APPENDIX 2.

EXPOSURE ESTIMATES AND MARGINS OF EXPOSURE FOR DEVELOPMENTAL NEUROTOXICITY

Appendix 2a - Drift Exposure for Infants with Aerial Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Drift-Modeling - AGDISP				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	External PBPK (mg/kg/day)	9.6% Absorption (mg/kg/day)	Hand to-Mouth (mg/kg/day)	Oral-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0517238	0.0049655	0.0010761	0.0000330	0.0000080	0.0011171	0.0292	0.0007178	0.0068005
AT 802A	2	1	50	0.0407100	0.0039082	0.0008469	0.0000260	0.0000063	0.0008793	0.0264	0.0006490	0.0054364
AT 802A	2	1	100	0.0274241	0.0026327	0.0005705	0.0000175	0.0000043	0.0005923	0.0220	0.0005408	0.0037658
AT 802A	2	1	250	0.0142959	0.0013724	0.0002974	0.0000091	0.0000022	0.0003088	0.0161	0.0003958	0.0020770
AT 802A	2	1	500	0.0085207	0.0008180	0.0001773	0.0000054	0.0000013	0.0001840	0.0117	0.0002876	0.0012896
AT 802A	2	1	1000	0.0045444	0.0004363	0.0000945	0.0000029	0.0000007	0.0000981	0.0065	0.0001598	0.0006942
AT 802A	2	1	1320	0.0029665	0.0002848	0.0000617	0.0000019	0.0000005	0.0000641	0.0046	0.0001128	0.0004617
AT 802A	2	1	2608	0.0005365	0.0000515	0.0000112	0.0000003	0.0000001	0.0000116	0.0016	0.0000396	0.0001027
Bell 205 Helicopter	2	1	25	0.0490098	0.0047049	0.0010196	0.0000313	0.0000076	0.0010585	0.0336	0.0008260	0.0065895
Bell 205 Helicopter	2	1	50	0.0300118	0.0028811	0.0006244	0.0000192	0.0000047	0.0006482	0.0274	0.0006736	0.0042029
Bell 205 Helicopter	2	1	100	0.0182406	0.0017511	0.0003795	0.0000116	0.0000028	0.0003940	0.0219	0.0005384	0.0026834
Bell 205 Helicopter	2	1	250	0.0116450	0.0011179	0.0002423	0.0000074	0.0000018	0.0002515	0.0153	0.0003761	0.0017455
Bell 205 Helicopter	2	1	500	0.0069112	0.0006635	0.0001438	0.0000044	0.0000011	0.0001493	0.0102	0.0002508	0.0010635
Bell 205 Helicopter	2	1	1000	0.0033767	0.0003242	0.0000702	0.0000022	0.0000005	0.0000729	0.0058	0.0001426	0.0005397
Bell 205 Helicopter	2	1	1320	0.0023669	0.0002272	0.0000492	0.0000015	0.0000004	0.0000511	0.0045	0.0001101	0.0003885
Bell 205 Helicopter	2	1	2608	0.0003787	0.0000364	0.0000079	0.0000002	0.0000001	0.0000082	0.0020	0.0000502	0.0000947
AT 802A	2	2	25	0.1035108	0.0099370	0.0021535	0.0000661	0.0000161	0.0022356	0.0493	0.0012120	0.0133846
AT 802A	2	2	50	0.0811676	0.0077921	0.0016886	0.0000518	0.0000126	0.0017531	0.0437	0.0010743	0.0106194
AT 802A	2	2	100	0.0542169	0.0052048	0.0011279	0.0000346	0.0000084	0.0011710	0.0350	0.0008604	0.0072362
AT 802A	2	2	250	0.0271400	0.0026054	0.0005646	0.0000173	0.0000042	0.0005862	0.0237	0.0005826	0.0037742
AT 802A	2	2	500	0.0147692	0.0014178	0.0003073	0.0000094	0.0000023	0.0003190	0.0153	0.0003761	0.0021130
