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TO: Lompoc Interagency Workgroup

FROM: Paul H. Gosselin, Assistant Director

DATE: January 12, 1999

RE: Lompoc Exposure Data

I enclosed three items for your review: 1) Ambient air monitoring results (Phase I); 2) Target Screening Level table and; 3) Hazard Index table. As we discussed, this information must remain confidential per direction of the legislature. I will schedule a conference call to answer any questions and discuss the relevance of the analyses. This evaluation will provide critical information for the LIWG to consider in preparing recommendations for Phase II. Your thoughts on the results and the methodology will be instrumental in guiding the LIWG's recommendations.

Screening Levels for the Lompoc Pesticide Air Monitoring Project (Phase I)
DPR prepared screening levels for the pesticides monitored under Phase I of the Lompoc Project. The pesticides included in Phase I are alachlor, chlorothalonil, chlorpyrifos, diazinon, dimethoate, disulfoton, fenamifos, fonofos, MITC, methyl bromide, oxydemeton methyl, and permethrin.

The screening levels represent the first tier in a hierarchy of risk analysis. The screening levels represent air concentrations that are health protective for all individuals, including sensitive populations. As described, there was a wide variation in the strength and completeness of the toxicology data. Given the conservatism utilized in the methodology, approaching or exceeding these screening levels would not indicate a health risk but would prompt further evaluation and possible refinement of the analysis. Every situation will be treated on a case by case basis. Monitoring data that are orders of magnitude below screening levels would indicate that absence of risk.

As shown in the tables, the monitoring indicate that none of the pesticides approached the screening levels. Seven chemicals were monitored but not detected - alachlor, dimethoate OA, disulfoton, disulfoton OA, fenamiphos, fonofos and

fonofos OA.

The methodology consisted of two main components: hazard identification and exposure characterization. These methods reflect the standard approach taken by DPR to evaluate pesticide risk to humans.

Hazard Identification Process

The hazard identification step derived toxicity endpoints for three main exposure scenarios: acute, subchronic and chronic. The approach utilized toxicity values reviewed principally by DPR and U.S. EPA. The documents relied upon include DPR Risk Characterization Documents (RCDs), DPR Toxicology Summaries, U.S. EPA Reregistration Eligibility Documents (REDs), IRIS Toxicity Profiles, a reference list from U.S. EPA, OPP and an August 6, 1998 U.S. EPA document on FQPA safety factors for organophosphorus compounds.

No one source of information provided endpoints and toxicity values for acute, subchronic, or chronic exposure for all the pesticides. In some cases, the available documents were in draft form or were only summaries of toxicity, rather than determinations of critical effects and NOELs. In some cases, different agency's reviews presented different conclusions. In deriving the endpoint values, DPR generally followed the following hierarchy; critical NOELs from hazard identification sections of risk assessments were considered preferable to values from individual study reviews; DPR reviews and evaluations were used preferentially over outside reviews; human data were used preferentially to animal data; a developmental toxicity study was used to generate the acute toxicity NOEL in the absence of a useful acute toxicity study. Likewise, in the absence of readily available and reviewed subchronic toxicity studies, multi-generation rat reproduction studies were used to generate the seasonal NOEL. In some cases, due to the disparate nature of the studies and the absence of a hazard identification evaluation for a pesticide, the NOELs from an acute toxicity study were lower than that for a subchronic study. In these cases, the lower acute NOEL was used for the seasonal exposure scenario.

Exposure Method to Determine Screening Levels

The screening levels were calculated using the average breathing rate per body weight for adult males and six year old children because these produce the most conservative inhalation per body weight for both adults and children. Estimates are

for 24 hours per day exposures. Most of the screening levels were derived from animal toxicology data. DPR incorporated a 100-fold uncertainty factor in estimating an acceptable level for humans when using animal toxicity data. In a few cases, toxicity data were available from human studies, so a 10 fold uncertainty factor was applied to that data. The method of calculating screening levels is shown in the following equations:

$$\frac{(\text{NOEL})(\text{Body Weight})/100}{\text{Air Volume Inspired}} = \textbf{SCREENING LEVEL}$$

$$\frac{(10^{-6}/Q_1^*)(\text{Body Weight})(365\text{ days}/30\text{ days})}{\text{Air Volume Inspired}} = \textbf{SCREENING LEVEL}$$

