.97                    | 2.45 | 2.74                   |                | K                    | K    | SRR      | SRR  |
| 038   | SAL4-C      | PS03B             | 7/7/09 12:11 | 7/8/09 11:11 | 23:00                            | 13884.5 | 13907.5 | 23.00                    | 2.97                    | 2.49 | 2.76                   |                | K                    | K    | SRR      | SRR  |
| 039   | HOL4        | PS02A             | 7/7/09 13:09 | 7/8/09 12:09 | 23:00                            | 682.0   | 705.0   | 23.01                    | 2.97                    | 2.90 | 2.96                   |                | K                    | K    | SRR      | SRR  |
| 040   | HOL4-C      | PS02B             | 7/7/09 13:09 | 7/8/09 12:09 | 23:00                            | 682.0   | 705.0   | 22.99                    | 2.97                    | 2.92 | 2.97                   |                | K                    | K    | SRR      | SRR  |
| 041   | GIL5        | PS01A             | 7/8/09 7:28  | 7/9/09 6:28  | 23:00                            | 599.9   | 622.9   | 22.99                    | 2.97                    | 2.90 | 2.96                   |                | F                    | F    | SRR      | SRR  |
| 042   | KCY5        | PS12A             | 7/8/09 8:58  | 7/9/09 7:58  | 23:00                            | 5633.1  | 7013.5  | 23.01                    | 2.97                    | 2.93 | 2.98                   |                | P                    | F    | SRR      | SRR  |
| 043   | SOL5        | PS11B             | 7/8/09 9:50  | 7/9/09 8:50  | 23:00                            | 5624.5  | 7006.0  | 23.03                    | 2.97                    | 3.09 | 3.06                   |                | P                    | K    | SRR      | SRR  |
| 044   | CHU5        | PS14A             | 7/8/09 10:26 | 7/9/09 9:26  | 23:00                            | 5210.9  | 5233.9  | 23.01                    | 2.97                    | 2.93 | 2.98                   |                | K                    | K    | SRR      | SRR  |

**MFM Used #: 2-5063      Slope: 1.003      Intercept: 0.018**      *Italicized counter entries are in minutes instead of hours.*

1. Replaced counter.    3. Counter in minutes not hours and tenths.    4. Found sunshield on roof at removal.    5. Added pump exhaust mufflers.

## RESIN SORBENT TUBE FIELD LOG SHEET

Project: Diazinon and Propyzamide Ambient Air Monitoring

Start Flow Set: 3.0 ±0.1lpm    End Flow Criteria: 3.0 lpm ±20%

| Log # | Sample Name | Sampler ID Number | Date & Time   |               | Elapsed Time In<br>Hours:Minutes | Counter |        | Elapsed Time In<br>Hours | Mass Flow Meter Display |      | Corrected Average Flow | Comment Number | Weather K,P,C,F&R |     | Initials |     |
|-------|-------------|-------------------|---------------|---------------|----------------------------------|---------|--------|--------------------------|-------------------------|------|------------------------|----------------|-------------------|-----|----------|-----|
|       |             |                   | Start         | End           |                                  | Start   | End    |                          | Start                   | End  |                        |                | Start             | End | Start    | End |
| 045   | SAL5        | PS03A             | 7/8/09 11:13  | 7/9/09 10:13  | 23:00                            | 3907.5  | 3930.5 | 22.99                    | 2.97                    | 2.92 | 2.97                   |                | K                 | K   | SRR      | SRR |
| 046   | HOL5        | PS02A             | 7/8/09 12:11  | 7/9/09 11:11  | 23:00                            | 705.1   | 728.0  | 22.99                    | 2.97                    | 2.97 | 3.00                   |                | K                 | K   | SRR      | SRR |
| 047   | GIL6        | PS01A             | 7/13/09 8:15  | 7/14/09 7:25  | 23:10                            | 622.9   | 646.1  | 23.16                    | 2.97                    | 2.92 | 2.97                   |                | K                 | K   | NTA      | NTA |
| 048   | GIL6C       | PS01B             | 7/13/09 8:15  | 7/14/09 7:25  | 23:10                            | 622.9   | 646.1  | 23.16                    | 2.97                    | 2.97 | 3.00                   |                | K                 | K   | NTA      | NTA |
| 049   | KCY6        | PS12A             | 7/13/09 9:45  | 7/14/09 8:55  | 23:10                            | 7013.5  | 7013.5 | 0.00                     | 2.97                    | 2.89 | 2.96                   | 6              | K                 | K   | NTA      | NTA |
| 050   | KCY6C       | PS12B             | 7/13/09 9:45  | 7/14/09 8:55  | 23:10                            | 7013.5  | 7013.5 | 0.00                     | 2.97                    | 2.95 | 2.99                   | 6              | K                 | K   | NTA      | NTA |
| 051   | SOL6        | PS11A             | 7/13/09 10:26 | 7/14/09 9:42  | 23:16                            | 7009.8  | 8405.2 | 23.26                    | 2.97                    | 3.00 | 3.01                   |                | K                 | K   | NTA      | NTA |
| 052   | SOL6C       | PS11B             | 7/13/09 10:26 | 7/14/09 9:42  | 23:16                            | 7009.8  | 8405.2 | 23.26                    | 2.97                    | 3.00 | 3.01                   |                | K                 | K   | NTA      | NTA |
| 053   | CHU6        | PS14A             | 7/13/09 10:53 | 7/14/09 10:20 | 23:27                            | 5233.9  | 5257.4 | 23.45                    | 2.97                    | 2.92 | 2.97                   |                | K                 | K   | NTA      | NTA |
| 054   | CHU6C       | PS14B             | 7/13/09 10:53 | 7/14/09 10:20 | 23:27                            | 5233.9  | 5257.4 | 23.45                    | 2.97                    | 2.90 | 2.96                   |                | K                 | K   | NTA      | NTA |
| 055   | SAL6        | PS03A             | 7/13/09 11:22 | 7/14/09 10:22 | 23:00                            | 3930.5  | 3954.1 | 23.60                    | 2.97                    | 2.98 | 3.00                   | ?              | K                 | K   | NTA      | NTA |
| 056   | SAL6C       | PS03B             | 7/13/09 11:22 | 7/14/09 10:22 | 23:00                            | 3930.5  | 3954.1 | 23.60                    | 2.97                    | 2.97 | 3.00                   | ?              | K                 | K   | NTA      | NTA |
| 057   | HOL6        | PS02A             | 7/13/09 12:04 | 7/14/09 11:04 | 23:00                            | 728.1   | 751.7  | 23.65                    | 2.97                    | 3.00 | 3.01                   | ?              | K                 | K   | NTA      | NTA |
| 058   | HOL6C       | PS02B             | 7/13/09 12:04 | 7/14/09 11:04 | 23:00                            | 728.1   | 751.7  | 23.65                    | 2.97                    | 2.94 | 2.98                   | ?              | K                 | K   | NTA      | NTA |
| 059   | GIL7        | PS01A             | 7/14/09 7:26  | 7/15/09 6:41  | 23:15                            | 646.1   | 669.3  | 23.25                    | 2.97                    | 2.98 | 3.00                   |                | K                 | K   | NTA      | NTA |
| 060   | KCY7        | PS12A             | 7/14/09 8:57  | 7/15/09 8:05  | 23:08                            | 7013.5  | 8403.4 | 23.17                    | 2.97                    | 2.97 | 3.00                   |                | K                 | K   | NTA      | NTA |
| 061   | SOL7        | PS11A             | 7/14/09 9:44  | 7/15/09 8:51  | 23:07                            | 8405.2  | 9795.2 | 23.17                    | 2.97                    | 2.99 | 3.01                   |                | K                 | K   | NTA      | NTA |
| 062   | CHU7        | PS14A             | 7/14/09 10:22 | 7/15/09 9:35  | 23:13                            | 5257.4  | 5280.3 | 22.96                    | 2.97                    | 3.02 | 3.02                   | See # 7        | K                 | K   | NTA      | NTA |
| 063   | SAL7        | PS03A             | 7/14/09 10:57 | 7/15/09 10:05 | 23:08                            | 3954.1  | 3977.2 | 23.10                    | 2.97                    | 2.89 | 2.96                   |                | K                 | K   | NTA      | NTA |
| 064   | HOL7        | PS02A             | 7/14/09 11:45 | 7/15/09 10:53 | 23:08                            | 751.7   | 774.8  | 23.11                    | 2.97                    | 3.03 | 3.03                   |                | K                 | K   | NTA      | NTA |
| 065   | GIL8        | PS01A             | 7/15/09 6:42  | 7/16/09 6:27  | 23:45                            | 669.3   | 693.1  | 23.77                    | 2.97                    | 3.03 | 3.03                   |                | K                 | K   | NTA      | NTA |
| 066   | KCY8        | PS12A             | 7/15/09 8:06  | 7/16/09 7:44  | 23:38                            | 8403.4  | 9821.4 | 23.63                    | 2.97                    | 3.00 | 3.01                   |                | K                 | K   | NTA      | NTA |