AT 802A	2	2	1000	0.0058067	0.0005574	0.0001208	0.0000037	0.0000009	0.0001254	0.0072	0.0001770	0.0008599
AT 802A	2	2	1320	0.0034083	0.0003272	0.0000709	0.0000022	0.0000005	0.0000736	0.0049	0.0001210	0.0005218
AT 802A	2	2	2608	0.0006312	0.0000606	0.0000131	0.0000004	0.0000001	0.0000136	0.0016	0.0000401	0.0001143
Bell 205 Helicopter	2	2	25	0.0993451	0.0095371	0.0020668	0.0000634	0.0000154	0.0021457	0.0580	0.0014258	0.0131086
Bell 205 Helicopter	2	2	50	0.0611597	0.0058713	0.0012724	0.0000391	0.0000095	0.0013209	0.0458	0.0011259	0.0083182
Bell 205 Helicopter	2	2	100	0.0380592	0.0036537	0.0007918	0.0000243	0.0000059	0.0008220	0.0345	0.0008481	0.0053238
Bell 205 Helicopter	2	2	250	0.0210809	0.0020238	0.0004386	0.0000135	0.0000033	0.0004553	0.0215	0.0005285	0.0030076
Bell 205 Helicopter	2	2	500	0.0107929	0.0010361	0.0002245	0.0000069	0.0000017	0.0002331	0.0130	0.0003196	0.0015888
Bell 205 Helicopter	2	2	1000	0.0047337	0.0004544	0.0000985	0.0000030	0.0000007	0.0001022	0.0068	0.0001672	0.0007238
Bell 205 Helicopter	2	2	1320	0.0030296	0.0002908	0.0000630	0.0000019	0.0000005	0.0000654	0.0050	0.0001227	0.0004789
Bell 205 Helicopter	2	2	2608	0.0005049	0.0000485	0.0000105	0.0000003	0.0000001	0.0000109	0.0022	0.0000538	0.0001132
AT 802A	2	2.3	25	0.1189648	0.0114206	0.0024750	0.0000760	0.0000185	0.0025694	0.0526	0.0012926	0.0152826
AT 802A	2	2.3	50	0.0931976	0.0089470	0.0019389	0.0000595	0.0000145	0.0020129	0.0464	0.0011417	0.0121015
AT 802A	2	2.3	100	0.0621317	0.0059646	0.0012926	0.0000397	0.0000096	0.0013419	0.0371	0.0009130	0.0082196
AT 802A	2	2.3	250	0.0310659	0.0029823	0.0006463	0.0000198	0.0000048	0.0006710	0.0250	0.0006138	0.0042671
AT 802A	2	2.3	500	0.0164765	0.0015817	0.0003428	0.0000105	0.0000026	0.0003559	0.0159	0.0003899	0.0023275
AT 802A	2	2.3	1000	0.0063874	0.0006132	0.0001329	0.0000041	0.0000010	0.0001380	0.0075	0.0001834	0.0009345
AT 802A	2	2.3	1320	0.0036292	0.0003484	0.0000755	0.0000023	0.0000006	0.0000784	0.0051	0.0001254	0.0005522
AT 802A	2	2.3	2608	0.0007984	0.0000766	0.0000166	0.0000005	0.0000001	0.0000172	0.0017	0.0000413	0.0001352
Bell 205 Helicopter	2	2.3	25	0.1143195	0.0109747	0.0023783	0.0000730	0.0000177	0.0024691	0.0611	0.0015020	0.0149458
Bell 205 Helicopter	2	2.3	50	0.0704063	0.0067590	0.0014647	0.0000450	0.0000109	0.0015206	0.0482	0.0011854	0.0094650
Bell 205 Helicopter	2	2.3	100	0.0439132	0.0042157	0.0009136	0.0000280	0.0000068	0.0009484	0.0362	0.0008902	0.0060543
Bell 205 Helicopter	2	2.3	250	0.0238075	0.0022855	0.0004953	0.0000152	0.0000037	0.0005142	0.0222	0.0005453	0.0033450
Bell 205 Helicopter	2	2.3	500	0.0119763	0.0011497	0.0002492	0.0000076	0.0000019	0.0002587	0.0133	0.0003267	0.0017351