NOEL = No Observable Effect Level in mg/kg
Body Weight = Weight of an adult male or six year old child; 77 and 21.7 kg, respectively (U.S. EPA, 1997)
Air Volume Inspired = Breathing rate for 24 hours; 15.2 and 16.7 m^3, respectively (U.S. EPA, 1997)
10^{-6} = One in a million excess lifetime risk of cancer
Q_1^* =The 95th percent upper confidence estimate of cancer potency in units of $(mg/kg/day)^{-1}$

The attached spreadsheet shows the screening level for each pesticide monitored under Phase I based on the indicated NOELs and cancer potencies values for acute, seasonal or subchronic, and chronic exposure scenarios. In making these calculations, the breathing rate and body weight for an adult were used for the developmental effect and oncogenic endpoint, while the child's breathing rate and body weight were used for the subchronic and chronic endpoints. The reasoning for this was that most of the acute studies were developmental and thus derived from exposure to pregnant (adult) animals. Cancer is typically believed to require long term exposure (a significant portion of a lifetime). Since most of a 70 year life is spent as an adult, it is appropriate to use the adult body weight and breathing rate for oncogenicity.

Reference:

U.S. EPA (1997). Exposure Factors Handbook. Office of Research and

Development U.S. Environmental Protection Agency. EPA/600/P-95/002Fa.

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RESULTS OF AIR MONITORING FOR PESTICIDES MONITORED IN LOMPOC, CALIFORNIA

Pesticide	Max 1807[a]	Max Lom[b]	SL(acute)[c]	HI(acute)[d]	Season Lom[e]	SL(seasonal)[f]	HI(Season)[g]
alachlor	N/A[h]	0.002	7598	0.0000003	0.002	130	0.00002
chlorothalonil	0.004	0.005	4	0.0012500	0.005	7	0.00071
chlorpyrifos	0.432	0.083	253	0.0003281	0.014	13	0.00108
diazinon	0.290	0.018	13	0.0013846	0.002	0.2	0.01000
dimethoate	N/A[h]	0.003	304	0.0000099	0.003	0.6	0.00500
disulfoton	N/A[h]	0.001	13	0.0000769	0.001	6	0.00017
fenamifos	0.016	0.001	12	0.0000833	0.001	1	0.00100
fonofos	N/A[h]	0.001	25	0.0000400	0.001	7	0.00014
methyl bromide	0.004	N/A[i]	815	N/A[i]	N/A[i]	104	N/A[i]
MITC	18.000	0.753	66	0.0114091	0.002	6	0.00033
oxydemeton methyl	0.006	0.003	76	0.0000395	0.003	12	0.00025
permethrin	0.110	0.006	193	0.0000311	0.005	650	0.00001

(a) Maximum ambient 24 hr TWA measured in high use county in units of $\mu g/m^3$

(b) Maximum ambient 24 hr TWA measured in Lompoc in units of $\mu g/m^3$

(c) Screening Level (acute) in units of $\mu g/m^3$

(d) Hazard Index for acute effects: Ratio of Maximum Lompoc ambient level to Screening Level; HI = < 1 = "OK"

(e) Seasonal average air concentrations in Lompoc were averages of daily air levels at the sampling location with highest concentration in units of $\mu g/m^3$; values for nondetects assumed ½ LOD and trace assumed ½ (LOD + LOQ)

(f) Screening Level (seasonal) in units of $\mu g/m^3$

(g) Hazard Index for subchronic effects: Ratio of Lompoc seasonal average air level to Screening Level

(h) N/A = not available

(i) Methyl bromide was not used during the monitoring period and background samples are not processed yet

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TARGET SCREENING LEVEL (SL) FOR PESTICIDES MONITORED IN LOMPOC, CALIFORNIA

Pesticide	NOEL(acute)	SL(acute)	NOEL(seasonal)	SL(seasonal)	NOEL(chronic)	SL(chronic)	Potency Factor	SL(cancer)
alachlor	150.00 (a)	7,598.7	10.000 *(b)*	129.9	1.000 *(c)*	158.1		
chlorothalonil	0.07 (c)	3.5	0.500 *(c)*	6.5	0.612 *(c)*	96.8	2.90E-03 *(c)*	21.3
chlorpyrifos*	0.50 (c)	253.3	1.000 *(c)*	13.0	1.000 *(c)*	158.1		
diazinon	0.25 (b)	12.7	0.015 *(b)*	0.2	0.020 *(b)*	3.2		
dimethoate	6.00 (b)	303.9	0.050 *(b)*	0.6	0.100 *(b)*	15.8		
disulfoton	0.25 (d)	12.7	0.450 *(f)*	5.8	0.013 *(d)*	2.1		
fenamifos	0.23 (e)	11.7	0.075 *(a)*	1.0	0.075 *(e)*	11.9		
fonofos	0.50 (b)	25.3	0.500 *(b)*	6.5	1.000 *(b)*	158.1		
methyl bromide	21.00 (c)	815.0 *(g)*	8.000 *(c)*	104.0	0.200 *(c)*	31.6		
MITC*	660ug/m3 (c)	66.0	0.480 *(c)*	6.2	N/A *(f)*	N/A		
oxydemeton methyl	1.50 (b)	76.0	0.900 *(b)*	11.7	0.125 *(b)*	19.8		
permethrin	3.80 (c)	192.5	50.000 *(c)*	649.7	2.100 *(c)*	332.0	7.80E-03 *(c)*	7.9