**MFM Used #: 2-5063      Slope: 1.003      Intercept: 0.018**      *Italicized counter entries are in minutes instead of hours.*

6 = King City ETM did not start. Moved it on 14<sup>th</sup> and it started. ? = Errors between Elapsed Time & Elapsed Counter due to operator forgot their glasses.

## RESIN SORBENT TUBE FIELD LOG SHEET

Project: Diazinon and Propyzamide Ambient Air Monitoring

Start Flow Set: 3.0 ±0.1lpm    End Flow Criteria: 3.0 lpm ±20%

| Log # | Sample Name | Sampler ID Number | Date & Time   |               | Elapsed Time In<br>Hours:Minutes | Counter |         | Elapsed Time In<br>Hours | Mass Flow Meter Display |      | Corrected Average Flow | Comment Number | Weather K,P,C,F&R |      | Initials |      |
|-------|-------------|-------------------|---------------|---------------|----------------------------------|---------|---------|--------------------------|-------------------------|------|------------------------|----------------|-------------------|------|----------|------|
|       |             |                   | Start         | End           |                                  | Start   | End     |                          | Start                   | End  |                        |                | Start             | End  | Start    | End  |
| 067   | SOL8        | PS11A             | 7/15/09 8:51  | 7/16/09 8:18  | 23:27                            | 9795.2  | 11201.9 | 23.45                    | 2.97                    | 2.97 | 3.00                   |                | K                 | K    | NTA      | NTA  |
| 068   | CHU8        | PS14A             | 7/15/09 9:40  | 7/16/09 8:45  | 23:05                            | 54.1    | 77.5    | 23.40                    | 2.97                    | 2.94 | 2.98                   | 7              | K                 | K    | NTA      | NTA  |
| 069   | SAL8        | PS03A             | 7/15/09 10:06 | 7/16/09 9:15  | 23:09                            | 3977.2  | 4000.4  | 23.25                    | 2.97                    | 3.06 | 3.04                   | ?              | K                 | K    | NTA      | NTA  |
| 070   | HOL8        | PS02A             | 7/15/09 10:55 | 7/16/09 9:58  | 23:03                            | 774.9   | 797.9   | 22.96                    | 2.97                    | 3.02 | 3.02                   |                | K                 | K    | NTA      | NTA  |
| 071   | TB3         | N.A.              | 7/16/09 10:10 | N.A.          | #VALUE!                          | N.A.    | N.A.    | #VALUE!                  | N.A.                    | N.A. | #VALUE!                |                | K                 | N.A. | NTA      | N.A. |
| 072   | KCY9        | PS12A             | 7/20/09 11:20 | 7/21/09 10:40 | 23:20                            | 9827.0  | 11224.0 | 23.28                    | 2.98                    | 3.08 | 3.06                   |                | K                 | K    | JR       | JR   |
| 073   | SOL9        | PS11A             | 7/20/09 12:20 | 7/21/09 11:40 | 23:20                            | 11203.0 | 12605.0 | 23.37                    | 2.98                    | 2.95 | 2.99                   | ?2             | K                 | K    | JR       | JR   |
| 074   | CHU9        | PS14A             | 7/20/09 13:00 | 7/21/09 12:25 | 23:25                            | 77.5    | 100.9   | 23.41                    | 2.98                    | 2.96 | 3.00                   | 8              | K                 | K    | JR       | JR   |
| 075   | SAL9        | PS03A             | 7/20/09 13:40 | 7/21/09 13:05 | 23:25                            | 4000.5  | 4023.9  | 23.43                    | 2.99                    | 2.97 | 3.01                   |                | K                 | K    | JR       | JR   |
| 076   | HOL9        | PS02A             | 7/20/09 14:28 | 7/21/09 13:55 | 23:27                            | 797.9   | 821.4   | 23.51                    | 2.98                    | 2.98 | 3.01                   |                | K                 | K    | JR       | JR   |
| 077   | GIL9        | PS01A             | 7/20/09 15:15 | 7/21/09 14:45 | 23:30                            | 693.1   | 716.7   | 23.55                    | 2.98                    | 2.99 | 3.01                   | ?2             | K                 | K    | JR       | JR   |
| 078   | KCY10       | PS12A             | 7/21/09 10:45 | 7/22/09 10:05 | 23:20                            | 11233.0 | 12629.0 | 23.27                    | 2.98                    | 3.00 | 3.02                   |                | K                 | K    | JR       | JR   |
| 079   | KCY10-C     | PS12B             | 7/21/09 10:45 | 7/22/09 10:05 | 23:20                            | 11233.0 | 12629.0 | 23.27                    | 2.98                    | 3.04 | 3.04                   |                | K                 | K    | JR       | JR   |
| 080   | SOL10       | PS11A             | 7/21/09 11:45 | 7/22/09 11:15 | 23:30                            | 12609.0 | 14019.0 | 23.50                    | 2.98                    | 2.97 | 3.00                   |                | K                 | K    | JR       | JR   |
| 081   | SOL10-C     | PS11B             | 7/21/09 11:45 | 7/22/09 11:15 | 23:30                            | 12609.0 | 14019.0 | 23.50                    | 2.98                    | 2.99 | 3.01                   |                | K                 | K    | JR       | JR   |
| 082   | CHU10       | PS14A             | 7/21/09 12:25 | 7/22/09 11:52 | 23:27                            | 100.9   | 124.4   | 23.47                    | 2.99                    | 2.98 | 3.01                   |                | K                 | K    | JR       | JR   |
| 083   | CHU10-C     | PS14B             | 7/21/09 12:25 | 7/22/09 11:55 | 23:30                            | 100.9   | 124.4   | 23.48                    | 2.98                    | 2.98 | 3.01                   |                | K                 | K    | JR       | JR   |
| 084   | SAL10       | PS03A             | 7/21/09 13:15 | 7/22/09 12:50 | 23:35                            | 4024.0  | 4047.7  | 23.66                    | 2.97                    | 2.97 | 3.00                   | ?2             | K                 | K    | JR       | JR   |
| 085   | SAL10-C     | PS03B             | 7/21/09 13:15 | 7/22/09 12:53 | 23:38                            | 4024.7  | 4047.7  | 22.97                    | 2.98                    | 2.97 | 3.00                   | ?2             | K                 | K    | JR       | JR   |
| 086   | HOL10       | PS02A             | 7/21/09 14:00 | 7/22/09 13:45 | 23:45                            | 821.5   | 845.2   | 23.75                    | 2.97                    | 2.96 | 2.99                   |                | K                 | K    | JR       | JR   |
| 087   | HOL10-C     | PS02B             | 7/21/09 14:00 | 7/22/09 13:47 | 23:47                            | 821.5   | 845.2   | 23.79                    | 2.97                    | 2.97 | 3.00                   |                | K                 | K    | JR       | JR   |
| 088   | GIL10       | PS01A             | 7/21/09 14:50 | 7/22/09 14:25 | 23:35                            | 716.8   | 740.4   | 23.55                    | 2.98                    | 2.96 | 3.00                   |                | K                 | K    | JR       | JR   |

