

Appendix I:

Air Monitoring Tables

Appendix I Tables

Field Data

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Phase 1 North Central District Receptor, Ambient, and Quality Control Sites

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Phase 1 Yakima Valley Receptor, Ambient, and Quality Control Sites

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Phase 2 Yakima Valley Perimeter Site

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Phase 2 Yakima Valley Receptor, Ambient, and Quality Control Sites

Appendix K Air Monitoring Tables Key Terms

- id= identification (unique number)
- ng= nanogram
- LC-MS= liquid chromatography-mass spectrometry
- CPF= chlorpyrifos
- CPF-oxon = chlorpyrifos-oxon.
- CPF total= sum of chlorpyrifos and chlorpyrifos-oxon expressed as the molar equivalent of CPF
- CPF eq= chlorpyrifos molar equivalent
- AZ= azinphosmethyl
- AZ total= sum of azinphosmethyl and azinphosmethyl-oxon expressed as the molar equivalent of azinphosmethyl.
- AZ eq= azinphosmethyl molar equivalent
- PH= phosmet
- MA= malathion
- n/a= non applicable
- ave= average
- l= total volume in liters
- lpm= liter per minute
- QC= quality control co-located at a receptor site
- m³= cubic meters
- min= total duration in minutes
- ng/m³= nanograms over cubic meters

Receptor and ambient samples

Air samples were collected with SKC universal sample pumps (model # 224-PCXR4) at a flowrate of 2.0 liters per minutes with a OVS XAD-2 tube (SKC catalog # 226-58A).

Perimeter samples

Air samples were collected with Hi-Lite 30 sample pumps (model # 228-031) at a flowrate of 6.0 liters per minutes with a OVS XAD-2 tube (SKC catalog # 226-58A).

All rotameters were calibrated to Bios Defender 520 (SKC catalog #717-520H) which was calibrated against a primary standard (bubble flow meter).

Samples were analyzed by a LC-MS at DEOHS- Environmental Health Lab.

Table 4. Field Data
Phase 1 North Central District Receptor, Ambient and Quality Control Sites

unique id number	Sample Period		Sampling Parameters			Observations
	start date and time	stop date and time	duration min	flow rate lpm	volume l	
Ambient						
3601	4/3/08 13:42	4/4/08 13:59	1457	1.9	2833.1	
3721	4/6/08 11:18	4/7/08 12:34	1516	2.0	3019.2	
3741	4/8/08 9:43	4/9/08 9:41	1438	1.9	2796.2	
3761	4/10/08 9:58	4/11/08 9:43	1425	1.9	2770.9	
3621	4/12/08 9:28	4/13/08 9:20	1432	1.9	2784.5	Spraying was seen before and after the new sampling tubes were set-up.
3641	4/14/08 11:02	4/15/08 10:40	1418	1.9	2757.3	
3661	4/16/08 10:39	4/17/08 11:38	1499	1.9	2914.8	
3681	4/18/08 9:34	4/19/08 7:04	1290	1.9	2508.4	
3701	4/20/08 8:10	4/21/08 12:02	1672	1.0	1626.4	
3781	4/22/08 10:59	4/23/08 8:54	1315	2.0	2632.4	
3801	4/24/08 10:14	4/25/08 8:48	1354	2.0	2710.4	
3821	4/26/08 8:10	4/27/08 6:40	1350	2.0	2702.4	
3841	4/28/08 11:55	4/29/08 10:19	1344	2.0	2690.4	
3861	4/30/08 10:07	5/1/08 9:52	1425	2.0	2852.6	
3881	5/2/08 9:54	5/3/08 7:50	1316	2.0	2634.4	
Receptor 1						
3603	4/3/08 15:48	4/4/08 16:01	1453	2.0	2939.5	
3723	4/6/08 13:19	4/7/08 14:29	1510	2.0	3054.8	
3743	4/8/08 11:37	4/9/08 11:42	1445	2.0	2923.3	
3763	4/10/08 11:45	4/11/08 11:35	1430	2.1	2964.9	
3623	4/12/08 11:33	4/13/08 11:13	1420	2.0	2872.7	Airblast applicator was seen across the road from the site.
3643	4/14/08 13:11	4/15/08 12:43	1412	2.0	2856.6	
3663	4/16/08 12:31	4/17/08 13:33	1502	2.0	3038.6	
3683	4/18/08 11:28	4/19/08 9:00	1292	2.0	2613.8	
3703	4/20/08 10:43	4/21/08 14:05	1642	2.1	3487.0	
3783	4/22/08 12:15	4/23/08 11:26	1391	1.9	2593.9	
3803	4/24/08 12:39	4/25/08 10:46	1327	2.0	2684.6	
3823	4/26/08 10:05	4/27/08 8:48	1363	2.0	2757.4	
3843	4/28/08 13:48	4/29/08 12:13	1345	2.0	2721.0	
3863	4/30/08 11:53	5/1/08 11:47	1434	2.0	2901.1	
3883	5/2/08 11:51	5/3/08 9:58	1327	1.8	2350.9	
Receptor 2						
3605	4/3/08 14:22	4/4/08 15:05	1483	2.1	3106.5	
3725	4/6/08 11:56	4/7/08 13:15	1519	2.1	3181.9	
3745	4/8/08 10:22	4/9/08 10:23	1441	2.1	3018.5	
3765	4/10/08 10:34	4/11/08 10:25	1431	2.1	3065.2	Spraying was observed near the site on three days: 9,10, and 13 April 2008.
3625	4/12/08 10:13	4/13/08 9:56	1423	2.1	2980.8	
3645	4/14/08 11:50	4/15/08 11:24	1414	2.1	2961.9	
3665	4/16/08 11:20	4/17/08 12:18	1498	2.1	3137.9	Spraying was observed at the site.
3685	4/18/08 10:11	4/19/08 7:49	1298	2.1	2718.9	
3705	4/20/08 9:19	4/21/08 12:47	1648	2.0	3296.3	
3785	4/22/08 10:47	4/23/08 9:45	1378	2.0	2756.2	
3805	4/24/08 10:53	4/25/08 9:25	1352	2.0	2704.2	
3825	4/26/08 8:58	4/27/08 7:25	1347	2.1	2821.6	
3845	4/28/08 12:40	4/29/08 10:57	1337	2.1	2800.6	
3865	4/30/08 10:44	5/1/08 10:30	1426	2.1	2987.1	
3885	5/2/08 10:30	5/3/08 8:34	1324	1.0	1387.4	

Table 4. Field Data
Phase 1 North Central District Receptor, Ambient and Quality Control Sites (cont.)

unique id number	Sample Period		Sampling Parameters			Observations
	start date and time	stop date and time	duration min	flow rate lpm	volume l	
Receptor 3						
3607	4/3/08 14:43	4/4/08 14:46	1443	1.8	2535.7	
3727	4/6/08 12:17	4/7/08 13:31	1514	1.8	2735.5	
3747	4/8/08 10:38	4/9/08 10:35	1437	1.8	2525.1	
3767	4/10/08 10:49	4/11/08 10:38	1429	1.8	2511.1	
3627	4/12/08 10:33	4/13/08 10:10	1417	1.8	2490.0	
3647	4/14/08 12:11	4/15/08 11:42	1411	1.7	2409.5	
3667	4/16/08 11:36	4/17/08 12:32	1496	1.8	2628.8	
3687	4/18/08 10:28	4/19/08 8:00	1292	1.8	2270.3	
3707	4/20/08 9:40	4/21/08 13:02	1642	1.8	2885.3	Spraying was observed on 19th April 2008 at the site.
3787	4/22/08 11:17	4/23/08 10:02	1365	1.8	2466.3	
3807	4/24/08 11:24	4/25/08 9:39	1335	1.8	2345.9	
3827	4/26/08 13:59	4/27/08 7:49	1070	1.8	1972.6	Spraying was observed at the site.
3847	4/28/08 12:54	4/29/08 11:12	1338	1.8	2466.6	
3867	4/30/08 10:58	5/1/08 10:45	1427	1.8	2630.7	
3887	5/2/08 10:47	5/3/08 8:55	1328	1.6	2134.9	
Quality control co-located with Receptor 3						
3609	4/3/08 14:43	4/4/08 14:46	1443	2.0	2872.6	
3729	4/6/08 12:17	4/7/08 6:06	1069	1.0	1064.6	
3749	4/8/08 10:38	4/9/08 4:08	1050	1.0	1045.6	
3769	4/10/08 10:49	4/11/08 10:38	1429	2.0	2844.8	Spraying was observed near the site on three days: 9,10, and 13 April 2008.
3629	4/12/08 10:33	4/13/08 10:10	1417	2.0	2820.9	
3649	4/14/08 12:11	4/15/08 11:42	1411	2.0	2808.9	
3669	4/16/08 11:36	4/17/08 12:32	1496	2.0	2978.1	Spraying was observed at the site.
3689	4/18/08 10:28	4/19/08 8:00	1292	2.0	2572.0	
3709	4/20/08 9:40	4/21/08 13:02	1642	2.0	3268.8	
3789	4/22/08 11:11	4/23/08 10:02	1371	2.0	2703.1	
3809	4/24/08 11:15	4/25/08 9:39	1344	2.0	2649.8	
3829	4/26/08 13:59	4/27/08 7:49	1070	2.0	2109.6	
3849	4/28/08 12:54	4/29/08 11:12	1338	2.0	2638.0	
3869	4/30/08 10:58	5/1/08 10:45	1427	2.0	2813.5	
3889	5/2/08 10:47	5/3/08 8:55	1328	2.0	2618.3	

Table 2. Field Data
Phase 1 Yakima Valley Receptor, Ambient, and Quality Control Sites

unique id number	Sample period		Sampling Parameters			Observations
	start date and time	stop date and time	duration min	flow rate lpm	volume l	
Ambient						
3021	3/8/08 12:10	3/9/08 10:53	1363	3.2	4387.4	
3041 ^a	3/10/08 11:37	3/11/08 9:28	1311	3.3	4282.1	
3051	3/12/08 16:08	3/13/08 15:45	1417	2.3	3198.8	
3081	3/14/08 15:09	3/15/08 15:15	1446	2.3	3264.3	
3101	3/16/08 14:38	3/17/08 15:54	1516	1.9	2870.8	
3121	3/18/08 17:24	3/19/08 14:02	1238	1.9	2344.3	
3141	3/20/08 13:09	3/21/08 13:27	1458	1.9	2760.9	
3161	3/22/08 16:56	3/23/08 15:45	1369	1.9	2592.4	
3181	3/24/08 17:04	3/25/08 15:04	1320	2.3	2979.8	
3201	3/26/08 14:40	3/27/08 15:26	1486	2.3	3354.6	
3221	3/28/08 13:10	3/29/08 16:35	1645	2.0	3270.8	
3225	3/30/08 15:17	3/31/08 14:40	1403	2.3	3167.2	
3231	4/1/08 14:25	4/2/08 13:50	1405	2.3	3171.7	
3251	4/3/08 16:21	4/4/08 15:09	1368	1.8	2396.3	
3271	4/6/08 15:23	4/7/08 14:58	1415	1.9	2679.5	
3299	4/8/08 15:04	4/9/08 12:19	1275	1.9	2414.4	
3309	4/10/08 16:12	4/11/08 13:01	1249	1.8	2187.8	
Receptor 1						
3046 ^b	3/11/08 12:32	3/12/08 15:07	1595	2.2	3489.4	
3094 ^c	3/18/08 16:45	3/19/08 13:30	1245	1.7	2135.5	
3113	3/20/08 12:44	3/21/08 13:03	1459	2.2	3191.8	
3077	3/22/08 16:30	3/23/08 15:11	1361	2.2	2977.5	
3157	3/24/08 15:36	3/25/08 14:34	1378	2.2	3014.6	
3137	3/26/08 14:10	3/27/08 14:55	1485	2.2	3248.7	
3187	3/27/08 15:00	3/28/08 12:34	1294	2.2	2830.9	
3165	3/30/08 14:49	3/31/08 14:10	1401	1.7	2403.1	
3233	4/1/08 14:05	4/2/08 13:22	1397	1.7	2396.2	
3253	4/3/08 15:40	4/4/08 14:36	1376	1.7	2360.2	
3273	4/6/08 14:55	4/7/08 14:30	1415	1.7	2427.1	
Receptor 2						
3005	3/8/08 10:39	3/9/08 9:39	1380	3.6	4938.2	
3013	3/10/08 9:35	3/11/08 9:00	1405	3.7	5163.1	
3025	3/12/08 14:26	3/13/08 14:26	1440	1.8	2637.4	
3037	3/14/08 13:30	3/15/08 14:20	1490	2.2	3321.3	
3057	3/16/08 14:00	3/17/08 15:10	1510	1.9	2914.8	
3058 ^d	3/16/08 14:00	3/17/08 15:10	1510	2.2	3365.9	
3087	3/18/08 14:10	3/19/08 12:56	1366	2.0	2704.3	
3107	3/20/08 12:23	3/21/08 12:43	1460	1.8	2674.0	
3075	3/22/08 16:02	3/23/08 14:45	1363	1.8	2496.4	
3155	3/24/08 15:11	3/25/08 14:04	1373	1.8	2514.7	
3135	3/26/08 13:46	3/27/08 14:27	1481	2.0	2931.9	
3195	3/28/08 12:19	3/29/08 14:27	1568	1.8	2871.9	
3196 ^e	3/28/08 12:19	3/29/08 14:27	1568	2.2	3595.2	
3163	3/30/08 14:29	3/31/08 13:44	1395	1.8	2555.0	
3237	4/1/08 13:45	4/2/08 12:58	1393	2.2	3098.4	
3257	4/3/08 15:09	4/4/08 14:05	1376	2.2	2994.3	This site was sprayed on 2 April 08.
3277	4/6/08 14:29	4/7/08 14:02	1413	2.2	3142.9	

Table I2. Field Data
Phase 1 Yakima Valley Receptor, Ambient, and Quality Control Sites (cont.)