*the acute SL for these marked pesticides were based on MOE of 10 for human study (vs. 100 for animal study).

all above NOEL/potency factors are in mg/kg/day, except for MITC's acute (which is in $\mu g/m^3$); and all SL, in $\mu g/m^3$.
all seasonal (i.e. subchronic) and chronic SL were based on child rate; all others, on adult rate.

SL(non-cancer) = (NOEL/MOE) x (body weight/air volume) x [(365/exposure days), if for chronic].
SL(cancer) = (10^{-6}/potency factor) x (body weight/air volume) x (365/exposure days).

adult body weight	77.00 kg
adult air volume	15.20 m^3
adult weight/volume	5.07
child body weight	21.70 kg
child air volume	16.70 m^3
child weight/volume	1.30
exposures/year	30.00 days (after adjustment for 24 hour equivalent for air volume assumed)

(a) EPA's RED
(b) DPR'sToxicology Summary
(c) DPR's RCD
(d) Housinger Memo
(e) Section 18 Risk Assessment
(f) N/A = Not Available
(g) Based on default weight/volume of 3.88

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DRAFT Data of Lompoc Air Monitoring, 12/31/98

chemicals detected are listed below; alachlor, dimethoate OA, disulfoton, disulfoton OA, fenamiphos, fonofos, fonofos OA were analyzed but not detected

nd = none detected

nd* = pesticide possibly detected, but not confirmed

trace = pesticide detection confirmed, but less than the quantitation limit

Site	Date/Time Start	chlorothalonil (ng/m^3)	chlorpyrifos (ng/m^3)	chlorpyrifos OA (ng/m^3)	cycloate (ng/m^3)	diazinon (ng/m^3)	diazinon OA (ng/m^3)	dimethoate (ng/m^3)	oxydemeton-methyl (ng/m^3)	permethrin (ng/m^3)
approx detection limit		2	1	5	2	1	5	1	1	2
approx quantitation limit		8	4	5	9	5	5	5	5	9
west	8/17/98 15:55	nd	nd*	nd	nd	nd	nd	nd	nd	nd
central	8/17/98 16:25	nd	nd	nd	nd	nd	nd	nd	nd	nd
southwest	8/17/98 16:35	nd	nd*	nd	nd	nd	nd	nd	nd	nd
northwest	8/17/98 16:50	nd	nd	nd	nd	nd	nd	nd	nd	nd
northeast	8/17/98 17:05	nd	nd	nd	nd	nd	nd	nd	nd	nd
west	8/18/98 10:40	nd	nd*	nd	nd	nd	nd	nd	nd	nd
central	8/18/98 11:35	nd	nd*	nd	nd	nd	nd	nd	nd	nd
southwest	8/18/98 11:55	nd	nd*	nd	nd	nd	nd	nd	nd	nd
northwest	8/18/98 12:20	nd	nd*	nd	nd	nd	nd	nd	nd	nd
northeast	8/18/98 12:35	nd	nd	nd	nd	nd	nd	nd	nd	nd
west	8/19/98 8:40	nd	13.3	nd	nd	nd	nd	nd	nd	nd
central	8/19/98 9:20	nd	nd*	nd	nd	nd	nd	nd	nd	nd
southwest	8/19/98 10:20	nd	10.8	nd	nd	nd	nd	nd	nd	nd
northwest	8/19/98 10:32	nd	nd*	nd	nd	nd	nd	nd	nd	nd
northeast	8/19/98 10:45	nd	nd*	nd	nd	nd	nd	nd	nd	nd
west	8/20/98 8:10	nd	nd*	nd	nd	nd	nd	nd	nd	nd
west	8/20/98 8:12	nd	5.1	nd	nd	nd	nd	nd	nd	nd
central	8/20/98 8:30	nd	nd*	nd	nd	nd	nd	nd	nd	nd
central	8/20/98 8:33	nd	nd*	nd	nd	nd	nd	nd	nd	nd
southwest	8/20/98 9:00	nd	nd*	nd	nd	nd	nd	nd	nd	nd
southwest	8/20/98 9:02	nd	nd*	nd	nd	nd	nd	nd	nd	nd
northwest	8/20/98 9:11	nd	nd*	nd	nd	nd	nd	nd	nd	nd
northwest	8/20/98 9:12	nd	nd*	nd	nd	nd	nd	nd	nd	nd
northeast	8/20/98 9:25	nd	nd*	nd	nd	nd	nd	nd	nd	nd
northeast	8/20/98 9:25	nd	nd*	nd	nd	nd	nd	nd	nd	nd