**MFM Used #: 6-2240    Slope: 0.994    Intercept: 0.045**    *Italicized counter entries are in minutes instead of hours.*

7 = ETM changed in error. 8. Found sun shield on roof. ? = Errors between Elapsed Time & Elapsed Counter due to operator forgot their glasses.

?2 = Operator recorded time or counter reading slightly off. Thus, differences between Elapsed Time & Elapsed Counter.



## RESIN SORBENT TUBE FIELD LOG SHEET

Project: Diazinon and Propyzamide Ambient Air Monitoring

Start Flow Set: 3.0 ±0.1lpm    End Flow Criteria: 3.0 lpm ±20%

| Log # | Sample Name | Sampler ID Number | Date & Time   |               | Elapsed Time In<br>Hours:Minutes | Counter |         | Elapsed Time In<br>Hours | Mass Flow Meter Display |      | Corrected Average Flow | Comment Number | Weather K,P,C,F&R |      | Initials |      |
|-------|-------------|-------------------|---------------|---------------|----------------------------------|---------|---------|--------------------------|-------------------------|------|------------------------|----------------|-------------------|------|----------|------|
|       |             |                   | Start         | End           |                                  | Start   | End     |                          | Start                   | End  |                        |                | Start             | End  | Start    | End  |
| 089   | GIL10-C     | PS01B             | 7/21/09 14:50 | 7/22/09 14:27 | 23:37                            | 716.8   | 740.4   | 23.58                    | 2.98                    | 2.96 | 3.00                   |                | K                 | K    | JR       | JR   |
| 090   | TB4         | N.A.              | N.            | N.A.          | #VALUE!                          | N.A.    | N.A.    | #VALUE!                  | N.A.                    | N.A. | #VALUE!                |                | K                 | N.A. | JR       | N.A. |
| 091   | KCY11       | PS12A             | 7/22/09 10:20 | 7/23/09 9:22  | 23:02                            | 12645.0 | 14025.0 | 23.00                    | 2.98                    | 3.00 | 3.02                   |                | K                 | K    | JR       | JR   |
| 092   | SOL11       | PS11A             | 7/22/09 11:20 | 7/23/09 10:22 | 23:02                            | 14025.0 | 15405.0 | 23.00                    | 2.99                    | 3.00 | 3.02                   |                | K                 | K    | JR       | JR   |
| 093   | CHU11       | PS14A             | 7/22/09 12:00 | 7/23/09 11:02 | 23:02                            | 124.6   | 147.6   | 23.01                    | 2.98                    | 3.04 | 3.04                   |                | K                 | K    | JR       | JR   |
| 094   | U11-F       | PS14B             | 7/22/09 12:00 | 7/23/09 11:02 | 23:02                            | 124.6   | 147.6   | 23.01                    | 2.90                    | 3.00 | 2.98                   | 9              | K                 | K    | JR       | JR   |
| 095   | SAL11       | PS03A             | 7/22/09 13:00 | 7/23/09 12:02 | 23:02                            | 4047.8  | 4070.8  | 23.00                    | 2.98                    | 2.92 | 2.98                   |                | K                 | K    | JR       | JR   |
| 096   | HOL11       | PS02A             | 7/22/09 13:45 | 7/23/09 12:47 | 23:02                            | 845.3   | 868.3   | 22.97                    | 2.98                    | 3.00 | 3.02                   |                | K                 | K    | JR       | JR   |
| 097   | GIL11       | PS01A             | 7/22/09 14:30 | 7/23/09 13:32 | 23:02                            | 740.5   | 763.5   | 23.00                    | 3.00                    | 3.07 | 3.06                   |                | K                 | K    | JR       | JR   |
| 098   | GIL11-FS    | PS01B             | 7/22/09 14:30 | 7/23/09 13:32 | 23:02                            | 740.5   | 763.5   | 23.00                    | 3.00                    | 3.08 | 3.07                   |                | K                 | K    | JR       | JR   |
| 099   | TS2         | N.A.              | 7/23/09 16:47 | N.A.          | #VALUE!                          | N.A.    | N.A.    | #VALUE!                  | N.A.                    | N.A. | #VALUE!                |                | K                 | N.A. | JR       | N.A. |
| 100   | GIL12       | PS01A             | 7/27/09 9:00  | 7/28/09 8:00  | 23:00                            | 763.5   | 786.5   | 23.00                    | 2.97                    | 3.06 | 3.04                   | 11             | K                 | C    | SRR      | SRR  |
| 101   | GIL12-C     | PS01B             | 7/27/09 9:00  | 7/28/09 8:00  | 23:00                            | 763.5   | 786.5   | 23.00                    | 2.97                    | 3.04 | 3.03                   |                | K                 | C    | SRR      | SRR  |
| 102   | KCY12       | PS12A             | 7/27/09 10:27 | 7/28/09 9:27  | 23:00                            | 14025.2 | 15405.1 | 23.00                    | 2.97                    | 3.32 | 3.17                   |                | K                 | PC   | SRR      | SRR  |
| 103   | KCY12-C     | PS12B             | 7/27/09 10:27 | 7/28/09 9:27  | 23:00                            | 14025.2 | 15405.1 | 23.00                    | 2.97                    | 3.19 | 3.11                   |                | K                 | PC   | SRR      | SRR  |
| 104   | SOL12       | PS11A             | 7/27/09 11:08 | 7/28/09 10:08 | 23:00                            | 15405.0 | 16785.0 | 23.00                    | 2.97                    | 3.42 | 3.22                   | 10             | K                 | K    | SRR      | SRR  |
| 105   | SOL12-C     | PS11B             | 7/27/09 11:08 | 7/28/09 10:08 | 23:00                            | 15405.0 | 16785.0 | 23.00                    | 2.97                    | 3.38 | 3.20                   | 10             | K                 | K    | SRR      | SRR  |
| 106   | CHU12       | PS14A             | 7/27/09 11:49 | 7/28/09 10:49 | 23:00                            | 147.6   | 170.6   | 23.00                    | 2.97                    | 3.36 | 3.19                   |                | K                 | PC   | SRR      | SRR  |
| 107   | CHU12-C     | PS14B             | 7/27/09 11:49 | 7/28/09 10:49 | 23:00                            | 147.6   | 170.6   | 23.00                    | 2.97                    | 3.36 | 3.19                   |                | K                 | PC   | SRR      | SRR  |
| 108   | SAL12       | PS03A             | 7/27/09 12:23 | 7/28/09 11:23 | 23:00                            | 4070.8  | 4093.8  | 23.00                    | 2.97                    | 3.49 | 3.26                   |                | K                 | C    | SRR      | SRR  |
| 109   | SAL12-C     | PS03B             | 7/27/09 12:23 | 7/28/09 11:23 | 23:00                            | 4070.8  | 4093.8  | 23.00                    | 2.97                    | 3.54 | 3.28                   |                | K                 | C    | SRR      | SRR  |
| 110   | HOL12       | PS02A             | 7/27/09 13:05 | 7/28/09 12:05 | 23:00                            | 868.3   | 891.3   | 23.00                    | 2.97                    | 3.76 | 3.39                   |                | K                 | PC   | SRR      | SRR  |

**MFM Used #: 6-2240    Slope: 0.994    Intercept: 0.045**    *Italicized counter entries are in minutes instead of hours.*

9. Found sun shield on roof. 10. Took 3 tubes till one worked. (Winds up it was probably the low bat. on MFM 5063.) 11. Found 5063 MFM reading very low @ AM removal.