Bell 205 Helicopter	2	2.3	1000	0.0051534	0.0004947	0.0001072	0.0000033	0.0000008	0.0001113	0.0069	0.0001689	0.0007749
Bell 205 Helicopter	2	2.3	1320	0.0032663	0.0003136	0.0000680	0.0000021	0.0000005	0.0000705	0.0050	0.0001239	0.0005080
Bell 205 Helicopter	2	2.3	2608	0.0006533	0.0000627	0.0000136	0.0000004	0.0000001	0.0000141	0.0023	0.0000553	0.0001321

*Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2a - Drift Exposure for Infants with Aerial Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Drift-Modeling - AGDISP				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand to-Mouth (mg/kg/day)	Oral-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	15	1	25	0.0444655	0.0042687	0.0009251	0.0000284	0.0000069	0.0009604	0.0413	0.0010155	0.0062446
AT 802A	15	1	50	0.0355661	0.0034143	0.0007399	0.0000227	0.0000055	0.0007682	0.0391	0.0009607	0.0051432
AT 802A	15	1	100	0.0237949	0.0022843	0.0004950	0.0000152	0.0000037	0.0005139	0.0348	0.0008557	0.0036540
AT 802A	15	1	250	0.0122130	0.0011724	0.0002541	0.0000078	0.0000019	0.0002638	0.0289	0.0007110	0.0021472
AT 802A	15	1	500	0.0075740	0.0007271	0.0001576	0.0000048	0.0000012	0.0001636	0.0243	0.0005971	0.0014878
AT 802A	15	1	1000	0.0056489	0.0005423	0.0001175	0.0000036	0.0000009	0.0001220	0.0190	0.0004661	0.0011304
AT 802A	15	1	1320	0.0051124	0.0004908	0.0001064	0.0000033	0.0000008	0.0001104	0.0164	0.0004034	0.0010046
AT 802A	15	1	2608	0.0015148	0.0001454	0.0000315	0.0000010	0.0000002	0.0000327	0.0090	0.0002208	0.0003989
Bell 205 Helicopter	15	1	25	0.0442761	0.0042505	0.0009211	0.0000283	0.0000069	0.0009563	0.0592	0.0014558	0.0066626
Bell 205 Helicopter	15	1	50	0.0256884	0.0024661	0.0005344	0.0000164	0.0000040	0.0005548	0.0517	0.0012705	0.0042914
Bell 205 Helicopter	15	1	100	0.0148955	0.0014300	0.0003099	0.0000095	0.0000023	0.0003217	0.0448	0.0011023	0.0028540
Bell 205 Helicopter	15	1	250	0.0103511	0.0009937	0.0002153	0.0000066	0.0000016	0.0002236	0.0367	0.0009012	0.0021185
Bell 205 Helicopter	15	1	500	0.0077633	0.0007453	0.0001615	0.0000050	0.0000012	0.0001677	0.0288	0.0007090	0.0016219
Bell 205 Helicopter	15	1	1000	0.0050809	0.0004878	0.0001057	0.0000032	0.0000008	0.0001097	0.0202	0.0004973	0.0010948
Bell 205 Helicopter	15	1	1320	0.0040710	0.0003908	0.0000847	0.0000026	0.0000006	0.0000879	0.0150	0.0003675	0.0008463
Bell 205 Helicopter	15	1	2608	0.0006627	0.0000636	0.0000138	0.0000004	0.0000001	0.0000143	0.0080	0.0001969	0.0002748
AT 802A	15	2	25	0.0929073	0.0089191	0.0019329	0.0000593	0.0000144	0.0020066	0.0703	0.0017277	0.0126534
AT 802A	15	2	50	0.0748560	0.0071862	0.0015573	0.0000478	0.0000116	0.0016167	0.0660	0.0016220	0.0104249
AT 802A	15	2	100	0.0509980	0.0048958	0.0010610	0.0000326	0.0000079	0.0011015	0.0579	0.0014224	0.0074197