unique id number	Sample period		Sampling Parameters			Observations
	start date and time	stop date and time	duration min	flow rate lpm	volume l	
Receptor 3						
3063	3/16/08 15:35	3/17/08 16:58	1523	2.1	3129.2	
3117	3/20/08 14:20	3/21/08 14:26	1446	2.1	2971.0	
3143	3/22/08 17:58	3/23/08 17:30	1412	2.0	2814.3	
3123	3/24/08 17:58	3/25/08 16:04	1326	2.1	2724.5	
3183	3/26/08 15:44	3/27/08 16:37	1493	2.1	3067.6	
3203	3/28/08 14:05	3/29/08 18:06	1681	2.1	3453.8	
3167	3/30/08 16:12	3/31/08 15:37	1405	2.1	2886.8	
3235	4/1/08 15:25	4/2/08 14:42	1397	2.1	2870.3	
3255	4/3/08 17:17	4/4/08 16:02	1365	2.1	2804.6	
3275	4/6/08 16:45	4/7/08 15:50	1385	2.1	2845.7	
3291	4/8/08 16:02	4/9/08 13:10	1268	2.3	2904.7	
3301	4/10/08 17:11	4/11/08 13:58	1247	2.2	2738.8	
Quality control co-located with Receptor 2						
3009	3/8/08 10:43	3/9/08 9:40	1377	3.0	4172.9	
3029	3/10/08 9:37	3/11/08 9:00	1403	2.9	4122.8	
3039	3/12/08 14:33	3/13/08 14:26	1433	2.1	2974.2	
3069	3/14/08 13:30	3/15/08 14:20	1490	1.6	2325.1	
3099	3/16/08 14:00	3/17/08 15:10	1510	2.1	3134.1	
3109	3/18/08 14:10	3/19/08 12:56	1366	2.1	2835.2	
3129	3/20/08 12:23	3/21/08 12:43	1460	2.1	3104.2	
3149	3/22/08 16:02	3/23/08 14:45	1363	1.6	2126.9	
3159	3/24/08 15:11	3/25/08 14:04	1373	2.1	2849.7	
3189	3/26/08 13:46	3/27/08 14:27	1481	2.2	3298.9	
3209	3/28/08 12:19	3/29/08 14:27	1568	2.1	3333.9	
3227	3/30/08 14:29	3/31/08 13:44	1395	2.1	2895.4	
3239	4/1/08 13:45	4/2/08 12:58	1393	1.5	2109.8	
3259	4/3/08 15:09	4/4/08 14:05	1376	1.7	2400.1	This site was sprayed on 2 April 08.
3279	4/6/08 14:29	4/7/08 14:02	1413	1.7	2399.7	
Footnotes						
^a Start time missing. Calculated by averaging of the time difference between start times at Ambient and Receptor 2, for 3 days, 12-14 Mar, and adding the average to the site Receptor 2 start time on this date.						
^b Backup sample replaces 3035						
^c Backup sample replaces 3093						
^d Backup sample replaces 3057						
^e Backup sample replaces 3195						

Table 3. Field Data
Phase 1 North Central District Perimeter Site

sample period/ id number	location	ordinal ^a direction	Sample Period		Sampling Parameters			Observations
			start date and time	stop date and time	duration min	flow rate ave lpm	volume l	
PreSpray Day April 6, 2008								
Sample period ~24 hours								
6504	2	NNE	4/6/08 10:24	4/7/08 8:00	1288	6.0	7701	
6508	4	SE	4/6/08 9:07	4/7/08 8:44	1409	5.8	8187	
6502	6	SSW	4/6/08 9:34	4/7/08 6:50	1264	7.0	8861	
6506	8	NW	4/6/08 9:23	4/7/08 6:43	1268	5.6	7077	
6510	QC ^b	SE	4/6/08 9:08	4/7/08 8:45	1409	6.2	8763	
Spray Day April 7, 2008								
Morning Sample period ~6 hours								
Note: The pesticide application occurred between 8:40-9:37 on 7 April, 2008.								
6514	1	NNW	4/7/08 7:57	4/7/08 13:33	336	5.8	1935	
6520	2	NNE	4/7/08 7:54	4/7/08 13:32	338	5.8	1953	
6526	3	NE	4/7/08 7:50	4/7/08 13:46	356	5.7	2031	
6532	4	SE	4/7/08 7:45	4/7/08 13:56	371	5.5	2043	
6538	5	SSE	4/7/08 7:40	4/7/08 14:14	394	6.9	2737	
6544	6	SSW	4/7/08 7:39	4/7/08 14:04	385	8.2	3160	
6550	7	SW	4/7/08 7:45	4/7/08 13:53	368	5.7	2106	
6556	8	NW	4/7/08 7:51	4/7/08 13:45	354	5.6	1989	
6562	QC ^b	SE	4/7/08 7:45	4/7/08 14:05	380	6.5	2455	
Spray Day April 7, 2008								
Afternoon Sample period ~6 hours								
6515	1	NNW	4/7/08 13:41	4/7/08 19:40	359	5.9	2134	
6521	2	NNE	4/7/08 13:40	4/7/08 19:41	361	5.7	2057	
6527	3	NE	4/7/08 13:52	4/7/08 19:52	360	5.8	2072	
6533	4	SE	4/7/08 14:01	4/7/08 20:01	360	5.8	2094	
6539	5	SSE	4/7/08 14:24	4/7/08 20:17	353	6.2	2186	
6545	6	SSW	4/7/08 14:10	4/7/08 20:07	357	6.2	2201	
6551	7	SW	4/7/08 13:59	4/7/08 20:00	361	5.8	2097	
6557	8	NW	4/7/08 13:50	4/7/08 19:52	362	6.0	2159	
6563	QC ^b	SE	4/7/08 14:11	4/7/08 20:09	358	6.0	2135	
Spray Day April 7, 2008								
Evening Sample period ~12 hours								
6516	1	NNW	4/7/08 20:42	4/8/08 7:35	653	5.6	3674	
6522	2	NNE	4/7/08 20:39	4/8/08 7:33	654	6.0	3897	
6528	3	NE	4/7/08 20:42	4/8/08 7:40	658	5.8	3811	
6534	4	SE	4/7/08 20:49	4/8/08 7:47	658	5.6	3714	
6540	5	SSE	4/7/08 20:55	4/8/08 7:59	664	6.0	3958	
6546	6	SSW	4/7/08 20:28	4/8/08 7:57	689	6.0	4148	
6552	7	SW	4/7/08 20:32	4/8/08 7:50	678	5.6	3821	
6558	8	NW	4/7/08 20:38	4/8/08 7:44	666	5.7	3802	
6564	QC ^b	SE	4/7/08 20:51	4/8/08 7:52	661	4.9	3243	

Table 4. Field Data
Phase 1 Yakima Valley Perimeter Site

sample period/ unique id number	location	ordinal direction ^a	Sample Period		Sampling Parameters			observations
			start date and time	stop date and time	duration min	flow rate ave lpm	volume l	
PreSpray Day March 31, 2008								
Sample period - ~24 hours								
6004	2	NNE	3/31/08 14:25	4/1/08 14:29	1432	5.8	8315	
6008	4	SE	3/31/08 14:22	4/1/08 14:38	1444	5.7	8263	
6002	6	SSW	3/31/08 15:42	4/1/08 14:54	1379	5.8	7979	
6006	8	NW	3/31/08 15:33	4/1/08 15:03	1397	5.7	7915	
6010	QC ^b	SE	3/31/08 15:17	4/1/08 14:40	1391	6.2	8597	
Spray Day April 2, 2008								
Morning Sample period ~7 hours								
Note: The pesticide application on the study orchard occurred between 14:08-16:23 on 2 April, 2008.								One acre located ~SE from the study orchard was sprayed with CPF around 11:00.
6014	1	N	4/2/08 10:20	4/2/08 17:43	443	5.5	2457	
6020	2	NNE	4/2/08 10:26	4/2/08 17:48	430	5.7	2443	
6026	3	NE	4/2/08 10:34	4/2/08 18:10	444	5.7	2529	
6032	4	SE	4/2/08 10:44	4/2/08 18:29	453	5.6	2529	
6038	5	S	4/2/08 10:51	4/2/08 18:57	474	6.4	3016	
6044	6	SSW	4/2/08 10:31	4/2/08 18:20	469	6.1	2884	
6050	7	SW	4/2/08 10:26	4/2/08 18:11	465	5.6	2613	
6056	8	NW	4/2/08 10:24	4/2/08 17:59	455	5.6	2554	
6062	QC ^b	SE	4/2/08 10:47	4/2/08 18:41	462	6.1	2837	
Spray Day April 2, 2008								
Afternoon Sample period ~6 hours								
6015	1	N	4/2/08 18:41	4/3/08 0:19	332	5.7	1899	
6021	2	NNE	4/2/08 18:02	4/3/08 0:17	375	5.8	2162	
6027	3	NE	4/2/08 18:20	4/3/08 0:34	374	5.7	2135	
6033	4	SE	4/2/08 18:39	4/3/08 0:48	369	5.8	2133	
6045	6	SSW	4/2/08 18:57	4/3/08 1:16	373	6.3	2336	
6051	7	SW	4/2/08 18:52	4/3/08 1:01	363	5.6	2029	
6057	8	NW	4/2/08 18:47	4/3/08 0:42	349	5.8	2008	
6063	QC ^b	SE	4/2/08 18:50	4/3/08 0:49	359	6.6	2382	
Spray Day April 3 (early morning), 2008								
Evening Sample period ~9hours								
6016	1	N	4/3/08 0:33	4/3/08 9:54	556	5.4	2998	
6022	2	NNE	4/3/08 0:27	4/3/08 10:03	555	5.5	3064	
6028	3	NE	4/3/08 0:41	4/3/08 10:26	564	5.5	3089	
6034	4	SE	4/3/08 1:06	4/3/08 10:40	553	5.4	2991	
6040	5	S	4/3/08 1:19	4/3/08 11:03	563	5.9	3327	
6046	6	SSW	4/3/08 1:26	4/3/08 10:31	540	6.4	3434	
6052	7	SW	4/3/08 1:10	4/3/08 10:19	544	5.4	2963	
6058	8	NW	4/3/08 0:52	4/3/08 10:09	552	5.6	3072	
6064	QC ^b	SE	4/3/08 1:05	4/3/08 10:52	566	6.0	3369	

Table 4. Field Data
Phase 1 Yakima Valley Perimeter Site (cont.)

sample period/ unique id number	location	ordinal direction ^a	Sample Period		Sampling Parameters			observations
			start date and time	stop date and time	duration min	flow rate ave lpm	volume l	
Post-Spray 1 April 3, 2008								
Morning sample period ~9 hours								
6068	1	N	4/3/08 10:02	4/3/08 19:14	544	5.8	3151	
6074	2	NNE	4/3/08 10:15	4/3/08 19:25	535	5.8	3083	
6080	3	NE	4/3/08 10:34	4/3/08 19:38	529	5.7	3038	
6086	4	SE	4/3/08 10:48	4/3/08 19:50	527	5.8	3032	
6092	5	S	4/3/08 11:10	4/3/08 20:11	526	6.2	3286	
6098	6	SSW	4/3/08 10:37	4/3/08 19:52	547	6.2	3391	
6104	7	SW	4/3/08 10:25	4/3/08 19:41	548	5.8	3157	
6110	8	NW	4/3/08 10:13	4/3/08 19:31	550	5.7	3117	
6116	QC ^b	SE	4/3/08 10:58	4/3/08 19:59	526	6.2	3283	
Post-Spray 1 April 3, 2008								
Evening sample period ~10hours								
6070	1	N	4/3/08 20:37	4/4/08 7:31	654	5.5	3618	
6076	2	NNE	4/3/08 21:28	4/4/08 7:39	611	5.8	3520	
6082	3	NE	4/3/08 21:23	4/4/08 7:51	628	5.6	3527	
6088	4	SE	4/3/08 21:13	4/4/08 8:01	648	5.7	3685	
6094	5	S	4/3/08 21:00	4/4/08 8:17	677	6.2	4189	
6100	6	SSW	4/3/08 21:46	4/4/08 7:56	610	6.4	3909	
6106	7	SW	4/3/08 20:54	4/4/08 7:48	654	5.7	3712	
6112	8	NW	4/3/08 20:47	4/4/08 7:41	654	5.7	3728	
6118	QC ^b	SE	4/3/08 21:18	4/4/08 8:07	649	6.2	4043	
Post-Spray 2 April 4, 2008								
Sample period ~24 hours								
6120	1	N	4/4/08 8:31	4/5/08 7:16	1360	5.3	7271	
6122	2	NNE	4/4/08 9:21	4/5/08 7:20	1310	5.7	7511	
6124	3	NE	4/4/08 9:15	4/5/08 7:24	1320	5.8	7650	
6126	4	SE	4/4/08 9:02	4/5/08 7:29	1338	5.8	7786	
6128	5	S	4/4/08 8:56	4/5/08 7:40	1355	6.2	8338	
6130	6	SSW	4/4/08 8:45	4/5/08 7:30	1360	6.3	8546	
6132	7	SW	4/4/08 8:42	4/5/08 7:26	1359	5.7	7708	
6134	8	NW	4/4/08 8:39	4/5/08 7:21	1357	5.8	7884	
6135	QC ^b	SE	4/4/08 9:10	4/5/08 7:30	1331	6.3	8384	
Footnote								
^a Ordinal direction from block center. The center was determined as the intersection of two lines, one line drawn from the mid point between locations 3 and 4 to the midpoint between 7 and 8. The second line was drawn from between the midpoint locations 1 and 2 and the midpoint between locations 5 and 6. ^b QC sampler co-located with sampler at location #4								