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DRAFT Data of Lompoc Air Monitoring, 12/31/98

chemicals detected are listed below; alachlor, dimethoate OA, disulfoton, disulfoton OA, fenamiphos, fonofos, fonofos OA were analyzed but not detected

nd = none detected

nd* = pesticide possibly detected, but not confirmed

trace = pesticide detection confirmed, but less than the quantitation limit

Site	Date/Time Start	chlorothalonil (ng/m^3)	chlorpyrifos (ng/m^3)	chlorpyrifos OA (ng/m^3)	cycloate (ng/m^3)	diazinon (ng/m^3)	diazinon OA (ng/m^3)	dimethoate (ng/m^3)	oxydemeton-methyl (ng/m^3)	permethrin (ng/m^3)
approx detection limit		2	1	5	2	1	5	1	1	2
approx quantitation limit		8	4	5	9	5	5	5	5	9
west	8/21/98 7:20	nd	nd*	nd	nd	nd	nd	nd	nd	nd
central	8/21/98 7:40	nd	nd*	nd	nd	nd	nd	nd	nd	nd
southwest	8/21/98 8:10	nd	nd*	nd	nd	nd	nd	nd	nd	nd
northwest	8/21/98 8:55	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
northeast	8/21/98 8:30	nd	nd*	nd	nd	nd*	nd	nd*	nd	nd
northwest	8/24/98 8:00	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
northeast	8/24/98 8:12	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
southwest	8/24/98 7:45	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
central	8/24/98 8:27	nd	nd*	nd	nd	nd	nd	nd	nd	nd
west	8/24/98 8:45	nd	nd*	nd	nd	nd	nd	nd	nd	nd
southwest	8/25/98 8:02	nd	nd*	nd	nd	nd	nd	nd	nd	nd
southwest	8/25/98 8:04	nd	nd*	nd	nd	nd	nd	nd	nd	nd
northwest	8/25/98 8:17	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
northwest	8/25/98 8:17	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
northeast	8/25/98 8:29	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
northeast	8/25/98 8:31	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
central	8/25/98 9:15	nd	nd*	nd	nd	nd	nd	nd	nd	nd
central	8/25/98 9:15	nd	nd*	nd	nd	nd	nd	nd	nd	nd
west	8/25/98 9:32	nd	4.8	nd	nd	nd*	nd	nd	nd	nd
west	8/25/98 9:30	nd	nd*	nd	nd	nd	nd	nd	nd	nd
southwest	8/27/98 7:52	nd	nd*	nd	nd	nd	nd	nd	nd	nd
northwest	8/27/98 8:00	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
northeast	8/27/98 8:10	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
central	8/27/98 8:35	nd	nd*	nd	nd	nd	nd	nd	nd	nd
west	8/27/98 8:53	nd	nd*	nd	nd	nd	nd	nd	nd	nd

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chemicals detected are listed below; alachlor, dimethoate OA, disulfoton, disulfoton OA, fenamiphos, fonofos, fonofos OA were analyzed but not detected