AT 802A	15	2	250	0.0268244	0.0025751	0.0005581	0.0000171	0.0000042	0.0005794	0.0468	0.0011500	0.0043045
AT 802A	15	2	500	0.0171045	0.0016420	0.0003558	0.0000109	0.0000027	0.0003694	0.0381	0.0009369	0.0029483
AT 802A	15	2	1000	0.0124339	0.0011937	0.0002587	0.0000079	0.0000019	0.0002685	0.0279	0.0006849	0.0021471
AT 802A	15	2	1320	0.0107929	0.0010361	0.0002245	0.0000069	0.0000017	0.0002331	0.0227	0.0005585	0.0018278
AT 802A	15	2	2608	0.0025878	0.0002484	0.0000538	0.0000017	0.0000004	0.0000559	0.0103	0.0002535	0.0005578
Bell 205 Helicopter	15	2	25	0.0922130	0.0088524	0.0019184	0.0000589	0.0000143	0.0019916	0.0828	0.0020360	0.0128801
Bell 205 Helicopter	15	2	50	0.0549112	0.0052715	0.0011424	0.0000351	0.0000085	0.0011860	0.0715	0.0017575	0.0082149
Bell 205 Helicopter	15	2	100	0.0325049	0.0031205	0.0006762	0.0000208	0.0000050	0.0007020	0.0612	0.0015038	0.0053263
Bell 205 Helicopter	15	2	250	0.0227219	0.0021813	0.0004727	0.0000145	0.0000035	0.0004907	0.0488	0.0011997	0.0038717
Bell 205 Helicopter	15	2	500	0.0161578	0.0015511	0.0003361	0.0000103	0.0000025	0.0003490	0.0373	0.0009167	0.0028168
Bell 205 Helicopter	15	2	1000	0.0097830	0.0009392	0.0002035	0.0000062	0.0000015	0.0002113	0.0252	0.0006200	0.0017705
Bell 205 Helicopter	15	2	1320	0.0074477	0.0007150	0.0001549	0.0000048	0.0000012	0.0001609	0.0207	0.0005079	0.0013837
Bell 205 Helicopter	15	2	2608	0.0013254	0.0001272	0.0000276	0.0000008	0.0000002	0.0000286	0.0115	0.0002822	0.0004381
AT 802A	15	2.3	25	0.1074240	0.0103127	0.0022349	0.0000686	0.0000167	0.0023201	0.0779	0.0019143	0.0145472
AT 802A	15	2.3	50	0.0866651	0.0083198	0.0018030	0.0000553	0.0000135	0.0018718	0.0730	0.0017941	0.0119857
AT 802A	15	2.3	100	0.0590106	0.0056650	0.0012277	0.0000377	0.0000092	0.0012745	0.0637	0.0015652	0.0085048
AT 802A	15	2.3	250	0.0311384	0.0029893	0.0006478	0.0000199	0.0000048	0.0006725	0.0513	0.0012609	0.0049227
AT 802A	15	2.3	500	0.0198154	0.0019023	0.0004122	0.0000127	0.0000031	0.0004280	0.0415	0.0010200	0.0033502
AT 802A	15	2.3	1000	0.0143716	0.0013797	0.0002990	0.0000092	0.0000022	0.0003104	0.0299	0.0007341	0.0024241
AT 802A	15	2.3	1320	0.0121215	0.0011637	0.0002522	0.0000077	0.0000019	0.0002618	0.0241	0.0005920	0.0020174
AT 802A	15	2.3	2608	0.0029759	0.0002857	0.0000619	0.0000019	0.0000005	0.0000643	0.0106	0.0002613	0.0006113
Bell 205 Helicopter	15	2.3	25	0.1068433	0.0102570	0.0022228	0.0000682	0.0000166	0.0023076	0.0917	0.0022540	0.0148186
Bell 205 Helicopter	15	2.3	50	0.0638012	0.0061249	0.0013273	0.0000407	0.0000099	0.0013780	0.0789	0.0019396	0.0094425
Bell 205 Helicopter	15	2.3	100	0.0378887	0.0036373	0.0007882	0.0000242	0.0000059	0.0008183	0.0671	0.0016486	0.0061042