**Table I5. Field Data
 Phase 2 Yakima Valley Perimeter Site**

sample period/id number	location	ordinal ^a direction	Sample Period		Sampling Parameters			Observations
			start date and time	stop date and time	duration min	flow rate ave lpm	volume l	
PreSpray Day June 19, 2008								
Note: Spray was observed at the neighboring orchard (~ south) during the sample set-up.								
Sample period ~24 hours								
9001	2	NNE	na	na	na	na	na	Invalid sample, back-up sample could not be analyzed.
9003	4	SE	6/19/08 9:38	6/20/08 9:31	1426	6.0	8620.9	
9005	6	SSW	6/19/08 9:24	6/20/08 9:25	1425	5.8	8237.7	
9007	8	NW	6/19/08 0:16	6/20/08 9:16	1424	5.9	8336.3	
9009	QC	SE	6/19/08 9:35	6/20/08 9:30	1428	5.7	8168.7	
Spray Day June 20, 2008								
Note: The pesticide spray was delayed, due to last minute orchard and equipment delays. Therefore there was no morning sample period.								
Evening Sample Period ~6 hours								
9012	1	N	6/20/08 18:03	6/21/08 0:42	399	5.7	2263.4	
9018	2	NNE	6/20/08 18:11	6/21/08 0:26	375	5.7	2147.5	
9024	3	NE	6/20/08 18:10	6/21/08 0:28	378	5.7	2159.3	
9030	4	SE	6/20/08 18:06	6/21/08 0:29	383	5.7	2185.1	
9036	5	S	6/20/08 18:01	6/21/08 0:32	391	5.8	2253.9	
9042	6	SSW	6/20/08 18:14	6/21/08 0:50	396	5.7	2260.8	
9048	7	SW	6/20/08 19:10	6/21/08 0:47	337	5.6	1885.3	
9054	8	NW	6/20/08 18:07	6/21/08 0:45	398	6.1	2442.8	
9060	QC	SE	na	na	na	na	na	Samples were lost due to pump failure occurring while the study block was being applied.
Spray Day June 20, 2008								
Note: The second sample period for spray day 2 started after midnight the following day due to the delay in the pesticide application								
Night Sample period ~7 hours								
9013	1	N	6/21/08 1:05	6/21/08 8:17	432	5.8	2491.3	
9019	2	NNE	6/21/08 1:40	6/21/08 8:29	409	6.3	2579.0	
9025	3	NE	6/21/08 1:32	6/21/08 8:28	416	6.1	2540.0	
9031	4	SE	6/21/08 1:14	6/21/08 8:26	432	6.1	2646.9	
9037	5	S	6/21/08 1:21	6/21/08 8:24	423	6.3	2685.4	
9043	6	SSW	6/21/08 1:20	6/21/08 8:22	422	5.8	2428.8	
9049	7	SW	6/21/08 1:15	6/21/08 8:20	425	6.0	2555.4	
9055	8	NW	6/21/08 1:10	6/21/08 8:19	429	6.0	2592.5	
9061	QC	SE	6/21/08 1:14	6/21/08 8:26	432	6.0	2610.4	

Table I6. Field Data
Phase 2 Yakima Valley Receptor, Ambient, and Quality Control Sites

Site/id number	Sample period		Sampling Parameters			Observations
	start date and time	stop date and time	duration min	flow rate ave lpm	volume l	
Ambient						
8001	5/21/08 11:57	5/22/08 13:43	1546	1.7	2569.7	
8011	5/24/08 12:30	5/25/08 12:02	1412	1.9	2718.4	
8021	5/27/08 12:35	5/28/08 11:30	1375	1.9	2647.1	
8031	5/30/08 9:50	5/31/08 13:40	1670	1.9	3215.0	
8041	6/2/08 15:30	6/3/08 12:25	1255	1.9	2390.2	
8051	6/5/08 13:50	6/6/08 15:25	1535	2.0	2995.8	
8061	6/8/08 15:48	6/9/08 17:40	1552	1.9	2955.9	
8071	6/11/08 14:20	6/12/08 17:20	1620	2.0	3195.5	
8081	6/13/08 12:28	6/14/08 11:25	1377	1.9	2651.0	
8091	6/17/08 8:25	6/18/08 6:50	1345	1.9	2589.4	
8101	6/20/08 15:02	6/21/08 16:00	1498	1.9	2883.9	
8111	6/23/08 14:45	6/24/08 12:32	1307	1.9	2516.2	
8121	6/26/08 5:55	6/27/08 5:55	1440	1.9	2772.3	
8131	7/2/08 11:02	7/3/08 16:22	1760	1.8	3221.6	
8141	7/5/08 11:50	7/6/08 12:31	1481	1.9	2851.2	
8151	7/8/08 6:00	7/9/08 5:40	1420	1.9	2733.8	
8161	7/11/08 10:52	7/12/08 10:02	1390	1.9	2676.0	
8171	7/14/08 12:00	7/15/08 10:35	1355	1.9	2608.6	
8181	7/17/08 10:00	7/18/08 10:15	1455	1.9	2801.1	
8191	7/20/08 11:42	7/21/08 10:52	1390	1.9	2676.0	
8201	7/23/08 11:29	7/24/08 10:32	1383	1.8	2531.5	
8211	7/26/08 10:13	7/27/08 10:16	1443	1.9	2778.0	
8221	7/29/08 11:05	7/30/08 11:25	1460	2.0	2879.9	
Receptor 2						
8007	5/21/08 12:49	5/22/08 14:10	1521	2.1	3142.1	
8017	5/24/08 12:57	5/25/08 12:30	1413	1.9	2701.8	
8027	5/27/08 13:05	5/28/08 11:53	1368	1.9	2615.7	
8038 ^a	5/30/08 10:37	5/31/08 14:01	1644	2.1	3396.2	
8047	6/2/08 17:25	6/3/08 13:26	1201	1.9	2296.4	
8057	6/5/08 14:52	6/6/08 16:36	1544	1.9	2952.3	
8067	6/8/08 16:48	6/9/08 18:40	1552	1.9	2967.5	
8078 ^b	6/11/08 15:02	6/12/08 18:10	1628	2.1	3363.1	
8087	6/13/08 13:39	6/14/08 12:20	1361	2.0	2668.5	
8097	6/17/08 8:55	6/18/08 6:15	1280	1.9	2447.5	
8107	6/20/08 16:09	6/21/08 16:54	1485	1.9	2839.4	
8117	6/23/08 15:10	6/24/08 12:57	1307	1.9	2499.1	
8127	6/26/08 6:19	6/27/08 6:09	1430	1.9	2734.3	
8137	7/2/08 12:05	7/3/08 18:02	1797	1.9	3436.0	
8147	7/5/08 12:25	7/6/08 12:55	1470	1.9	2810.8	
8157	7/8/08 6:25	7/9/08 5:59	1414	1.9	2703.7	
8167	7/11/08 11:29	7/12/08 10:23	1374	1.9	2627.2	
8177	7/14/08 12:37	7/15/08 10:59	1342	1.9	2566.0	
8187	7/17/08 10:28	7/18/08 10:41	1453	1.9	2778.3	
8197	7/20/08 12:09	7/21/08 11:20	1391	1.9	2659.7	
8207	7/23/08 12:23	7/24/08 11:01	1358	2.0	2662.6	
8217	7/26/08 10:36	7/27/08 10:35	1439	1.9	2751.5	
8227	7/29/08 11:30	7/30/08 11:49	1459	2.0	2860.6	

Table 16. Field Data
Phase 2 Yakima Valley Receptor, Ambient, and Quality Control Sites (cont.)

Site/id number	Sample period		Sampling Parameters			Observations
	start date and time	stop date and time	duration min	flow rate ave lpm	volume l	
Receptor 4						
8003	5/21/08 13:09	5/22/08 14:27	1518	1.8	2670.7	
8014 ^c	5/24/08 13:07	5/25/08 12:46	1419	1.7	2364.4	
8023	5/27/08 13:24	5/28/08 12:08	1364	1.8	2399.7	
8033	5/30/08 10:50	5/31/08 14:07	1637	1.8	2880.1	
8043	6/2/08 16:30	6/3/08 12:51	1221	1.8	2148.2	
8053	6/5/08 14:18	6/6/08 15:50	1532	1.8	2695.3	
8063	6/8/08 16:13	6/9/08 18:13	1560	1.7	2666.7	
8073	6/11/08 15:17	6/12/08 17:44	1587	1.8	2792.1	
8083	6/13/08 13:06	6/14/08 11:52	1366	1.7	2266.9	
8093	6/17/08 9:25	6/18/08 6:10	1245	1.8	2190.4	
8103	6/20/08 15:35	6/21/08 16:23	1488	1.8	2692.2	
8113	6/23/08 15:18	6/24/08 13:15	1317	1.8	2317.1	
8123	6/26/08 6:24	6/27/08 6:16	1432	1.8	2519.4	
8133	7/2/08 11:31	7/3/08 17:37	1806	1.8	3177.4	
8143	7/5/08 12:36	7/6/08 13:06	1470	1.7	2512.9	
8153	7/8/08 6:36	7/9/08 6:08	1412	1.8	2484.2	
8163	7/11/08 11:40	7/12/08 10:35	1375	1.8	2419.1	
8173	7/14/08 12:44	7/15/08 11:09	1345	1.8	2366.3	
8183	7/17/08 10:49	7/18/08 10:43	1434	1.8	2522.9	
8193	7/20/08 12:19	7/21/08 11:32	1393	1.8	2450.8	
8203	7/23/08 12:35	7/24/08 11:13	1358	1.8	2389.2	
8213	7/26/08 10:45	7/27/08 10:42	1437	1.8	2528.2	
8223	7/29/08 11:39	7/30/08 11:59	1460	1.7	2495.8	
Receptor 5						
NOTE: The orchard to the east of Receptor 5 did not spray OPs during the crop season.						
8005	5/21/08 13:33	5/22/08 14:41	1508	1.7	2600.4	
8015	5/24/08 13:21	5/25/08 12:58	1417	1.7	2443.5	
8025	5/27/08 13:38	5/28/08 12:20	1362	1.7	2348.7	
8035	5/30/08 11:00	5/31/08 14:20	1640	1.7	2828.1	Spraying west of the site on 28 May 08.
8045	6/2/08 16:49	6/3/08 13:07	1218	1.8	2163.5	
8055	6/5/08 14:35	6/6/08 16:15	1540	1.7	2655.6	
8065	6/8/08 16:36	6/9/08 18:25	1549	1.7	2671.1	
8075	6/11/08 15:37	6/12/08 17:56	1579	1.7	2722.9	
8085	6/13/08 13:22	6/14/08 12:04	1362	1.7	2348.7	
8095	6/17/08 11:00	6/18/08 5:50	1130	1.7	1948.6	
8105	6/20/08 15:53	6/21/08 16:38	1485	1.7	2560.8	
8115	6/23/08 15:28	6/24/08 13:28	1320	1.7	2276.2	
8125	6/26/08 8:18	6/27/08 6:24	1326	1.7	2286.6	Spraying west of the site on 26 June 08.
8135	7/2/08 11:50	7/3/08 17:50	1800	2.0	3570.4	
8145 ^d	na	na	na	na	na	
8155	7/8/08 6:48	7/9/08 6:18	1410	1.7	2431.4	Spraying east of the site on 7th-8th July 08.
8165	7/11/08 11:56	7/12/08 10:46	1370	1.7	2362.5	
8175	7/14/08 12:55	7/15/08 11:20	1345	1.7	2319.3	
8185	7/17/08 11:00	7/18/08 10:59	1439	1.7	2481.4	
8195	7/20/08 12:29	7/21/08 11:44	1395	1.9	2694.8	
8205	7/23/08 12:46	7/24/08 11:24	1358	1.7	2341.8	
8215	7/26/08 10:49	7/27/08 10:50	1441	1.7	2484.9	
8225	7/29/08 11:52	7/30/08 12:09	1457	1.6	2361.5	

Table 16. Field Data
Phase 2 Yakima Valley Receptor, Ambient, and Quality Control Sites (cont.)

Site/id number	Sample period		Sampling Parameters			Observations
	start date and time	stop date and time	duration min	flow rate ave lpm	volume l	
Quality Control co-located with Receptor 2						
8009	5/21/08 12:49	5/22/08 14:10	1521	2.0	3005.7	
8020 ^e	5/24/08 12:57	5/25/08 12:30	1413	1.7	2448.2	
8029	5/27/08 13:05	5/28/08 11:53	1368	2.2	3021.2	
8039	5/30/08 10:37	5/31/08 14:01	1644	2.1	3472.2	
8049	6/2/08 17:25	6/3/08 13:26	1201	2.2	2594.5	
8059	6/5/08 14:52	6/6/08 16:36	1544	2.1	3186.5	
8069	6/8/08 16:48	6/9/08 18:40	1552	2.2	3352.7	
8089	6/13/08 13:44	6/14/08 12:20	1356	2.2	2994.7	
8099	6/17/08 8:55	6/18/08 6:15	1280	2.2	2826.8	
8109	6/20/08 16:09	6/21/08 16:54	1485	2.2	3279.6	
8119	6/23/08 15:10	6/24/08 12:57	1307	2.2	2886.5	
8130 ^e	6/26/08 6:19	6/27/08 6:09	1430	2.0	2825.9	
8140 ^e	7/2/08 12:05	7/3/08 18:02	1797	2.0	3551.2	
8149	7/5/08 12:22	7/6/08 12:55	1473	2.2	3253.1	
8159	7/8/08 6:25	7/9/08 5:59	1414	2.2	3122.8	
8169	7/11/08 11:29	7/12/08 10:23	1374	2.2	3034.4	
8179	7/14/08 12:37	7/15/08 10:59	1342	2.2	2963.8	
8189	7/17/08 10:28	7/18/08 10:41	1453	2.2	3208.9	
8199	7/20/08 12:09	7/21/08 11:20	1391	2.2	3072.0	
8209	7/23/08 12:23	7/24/08 11:01	1358	2.2	2999.1	
8219	7/26/08 10:36	7/27/08 10:35	1439	2.2	3178.0	
8229	7/29/08 11:30	7/30/08 11:49	1459	2.2	3222.2	
Footnotes						
^a Sample #8038 replaces sample #8037						
^b Sample #8078 replaces sample #8077						
^c Sample #8017 replaces sample #8013						
^d No samples for this site on 5 July, 2008 due to battery failure						
^e Invalid Q1 sample, sample #8020,#8130, and #8140 are back-up samples						