nd = none detected

nd* = pesticide possibly detected, but not confirmed

trace = pesticide detection confirmed, but less than the quantitation limit

Site	Date/Time Start	chlorothalonil (ng/m^3)	chlorpyrifos (ng/m^3)	chlorpyrifos OA (ng/m^3)	cycloate (ng/m^3)	diazinon (ng/m^3)	diazinon OA (ng/m^3)	dimethoate (ng/m^3)	oxydemeton-methyl (ng/m^3)	permethrin (ng/m^3)
approx detection limit		2	1	5	2	1	5	1	1	2
approx quantitation limit		8	4	5	9	5	5	5	5	9
southwest	8/28/98 7:55	nd	nd*	nd	nd	18.2	nd	nd	nd	nd
northwest	8/28/98 8:23	nd	4.5	nd	nd	nd*	nd	nd	nd	nd
northeast	8/28/98 8:25	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
central	8/28/98 8:47	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
west	8/28/98 9:01	nd	nd*	nd	nd	nd*	nd	nd*	nd	nd
southwest	8/29/98 8:12	trace	5.7	nd	nd	nd*	5.3	nd	nd	nd
northwest	8/29/98 8:23	trace	11.5	nd	nd	nd*	nd	nd	nd	nd
northeast	8/29/98 8:34	trace	7.9	nd	nd	nd*	nd	nd	nd	nd
central	8/29/98 9:00	trace	nd*	nd	nd	nd	nd	nd	nd	nd
west	8/29/98 9:15	nd	nd*	nd	nd	nd	nd	nd*	nd	nd
southwest	8/31/98 7:56	trace	9.7	nd	nd	nd*	nd	nd*	nd	nd
northwest	8/31/98 8:11	nd	83.1	8.5	nd	nd*	nd	nd*	nd*	nd
northeast	8/31/98 8:55	nd	6.2	nd	nd	nd*	nd	nd*	nd*	nd
central	8/31/98 9:31	trace	6.7	nd	nd	nd*	nd	nd	nd	nd
west	8/31/98 10:10	nd	4.9	nd	nd	nd	nd	nd*	nd	nd
southwest	9/2/98 9:03	trace	8.0	nd	nd	nd*	nd	nd	nd	nd
northwest	9/2/98 8:16	nd	31.3	nd	nd	nd*	nd	nd	nd	nd
northeast	9/2/98 8:30	trace	nd*	nd	nd	nd*	nd	nd	nd	nd
central	9/2/98 8:42	trace	6.3	nd	nd	nd*	nd	nd	nd	nd
west	9/2/98 8:52	trace	7.8	nd	nd	nd*	nd	nd*	nd	nd
northwest	9/3/98 8:07	nd	31.2	4.8	759.6	nd*	nd	nd	nd	nd
northwest	9/3/98 8:08	nd	35.8	5.5	739.2	nd*	nd	nd	nd	nd
northeast	9/3/98 8:24	nd	4.7	nd	nd	nd*	nd	nd	nd	nd
northeast	9/3/98 8:22	nd	4.9	4.1	nd	nd*	nd	nd	nd	nd
central	9/3/98 8:36	trace	4.6	nd	nd	nd*	nd	nd	nd	nd

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trace = pesticide detection confirmed, but less than the quantitation limit

Site	Date/Time Start	chlorothalonil (ng/m^3)	chlorpyrifos (ng/m^3)	chlorpyrifos OA (ng/m^3)	cycloate (ng/m^3)	diazinon (ng/m^3)	diazinon OA (ng/m^3)	dimethoate (ng/m^3)	oxydemeton-methyl (ng/m^3)	permethrin (ng/m^3)
approx detection limit		2	1	5	2	1	5	1	1	2
approx quantitation limit		8	4	5	9	5	5	5	5	9
central	9/3/98 8:37	trace	nd*	nd	nd	nd*	nd	nd	nd	nd
west	9/3/98 8:51	trace	8.1	nd	nd	nd*	nd	nd*	nd	nd
west	9/3/98 8:52	trace	7.9	nd	nd	nd*	nd	nd*	nd	nd
southwest	9/3/98 7:55	trace	6.9	nd	nd	nd*	nd	nd	nd	nd
southwest	9/3/98 7:55	trace	6.7	nd	nd	nd*	nd	nd	nd	nd
northwest	9/4/98 8:25	trace	25.8	nd	69.2	4.8	nd	nd	nd	nd
northeast	9/4/98 12:16	trace	7.1	nd	nd	nd*	nd	nd	nd	nd
central	9/4/98 9:45	trace	6.1	nd	nd	nd*	nd	nd	nd	nd
west	9/4/98 9:18	trace	9.4	nd	nd	nd*	nd	nd	nd	nd
southwest	9/4/98 8:53	trace	15.7	nd	nd	6.2	nd	nd	nd	nd
northwest	9/5/98 9:40	trace	34.3	nd	7.1	nd*	nd	nd	nd	nd
west	9/5/98 8:50	trace	6.1	nd	nd	nd*	nd	nd*	nd	nd
central	9/5/98 9:20	trace	11.5	nd	nd	nd*	nd	nd	nd	nd
southwest	9/5/98 9:56	trace	20.2	nd	nd	nd*	nd	nd	nd	nd
central	9/6/98 9:10	trace	nd*	nd	nd	nd*	nd	nd	nd	nd
west	9/6/98 9:00	trace	4.8	nd	nd	nd	nd	nd*	nd	nd
northeast	9/6/98 9:25	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
northwest	9/6/98 8:45	nd	16.1	nd	25.4	nd*	nd	nd	nd	nd
southwest	9/6/98 8:30	nd	7.5	nd	nd	nd*	nd	nd	nd	nd
northwest	9/7/98 8:35	nd	13.5	nd	nd	nd*	nd	nd	nd	nd
southwest	9/7/98 8:45	nd	4.5	nd	nd	nd*	nd	nd	nd	nd
west	9/7/98 8:55	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
central	9/7/98 9:05	trace	nd*	nd	nd	nd*	nd	nd	nd	nd
northeast	9/7/98 9:15	nd	6.8	nd	nd	nd*	nd	nd	nd	nd