Bell 205 Helicopter	15	2.3	250	0.0262753	0.0025224	0.0005466	0.0000168	0.0000041	0.0005675	0.0532	0.0013071	0.0043970
Bell 205 Helicopter	15	2.3	500	0.0184363	0.0017699	0.0003836	0.0000118	0.0000029	0.0003982	0.0402	0.0009887	0.0031568
Bell 205 Helicopter	15	2.3	1000	0.0111779	0.0010731	0.0002325	0.0000071	0.0000017	0.0002414	0.0269	0.0006606	0.0019751
Bell 205 Helicopter	15	2.3	1320	0.0084923	0.0008153	0.0001767	0.0000054	0.0000013	0.0001834	0.0220	0.0005401	0.0015388
Bell 205 Helicopter	15	2.3	2608	0.0015243	0.0001463	0.0000317	0.0000010	0.0000002	0.0000329	0.0127	0.0003115	0.0004907

*Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2a - Drift Exposure for Infants with Aerial Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Drift-Modeling - AGDISP				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	2	9	14	1	1
AT 802A	2	1	50	3	11	15	2	2
AT 802A	2	1	100	4	17	18	3	2
AT 802A	2	1	250	7	32	25	5	4
AT 802A	2	1	500	12	54	35	8	5
AT 802A	2	1	1000	23	102	63	14	7
AT 802A	2	1	1320	35	156	89	22	9
AT 802A	2	1	2608	194	863	253	97	12
Bell 205 Helicopter	2	1	25	2	9	12	2	1
Bell 205 Helicopter	2	1	50	3	15	15	2	2
Bell 205 Helicopter	2	1	100	6	25	19	4	3
Bell 205 Helicopter	2	1	250	9	40	27	6	4
Bell 205 Helicopter	2	1	500	15	67	40	9	6
Bell 205 Helicopter	2	1	1000	31	137	70	19	8
Bell 205 Helicopter	2	1	1320	44	196	91	26	9
Bell 205 Helicopter	2	1	2608	275	1223	199	106	12
AT 802A	2	2	25	1	4	8	<1	<1
AT 802A	2	2	50	1	6	9	<1	<1
AT 802A	2	2	100	2	9	12	1	1
AT 802A	2	2	250	4	17	17	3	2
AT 802A	2	2	500	7	31	27	5	4
AT 802A	2	2	1000	18	80	56	12	6
AT 802A	2	2	1320	31	136	83	19	8
AT 802A	2	2	2608	165	734	250	87	12
Bell 205 Helicopter	2	2	25	1	5	7	<1	<1
Bell 205 Helicopter	2	2	50	2	8	9	1	1
Bell 205 Helicopter	2	2	100	3	12	12	2	2
Bell 205 Helicopter	2	2	250	5	22	19	3	3
Bell 205 Helicopter	2	2	500	10	43	31	6	4
Bell 205 Helicopter	2	2	1000	22	98	60	14	7
Bell 205 Helicopter	2	2	1320	34	153	82	21	8
Bell 205 Helicopter	2	2	2608	206	917	186	88	12
AT 802A	2	2.3	25	<1	4	8	<1	<1
AT 802A	2	2.3	50	1	5	9	<1	<1
AT 802A	2	2.3	100	2	7	11	1	1
AT 802A	2	2.3	250	3	15	16	2	2
AT 802A	2	2.3	500	6	28	26	4	3
AT 802A	2	2.3	1000	16	72	55	11	6
AT 802A	2	2.3	1320	29	128	80	18	8
AT 802A	2	2.3	2608	130	580	242	74	12
Bell 205 Helicopter	2	2.3	25	<1	4	7	<1	<1
Bell 205 Helicopter	2	2.3	50	1	7	8	1	<1
Bell 205 Helicopter	2	2.3	100	2	11	11	2	1
Bell 205 Helicopter	2	2.3	250	4	19	18	3	2
Bell 205 Helicopter	2	2.3	500	9	39	31	6	4
Bell 205 Helicopter	2	2.3	1000	20	90	59	13	7
Bell 205 Helicopter	2	2.3	1320	32	142	81	20	8
Bell 205 Helicopter	2	2.3	2608	159	709	181	76	12