**Table 7. Chlorpyrifos and Chlorpyrifos-oxon
Concentrations in Air (ng/m³)
Phase 1 North Central District Receptor, Ambient, and Quality Control Sites**

unique id number	start date and time	volume m ³	Mass (ng)						Air Concentrations (ng/m ³)			
			CPF	< LOD CPF	CPF-oxon	< LOD CPF-oxon	CPF-oxon as CPF Eq ^b	CPF Total	CPF	CPF-oxon	CPF-oxon as CPF Eq	CPF Total
Ambient												
3601	4/3/08 13:42	2.8	15.7		9.1		9.6	25.3	5.5	3.2	3.4	8.9
3721	4/6/08 11:18	3.0	36.2		14.3		15.0	51.2	12.0	4.8	5.0	17.0
3741	4/8/08 9:43	2.8	17.3		7.2		7.6	24.8	6.2	2.6	2.7	8.9
3761	4/10/08 9:58	2.8	21.1		17.2		18.0	39.1	7.6	6.2	6.5	14.1
3621	4/12/08 9:28	2.8	44.0		14.0		14.7	58.7	15.8	5.0	5.3	21.1
3641	4/14/08 11:02	2.8	5.2		3.1		3.2	8.4	1.9	1.1	1.2	3.1
3661	4/16/08 10:39	2.9	20.6		16.5		17.2	37.9	7.1	5.6	5.9	13.0
3681	4/18/08 9:34	2.5	1.5		1.8		1.9	3.3	0.59	0.7	0.7	1.3
3701	4/20/08 8:10	1.6	2.8		1.9		2.0	4.7	1.7	1.2	1.2	2.9
3781	4/22/08 10:59	2.6	9.5		1.7		1.8	11.3	3.6	0.65	0.68	4.3
3801	4/24/08 10:14	2.7	5.3		1.7		1.8	7.1	1.9	0.64	0.68	2.6
3821	4/26/08 8:10	2.7	2.6		3.1		3.2	5.8	0.95	1.1	1.2	2.1
3841	4/28/08 11:55	2.7	1.6		1.2		1.2	2.9	0.60	0.44	0.46	1.1
3861	4/30/08 10:07	2.9	0.9		0.6		0.6	1.5	0.32	0.21	0.22	0.54
3881	5/2/08 9:54	2.6	1.2		0.5		0.6	1.7	0.46	0.20	0.21	0.66
Receptor 1												
3603	4/3/08 15:48	2.9	34.8		12.4		13.0	47.8	11.9	4.2	4.4	16.3
3723	4/6/08 13:19	3.1	21.9		6.7		7.0	29.0	7.2	2.2	2.3	9.5
3743	4/8/08 11:37	2.9	14.3		6.4		6.7	21.0	4.9	2.2	2.3	7.2
3763	4/10/08 11:45	3.0	52.8		11.3		11.8	64.7	17.8	3.8	4.0	21.8
3623	4/12/08 11:33	2.9	1418.9		309.4		324.3	1743.1	493.9	107.7	112.9	606.8
3643	4/14/08 13:11	2.9	49.9		16.7		17.5	67.5	17.5	5.9	6.1	23.6
3663	4/16/08 12:31	3.0	147.7		31.4		32.9	180.6	48.6	10.3	10.8	59.4
3683	4/18/08 11:28	2.6	17.4		3.6		3.7	21.2	6.7	1.4	1.4	8.1
3703	4/20/08 10:43	3.5	39.9		11.1		11.6	51.5	11.4	3.2	3.3	14.8
3783	4/22/08 12:15	2.6	48.3		8.4		8.8	57.1	18.6	3.2	3.4	22.0
3803	4/24/08 12:39	2.7	26.1		7.1		7.5	33.6	9.7	2.7	2.8	12.5
3823	4/26/08 10:05	2.8	25.9		16.9		17.7	43.6	9.4	6.1	6.4	15.8
3843	4/28/08 13:48	2.7	11.3		7.9		8.3	19.6	4.2	2.9	3.0	7.2
3863	4/30/08 11:53	2.9	3.2		2.4		2.5	5.7	1.1	0.83	0.87	2.0
3883	5/2/08 11:51	2.4	8.2		4.4		4.6	12.8	3.5	1.9	2.0	5.5
Receptor 2												
3605	4/3/08 14:22	3.1	6.5		4.9		5.1	11.6	2.1	1.6	1.6	3.7
3725	4/6/08 11:56	3.2	4.6		2.1		2.2	6.8	1.4	0.67	0.70	2.1
3745	4/8/08 10:22	3.0	3.4		1.9		2.0	5.4	1.1	0.64	0.67	1.8
3765	4/10/08 10:34	3.1	11.7		14.8		15.5	27.2	3.8	4.8	5.1	8.9
3625	4/12/08 10:13	3.0	24.3		10.7		11.2	35.6	8.2	3.6	3.8	11.9
3645	4/14/08 11:50	3.0	2.9		5.6		5.9	8.8	1.0	1.9	2.0	3.0
3665	4/16/08 11:20	3.1	87.9		57.9		60.7	148.6	28.0	18.5	19.3	47.4
3685	4/18/08 10:11	2.7	33.2		8.5		9.0	42.1	12.2	3.1	3.3	15.5
3705	4/20/08 9:19	3.3	244.1		78.8		82.6	326.7	74.0	23.9	25.1	99.1
3785	4/22/08 10:47	2.8	283.5		31.2		32.7	316.2	102.9	11.3	11.9	114.7
3805	4/24/08 10:53	2.7	7.7		7.2		7.6	15.2	2.8	2.7	2.8	5.6
3825	4/26/08 8:58	2.8	156.2		34.9		36.5	192.7	55.4	12.4	12.9	68.3
3845	4/28/08 12:40	2.8	12.1		17.4		18.3	30.3	4.3	6.2	6.5	10.8
3865	4/30/08 10:44	3.0	1.9		1.7		1.8	3.7	0.64	0.57	0.60	1.2
3885	5/2/08 10:30	1.4	27.2		16.7		17.5	44.7	19.6	12.0	12.6	32.2

**Table 7. Chlorpyrifos and Chlorpyrifos-oxon
 Concentrations in Air (ng/m³)
 Phase 1 North Central District Receptor, Ambient, and Quality Control Sites (cont.)**

unique id number	start date and time	volume m ³	Mass (ng)					Air Concentrations (ng/m ³)				
			CPF	< LOD CPF	CPF-oxon	< LOD CPF-oxon	CPF-oxon as CPF Eq ^b	CPF Total	CPF	CPF-oxon	CPF-oxon as CPF Eq	CPF Total
Receptor 3												
3607	4/3/08 14:43	2.5	5.4		3.1		3.2	8.6	2.1	1.2	1.3	3.4
3727	4/6/08 12:17	2.7	0.8		0.9		0.9	1.7	0.31	0.32	0.33	0.64
3747	4/8/08 10:38	2.5	1.6		1.3		1.3	2.9	0.63	0.51	0.53	1.2
3767	4/10/08 10:49	2.5	3.3		6.2		6.5	9.8	1.3	2.5	2.6	3.9
3627	4/12/08 10:33	2.5	320.0		83.6		87.6	407.5	128.5	33.6	35.2	163.7
3647	4/14/08 12:11	2.4	0.5 ^a		1.2		1.2	1.7	0.21	0.48	0.50	0.7
3667	4/16/08 11:36	2.6	1.1		16.0		16.8	17.9	0.43	6.1	6.4	6.8
3687	4/18/08 10:28	2.3	6.4		4.2		4.5	10.9	2.8	1.9	2.0	4.8
3707	4/20/08 9:40	2.9	10.4		11.1		11.7	22.0	3.6	3.9	4.0	7.6
3787	4/22/08 11:17	2.5	19.1		5.8		6.1	25.2	7.8	2.4	2.5	10.2
3807	4/24/08 11:24	2.3	5.0		6.2		6.5	11.5	2.1	2.7	2.8	4.9
3827	4/26/08 13:59	2.0	3.9		2.1		2.2	6.1	2.0	1.0	1.1	3.1
3847	4/28/08 12:54	2.5	1.3		2.5		2.6	3.9	0.52	1.0	1.0	1.6
3867	4/30/08 10:58	2.6	0.5 ^a		0.5 ^a		0.5	1.0	0.19	0.19	0.20	0.39
3887	5/2/08 10:47	2.1	1.0		0.9		1.0	1.9	0.45	0.44	0.46	0.91
Quality control co-located with Receptor 3												
3609	4/3/08 14:43	2.9	17.2		6.2		6.5	23.7	6.0	2.1	2.2	8.2
3729	4/6/08 12:17	1.1	0.5 ^a		0.5 ^a		0.5	1.0	0.47	0.47	0.49	1.0
3749	4/8/08 10:38	1.0	2.5		1.2		1.3	3.7	2.3	1.1	1.2	3.5
3769	4/10/08 10:49	2.8	7.1		3.9		4.0	11.1	2.5	1.4	1.4	3.9
3629	4/12/08 10:33	2.8	16.4		5.1		5.4	21.8	5.8	1.8	1.9	7.7
3649	4/14/08 12:11	2.8	2.0		0.7		0.7	2.7	0.71	0.24	0.25	1.0
3669	4/16/08 11:36	3.0	5.8		16.7		17.5	23.2	1.9	5.6	5.9	7.8
3689	4/18/08 10:28	2.6	7.8		2.1		2.2	10.0	3.0	0.83	0.87	3.9
3709	4/20/08 9:40	3.3	14.2		12.2		12.8	27.0	4.3	3.7	3.9	8.3
3789	4/22/08 11:11	2.7	24.6		7.2		7.5	32.2	9.1	2.7	2.8	11.9
3809	4/24/08 11:15	2.6	7.1		6.5		6.8	14.0	2.7	2.5	2.6	5.3
3829	4/26/08 13:59	2.1	3.1		1.1		1.1	4.2	1.5	0.51	0.53	2.0
3849	4/28/08 12:54	2.6	1.1		3.0		3.1	4.2	0.40	1.1	1.2	1.6
3869	4/30/08 10:58	2.8	0.5 ^a		0.5 ^a		0.5	1.0	0.18	0.18	0.19	0.36
3889	5/2/08 10:47	2.6	1.0		1.2		1.2	2.2	0.38	0.45	0.47	0.85
Footnote												
^a Lab reported <LOD, LOD = 1 for both CPF and CPF-oxon. Value on table is equal to half of the LOD.												
^b CPF-oxon as CPF eq (ng)= (CPF-oxon mass, ng) * (CPF molecular weight/ CPF-oxon molecular weight)												

Table -8. Chlorpyrifos and Chlorpyrifos-oxon Concentrations in Air (ng/m³)
Phase 1 Yakima Valley Receptor, Ambient, and Quality Control Sites

unique id number	start date and time	volume m ³	Mass (ng)					Air Concentrations (ng/m ³)				
			CPF	< LOD CPF	CPF-oxon	< LOD CPF-oxon	CPF-oxon as CPF Eq ^a	CPF Total	CPF	CPF-oxon	CPF-oxon as CPF Eq	CPF Total
Ambient												
3021	3/8/08 12:10	4.4	7.0		2.9		3.1	10.0	1.6	0.67	0.70	2.3
3041 ^b	3/10/08 11:37	4.3	6.5		8.2		8.6	15.1	1.5	1.9	2.0	3.5
3051	3/12/08 16:08	3.2	12.0		6.5		6.8	18.9	3.8	2.0	2.1	5.9
3081	3/14/08 15:09	3.3	4.4		2.4		2.5	6.9	1.4	0.73	0.76	2.1
3101	3/16/08 14:38	2.9	3.7		4.8		5.0	8.7	1.3	1.7	1.7	3.0
3121	3/18/08 17:24	2.3	43.7		13.8		14.5	58.2	18.6	5.9	6.2	24.8
3141	3/20/08 13:09	2.8	2.4		6.6		6.9	9.3	0.88	2.4	2.5	3.4
3161	3/22/08 16:56	2.6	31.3		16.6		17.4	48.7	12.1	6.4	6.7	18.8
3181	3/24/08 17:04	3.0	18.9		15.3		16.0	34.9	6.3	5.1	5.4	11.7
3201	3/26/08 14:40	3.4	2.7		5.1		5.4	8.1	0.82	1.5	1.6	2.4
3221	3/28/08 13:10	3.3	2.8		7.3		7.6	10.4	0.86	2.2	2.3	3.2
3225	3/30/08 15:17	3.2	6.6		8.4		8.8	15.4	2.1	2.7	2.8	4.9
3231	4/1/08 14:25	3.2	14.2		10.1		10.6	24.8	4.5	3.2	3.3	7.8
3251	4/3/08 16:21	2.4	47.6		23.7		24.8	72.4	19.9	9.9	10.3	30.2
3271	4/6/08 15:23	2.7	4.9		6.9		7.2	12.1	1.8	2.6	2.7	4.5
3299	4/8/08 15:04	2.4	8.9		8.6		9.0	17.9	3.7	3.6	3.7	7.4
3309	4/10/08 16:12	2.2	12.0		8.0		8.4	20.3	5.5	3.7	3.8	9.3
Receptor 1												
3046 ^c	3/11/08 12:32	3.5	1.0		0.5		0.5	1.6	0.29	0.15	0.15	0.45
3094 ^d	3/18/08 16:45	2.1	5.0		1.5		1.6	6.6	2.3	0.70	0.73	3.1
3113	3/20/08 12:44	3.2	7.9		3.1		3.3	11.2	2.5	1.0	1.0	3.5
3077	3/22/08 16:30	3.0	77.6		12.8		13.4	91.0	26.1	4.3	4.5	30.6
3157	3/24/08 15:36	3.0	30.7		10.4		10.9	41.6	10.2	3.5	3.6	13.8
3137	3/26/08 14:10	3.2	18.6		19.0		19.9	38.5	5.7	5.9	6.1	11.9
3187	3/27/08 15:00	2.8	37.2		8.8		9.2	46.4	13.1	3.1	3.2	16.4
3165	3/30/08 14:49	2.4	45.5		10.3		10.8	56.4	19.0	4.3	4.5	23.5
3233	4/1/08 14:05	2.4	256.3		32.1		33.7	289.9	106.9	13.4	14.1	121.0
3253	4/3/08 15:40	2.4	440.2		48.9		51.2	491.4	186.5	20.7	21.7	208.2
3273	4/6/08 14:55	2.4	106.5		26.8		28.1	134.5	43.9	11.0	11.6	55.4
Receptor 2												
3005	3/8/08 10:39	4.9	7.4		0.5 ^g		0.5	7.9	1.5	0.10	0.11	1.6
3013	3/10/08 9:35	5.2	8.5		0.9		1.0	9.4	1.6	0.18	0.18	1.8
3025	3/12/08 14:26	2.6	35.8		4.5		4.7	40.6	13.6	1.7	1.8	15.4
3037	3/14/08 13:30	3.3	19.5		1.2		1.2	20.8	5.9	0.36	0.38	6.3
3057	3/16/08 14:00	2.9	na		na		na	na	na	na	na	na
3058 ^e	3/16/08 14:00	3.4	12.0		1.0		1.0	13.0	3.6	0.30	0.31	3.9
3087	3/18/08 14:10	2.7	47.1		3.6		3.8	50.9	17.4	1.3	1.4	18.8
3107	3/20/08 12:23	2.7	10.6		1.2		1.2	11.8	4.0	0.44	0.46	4.4
3075	3/22/08 16:02	2.5	70.0		9.5		10.0	79.9	28.0	3.8	4.0	32.0
3155	3/24/08 15:11	2.5	60.3		9.0		9.5	69.8	24.0	3.6	3.8	27.8
3135	3/26/08 13:46	2.9	7.5		1.2		1.3	8.9	2.6	0.43	0.45	3.0
3195	3/28/08 12:19	2.9	na		na		na	na	na	na	na	na
3196 ^f	3/28/08 12:19	3.5	18.0		3.0		3.1	21.1	5.1	0.86	0.90	6.0
3163	3/30/08 14:29	2.6	198.4		16.9		17.7	216.1	77.7	6.6	6.9	84.6
3237	4/1/08 13:45	3.1	238.8		14.8		15.5	254.3	77.1	4.8	5.0	82.1
3257	4/3/08 15:09	3.0	665.9		59.5		62.3	728.2	222.4	19.9	20.8	243.2
3277	4/6/08 14:29	3.1	22.3		3.4		3.6	25.8	7.1	1.1	1.1	8.2