11. (continued) Started using 20062240.

## RESIN SORBENT TUBE FIELD LOG SHEET

Project: Diazinon and Propyzamide Ambient Air Monitoring

Start Flow Set: 3.0 ±0.1lpm    End Flow Criteria: 3.0 lpm ±20%

| Log # | Sample Name | Sampler ID Number | Date & Time   |               | Elapsed Time In<br>Hours:Minutes | Counter       |               | Elapsed Time In<br>Hours | Mass Flow Meter Display |       | Corrected Average Flow | Comment Number | Weather<br>K,P,C,F&R |      | Initials |      |
|-------|-------------|-------------------|---------------|---------------|----------------------------------|---------------|---------------|--------------------------|-------------------------|-------|------------------------|----------------|----------------------|------|----------|------|
|       |             |                   | Start         | End           |                                  | Start         | End           |                          | Start                   | End   |                        |                | Start                | End  | Start    | End  |
|       |             |                   | 111           | HOL12-C       | PS02B                            | 7/27/09 13:05 | 7/28/09 12:05 | 23:00                    | 868.3                   | 891.3 | 23.00                  | 2.97           | 3.70                 | 3.36 |          | K    |
| 112   | GIL13       | PS01A             | 7/28/09 8:05  | 7/29/09 7:30  | 23:25                            | 786.5         | 809.9         | 23.42                    | 2.97                    | 2.97  | 3.00                   |                | C                    | C    | SRR      | SRR  |
| 113   | KCY13       | PS12A             | 7/28/09 9:29  | 7/29/09 8:56  | 23:27                            | 15407.1       | 16813.8       | 23.45                    | 2.98                    | 3.00  | 3.02                   |                | PC                   | C    | SRR      | SRR  |
| 114   | SOL13       | PS11A             | 7/28/09 10:10 | 7/29/09 9:36  | 23:26                            | 16785.0       | 18190.7       | 23.43                    | 2.98                    | 3.00  | 3.02                   |                | K                    | PC   | SRR      | SRR  |
| 115   | CHU13       | PS14A             | 7/28/09 10:51 | 7/29/09 10:21 | 23:30                            | 170.6         | 194.1         | 23.50                    | 2.98                    | 2.97  | 3.00                   |                | PC                   | PC   | SRR      | SRR  |
| 116   | SAL13       | PS03A             | 7/28/09 11:25 | 7/29/09 10:50 | 23:25                            | 4093.8        | 4117.2        | 23.40                    | 2.98                    | 2.98  | 3.01                   |                | C                    | PC   | SRR      | SRR  |
| 117   | HOL13       | PS02A             | 7/28/09 12:08 | 7/29/09 11:33 | 23:25                            | 891.3         | 914.7         | 23.42                    | 2.98                    | 2.97  | 3.00                   |                | PC                   | K    | SRR      | SRR  |
| 118   | GIL14       | PS01A             | 7/29/09 7:30  | 7/30/09 6:55  | 23:25                            | 809.9         | 833.3         | 23.40                    | 2.98                    | 2.97  | 3.00                   |                | C                    | C    | SRR      | SRR  |
| 119   | KCY14       | PS12A             | 7/29/09 8:56  | 7/30/09 8:21  | 23:25                            | 16813.8       | 18218.9       | 23.42                    | 2.98                    | 2.98  | 3.01                   |                | C                    | C    | SRR      | SRR  |
| 120   | SOL14       | PS11A             | 7/29/09 9:36  | 7/30/09 9:01  | 23:25                            | 18190.7       | 19595.8       | 23.42                    | 2.98                    | 3.04  | 3.04                   |                | PC                   | C    | SRR      | SRR  |
| 121   | CHU14       | PS14A             | 7/29/09 10:21 | 7/30/09 9:45  | 23:24                            | 194.1         | 217.5         | 23.40                    | 2.98                    | 3.00  | 3.02                   |                | PC                   | C    | SRR      | SRR  |
| 122   | SAL14       | PS03A             | 7/29/09 10:50 | 7/30/09 10:15 | 23:25                            | 4117.2        | 4140.6        | 23.42                    | 2.98                    | 3.00  | 3.02                   |                | PC                   | C    | SRR      | SRR  |
| 123   | HOL14       | PS02A             | 7/29/09 11:33 | 7/30/09 10:58 | 23:25                            | 914.7         | 938.1         | 23.41                    | 2.98                    | 2.99  | 3.01                   |                | K                    | K    | SRR      | SRR  |
| 124   | TB5         | N.A.              | 7/29/09 6:50  | N.A.          | #VALUE!                          | N.A.          | N.A.          | #VALUE!                  | N.A.                    | N.A.  | #VALUE!                |                | C                    | N.A. | SRR      | N.A. |
| 125   | GIL15       | PS01A             | 7/30/09 6:55  | 7/31/09 6:17  | 23:22                            | 833.3         | 856.7         | 23.38                    | 2.98                    | 2.99  | 3.01                   |                | C                    | C    | SRR      | SRR  |
| 126   | KCY15       | PS12A             | 7/30/09 8:21  | 7/31/09 7:43  | 23:22                            | 18218.9       | 19620.8       | 23.37                    | 2.98                    | 2.99  | 3.01                   |                | C                    | C    | SRR      | SRR  |
| 127   | SOL15       | PS11A             | 7/30/09 9:01  | 7/31/09 8:23  | 23:22                            | 19595.8       | 20997.8       | 23.37                    | 2.98                    | 2.99  | 3.01                   |                | C                    | C    | SRR      | SRR  |
| 128   | CHU15       | PS14A             | 7/30/09 9:45  | 7/31/09 9:07  | 23:22                            | 217.5         | 240.8         | 23.36                    | 2.98                    | 2.99  | 3.01                   |                | C                    | C    | SRR      | SRR  |
| 129   | SAL15       | PS03A             | 7/30/09 10:15 | 7/31/09 9:37  | 23:22                            | 4140.6        | 4163.9        | 23.37                    | 2.98                    | 2.98  | 3.01                   |                | C                    | C    | SRR      | SRR  |
| 130   | HOL15       | PS02A             | 7/30/09 10:58 | 7/31/09 10:20 | 23:22                            | 938.1         | 961.5         | 23.37                    | 2.98                    | 2.96  | 3.00                   |                | K                    | K    | SRR      | SRR  |
| 131   | GIL16       | PS01A             | 8/3/09 9:00   | 8/4/09 8:02   | 23:02                            | 856.8         | 879.8         | 23.04                    | 2.98                    | 2.98  | 3.01                   |                | C                    | P    | MM       | MM   |
| 132   | GIL16-FS    | PS01B             | 8/3/09 9:00   | 8/4/09 8:02   | 23:02                            | 856.8         | 879.8         | 23.04                    | 2.98                    | 3.00  | 3.02                   |                | C                    | P    | MM       | MM   |