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for infants was 0.00027 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for infants was 0.000439 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2a - Drift Exposure for Infants with Aerial Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Drift-Modeling - AGDISP				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	15	1	25	2	10	10	2	1
AT 802A	15	1	50	3	13	10	2	2
AT 802A	15	1	100	4	19	12	3	2
AT 802A	15	1	250	9	38	14	5	4
AT 802A	15	1	500	14	61	17	7	5
AT 802A	15	1	1000	18	82	21	9	5
AT 802A	15	1	1320	20	91	25	10	6
AT 802A	15	1	2608	69	306	45	25	9
Bell 205 Helicopter	15	1	25	2	10	7	2	1
Bell 205 Helicopter	15	1	50	4	18	8	2	2
Bell 205 Helicopter	15	1	100	7	31	9	4	3
Bell 205 Helicopter	15	1	250	10	45	11	5	4
Bell 205 Helicopter	15	1	500	13	60	14	6	4
Bell 205 Helicopter	15	1	1000	21	91	20	9	6
Bell 205 Helicopter	15	1	1320	26	114	27	12	6
Bell 205 Helicopter	15	1	2608	157	699	51	36	10
AT 802A	15	2	25	1	5	6	<1	<1
AT 802A	15	2	50	1	6	6	<1	<1
AT 802A	15	2	100	2	9	7	1	1
AT 802A	15	2	250	4	17	9	2	2
AT 802A	15	2	500	6	27	11	3	3
AT 802A	15	2	1000	8	37	15	5	4
AT 802A	15	2	1320	10	43	18	5	4
AT 802A	15	2	2608	40	179	39	18	8
Bell 205 Helicopter	15	2	25	1	5	5	<1	<1
Bell 205 Helicopter	15	2	50	2	8	6	1	1
Bell 205 Helicopter	15	2	100	3	14	7	2	2
Bell 205 Helicopter	15	2	250	5	20	8	3	2
Bell 205 Helicopter	15	2	500	6	29	11	4	3
Bell 205 Helicopter	15	2	1000	11	47	16	6	4
Bell 205 Helicopter	15	2	1320	14	62	20	7	5
Bell 205 Helicopter	15	2	2608	79	349	35	23	9
AT 802A	15	2.3	25	<1	4	5	<1	<1
AT 802A	15	2.3	50	1	5	6	<1	<1
AT 802A	15	2.3	100	2	8	6	1	1
AT 802A	15	2.3	250	3	15	8	2	2
AT 802A	15	2.3	500	5	23	10	3	2
AT 802A	15	2.3	1000	7	32	14	4	3
AT 802A	15	2.3	1320	9	38	17	5	4
AT 802A	15	2.3	2608	35	156	38	16	8
Bell 205 Helicopter	15	2.3	25	<1	4	4	<1	<1
Bell 205 Helicopter	15	2.3	50	2	7	5	1	<1
Bell 205 Helicopter	15	2.3	100	3	12	6	2	1
Bell 205 Helicopter	15	2.3	250	4	18	8	2	2
Bell 205 Helicopter	15	2.3	500	6	25	10	3	3
Bell 205 Helicopter	15	2.3	1000	9	41	15	5	4
Bell 205 Helicopter	15	2.3	1320	12	55	19	6	4
Bell 205 Helicopter	15	2.3	2608	68	304	32	20	8

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for infants was 0.00027 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for infants was 0.000439 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2b - Drift Exposure for Infants with Airblast Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Orchard Airblast - Dormant Apple - 60 Swath												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose						
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)	1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AT 802A	2	1	25	0.0174674	0.0016769	0.0003634	0.0000112	0.0000027	0.0003773	0.0292	0.0007178	0.0027720