Table I8. Chlorpyrifos and Chlorpyrifos-oxon Concentrations in Air (ng/m³)
 Phase 1 Yakima Valley Receptor, Ambient, and Quality Control Sites (cont.)

unique id number	start date and time	volume m ³	Mass (ng)					Air Concentrations (ng/m ³)				
			CPF	< LOD CPF	CPF-oxon	< LOD CPF-oxon	CPF-oxon as CPF Eq ^a	CPF Total	CPF	CPF-oxon	CPF-oxon as CPF Eq	CPF Total
Receptor 3												
3063	3/16/08 15:35	3.1	2.7		0.6		0.6	3.3	0.87	0.18	0.19	1.1
3117	3/20/08 14:20	3.0	0.5 ^g		0.5		0.5	1.0	0.17	0.17	0.18	0.34
3143	3/22/08 17:58	2.8	4.9		3.1		3.3	8.1	1.7	1.1	1.2	2.9
3123	3/24/08 17:58	2.7	43.5		24.6		25.7	69.3	16.0	9.0	9.4	25.4
3183	3/26/08 15:44	3.1	13.8		10.9		11.4	25.2	4.5	3.5	3.7	8.2
3203	3/28/08 14:05	3.5	6.7		7.3		7.6	14.3	1.9	2.1	2.2	4.1
3167	3/30/08 16:12	2.9	0.5 ^g		2.2		2.3	2.8	0.17	0.77	0.81	1.0
3235	4/1/08 15:25	2.9	4.1		6.9		7.2	11.3	1.4	2.4	2.5	3.9
3255	4/3/08 17:17	2.8	24.5		13.0		13.6	38.1	8.7	4.6	4.9	13.6
3275	4/6/08 16:45	2.8	7.7		4.7		4.9	12.5	2.7	1.6	1.7	4.4
3291	4/8/08 16:02	2.9	9.4		4.6		4.8	14.2	3.2	1.6	1.6	4.9
3301	4/10/08 17:11	2.7	124.0		28.5		29.8	153.8	45.3	10.4	10.9	56.2
Quality control co-located with Receptor 2												
3009	3/8/08 10:43	4.2	5.9		0.6		0.6	6.5	1.4	0.14	0.14	1.6
3029	3/10/08 9:37	4.1	6.2		0.9		1.0	7.2	1.5	0.23	0.24	1.7
3039	3/12/08 14:33	3.0	44.4		3.5		3.7	48.0	14.9	1.2	1.2	16.2
3069	3/14/08 13:30	2.3	12.4		0.9		0.9	13.3	5.3	0.38	0.40	5.7
3099	3/16/08 14:00	3.1	11.1		1.1		1.1	12.2	3.5	0.35	0.36	3.9
3109	3/18/08 14:10	2.8	46.3		10.5		11.0	57.3	16.3	3.7	3.9	20.2
3129	3/20/08 12:23	3.1	11.7		1.4		1.5	13.2	3.8	0.47	0.49	4.3
3149	3/22/08 16:02	2.1	61.9		12.5		13.1	75.0	29.1	5.9	6.2	35.3
3159	3/24/08 15:11	2.8	86.5		9.4		9.9	96.4	30.4	3.3	3.5	33.8
3189	3/26/08 13:46	3.3	9.0		2.1		2.2	11.2	2.7	0.64	0.67	3.4
3209	3/28/08 12:19	3.3	15.5		2.1		2.2	17.7	4.7	0.64	0.67	5.3
3227	3/30/08 14:29	2.9	148.4		15.9		16.7	165.1	51.3	5.5	5.8	57.0
3239	4/1/08 13:45	2.1	152.4		12.1		12.7	165.2	72.2	5.8	6.0	78.3
3259	4/3/08 15:09	2.4	457.5		62.7		65.7	523.2	190.6	26.1	27.4	218.0
3279	4/6/08 14:29	2.4	17.0		2.2		2.3	19.3	7.1	0.90	0.95	8.0
Footnotes												
^a CPF-oxon as CPF eq (ng)= (CPF-oxon mass, ng) * (CPF molecular weight/ CPF-oxon molecular weight)												
^b Start time missing. Calculated by averaging of the time difference between start times at Ambient and Receptor 2, for 3 days, 12-14 Mar, and adding the average to the site Receptor 2 start time on this date.												
^c Backup sample replacec 3035												
^d Backup sample replaces 3093												
^e Backup sample replaces 3057												
^f Backup sample replaces 3195												
^g Lab reported <LOD, LOD = 1 for both CPF and CPF-oxon. Value on table is equal to half of the LOD.												

**Table 9. Chlorpyrifos and Chlorpyrifos-oxon Concentrations in Air (ng/m³)
Phase 1 North Central District Perimeter Site**

sample period/ id number	location	start date and time	volume m ³	Mass (ng)				Air Concentrations (ng/m ³)			
				CPF	CPF-oxon	CPF-oxon as CPF Eq ^a	CPF Total	CPF	CPF-oxon	CPF-oxon as CPF Eq	CPF Total
PreSpray Day April 6, 2008											
Sample period ~24 hours											
6504	2	4/6/08 10:24	7.7	133.5	32.4	34.0	167.5	17.3	4.2	4.4	21.8
6508	4	4/6/08 9:07	8.2	48.6	16.9	17.7	66.3	5.9	2.1	2.2	8.1
6502	6	4/6/08 9:34	8.9	46.9	12.0	12.6	59.5	5.3	1.4	1.4	6.7
6506	8	4/6/08 9:23	7.1	61.4	24.5	25.7	87.2	8.7	3.5	3.6	12.3
6510	QC	4/6/08 9:08	8.8	66.9	13.9	14.6	81.5	7.6	1.6	1.7	9.3
Spray Day April 7, 2008											
Morning Sample period ~6 hours											
Note: The pesticide application occurred between 8:40-9:37 on 7 April, 2008.											
6514	1	4/7/08 7:57	1.9	241.5	19.6	20.6	262.0	124.8	10.1	10.6	135.4
6520	2	4/7/08 7:54	2.0	1318.0	89.8	94.1	1412.1	675.0	46.0	48.2	723.2
6526	3	4/7/08 7:50	2.0	2194.3	124.5	130.4	2324.7	1080.6	61.3	64.2	1144.9
6532	4	4/7/08 7:45	2.0	1725.8	48.5	50.9	1776.7	844.7	23.8	24.9	869.6
6538	5	4/7/08 7:40	2.7	165.5	19.6	20.5	186.0	60.4	7.1	7.5	67.9
6544	6	4/7/08 7:39	3.2	9.4	1.9	2.0	11.4	3.0	0.6	0.6	3.6
6550	7	4/7/08 7:45	2.1	97.9	19.4	20.3	118.3	46.5	9.2	9.7	56.2
6556	8	4/7/08 7:51	2.0	200.7	33.2	34.8	235.5	100.9	16.7	17.5	118.4
6562	QC	4/7/08 7:45	2.5	2070.6	105.5	110.6	2181.1	843.5	43.0	45.0	888.5
Spray Day April 7, 2008											
Afternoon Sample period ~6 hours											
6515	1	4/7/08 13:41	2.1	349.3	30.9	32.3	381.6	163.7	14.5	15.2	178.8
6521	2	4/7/08 13:40	2.1	531.3	37.3	39.1	570.3	258.2	18.1	19.0	277.2
6527	3	4/7/08 13:52	2.1	618.6	42.6	44.6	663.2	298.6	20.5	21.5	320.1
6533	4	4/7/08 14:01	2.1	619.6	33.3	34.9	654.5	295.8	15.9	16.7	312.5
6539	5	4/7/08 14:24	2.2	39.7	5.9	6.2	45.9	18.2	2.7	2.8	21.0
6545	6	4/7/08 14:10	2.2	23.9	3.5	3.6	27.5	10.8	1.6	1.7	12.5
6551	7	4/7/08 13:59	2.1	174.4	22.2	23.3	197.6	83.2	10.6	11.1	94.3
6557	8	4/7/08 13:50	2.2	233.5	28.9	30.3	263.8	108.2	13.4	14.1	122.2
6563	QC	4/7/08 14:11	2.1	586.3	38.0	39.9	626.2	274.6	17.8	18.7	293.3
Spray Day April 7, 2008											
Evening Sample period ~12 hours											
6516	1	4/7/08 20:42	3.7	168.0	16.9	17.7	185.7	45.7	4.6	4.8	50.5
6522	2	4/7/08 20:39	3.9	150.4	26.2	27.4	177.9	38.6	6.7	7.0	45.6
6528	3	4/7/08 20:42	3.8	383.7	28.2	29.6	413.3	100.7	7.4	7.8	108.4
6534	4	4/7/08 20:49	3.7	436.7	38.0	39.8	476.5	117.6	10.2	10.7	128.3
6540	5	4/7/08 20:55	4.0	136.4	18.0	18.9	155.3	34.5	4.6	4.8	39.2
6546	6	4/7/08 20:28	4.1	135.0	15.5	16.2	151.3	32.6	3.7	3.9	36.5
6552	7	4/7/08 20:32	3.8	178.1	19.2	20.1	198.2	46.6	5.0	5.3	51.9
6558	8	4/7/08 20:38	3.8	177.4	21.5	22.6	199.9	46.6	5.7	5.9	52.6
6564	QC	4/7/08 20:51	3.2	328.6	42.8	44.8	373.5	101.3	13.2	13.8	115.2

**Table 9. Chlorpyrifos and Chlorpyrifos-oxon Concentrations in Air (ng/m³)
Phase 1 North Central District Perimeter Site (cont.)**

sample period/ id number	location	start date and time	volume m ³	Mass (ng)				Air Concentrations (ng/m ³)			
				CPF	CPF-oxon	CPF-oxon as CPF Eq ^a	CPF Total	CPF	CPF-oxon	CPF-oxon as CPF Eq	CPF Total
Post-Spray 1 April 8, 2008											
Morning sample period ~12 hours											
6568	1	4/8/08 8:51	3.5	143.9	30.2	31.7	175.6	40.9	8.6	9.0	49.9
6574	2	4/8/08 8:17	3.8	463.4	69.1	72.5	535.8	120.6	18.0	18.9	139.4
6580	3	4/8/08 8:21	3.7	699.6	69.5	72.8	772.5	187.7	18.7	19.5	207.3
6586	4	4/8/08 8:25	3.8	906.3	94.0	98.5	1004.8	238.5	24.7	25.9	264.4
6592	5	4/8/08 8:35	4.5	77.3	13.2	13.8	91.1	17.0	2.9	3.0	20.1
6598	6	4/8/08 8:15	4.0	26.5	4.7	5.0	31.5	6.6	1.2	1.2	7.8
6604	7	4/8/08 8:27	3.8	106.8	31.7	33.2	140.0	28.5	8.4	8.8	37.3
6610	8	4/8/08 8:45	3.5	99.7	25.8	27.0	126.7	28.2	7.3	7.6	35.8
6616	QC	4/8/08 8:30	3.4	723.9	83.2	87.2	811.0	212.7	24.4	25.6	238.3
Post-Spray 1 April 8, 2008											
Evening sample period ~12 hours											
6570	1	4/8/08 20:01	4.1	294.4	46.1	48.3	342.7	72.0	11.3	11.8	83.9
6576	2	4/8/08 19:59	4.0	249.3	38.0	39.8	289.1	62.1	9.5	9.9	72.0
6582	3	4/8/08 20:03	4.0	395.4	55.7	58.4	453.8	100.0	14.1	14.8	114.8
6588	4	4/8/08 20:08	4.0	440.8	72.6	76.1	516.9	109.9	18.1	19.0	128.9
6594	5	4/8/08 20:15	4.2	308.9	46.8	49.0	357.9	73.7	11.2	11.7	85.4
6600	6	4/8/08 19:49	4.3	275.4	60.1	63.0	338.3	64.5	14.1	14.7	79.3
6606	7	4/8/08 19:54	3.9	297.0	45.3	47.5	344.5	75.5	11.5	12.1	87.5
6612	8	4/8/08 19:57	4.0	287.0	57.0	59.7	346.7	71.1	14.1	14.8	85.9
6618	QC	4/8/08 20:11	3.5	355.3	75.8	79.4	434.7	101.8	21.7	22.8	124.5
Post-Spray 2 April 9, 2008											
Sample period ~24 hours											
6620	1	4/9/08 7:48	8.4	452.0	131.3	137.6	589.6	53.7	15.6	16.3	70.0
6622	2	4/9/08 7:50	8.5	586.6	177.6	186.1	772.7	69.2	21.0	22.0	91.2
6624	3	4/9/08 7:53	8.2	1198.5	150.1	157.3	1355.8	145.3	18.2	19.1	164.4
6626	4	4/9/08 7:56	8.3	1077.5	236.3	247.7	1325.2	129.6	28.4	29.8	159.4
6636	5	4/9/08 8:00	8.6	824.4	231.7	242.8	1067.2	95.3	26.8	28.1	123.4
6630	6	4/9/08 7:39	8.9	282.4	60.1	63.0	345.4	31.7	6.8	7.1	38.8
6632	7	4/9/08 7:42	8.7	349.6	115.2	120.7	470.4	40.4	13.3	13.9	54.3
6634	8	4/9/08 7:45	8.0	403.0	120.4	126.2	529.2	50.3	15.0	15.7	66.0
6628	QC	4/9/08 7:58	7.3	406.1	40.0	41.9	448.1	55.6	5.5	5.7	61.4
Footnotes											
^a CPF-oxon as CPF eq (ng)= (CPF-oxon mass, ng) * (CPF molecular weight/ CPF-oxon molecular weight)											