MFM Used #: 6-2240

Slope: 0.994

Intercept: 0.045

*Italicized counter entries are in minutes instead of hours.*

## RESIN SORBENT TUBE FIELD LOG SHEET

Project: Diazinon and Propyzamide Ambient Air Monitoring

Start Flow Set: 3.0 ±0.1lpm    End Flow Criteria: 3.0 lpm ±20%

| Log # | Sample Name | Sampler ID Number | Date & Time  |              | Elapsed Time In<br>Hours:Minutes | Counter |         | Elapsed Time In<br>Hours | Mass Flow Meter Display |      | Corrected Average Flow | Comment Number | Weather<br>K,P,C,F&R |      | Initials |      |
|-------|-------------|-------------------|--------------|--------------|----------------------------------|---------|---------|--------------------------|-------------------------|------|------------------------|----------------|----------------------|------|----------|------|
|       |             |                   | Start        | End          |                                  | Start   | End     |                          | Start                   | End  |                        |                | Start                | End  | Start    | End  |
| 133   | KYC16       | PS12A             | 8/3/09 10:35 | 8/4/09 10:02 | 23:27                            | 19628.8 | 21035.8 | 23.45                    | 2.98                    | 2.93 | 2.98                   |                | P                    | K    | MM       | MM   |
| 134   | KYC16-C     | PS12B             | 8/3/09 10:35 | 8/4/09 10:02 | 23:27                            | 19628.8 | 21035.8 | 23.45                    | 2.98                    | 3.14 | 3.09                   |                | P                    | K    | MM       | MM   |
| 135   | SOL16       | PS11A             | 8/3/09 11:29 | 8/4/09 10:46 | 23:17                            | 21000.4 | 22397.6 | 23.29                    | 2.98                    | 2.99 | 3.01                   |                | K                    | K    | MM       | MM   |
| 136   | SOL16-C     | PS11B             | 8/3/09 11:29 | 8/4/09 10:46 | 23:17                            | 21000.4 | 22397.6 | 23.29                    | 2.98                    | 2.97 | 3.00                   |                | K                    | K    | MM       | MM   |
| 137   | CHU16       | PS14A             | 8/3/09 12:12 | 8/4/09 11:21 | 23:09                            | 240.9   | 264.0   | 23.15                    | 2.98                    | 2.98 | 3.01                   |                | K                    | K    | MM       | MM   |
| 138   | U16-F       | PS14B             | 8/3/09 12:12 | 8/4/09 11:21 | 23:09                            | 240.9   | 264.0   | 23.15                    | 2.98                    | 2.97 | 3.00                   |                | K                    | K    | MM       | MM   |
| 139   | SAL16       | PS03A             | 8/3/09 12:53 | 8/4/09 11:58 | 23:05                            | 4164.0  | 4187.1  | 23.09                    | 2.98                    | 3.00 | 3.02                   |                | K                    | K    | MM       | MM   |
| 140   | SAL16-C     | PS03B             | 8/3/09 12:53 | 8/4/09 11:58 | 23:05                            | 4164.0  | 4187.1  | 23.09                    | 2.98                    | 2.94 | 2.99                   |                | K                    | K    | MM       | MM   |
| 141   | HOL16       | PS02A             | 8/3/09 13:43 | 8/4/09 13:01 | 23:18                            | 961.5   | 984.8   | 23.32                    | 2.98                    | 2.95 | 2.99                   |                | K                    | K    | MM       | MM   |
| 142   | HOL16-C     | PS02B             | 8/3/09 13:43 | 8/4/09 13:01 | 23:18                            | 961.5   | 984.8   | 23.32                    | 2.98                    | 2.88 | 2.96                   |                | K                    | K    | MM       | MM   |
| 143   | TS3         | N.A.              | 8/3/09 13:53 | N.A.         | #VALUE!                          | N.A.    | N.A.    | #VALUE!                  | N.A.                    | N.A. | #VALUE!                |                | K                    | N.A. | MM       | N.A. |
| 144   | TB6         | N.A.              | 8/3/09 13:53 | N.A.         | #VALUE!                          | N.A.    | N.A.    | #VALUE!                  | N.A.                    | N.A. | #VALUE!                |                | K                    | N.A. | MM       | N.A. |
| 145   | GIL17       | PS01A             | 8/4/09 8:06  | 8/5/09 7:06  | 23:00                            | 879.9   | 902.9   | 22.99                    | 2.98                    | 3.00 | 3.02                   |                | P                    | C    | MM       | MM   |
| 146   | GIL17-C     | PS01B             | 8/4/09 8:06  | 8/5/09 7:06  | 23:00                            | 879.9   | 902.9   | 22.99                    | 2.98                    | 3.00 | 3.02                   |                | P                    | C    | MM       | MM   |
| 147   | KYC17       | PS12A             | 8/4/09 10:07 | 8/5/09 9:07  | 23:00                            | 21036.2 | 22415.3 | 22.99                    | 2.98                    | 3.00 | 3.02                   |                | K                    | K    | MM       | MM   |
| 148   | SOL17       | PS11A             | 8/4/09 10:50 | 8/5/09 9:51  | 23:01                            | 22398.3 | 23778.9 | 23.01                    | 2.98                    | 3.00 | 3.02                   |                | K                    | K    | MM       | MM   |
| 149   | CHU17       | PS14A             | 8/4/09 11:24 | 8/5/09 10:26 | 23:02                            | 264.1   | 287.1   | 23.04                    | 2.98                    | 3.00 | 3.02                   |                | K                    | K    | MM       | MM   |
| 150   | CHU17-C     | PS14B             | 8/4/09 11:24 | 8/5/09 10:26 | 23:02                            | 264.1   | 287.1   | 23.04                    | 2.98                    | 3.00 | 3.02                   |                | K                    | K    | MM       | MM   |
| 151   | SAL17       | PS03A             | 8/4/09 12:02 | 8/5/09 11:02 | 23:00                            | 4187.1  | 4210.1  | 23.01                    | 2.98                    | 2.99 | 3.01                   |                | K                    | K    | MM       | MM   |
| 152   | HOL17       | PS02A             | 8/4/09 13:05 | 8/5/09 12:08 | 23:03                            | 984.9   | 1007.9  | 23.03                    | 2.98                    | 3.00 | 3.02                   |                | K                    | K    | MM       | MM   |
| 153   | GIL18       | PS01A             | 8/5/09 7:09  | 8/6/09 6:09  | 23:00                            | 902.9   | 925.9   | 23.00                    | 2.98                    | 2.96 | 3.00                   |                | C                    | C    | MM       | MM   |
| 154   | KYC18       | PS12A             | 8/5/09 9:09  | 8/6/09 8:09  | 23:00                            | 22415.5 | 23795.3 | 23.00                    | 2.98                    | 3.00 | 3.02                   |                | K                    | P    | MM       | MM   |