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nd = none detected

nd* = pesticide possibly detected, but not confirmed

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Site	Date/Time Start	chlorothalonil (ng/m^3)	chlorpyrifos (ng/m^3)	chlorpyrifos OA (ng/m^3)	cycloate (ng/m^3)	diazinon (ng/m^3)	diazinon OA (ng/m^3)	dimethoate (ng/m^3)	oxydemeton-methyl (ng/m^3)	permethrin (ng/m^3)
approx detection limit		2	1	5	2	1	5	1	1	2
approx quantitation limit		8	4	5	9	5	5	5	5	9
northwest	9/8/98 8:50	nd	7.5	nd	nd	nd*	nd	nd	nd	nd
northwest	9/8/98 8:50	nd	7.0	nd	nd	nd*	nd	nd	nd	nd
southwest	9/8/98 9:20	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
southwest	9/8/98 9:21	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
west	9/8/98 9:35	nd	28.5	nd	nd	nd*	nd	nd*	nd	nd
west	9/8/98 9:35	nd	26.0	nd	nd	nd*	nd	nd	nd	nd
central	9/8/98 9:47	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
central	9/8/98 9:47	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
northeast	9/8/98 10:00	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
northeast	9/8/98 10:00	nd	nd*	nd	nd	nd*	nd	nd	nd	nd
southwest	9/9/98 8:57	nd	7.4	nd	nd	nd*	nd	nd	nd	nd
northwest	9/9/98 8:22	nd	5.2	nd	7.2	nd*	nd	nd	nd	nd
west	9/9/98 9:29	nd	9.3	nd	nd	nd*	nd	nd	nd	nd
central	9/9/98 10:15	nd	6.1	nd	nd	nd*	nd	nd	nd	nd
northeast	9/9/98 10:50	nd	7.7	nd	nd	nd*	nd	nd	nd	nd
northwest	9/10/98 8:20	nd	10.7	nd	34.6	nd*	nd	nd	nd	nd
southwest	9/10/98 8:40	nd	12.0	nd	nd	nd*	nd	nd	nd	trace
west	9/10/98 9:25	nd	5.4	nd	nd	nd*	nd	nd	nd	nd
central	9/10/98 9:31	nd	4.5	nd	nd	nd*	nd	nd	nd	nd
northeast	9/10/98 10:03	nd	5.7	nd	nd	nd*	nd	nd	nd	nd
# samples		119	119	119	119	119	119	119	119	119
% confirmed positive		23.5	46.2	3.4	5.9	2.5	0.8	0.0	0.0	0.8
maximum (ng/m^3)		trace	83.1	8.5	759.6	18.2	5.3	nd*	nd*	trace

DRAFT Data of Lompoc Air Monitoring, 12/8/98

Methyl Isothiocyanate (ng/m^3)

	Southwest	West	Northwest	Northeast	Central
8/31/98 day	nd	nd	nd	nd	nd
8/31/98 night	nd	nd	nd	nd	nd
9/9/98 day	nd	nd	nd	nd	nd
9/9/98 night	nd	nd	nd	nd	nd
9/10/98 day	nd	1005	nd	nd	nd
9/10/98 night	167	502	40	nd	583
9/11/98 day	nd	nd	nd	nd	nd
9/11/98 night	262	362	185	188	151
9/12/98 day	87	nd	nd	nd	nd
9/12/98 night	44	54	nd	nd	nd
9/13/98 day	nd	nd	nd	67	nd
9/13/98 night	nd	nd	nd	nd	nd

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