**Table #10. Chlorpyrifos and Chlorpyrifos-oxon Concentrations in Air (ng/m³)
 Phase 1 Yakima Valley Perimeter Site**

sample period/ unique id number	location	start date and time	volume m ³	Mass (ng)				Air Concentrations (ng/m ³)				
				CPF	CPF-oxon	CPF-oxon as CPF Eq ^a	CPF Total	CPF	CPF-oxon	CPF-oxon as CPF Eq	CPF Total	
PreSpray Day March 31, 2008												
Sample period ~24 hours												
6004	2	3/31/08 14:25	8.3	126.3	36.9	38.6	164.9	15.2	4.4	4.6	19.8	
6008	4	3/31/08 14:22	8.3	156.5	10.3	10.8	167.3	18.9	1.2	1.3	20.2	
6002	6	3/31/08 15:42	8.0	316.9	19.8	20.7	337.7	39.7	2.5	2.6	42.3	
6006	8	3/31/08 15:33	7.9	114.9	50.4	52.8	167.7	14.5	6.4	6.7	21.2	
6010	QC	3/31/08 15:17	8.6	179.9	16.7	17.5	197.4	20.9	1.9	2.0	23.0	
Spray Day April 2, 2008												
Morning Sample period ~7 hours												
Note: One acre located ~SE from the study orchard was sprayed with CPF around 11:00. The pesticide application on the study orchard occurred between 14:08-16:23 on 2 April, 2008.												
6014	1	4/2/08 10:20	2.5	230.2	16.3	17.1	247.3	93.7	6.7	7.0	100.7	
6020	2	4/2/08 10:26	2.4	1247.6	94.9	99.5	1347.1	510.8	38.9	40.7	551.5	
6026	3	4/2/08 10:34	2.5	2425.1	103.3	108.2	2533.3	958.9	40.8	42.8	1001.7	
6032	4	4/2/08 10:44	2.5	2219.5	62.8	65.9	2285.4	877.5	24.8	26.0	903.5	
6038	5	4/2/08 10:51	3.0	1293.9	105.7	110.7	1404.7	429.0	35.0	36.7	465.7	
6044	6	4/2/08 10:31	2.9	1309.3	45.6	47.8	1357.1	454.1	15.8	16.6	470.6	
6050	7	4/2/08 10:26	2.6	960.9	47.5	49.8	1010.7	367.7	18.2	19.0	386.7	
6056	8	4/2/08 10:24	2.6	1265.1	87.1	91.3	1356.4	495.4	34.1	35.7	531.1	
6062	QC	4/2/08 10:47	2.8	2239.0	91.5	95.8	2334.9	789.2	32.2	33.8	823.0	
Spray Day April 2, 2008												
Afternoon Sample period ~6 hours												
6015	1	4/2/08 18:41	1.9	185.8	31.7	33.2	219.0	97.9	16.7	17.5	115.4	
6021	2	4/2/08 18:02	2.2	191.8	27.0	28.3	220.1	88.7	12.5	13.1	101.8	
6027	3	4/2/08 18:20	2.1	78.9	5.0	5.2	84.1	37.0	2.3	2.4	39.4	
6033	4	4/2/08 18:39	2.1	212.7	5.9	6.2	218.9	99.7	2.8	2.9	102.6	
6045	6	4/2/08 18:57	2.3	1046.7	62.9	66.0	1112.7	448.2	26.9	28.2	476.4	
6051	7	4/2/08 18:52	2.0	919.2	39.4	41.3	960.5	453.1	19.4	20.4	473.5	
6057	8	4/2/08 18:47	2.0	1052.7	56.8	59.6	1112.2	524.2	28.3	29.7	553.9	
6063	QC	4/2/08 18:50	2.4	304.9	11.5	12.1	317.0	128.0	4.8	5.1	133.1	
Spray Day April 3 (early morning), 2008												
Evening Sample period ~9hours												
6016	1	4/3/08 0:33	3.0	64.3	12.7	13.3	77.6	21.4	4.2	4.4	25.9	
6022	2	4/3/08 0:27	3.1	248.1	50.3	52.7	300.8	81.0	16.4	17.2	98.2	
6028	3	4/3/08 0:41	3.1	458.1	43.4	45.4	503.6	148.3	14.0	14.7	163.0	
6034	4	4/3/08 1:06	3.0	732.0	43.2	45.3	777.3	244.7	14.5	15.2	259.9	
6040	5	4/3/08 1:19	3.3	1033.1	99.1	103.8	1136.9	310.6	29.8	31.2	341.8	
6046	6	4/3/08 1:26	3.4	437.9	64.2	67.3	505.2	127.5	18.7	19.6	147.1	
6052	7	4/3/08 1:10	3.0	280.6	42.3	44.4	325.0	94.7	14.3	15.0	109.7	
6058	8	4/3/08 0:52	3.1	392.0	66.0	69.2	461.2	127.6	21.5	22.5	150.2	
6064	QC	4/3/08 1:05	3.4	713.1	49.6	52.0	765.1	211.7	14.7	15.4	227.1	

**Table #0. Chlorpyrifos and Chlorpyrifos-oxon Concentrations in Air (ng/m³)
Phase 1 Yakima Valley Perimeter Site (cont.)**

sample period/ unique id number	location	start date and time	volume m ³	Mass (ng)				Air Concentrations (ng/m ³)			
				CPF	CPF-oxon	CPF-oxon as CPF Eq ^a	CPF Total	CPF	CPF-oxon	CPF-oxon as CPF Eq	CPF Total
Post-Spray 1 April 3, 2008											
Morning sample period ~9 hours											
6068	1	4/3/08 10:02	3.2	1938.6	355.5	372.6	2311.2	615.2	112.8	118.2	733.5
6074	2	4/3/08 10:15	3.1	724.1	106.3	111.4	835.5	234.9	34.5	36.1	271.0
6080	3	4/3/08 10:34	3.0	939.0	126.7	132.8	1071.9	309.1	41.7	43.7	352.8
6086	4	4/3/08 10:48	3.0	949.1	59.2	62.1	1011.1	313.0	19.5	20.5	333.5
6092	5	4/3/08 11:10	3.3	1373.8	137.7	144.3	1518.1	418.1	41.9	43.9	462.0
6098	6	4/3/08 10:37	3.4	1961.8	130.5	136.8	2098.5	578.5	38.5	40.3	618.8
6104	7	4/3/08 10:25	3.2	1080.4	156.7	164.2	1244.6	342.2	49.6	52.0	394.3
6110	8	4/3/08 10:13	3.1	2289.5	385.4	403.9	2693.4	734.5	123.6	129.6	864.0
6116	QC	4/3/08 10:58	3.3	1082.6	76.4	80.0	1162.6	329.8	23.3	24.4	354.1
Post-Spray 1 April 3, 2008											
Evening sample period ~10hours											
6070	1	4/3/08 20:37	3.6	116.5	50.2	52.6	169.0	32.2	13.9	14.5	46.7
6076	2	4/3/08 21:28	3.5	270.6	42.6	44.6	315.2	76.9	12.1	12.7	89.5
6082	3	4/3/08 21:23	3.5	368.6	83.7	87.7	456.4	104.5	23.7	24.9	129.4
6088	4	4/3/08 21:13	3.7	1366.5	97.6	102.3	1468.8	370.8	26.5	27.7	398.6
6094	5	4/3/08 21:00	4.2	1756.3	216.9	227.3	1983.6	419.2	51.8	54.2	473.5
6100	6	4/3/08 21:46	3.9	732.1	158.1	165.7	897.8	187.3	40.5	42.4	229.7
6106	7	4/3/08 20:54	3.7	520.4	150.5	157.7	678.1	140.2	40.5	42.5	182.7
6112	8	4/3/08 20:47	3.7	449.8	133.9	140.4	590.2	120.7	35.9	37.7	158.3
6118	QC	4/3/08 21:18	4.0	1392.4	141.2	148.0	1540.4	344.4	34.9	36.6	381.0
Post-Spray 2 April 4, 2008											
Sample period ~24 hours											
6120	1	4/4/08 8:31	7.3	247.1	118.3	124.0	371.1	34.0	16.3	17.1	51.0
6122	2	4/4/08 9:21	7.5	1687.6	251.5	263.6	1951.2	224.7	33.5	35.1	259.8
6124	3	4/4/08 9:15	7.7	1694.8	250.9	262.9	1957.8	221.5	32.8	34.4	255.9
6126	4	4/4/08 9:02	7.8	2105.3	201.0	210.7	2316.0	270.4	25.8	27.1	297.5
6128	5	4/4/08 8:56	8.3	1738.1	281.6	295.1	2033.3	208.5	33.8	35.4	243.9
6130	6	4/4/08 8:45	8.5	789.1	183.3	192.1	981.2	92.3	21.4	22.5	114.8
6132	7	4/4/08 8:42	7.7	672.3	176.3	184.8	857.1	87.2	22.9	24.0	111.2
6134	8	4/4/08 8:39	7.9	472.9	149.2	156.4	629.3	60.0	18.9	19.8	79.8
6135	QC	4/4/08 9:10	8.4	2171.6	292.6	306.7	2478.3	259.0	34.9	36.6	295.6
Footnotes											
^a CPF-oxon as CPF eq (ng)= (CPF-oxon mass, ng) * (CPF molecular weight/ CPF-oxon molecular weight)											

**Table I11. Azinphosmethyl, Azinphosmethyl-oxon, Phosmet, Malathion Concentrations in Air (ng/m³)
Phase 2 Yakima Valley Perimeter Site**

sample period/id number	location	start date and time	volume m ³	Mass (ng)							Air Concentrations (ng/m ³)						
				AZ	AZ-oxon	AZ-oxon as AZ Eq	AZ Total	PH	MA	< LOD MA	AZ	AZ-oxon	AZ-oxon as AZ Eq	AZ Total	PH	MA	
PreSpray Day June 19, 2008																	
Note: Spray was observed at the neighboring orchard (~ south) during the sample set-up.																	
Sample period ~24 hours																	
9001 ^a	2	na	na	na	na	na	na	na	na	na		na	na	na	na	na	
9003	4	6/19/08 9:38	8.6	102.2	5.8	6.1	108.3	22.1	0.2 ^b			11.9	0.67	0.71	12.6	2.6	0.02
9005	6	6/19/08 9:24	8.2	135.3	8.1	8.6	143.9	31.3	0.7 ^b			16.4	1.0	1.0	17.5	3.8	0.09
9007	8	6/19/08 0:16	8.3	183.9	9.6	10.1	194.0	39.9	0.5 ^b			22.1	1.2	1.2	23.3	4.8	0.06
9009 ^b	QC	6/19/08 9:35	8.2	156.8	6.9	7.2	164.1	24.5	8.1 ^b			19.2	0.84	0.89	20.1	3.0	1.0
Spray Day June 20, 2008																	
Note: The pesticide spray was delayed, due to last minute orchard and equipment delays. Therefore there was no morning sample period. The pesticide application occurred between 20:00-22:00 on 20 June, 2008.																	
Evening Sample Period ~6 hours																	
9012 ^c	1	6/20/08 18:03	2.3	80.3	7.8	8.2	88.5	10.2	0.8 ^b			35.5	3.4	3.6	39.1	4.5	0.36
9018	2	6/20/08 18:11	2.1	197.9	5.0	5.3	203.1	2.3	0.2 ^b			92.1	2.3	2.5	94.6	1.1	0.09
9024	3	6/20/08 18:10	2.2	3449.0	14.0	14.8	3463.8	8.2	0.2 ^b			1597.3	6.5	6.9	1604.2	3.8	0.09
9030	4	6/20/08 18:06	2.2	16442.7	59.7	62.9	16505.7	20.6	0.2 ^b			7524.8	27.3	28.8	7553.6	9.4	0.09
9036	5	6/20/08 18:01	2.3	21745.1	74.5	78.5	21823.6	26.8	0.2 ^b			9647.8	33.1	34.8	9682.6	11.9	0.09
9042	6	6/20/08 18:14	2.3	2269.1	15.4	16.2	2285.3	36.0	0.2 ^b			1003.7	6.8	7.2	1010.8	15.9	0.09
9048	7	6/20/08 19:10	1.9	944.4	13.9	14.6	959.0	22.2	0.2 ^b			500.9	7.4	7.8	508.7	11.8	0.11
9054	8	6/20/08 18:07	2.4	1871.4	12.0	12.7	1884.1	23.2	0.2 ^b			766.1	4.9	5.2	771.3	9.5	0.08
9060 ^d	QC	na	na	na	na	na	na	na	na			na	na	na	na	na	na
Spray Day June 20, 2008																	
Note: The second sample period for spray day 2 started after midnight the following day due to the delay in the pesticide application																	
Night Sample period ~7 hours																	
9013	1	6/21/08 1:05	2.5	19.7	3.5	3.7	23.4	4.0	0.2 ^b			7.9	1.4	1.5	9.4	1.6	0.08
9019	2	6/21/08 1:40	2.6	25.4	1.9	2.0	27.4	7.0	0.2 ^b			9.9	0.7	0.8	10.6	2.7	0.08
9025	3	6/21/08 1:32	2.5	38.9	3.3	3.4	42.3	12.3	0.2 ^b			15.3	1.3	1.4	16.7	4.8	0.08
9031	4	6/21/08 1:14	2.6	100.0	6.4	6.7	106.7	9.5	0.2 ^b			37.8	2.4	2.5	40.3	3.6	0.08
9037	5	6/21/08 1:21	2.7	108.8	3.6	3.8	112.7	9.0	0.6 ^b			40.5	1.4	1.4	42.0	3.4	0.21
9043	6	6/21/08 1:20	2.4	32.6	3.8	4.0	36.6	8.9	0.2 ^b			13.4	1.6	1.7	15.1	3.7	0.08
9049	7	6/21/08 1:15	2.6	32.4	4.1	4.4	36.8	8.1	0.2 ^b			12.7	1.6	1.7	14.4	3.2	0.08
9055	8	6/21/08 1:10	2.6	20.0	3.3	3.5	23.5	5.5	0.2 ^b			7.7	1.3	1.3	9.1	2.1	0.08
9061	QC	6/21/08 1:14	2.6	103.9	6.5	6.8	110.7	6.6	0.2 ^b			39.8	2.5	2.6	42.4	2.5	0.08