MFM Used #: 6-2240

Slope: 0.994

Intercept: 0.045

*Italicized counter entries are in minutes instead of hours.*

## RESIN SORBENT TUBE FIELD LOG SHEET

Project: Diazinon and Propyzamide Ambient Air Monitoring

Start Flow Set: 3.0 ±0.1lpm    End Flow Criteria: 3.0 lpm ±20%

| Log # | Sample Name | Sampler ID Number | Date & Time   |               | Elapsed Time In<br>Hours:Minutes | Counter |         | Elapsed Time In<br>Hours | Mass Flow Meter Display |      | Corrected Average Flow | Comment Number | Weather<br>K,P,C,F&R |     | Initials |     |
|-------|-------------|-------------------|---------------|---------------|----------------------------------|---------|---------|--------------------------|-------------------------|------|------------------------|----------------|----------------------|-----|----------|-----|
|       |             |                   | Start         | End           |                                  | Start   | End     |                          | Start                   | End  |                        |                | Start                | End | Start    | End |
| 155   | SOL18       | PS11A             | 8/5/09 9:53   | 8/6/09 8:53   | 23:00                            | 23779.1 | 25158.7 | 22.99                    | 2.98                    | 2.97 | 3.00                   |                | K                    | C   | MM       | MM  |
| 156   | CHU18       | PS14A             | 8/5/09 10:30  | 8/6/09 9:30   | 23:00                            | 287.1   | 310.1   | 22.98                    | 2.98                    | 3.00 | 3.02                   |                | K                    | R   | MM       | MM  |
| 157   | SAL18       | PS03A             | 8/5/09 11:03  | 8/6/09 10:03  | 23:00                            | 4210.1  | 4233.1  | 22.98                    | 2.98                    | 2.98 | 3.01                   |                | K                    | P   | MM       | MM  |
| 158   | HOL18       | PS02A             | 8/5/09 12:10  | 8/6/09 11:10  | 23:00                            | 1007.9  | 1030.9  | 22.99                    | 2.98                    | 2.98 | 3.01                   |                | K                    | C   | MM       | MM  |
| 159   | GIL19       | PS01A             | 8/10/09 9:14  | 8/11/09 8:14  | 23:00                            | 925.9   | 948.9   | 23.00                    | 2.98                    | 3.07 | 3.05                   |                | K                    | P   | SRR      | SRR |
| 160   | GIL19-C     | PS01B             | 8/10/09 9:14  | 8/11/09 8:14  | 23:00                            | 925.9   | 948.9   | 23.00                    | 2.98                    | 3.08 | 3.06                   |                | K                    | P   | SRR      | SRR |
| 161   | KYC19       | PS12A             | 8/10/09 10:46 | 8/11/09 9:46  | 23:00                            | 23795.3 | 25175.4 | 23.00                    | 2.98                    | 3.06 | 3.05                   |                | P                    | P   | SRR      | SRR |
| 162   | KYC19-C     | PS12B             | 8/10/09 10:46 | 8/11/09 9:46  | 23:00                            | 23795.3 | 25175.4 | 23.00                    | 2.98                    | 3.07 | 3.05                   |                | P                    | P   | SRR      | SRR |
| 163   | SOL19       | PS11A             | 8/10/09 11:35 | 8/11/09 10:35 | 23:00                            | 25158.7 | 26538.8 | 23.00                    | 2.98                    | 3.09 | 3.06                   |                | P                    | P   | SRR      | SRR |
| 164   | SOL19-C     | PS11B             | 8/10/09 11:35 | 8/11/09 10:35 | 23:00                            | 25158.7 | 26538.8 | 23.00                    | 2.98                    | 3.09 | 3.06                   |                | P                    | P   | SRR      | SRR |
| 165   | CHU19       | PS14A             | 8/10/09 12:08 | 8/11/09 11:08 | 23:00                            | 310.1   | 333.1   | 23.00                    | 2.98                    | 3.00 | 3.02                   |                | P                    | P   | SRR      | SRR |
| 166   | CHU19-C     | PS14B             | 8/10/09 12:08 | 8/11/09 11:08 | 23:00                            | 310.1   | 333.1   | 23.00                    | 2.98                    | 3.00 | 3.02                   |                | P                    | P   | SRR      | SRR |
| 167   | SAL19       | PS03A             | 8/10/09 12:47 | 8/11/09 11:47 | 23:00                            | 4233.1  | 4256.1  | 23.00                    | 2.98                    | 3.00 | 3.02                   |                | P                    | P   | SRR      | SRR |
| 168   | SAL19-C     | PS03B             | 8/10/09 12:47 | 8/11/09 11:47 | 23:00                            | 4233.1  | 4256.1  | 23.04                    | 2.98                    | 2.99 | 3.01                   |                | P                    | P   | SRR      | SRR |
| 169   | HOL19       | PS02A             | 8/10/09 13:36 | 8/11/09 12:36 | 23:00                            | 1030.9  | 1053.9  | 23.00                    | 2.98                    | 2.99 | 3.01                   |                | P                    | K   | SRR      | SRR |
| 170   | HOL19-C     | PS02B             | 8/10/09 13:36 | 8/11/09 12:36 | 23:00                            | 1030.9  | 1053.9  | 23.00                    | 2.98                    | 2.98 | 3.01                   |                | P                    | K   | SRR      | SRR |
| 171   | GIL20       | PS01A             | 8/11/09 8:17  | 8/12/09 7:17  | 23:00                            | 948.9   | 971.9   | 23.00                    | 2.98                    | 2.98 | 3.01                   |                | P                    | P   | SRR      | SRR |
| 172   | KYC20       | PS12A             | 8/11/09 9:49  | 8/12/09 8:49  | 23:00                            | 25175.4 | 26555.4 | 23.00                    | 2.98                    | 2.98 | 3.01                   |                | P                    | K   | SRR      | SRR |
| 173   | SOL20       | PS11A             | 8/11/09 10:37 | 8/12/09 9:37  | 23:00                            | 26538.8 | 27918.7 | 23.00                    | 2.98                    | 2.96 | 3.00                   |                | P                    | P   | SRR      | SRR |
| 174   | CHU20       | PS14A             | 8/11/09 11:10 | 8/12/09 10:10 | 23:00                            | 333.1   | 356.1   | 23.00                    | 2.98                    | 2.96 | 3.00                   |                | P                    | P   | SRR      | SRR |
| 175   | SAL20       | PS03A             | 8/11/09 11:49 | 8/12/09 10:49 | 23:00                            | 4256.1  | 4279.1  | 22.99                    | 2.98                    | 2.97 | 3.00                   |                | P                    | P   | SRR      | SRR |
| 176   | HOL20       | PS02A             | 8/11/09 12:38 | 8/12/09 11:38 | 23:00                            | 1053.9  | 1076.9  | 23.00                    | 2.98                    | 2.94 | 2.99                   |                | K                    | K   | SRR      | SRR |

MFM Used #: 6-2240

Slope: 0.994

Intercept: 0.045

*Italicized counter entries are in minutes instead of hours.*

## RESIN SORBENT TUBE FIELD LOG SHEET

Project: Diazinon and Propyzamide Ambient Air Monitoring

Start Flow Set: 3.0 ±0.1lpm    End Flow Criteria: 3.0 lpm ±20%

| Log # | Sample Name | Sampler ID Number | Date & Time   |               | Elapsed Time In | Counter |         | Elapsed Time In | Mass Flow Meter Display |      | Corrected Average Flow | Comment Number | Weather K,P,C,F&R |      | Initials |      |
|-------|-------------|-------------------|---------------|---------------|-----------------|---------|---------|-----------------|-------------------------|------|------------------------|----------------|-------------------|------|----------|------|
|       |             |                   | Start         | End           | Hours:Minutes   | Start   | End     | Hours           | Start                   | End  |                        |                | Start             | End  | Start    | End  |
| 177   | GIL21       | PS01A             | 8/12/09 7:17  | 8/13/09 6:22  | 23:05           | 971.9   | 995.0   | 23.08           | 2.98                    | 2.99 | 3.01                   |                | P                 | K    | SRR      | SRR  |
| 178   | KYC21       | PS12A             | 8/12/09 8:49  | 8/13/09 7:54  | 23:05           | 26555.4 | 27940.3 | 23.08           | 2.98                    | 2.99 | 3.01                   |                | K                 | K    | SRR      | SRR  |
| 179   | SOL21       | PS11A             | 8/12/09 9:37  | 8/13/09 8:42  | 23:05           | 27918.7 | 29303.7 | 23.08           | 2.98                    | 2.98 | 3.01                   |                | P                 | P    | SRR      | SRR  |
| 180   | CHU21       | PS14A             | 8/12/09 10:10 | 8/13/09 9:15  | 23:05           | 356.1   | 379.2   | 23.08           | 2.98                    | 2.98 | 3.01                   |                | P                 | P    | SRR      | SRR  |
| 181   | SAL21       | PS03A             | 8/12/09 10:49 | 8/13/09 9:54  | 23:05           | 4279.1  | 4302.1  | 23.09           | 2.98                    | 3.00 | 3.02                   |                | P                 | P    | SRR      | SRR  |
| 182   | HOL21       | PS02A             | 8/12/09 11:38 | 8/13/09 10:43 | 23:05           | 1076.9  | 1100.0  | 23.08           | 2.98                    | 2.97 | 3.00                   |                | K                 | K    | SRR      | SRR  |
| 183   | TB7         | N.A.              | 8/13/09 7:14  | N.A.          | #VALUE!         | N.A.    | N.A.    | #VALUE!         | N.A.                    | N.A. | #VALUE!                |                | P                 | N.A. | SRR      | N.A. |
| 184   | GIL22       | PS01A             | 8/17/09 10:58 | 8/18/09 10:10 | 23:12           | 995.1   | 1018.3  | 23.17           | 2.98                    | 3.00 | 3.02                   |                | K                 | K    | JR       | JR   |
| 185   | GIL22-FS    | PS01B             | 8/17/09 10:58 | 8/18/09 10:10 | 23:12           | 995.1   | 1018.3  | 23.17           | 2.97                    | 3.00 | 3.01                   |                | K                 | K    | JR       | JR   |
| 186   | KCY22       | PS12A             | 8/17/09 12:25 | 8/18/09 11:50 | 23:25           | 27943.0 | 29347.0 | 23.40           | 2.98                    | 3.00 | 3.02                   |                | K                 | K    | JR       | JR   |
| 187   | SOL22       | PS11A             | 8/17/09 13:30 | 8/18/09 12:45 | 23:15           | 29305.0 | 30702.0 | 23.28           | 2.97                    | 3.00 | 3.01                   |                | K                 | K    | JR       | JR   |
| 188   | CHU22       | PS14A             | 8/17/09 14:05 | 8/18/09 13:30 | 23:25           | 379.2   | 402.6   | 23.40           | 2.99                    | 2.97 | 3.01                   |                | K                 | K    | JR       | JR   |
| 189   | U22-F       | PS14A             | 8/17/09 14:05 | 8/18/09 13:30 | 23:25           | 379.2   | 402.6   | 23.40           | 2.99                    | 2.98 | 3.01                   |                | K                 | K    | JR       | JR   |
| 190   | SAL22       | PS03A             | 8/17/09 14:45 | 8/18/09 14:15 | 23:30           | 4302.2  | 4325.7  | 23.46           | 2.98                    | 2.97 | 3.00                   |                | K                 | P    | JR       | JR   |
| 191   | SAL22-C     | PS03B             | 8/17/09 14:45 | 8/18/09 14:15 | 23:30           | 4302.2  | 4325.7  | 23.46           | 2.99                    | 3.00 | 3.02                   |                | K                 | P    | JR       | JR   |
| 192   | HOL22       | PS02A             | 8/17/09 15:30 | 8/18/09 15:10 | 23:40           | 1100.0  | 1123.7  | 23.66           | 2.98                    | 2.99 | 3.01                   |                | K                 | K    | JR       | JR   |
| 193   | HOL22-C     | PS02B             | 8/17/09 15:30 | 8/18/09 15:10 | 23:40           | 1100.0  | 1123.7  | 23.66           | 2.98                    | 2.99 | 3.01                   |                | K                 | K    | JR       | JR   |
| 194   | TB8         | N.A.              | 8/17/09 20:00 | N.A.          | #VALUE!         | N.A.    | N.A.    | #VALUE!         | N.A.                    | N.A. | #VALUE!                |                | K                 | N.A. | JR       | N.A. |
| 195   | GIL23       | PS01A             | 8/18/09 10:15 | 8/19/09 9:21  | 23:06           | 1018.3  | 1041.5  | 23.13           | 2.98                    | 2.99 | 3.01                   |                | K                 | P    | JR       | JR   |
| 196   | GIL23-C     | PS01B             | 8/18/09 10:15 | 8/19/09 9:24  | 23:09           | 1018.3  | 1041.5  | 23.17           | 2.97                    | 2.99 | 3.01                   |                | K                 | P    | JR       | JR   |
| 197   | KCY23       | PS12A             | 8/18/09 11:50 | 8/19/09 10:55 | 23:05           | 29349.0 | 30732.5 | 23.06           | 2.97                    | 3.00 | 3.01                   |                | K                 | K    | JR       | JR   |
| 198   | KCY23-C     | PS12B             | 8/18/09 11:50 | 8/19/09 10:55 | 23:05           | 29349.0 | 30732.5 | 23.06           | 2.97                    | 3.00 | 3.01                   |                | K                 | K    | JR       | JR   |