**Table I11. Azinphosmethyl, Azinphosmethyl-oxon, Phosmet, Malathion Concentrations in Air (ng/m³)
 Phase 2 Yakima Valley Perimeter Site (cont.)**

sample period/id number	location	start date and time	volume m ³	Mass (ng)							Air Concentrations (ng/m ³)					
				AZ	AZ-oxon	AZ-oxon as AZ Eq	AZ Total	PH	MA	< LOD MA	AZ	AZ-oxon	AZ-oxon as AZ Eq	AZ Total	PH	MA
Post-Spray 1 June 21, 2008																
Morning Sample period ~12 hours																
9065	1	6/21/08 8:57	4.0	172.3	9.0	9.5	181.8	20.1	0.2 ^b		43.3	2.3	2.4	45.7	5.1	0.05
9069	2	6/21/08 8:58	4.1	145.2	5.8	6.1	151.3	12.4	1.8 ^b		35.1	1.4	1.5	36.6	3.0	0.43
9073	3	6/21/08 9:03	4.4	256.9	11.0	11.6	268.5	8.4	0.7 ^b		58.7	2.5	2.7	61.3	1.9	0.16
9077	4	6/21/08 9:37	4.3	369.4	12.8	13.5	382.9	12.1	0.7 ^b		86.7	3.0	3.2	89.9	2.8	0.17
9081	5	6/21/08 9:17	4.0	298.2	5.8	6.1	304.3	15.6	1.0 ^b		74.3	1.4	1.5	75.8	3.9	0.25
9085	6	6/21/08 9:18	4.0	135.5	4.2	4.4	139.8	23.0	0.9 ^b		33.9	1.0	1.1	35.0	5.8	0.22
9089	7	6/21/08 9:12	4.0	215.7	9.7	10.2	225.9	27.4	0.5 ^b		54.1	2.4	2.6	56.6	6.9	0.13
9093	8	6/21/08 9:06	4.4	228.0	5.6	5.9	233.8	24.2	0.6 ^b		52.1	1.3	1.3	53.5	5.5	0.15
9097	QC	6/21/08 9:13	4.6	337.1	7.4	7.8	344.9	16.3	1.0 ^b		73.2	1.6	1.7	74.9	3.5	0.21
Post-Spray 1 June 21, 2008																
Evening Sample period ~12 hours																
9066	1	6/21/08 21:47	4.0	54.1	3.4	3.6	57.7	7.3	0.2 ^b		13.7	0.9	0.9	14.6	1.9	0.05
9070	2	6/21/08 21:06	4.2	45.4	2.1	2.2	47.6	3.8	0.2 ^b		10.8	0.5	0.5	11.4	0.9	0.05
9074	3	6/21/08 21:13	4.1	71.0	2.6	2.7	73.7	4.8	0.2 ^b		17.3	0.6	0.7	18.0	1.2	0.05
9078	4	6/21/08 21:21	4.7	163.5	3.2	3.3	166.8	5.3	0.8 ^b		35.1	0.7	0.7	35.8	1.1	0.17
9082	5	6/21/08 21:25	4.0	176.9	4.0	4.2	181.1	3.6	0.2 ^b		43.8	1.0	1.0	44.8	0.9	0.05
9086	6	6/21/08 21:31	4.2	57.5	1.5	1.6	59.1	9.1	0.2 ^b		13.7	0.4	0.4	14.1	2.2	0.05
9090	7	6/21/08 21:37	4.2	66.8	3.9	4.1	70.9	14.1	0.2 ^b		15.9	0.9	1.0	16.9	3.4	0.05
9094	8	6/21/08 21:41	4.8	83.6	3.9	4.1	87.7	9.4	0.2 ^b		17.6	0.8	0.9	18.4	2.0	0.04
9098	QC	6/21/08 21:18	4.3	127.3	4.8	5.0	132.3	4.0	0.2 ^b		29.7	1.1	1.2	30.9	0.9	0.05
Post-Spray 2 June 22, 2008																
Sample period ~24 hours																
9101	1	6/22/08 9:48	8.5	150.6	7.4	7.8	158.4	21.1	0.2		17.7	0.9	0.9	18.6	2.5	0.02
9103	2	6/22/08 9:14	9.3	91.4	5.8	6.2	97.6	11.1	0.2		9.8	0.6	0.7	10.4	1.2	0.02
9105	3	6/22/08 9:18	8.3	144.7	6.6	6.9	151.6	12.2	1.1		17.5	0.8	0.8	18.3	1.5	0.13
9107	4	6/22/08 9:24	9.3	229.6	10.4	10.9	240.5	10.2	1.2		24.6	1.1	1.2	25.8	1.1	0.13
9109	5	6/22/08 9:30	8.6	234.5	10.8	11.4	245.9	13.3	0.9		27.4	1.3	1.3	28.7	1.5	0.10
9111	6	6/22/08 9:36	8.6	114.4	3.0	3.2	117.6	33.7	0.4		13.3	0.3	0.4	13.7	3.9	0.05
9113	7	6/22/08 9:39	9.0	92.2	6.8	7.1	99.4	37.9	0.2		10.3	0.8	0.8	11.0	4.2	0.02
9115	8	6/22/08 9:43	9.0	106.7	4.0	4.2	110.9	34.9	0.2		11.9	0.4	0.5	12.4	3.9	0.02
9117	QC	6/22/08 9:26	8.7	191.3	8.2	8.6	199.9	9.9	1.2		22.1	0.9	1.0	23.1	1.1	0.14
Footnotes																
^a Invalid sample, back-up sample could not be analyzed.																
^b Sample #9009- for MA only, 88% of the total concentration came from the back section of the sample tube																
^c Sample #9012- for MA only, 76% of the total concentration came from the back section of the sample tube																
^d Samples were lost due to pump failure occurring while the study block was being applied.																
^e Lab reported <LOD, LOD = 0.4 for malathion. Value on table is equal to half of the LOD.																

**Table I12. Azinphosmethyl, Azinphosmethyl-oxon, Phosmet, Malathion Air Concentrations (ng/m³)
 Phase 2 Yakima Valley Receptor, Ambient, and Quality Control Sites**

sample period/ unique id number	start date and time	volume m ³	Mass (ng)										Air Concentrations (ng/m ³)					
			AZ	<LOD AZ	AZ-oxon	<LOD AZ-oxon	AZ-oxon as AZ Eq	AZ Total	PH	<LOD PH	MA	<LOD MA	AZ	AZ-oxon	AZ-oxon as AZ Eq	AZ Total	PH	MA
Ambient																		
8001	5/21/08 11:57	2.6	10.6		0.3 ^k		0.3	10.8	0.3 ^k	0.2 ^k		4.1	0.10	0.10	4.2	0.10	0.08	
8011	5/24/08 12:30	2.7	12.5		0.3 ^k		0.3	12.8	0.3 ^k	0.2 ^k		4.6	0.09	0.10	4.7	0.09	0.07	
8021	5/27/08 12:35	2.6	11.2		0.3 ^k		0.3	11.5	2.0	0.2 ^k		4.2	0.09	0.10	4.3	0.75	0.08	
8031	5/30/08 9:50	3.2	27.1		0.8		0.9	28.0	2.0	0.2 ^k		8.4	0.26	0.27	8.7	0.63	0.06	
8041	6/2/08 15:30	2.4	2.6		0.3 ^k		0.3	2.8	0.3 ^k	0.2 ^k		1.1	0.10	0.11	1.2	0.10	0.08	
8051	6/5/08 13:50	3.0	1.0		0.3 ^k		0.3	1.3	1.1	0.2 ^k		0.34	0.08	0.09	0.4	0.36	0.07	
8061	6/8/08 15:48	3.0	4.4		0.3 ^k		0.3	4.7	0.3 ^k	0.2 ^k		1.5	0.08	0.09	1.6	0.08	0.07	
8071	6/11/08 14:20	3.2	9.5		0.3 ^k		0.3	9.7	4.8	0.2 ^k		3.0	0.08	0.08	3.0	1.5	0.06	
8081	6/13/08 12:28	2.7	9.0		0.3 ^k		0.3	9.3	0.9	0.2 ^k		3.4	0.09	0.10	3.5	0.34	0.08	
8091	6/17/08 8:25	2.6	5.0		0.3 ^k		0.3	5.3	1.8	0.2 ^k		1.9	0.10	0.10	2.0	0.68	0.08	
8101	6/20/08 15:02	2.9	23.6		1.8		1.9	25.6	2.2	0.7		8.2	0.63	0.67	8.9	0.77	0.23	
8111	6/23/08 14:45	2.5	5.6		0.3 ^k		0.3	5.9	1.4	0.2 ^k		2.2	0.10	0.10	2.3	0.58	0.08	
8121	6/26/08 5:55	2.8	5.6		0.3 ^k		0.3	5.9	0.6	0.2 ^k		2.0	0.09	0.09	2.1	0.21	0.07	
8131	7/2/08 11:02	3.2	7.8		1.4		1.5	9.3	0.3	1.0		2.4	0.43	0.46	2.9	0.08	0.32	
8141	7/5/08 11:50	2.9	2.6		0.3 ^k		0.3	2.9	0.8	0.2 ^k		0.92	0.09	0.09	1.0	0.28	0.07	
8151	7/8/08 6:00	2.7	4.3		0.3 ^k		0.3	4.6	4.4	0.2		1.6	0.09	0.10	1.7	1.6	0.07	
8161	7/11/08 10:52	2.7	8.3		0.6		0.7	8.9	6.3	0.9 ^k		3.1	0.24	0.25	3.3	2.4	0.32	
8171	7/14/08 12:00	2.6	8.5		0.8		0.8	9.3	0.6	0.2 ^k		3.3	0.29	0.30	3.6	0.22	0.08	
8181	7/17/08 10:00	2.8	8.2		0.5		0.6	8.8	2.9	0.2 ^k		2.9	0.19	0.20	3.1	1.0	0.07	
8191	7/20/08 11:42	2.7	5.9		0.7		0.8	6.7	2.5	0.2 ^k		2.2	0.27	0.28	2.5	0.93	0.07	
8201	7/23/08 11:29	2.5	4.2		0.3 ^k		0.3	4.5	4.4	0.2 ^k		1.7	0.10	0.10	1.8	1.7	0.08	
8211	7/26/08 10:13	2.8	5.0		0.6		0.6	5.6	1.3	0.2 ^k		1.8	0.20	0.21	2.0	0.47	0.07	
8221 ^a	7/29/08 11:05	2.9	2.5		0.3 ^k		0.3	2.8	1.4	1.0		0.87	0.09	0.09	1.0	0.49	0.33	
Receptor 2																		
8007	5/21/08 12:49	3.1	0.3 ^k		0.3 ^k		0.3	0.5	0.3 ^k	0.2 ^k		0.08	0.08	0.08	0.2	0.08	0.06	
8017	5/24/08 12:57	2.7	26.2		0.6		0.7	26.8	1.0	0.2 ^k		9.7	0.24	0.25	9.9	0.36	0.07	
8027	5/27/08 13:05	2.6	19.2		0.6		0.7	19.9	0.3 ^k	0.2 ^k		7.3	0.24	0.25	7.6	0.10	0.08	
8038 ^b	5/30/08 10:37	3.4	43.0		2.0		2.1	45.1	3.0	0.5		12.7	0.59	0.62	13.3	0.9	0.15	
8047	6/2/08 17:25	2.3	4.6		0.3 ^k		0.3	4.9	0.3 ^k	0.2 ^k		2.0	0.11	0.11	2.1	0.11	0.09	
8057	6/5/08 14:52	3.0	1.9		0.3 ^k		0.3	2.1	0.3 ^k	0.2 ^k		0.63	0.08	0.09	0.7	0.08	0.07	
8067	6/8/08 16:48	3.0	31.2		0.7		0.7	31.9	0.3 ^k	0.2 ^k		10.5	0.23	0.25	10.8	0.08	0.07	
8078 ^c	6/11/08 15:02	3.4	49.0		2.0		2.1	51.1	1.0	0.5		14.6	0.59	0.63	15.2	0.30	0.15	
8087	6/13/08 13:39	2.7	24.5		0.8		0.9	25.4	5.3	0.2 ^k		9.2	0.31	0.33	9.5	2.0	0.07	
8097	6/17/08 8:55	2.4	52.3		1.2		1.3	53.6	0.8	0.2 ^k		21.4	0.51	0.54	21.9	0.32	0.08	
8107	6/20/08 16:09	2.8	43.0		3.6		3.7	46.8	5.1	0.2 ^k		15.2	1.3	1.3	16.5	1.8	0.07	
8117	6/23/08 15:10	2.5	30.5		0.6		0.6	31.1	0.3 ^k	0.2 ^k		12.2	0.23	0.24	12.4	0.10	0.08	
8127	6/26/08 6:19	2.7	20.9		1.4		1.5	22.4	0.7	0.2 ^k		7.7	0.52	0.55	8.2	0.27	0.07	
8137	7/2/08 12:05	3.4	41.0		4.4		4.7	45.7	2.6	0.2 ^k		11.9	1.3	1.4	13.3	0.77	0.06	
8147	7/5/08 12:25	2.8	7.9		0.5		0.5	8.5	0.3 ^k	0.2 ^k		2.8	0.18	0.19	3.0	0.09	0.07	
8157	7/8/08 6:25	2.7	11.7		0.8		0.9	12.6	1.1	0.2 ^k		4.3	0.30	0.32	4.7	0.42	0.07	
8167	7/11/08 11:29	2.6	14.1		0.6		0.7	14.8	4.4	0.2 ^k		5.4	0.24	0.26	5.6	1.7	0.08	
8177	7/14/08 12:37	2.6	14.5		0.7		0.8	15.3	2.3	0.2 ^k		5.7	0.28	0.30	6.0	0.89	0.08	
8187	7/17/08 10:28	2.8	17.7		0.6		0.6	18.3	2.4	0.2 ^k		6.4	0.22	0.23	6.6	0.87	0.07	
8197	7/20/08 12:09	2.7	8.6		1.0		1.1	9.7	1.0	0.2 ^k		3.2	0.38	0.40	3.6	0.39	0.08	
8207	7/23/08 12:23	2.7	16.8		0.3 ^k		0.3	17.0	1.8	0.2 ^k		6.3	0.09	0.10	6.4	0.66	0.08	
8217	7/26/08 10:36	2.8	7.3		0.6		0.6	7.9	4.0	0.2 ^k		2.7	0.21	0.22	2.9	1.5	0.07	
8227	7/29/08 11:30	2.9	7.2		0.3 ^k		0.3	7.5	0.8	0.8		2.5	0.09	0.09	2.6	0.3	0.27	