MFM Used #: 6-2240

Slope: 0.994

Intercept: 0.045

*Italicized counter entries are in minutes instead of hours.*

## RESIN SORBENT TUBE FIELD LOG SHEET

Project: Diazinon and Propyzamide Ambient Air Monitoring

Start Flow Set: 3.0 ±0.1lpm    End Flow Criteria: 3.0 lpm ±20%

| Log # | Sample Name | Sampler ID Number | Date & Time   |               | Elapsed Time In<br>Hours:Minutes | Counter |         | Elapsed Time In<br>Hours | Mass Flow Meter Display |      | Corrected Average Flow | Comment Number | Weather<br>K,P,C,F&R |      | Initials |      |
|-------|-------------|-------------------|---------------|---------------|----------------------------------|---------|---------|--------------------------|-------------------------|------|------------------------|----------------|----------------------|------|----------|------|
|       |             |                   | Start         | End           |                                  | Start   | End     |                          | Start                   | End  |                        |                | Start                | End  | Start    | End  |
| 199   | SOL23       | PS11A             | 8/18/09 12:50 | 8/19/09 12:05 | 23:15                            | 30705.0 | 32100.0 | 23.25                    | 2.97                    | 3.00 | 3.01                   |                | K                    | K    | JR       | JR   |
| 200   | SOL23-C     | PS11B             | 8/18/09 12:50 | 8/19/09 12:07 | 23:17                            | 30705.0 | 32102.5 | 23.29                    | 2.97                    | 2.98 | 3.00                   |                | K                    | K    | JR       | JR   |
| 201   | CHU23       | PS14A             | 8/18/09 13:35 | 8/19/09 12:45 | 23:10                            | 402.7   | 425.9   | 23.18                    | 2.97                    | 2.97 | 3.00                   |                | K                    | K    | JR       | JR   |
| 202   | CHU23-C     | PS14B             | 8/18/09 13:35 | 8/19/09 12:48 | 23:13                            | 402.7   | 425.9   | 23.21                    | 2.98                    | 2.98 | 3.01                   |                | K                    | K    | JR       | JR   |
| 203   | SAL23       | PS03A             | 8/18/09 14:20 | 8/19/09 13:42 | 23:22                            | 4325.8  | 4349.2  | 23.40                    | 2.97                    | 2.96 | 2.99                   |                | P                    | P    | JR       | JR   |
| 204   | HOL23       | PS02A             | 8/18/09 15:15 | 8/19/09 14:50 | 23:35                            | 1123.7  | 1147.3  | 23.56                    | 2.97                    | 2.95 | 2.99                   |                | K                    | K    | JR       | JR   |
| 205   | TS4         | N.A.              | 8/18/09 15:20 | N.A.          | #VALUE!                          | N.A.    | N.A.    | #VALUE!                  | N.A.                    | N.A. | #VALUE!                |                | K                    | N.A. | JR       | N.A. |
| 206   | GIL24       | PS01A             | 8/19/09 9:27  | 8/20/09 8:45  | 23:18                            | 1041.6  | 1064.9  | 23.31                    | 2.98                    | 2.96 | 3.00                   |                | K                    | K    | JR       | JR   |
| 207   | KCY24       | PS12A             | 8/19/09 11:00 | 8/20/09 10:20 | 23:20                            | 30738.0 | 32139.0 | 23.35                    | 2.98                    | 2.98 | 3.01                   |                | K                    | K    | JR       | JR   |
| 208   | SOL24       | PS11A             | 8/19/09 12:10 | 8/20/09 11:12 | 23:02                            | 32105.5 | 33487.0 | 23.03                    | 2.97                    | 3.00 | 3.01                   |                | K                    | K    | JR       | JR   |
| 209   | CHU24       | PS14A             | 8/19/09 12:55 | 8/20/09 11:57 | 23:02                            | 426.0   | 449.1   | 23.05                    | 2.97                    | 2.99 | 3.01                   |                | K                    | K    | JR       | JR   |
| 210   | SAL24       | PS03A             | 8/19/09 13:50 | 8/20/09 12:51 | 23:01                            | 4349.2  | 4372.3  | 23.05                    | 2.98                    | 2.95 | 2.99                   |                | K                    | K    | JR       | JR   |
| 211   | HOL24       | PS02A             | 8/19/09 14:54 | 8/20/09 13:55 | 23:01                            | 1147.4  | 1170.4  | 23.01                    | 2.97                    | 2.89 | 2.96                   |                | K                    | K    | JR       | JR   |
|       |             |                   |               |               | 0:00                             |         |         | 0.00                     |                         |      |                        |                |                      |      |          |      |
|       |             |                   |               |               | 0:00                             |         |         | 0.00                     |                         |      |                        |                |                      |      |          |      |
|       |             |                   |               |               | 0:00                             |         |         | 0.00                     |                         |      |                        |                |                      |      |          |      |
|       |             |                   |               |               | 0:00                             |         |         | 0.00                     |                         |      |                        |                |                      |      |          |      |
|       |             |                   |               |               | 0:00                             |         |         | 0.00                     |                         |      |                        |                |                      |      |          |      |
|       |             |                   |               |               | 0:00                             |         |         | 0.00                     |                         |      |                        |                |                      |      |          |      |
|       |             |                   |               |               | 0:00                             |         |         | 0.00                     |                         |      |                        |                |                      |      |          |      |
|       |             |                   |               |               | 0:00                             |         |         | 0.00                     |                         |      |                        |                |                      |      |          |      |
|       |             |                   |               |               | 0:00                             |         |         | 0.00                     |                         |      |                        |                |                      |      |          |      |

MFM Used #: \_\_\_\_\_ Slope: \_\_\_\_\_

Intercept: \_\_\_\_\_

*Italicized counter entries are in minutes instead of hours.*

# APPENDIX E

## Calibration and Certification Reports

# CALIFORNIA AIR RESOURCES BOARD

## FLOW CALIBRATION REPORT

TO: SPECIAL PURPOSE MONITORING  
NEIL ADLER

LOG NUMBER : 2009 127

FROM: ROBERT RUSSELL\BRIAN SPREADBOROUGH  
Program Evaluation & Standards

CALIBRATION DATE: 06/19/2009  
REPORT DATE : 06/19/2009

### IDENTIFICATION

Instrument : AALBORG  
Position number : 1  
Property No. : 20062240  
Serial No. : 20062240  
Previous Log No.: 2008 110  
Bar Code No. : 20062240  
Elevation : 25.00'  
Inst. Prop. Of : AIR MONITORING - CENTRAL

Site Name : MLD Standards Lab  
Site Number : 34-299  
Location : 1309 T-Street  
Sacramento, CA 95814

| CALIBRATION STANDARDS | ID NUMBER |
|-----------------------|-----------|
| MOLBOX                | 20021121  |

### CALIBRATION RESULTS

| Component                            | FLOW       |
|--------------------------------------|------------|
| Instrument Range                     | 0-5 SLM    |
| Initial Zero Setting                 |            |
| Initial Span Setting                 |            |
| Final Zero Setting                   |            |
| Final Span Setting                   |            |
| Slope                                | 1.006      |
| Intercept                            | -0.045     |
| Correlation Coefficient              | 0.99994 ✓  |
| Change From Previous Calibration (%) | 0.6455     |
| Date Of Last Calibration             | 05/28/2008 |

Calibration Equation:

Calibration Expires: 06/19/2010

Std. FLOW = 0.994 \* (Net Display) + 0.045

Comments:

CALIBRATED BY: NSB

CHECKED BY: RB



# CALIFORNIA AIR RESOURCES BOARD

## FLOW CALIBRATION REPORT

TO: TESTING AND EVALUATIONS  
STEVE RIDER

LOG NUMBER : 2009 031

FROM: ROBERT RUSSELL\BRIAN SPREADBOROUGH  
Program Evaluation & Standards

CALIBRATION DATE: 03/13/2009  
REPORT DATE : 03/13/2009

### IDENTIFICATION

Instrument : AALBORG MFM GFM17  
Position number : 1  
Property No. : 20005063  
Serial No. : G15285  
Previous Log No. : 2009 007  
Bar Code No. : 20005063  
Elevation : 25.00'  
Inst. Prop. Of : AIR MONITORING - CENTRAL

Site Name : MLD Standards Lab  
Site Number : 34-299  
Location : 1309 T-Street  
Sacramento, CA 95814

| CALIBRATION STANDARDS | ID NUMBER |
|-----------------------|-----------|
| MOLBOX                | 20021493  |

### CALIBRATION RESULTS

| Component                            | FLOW       |
|--------------------------------------|------------|
| Instrument Range                     | 0-5SLM     |
| Initial Zero Setting                 |            |
| Initial Span Setting                 |            |
| Final Zero Setting                   |            |
| Final Span Setting                   |            |
| Slope                                | 0.997      |
| Intercept                            | -0.018     |
| Correlation Coefficient              | 0.99998 ✓  |
| Change From Previous Calibration (%) | -1.291     |
| Date Of Last Calibration             | 01/13/2009 |

Calibration Equation:

Calibration Expires: 03/13/2010

$\text{Std. FLOW} = 1.003 * (\text{Net Display}) + 0.018$   
*+1.3%*

Comments:

CALIBRATED BY: NS

CHECKED BY: RR