**Table I12. Azinphosmethyl, Azinphosmethyl-oxon, Phosmet, Malathion Air Concentrations (ng/m³)
Phase 2 Yakima Valley Receptor, Ambient, and Quality Control Sites (cont.)**

sample period/ unique id number	start date and time	volume m ³	Mass (ng)										Air Concentrations (ng/m ³)					
			AZ	<LOD AZ	AZ-oxon	<LOD AZ-oxon	AZ-oxon as AZ Eq	AZ Total	PH	<LOD PH	MA	<LOD MA	AZ	AZ-oxon	AZ-oxon as AZ Eq	AZ Total	PH	MA
Receptor 4																		
8003	5/21/08 13:09	2.7	0.3 ^k		0.3 ^k		0.3	0.5	0.3 ^k		0.2 ^k		0.09	0.09	0.10	0.2	0.09	0.07
8014 ^d	5/24/08 13:07	2.4	8.0		0.5		0.5	8.5	0.5		0.5		3.4	0.21	0.22	3.6	0.21	0.21
8023	5/27/08 13:24	2.4	42.9		0.7		0.7	43.7	0.3 ^k		0.2 ^k		17.9	0.29	0.31	18.2	0.10	0.08
8033	5/30/08 10:50	2.9	45.3		1.2		1.2	46.5	10.7		0.2 ^k		15.7	0.40	0.42	16.1	3.7	0.07
8043	6/2/08 16:30	2.1	5.6		0.3 ^k		0.3	5.8	0.3 ^k		0.2 ^k		2.6	0.12	0.12	2.7	0.12	0.09
8053	6/5/08 14:18	2.7	65.5		0.8		0.9	66.3	0.3 ^k		0.2 ^k		24.3	0.31	0.32	24.6	0.09	0.07
8063	6/8/08 16:13	2.7	42.7		0.7		0.7	43.4	3.9		0.2 ^k		16.0	0.26	0.28	16.3	1.5	0.07
8073	6/11/08 15:17	2.8	982.0		12.7		13.3	995.4	0.3 ^k		0.2 ^k		351.7	4.5	4.8	356.5	0.09	0.07
8083	6/13/08 13:06	2.3	180.5		4.1		4.4	184.9	0.3 ^k		0.2 ^k		79.6	1.8	1.9	81.6	0.11	0.09
8093	6/17/08 9:25	2.2	183.8		3.0		3.2	186.9	1.6		0.2 ^k		83.9	1.4	1.5	85.3	0.73	0.09
8103	6/20/08 15:35	2.7	174.3		8.2		8.6	182.9	11.0		0.2 ^k		64.7	3.0	3.2	67.9	4.1	0.07
8113	6/23/08 15:18	2.3	73.0		2.0		2.1	75.2	3.9 ^k		0.2 ^k		31.5	0.87	0.92	32.4	1.7	0.09
8123	6/26/08 6:24	2.5	47.7		1.4		1.5	49.2	2.0		0.2 ^k		18.9	0.56	0.59	19.5	0.80	0.08
8133	7/2/08 11:31	3.2	35.6		8.3		8.8	44.4	6.6		0.2 ^k		11.2	2.6	2.76	14.0	2.1	0.06
8143	7/5/08 12:36	2.5	18.9		1.6		1.7	20.6	1.1		0.2 ^k		7.5	0.63	0.66	8.2	0.42	0.08
8153	7/8/08 6:36	2.5	24.4		2.1		2.2	26.6	2.8		0.2 ^k		9.8	0.85	0.89	10.7	1.1	0.08
8163	7/11/08 11:40	2.4	32.9		1.2		1.2	34.1	3.9		0.2 ^k		13.6	0.48	0.51	14.1	1.6	0.08
8173	7/14/08 12:44	2.4	13.8		1.5		1.6	15.4	1.7		0.2 ^k		5.8	0.65	0.69	6.5	0.71	0.08
8183	7/17/08 10:49	2.5	26.5		1.4		1.5	28.0	6.9		0.5		10.5	0.57	0.61	11.1	2.7	0.19
8193	7/20/08 12:19	2.5	10.7		1.3		1.4	12.1	6.4		1.0		4.4	0.54	0.57	4.9	2.6	0.42
8203	7/23/08 12:35	2.4	8.0		0.3 ^k		0.3	8.3	2.5		0.2 ^k		3.4	0.10	0.11	3.5	1.1	0.08
8213	7/26/08 10:45	2.5	8.9		1.0		1.0	9.9	6.1		0.2 ^k		3.5	0.38	0.40	3.9	2.4	0.08
8223 ^f	7/29/08 11:39	2.5	4.6		0.3 ^k		0.3	4.8	1.6		1.0		1.8	0.10	0.11	1.9	0.63	0.39
Receptor 5																		
NOTE: The orchard to the east of Receptor 5 did not spray OPs during the crop season.																		
8005	5/21/08 13:33	2.6	1.8		0.3 ^k		0.3	2.1	0.3 ^k		0.2 ^k		0.70	0.10	0.10	0.8	0.10	0.08
8015	5/24/08 13:21	2.4	6.5		0.3 ^k		0.3	6.7	0.3 ^k		0.2 ^k		2.7	0.10	0.11	2.8	0.10	0.08
8025	5/27/08 13:38	2.3	116.7		1.7		1.8	118.5	1.1		0.2 ^k		49.7	0.71	0.75	50.4	0.47	0.09
8035	5/30/08 11:00	2.8	167.1		4.7		4.9	172.1	2.8		0.2 ^k		59.1	1.7	1.7	60.8	1.0	0.07
8045	6/2/08 16:49	2.2	75.1		2.2		2.4	77.5	0.3 ^k		0.2 ^k		34.7	1.0	1.1	35.8	0.12	0.09
8055	6/5/08 14:35	2.7	117.1		1.6		1.7	118.8	0.3 ^k		0.2 ^k		44.1	0.59	0.62	44.7	0.09	0.08
8065	6/8/08 16:36	2.7	120.1		1.8		1.9	122.0	0.3 ^k		0.2 ^k		45.0	0.67	0.70	45.7	0.09	0.07
8075	6/11/08 15:37	2.7	118.4		1.8		1.9	120.3	0.3 ^k		0.2 ^k		43.5	0.65	0.69	44.2	0.09	0.07
8085	6/13/08 13:22	2.3	69.5		1.8		1.9	71.4	2.7		0.2 ^k		29.6	0.78	0.82	30.4	1.1	0.09
8095	6/17/08 11:00	1.9	40.4		1.2		1.2	41.7	0.3		0.2 ^k		20.8	0.61	0.64	21.4	0.13	0.10
8105	6/20/08 15:53	2.6	229.1		7.0		7.3	236.4	7.4		0.2 ^k		89.4	2.7	2.9	92.3	2.9	0.08
8115	6/23/08 15:28	2.3	44.2		1.9		2.0	46.2	2.2		0.2 ^k		19.4	0.84	0.89	20.3	1.0	0.09
8125	6/26/08 8:18	2.3	27.0		1.3		1.4	28.4	2.6		0.2 ^k		11.8	0.57	0.60	12.4	1.1	0.09
8135	7/2/08 11:50	3.6	68.8		12.4		13.1	81.8	68.3		0.2 ^k		19.3	3.47	3.7	22.9	19.1	0.06
8145 ^g	na	na	na		na		na	na	na		na		na	na	na	na	na	na
8155	7/8/08 6:48	2.4	13.2		2.4		2.5	15.7	93.9		0.2 ^k		5.4	0.98	1.0	6.4	38.6	0.08
8165	7/11/08 11:56	2.4	37.6		2.1		2.2	39.8	27.0		0.2 ^k		15.9	0.88	0.92	16.8	11.4	0.08
8175	7/14/08 12:55	2.3	7.3		1.3		1.4	8.7	42.6		0.2 ^k		3.1	0.57	0.60	3.7	18.4	0.09
8185	7/17/08 11:00	2.5	15.2		0.9		1.0	16.1	23.4		0.2 ^k		6.1	0.37	0.38	6.5	9.4	0.08
8195	7/20/08 12:29	2.7	23.4		2.7		2.8	26.2	15.8		0.2 ^k		8.7	1.0	1.05	9.7	5.9	0.07
8205	7/23/08 12:46	2.3	9.4		0.3 ^k		0.3	9.7	8.4		0.2 ^k		4.0	0.11	0.11	4.1	3.6	0.09
8215	7/26/08 10:49	2.5	21.0		1.6		1.7	22.7	24.1		0.2 ^k		8.5	0.66	0.69	9.1	9.7	0.08
8225	7/29/08 11:52	2.4	27.4		1.0		1.1	28.5	5.2		0.2 ^k		11.6	0.43	0.45	12.0	2.2	0.08

**Table I12. Azinphosmethyl, Azinphosmethyl-oxon, Phosmet, Malathion Air Concentrations (ng/m³)
 Phase 2 Yakima Valley Receptor, Ambient, and Quality Control Sites (cont.)**

sample period/ unique id number	start date and time	volume m ³	Mass (ng)										Air Concentrations (ng/m ³)					
			AZ	<LOD AZ	AZ-oxon	<LOD AZ-oxon	AZ-oxon as AZ Eq	AZ Total	PH	<LOD PH	MA	<LOD MA	AZ	AZ-oxon	AZ-oxon as AZ Eq	AZ Total	PH	MA
Quality Control co-located with Receptor 2																		
8009	5/21/08 12:49	3.0	0.3 ^k		0.3 ^k		0.3	0.5	0.3 ^k		0.2 ⁱ		0.08	0.08	0.09	0.2	0.08	0.07
8020 ^b	5/24/08 12:57	2.4	18.4		0.5		0.5	19.0	0.3 ^k		0.2 ^j		7.5	0.21	0.22	7.7	0.10	0.08
8029	5/27/08 13:05	3.0	25.7		0.7		0.8	26.5	0.3 ^k		0.2 ^k		8.5	0.24	0.25	8.8	0.08	0.07
8039	5/30/08 10:37	3.5	59.1		1.5		1.5	60.6	2.7		0.2 ^k		17.0	0.42	0.44	17.5	0.78	0.06
8049	6/2/08 17:25	2.6	5.1		0.3 ^k		0.3	5.4	0.3 ^k		0.2 ^k		2.0	0.10	0.10	2.1	0.10	0.08
8059	6/5/08 14:52	3.2	0.6		0.3 ^k		0.3	0.9	0.3 ^k		0.2 ^k		0.19	0.08	0.08	0.3	0.08	0.06
8069	6/8/08 16:48	3.4	29.3		0.8 ^k		0.9	30.2	0.3 ^k		0.2 ^k		8.7	0.25	0.27	9.0	0.07	0.06
8089	6/13/08 13:44	3.0	32.9		1.1		1.1	34.0	1.1		0.2 ^k		11.0	0.36	0.38	11.4	0.38	0.07
8099 ^g	6/17/08 8:55	2.8	52.8		1.2		1.2	54.0	1.6		0.2 ^k		18.7	0.41	0.43	19.1	0.56	0.07
8109	6/20/08 16:09	3.3	59.5		4.3		4.5	64.0	5.4		0.2 ^k		18.1	1.3	1.4	19.5	1.6	0.06
8119	6/23/08 15:10	2.9	32.5		0.6		0.7	33.2	0.6		0.2 ^k		11.3	0.22	0.23	11.5	0.22	0.07
8130 ^h	6/26/08 6:19	2.8	16.5		0.7		0.8	17.2	1.6		0.4		5.8	0.27	0.28	6.1	0.57	0.16
8140 ⁱ	7/2/08 12:05	3.6	31.1		4.3		4.6	35.6	4.3		0.4		8.7	1.2	1.3	10.0	1.2	0.12
8149	7/5/08 12:22	3.3	6.9		0.7		0.7	7.7	3.5		0.2 ^k		2.1	0.21	0.22	2.4	1.1	0.06
8159	7/8/08 6:25	3.1	17.6		1.4		1.5	19.1	1.6		0.5		5.6	0.44	0.47	6.1	0.52	0.17
8169	7/11/08 11:29	3.0	11.3		1.1		1.1	12.5	7.0		0.2 ^k		3.7	0.36	0.37	4.1	2.3	0.07
8179	7/14/08 12:37	3.0	6.5		1.2		1.3	7.8	1.2		0.2 ^k		2.2	0.41	0.43	2.6	0.41	0.07
8189	7/17/08 10:28	3.2	18.5		0.9		0.9	19.4	3.6		0.2 ^k		5.8	0.27	0.29	6.1	1.1	0.06
8199	7/20/08 12:09	3.1	9.5		1.6		1.7	11.2	3.8		0.5 ^k		3.1	0.52	0.55	3.7	1.2	0.16
8209	7/23/08 12:23	3.0	13.6		0.6		0.6	14.2	4.1		0.2 ^k		4.5	0.19	0.20	4.7	1.4	0.07
8219	7/26/08 10:36	3.2	7.7		0.7		0.7	8.4	5.0		0.2 ^k		2.4	0.21	0.22	2.7	1.6	0.06
8229	7/29/08 11:30	3.2	8.0		0.3 ^k		0.3	8.3	1.4		1.9		2.5	0.08	0.08	2.6	0.43	0.60
Footnotes																		
^a Sample #8221-for PH only, 51% of the total concentration came from the back section of the sample tube																		
^b Sample #8038 replaces sample #8037																		
^c Sample #8078 replaces sample #8077																		
^d Sample #8014 replaces sample #8013																		
^f The back-up sample for sample #8223 was not analyzed since the concentrations were very low that breakthrough is unlikely																		
^g No samples for this site on 5 July, 2008 due to battery failure																		
^h Invalid Q1 sample, sample #8020, #8130, and #8140 are back-up samples																		
ⁱ Sample #8099- for AZ only, 14% of the total concentration came from the back section of the sample tube																		
^k Lab reported <LOD, LOD = 0.5 for AZ, AZ-oxon, and PH. The LOD = 0.4 for malathion. Value on table is equal to half of the LOD																		