AT 802A	2	1	50	0.0066462	0.0006380	0.0001383	0.0000042	0.0000010	0.0001435	0.0264	0.0006490	0.0014306
AT 802A	2	1	75	0.0032600	0.0003130	0.0000678	0.0000021	0.0000005	0.0000704	0.0239	0.0005870	0.0009703
AT 802A	2	1	100	0.0018525	0.0001778	0.0000385	0.0000012	0.0000003	0.0000400	0.0220	0.0005408	0.0007587
AT 802A	2	1	150	0.0007826	0.0000751	0.0000163	0.0000005	0.0000001	0.0000169	0.0194	0.0004759	0.0005679
AT 802A	2	1	200	0.0004134	0.0000397	0.0000086	0.0000003	0.0000001	0.0000089	0.0175	0.0004306	0.0004792
AT 802A	2	1	250	0.0002493	0.0000239	0.0000052	0.0000002	0.0000000	0.0000054	0.0161	0.0003958	0.0004251
AT 802A	2	1	300	0.0001609	0.0000155	0.0000033	0.0000001	0.0000000	0.0000035	0.0149	0.0003675	0.0003864
AT 802A	2	1	500	0.0000442	0.0000042	0.0000009	0.0000000	0.0000000	0.0000010	0.0117	0.0002876	0.0002928
AT 802A	2	1	1000	0.0000081	0.0000008	0.0000002	0.0000000	0.0000000	0.0000002	0.0065	0.0001598	0.0001607
AT 802A	2	1	1320	0.0000041	0.0000004	0.0000001	0.0000000	0.0000000	0.0000001	0.0046	0.0001131	0.0001136
AT 802A	2	1	2608	0.0000007	0.0000001	0.0000000	0.0000000	0.0000000	0.0000000	0.0016	0.0000393	0.0000394
AT 802A	2	2	25	0.0349349	0.0033538	0.0007268	0.0000223	0.0000054	0.0007545	0.0493	0.0012120	0.0053202
AT 802A	2	2	50	0.0132923	0.0012761	0.0002765	0.0000085	0.0000021	0.0002871	0.0437	0.0010743	0.0026374
AT 802A	2	2	75	0.0065199	0.0006259	0.0001356	0.0000042	0.0000010	0.0001408	0.0386	0.0009488	0.0017155
AT 802A	2	2	100	0.0037049	0.0003557	0.0000771	0.0000024	0.0000006	0.0000800	0.0350000	0.0008604	0.0012961
AT 802A	2	2	150	0.0015653	0.0001503	0.0000326	0.0000010	0.0000002	0.0000338	0.0300	0.0007368	0.0009209
AT 802A	2	2	200	0.0008268	0.0000794	0.0000172	0.0000005	0.0000001	0.0000179	0.0264	0.0006498	0.0007470
AT 802A	2	2	250	0.0004986	0.0000479	0.0000104	0.0000003	0.0000001	0.0000108	0.0237	0.0005826	0.0006413
AT 802A	2	2	300	0.0003219	0.0000309	0.0000067	0.0000002	0.0000000	0.0000070	0.0215	0.0005280	0.0005658
AT 802A	2	2	500	0.0000884	0.0000085	0.0000018	0.0000001	0.0000000	0.0000019	0.0153	0.0003761	0.0003865
AT 802A	2	2	1000	0.0000162	0.0000016	0.0000003	0.0000000	0.0000000	0.0000004	0.0072	0.0001770	0.0001789
AT 802A	2	2	1320	0.0000081	0.0000008	0.0000002	0.0000000	0.0000000	0.0000002	0.0049	0.0001205	0.0001214
AT 802A	2	2	2608	0.0000015	0.0000001	0.0000000	0.0000000	0.0000000	0.0000000	0.0016	0.0000393	0.0000395
AT 802A	2	4	25	0.0698698	0.0067075	0.0014536	0.0000446	0.0000108	0.0015091	0.0795	0.0019539	0.0101704
AT 802A	2	4	50	0.0265846	0.0025521	0.0005531	0.0000170	0.0000041	0.0005742	0.0688	0.0016918	0.0048181
AT 802A	2	4	75	0.0130398	0.0012518	0.0002713	0.0000083	0.0000020	0.0002816	0.0594	0.0014610	0.0029944
AT 802A	2	4	100	0.0074099	0.0007113	0.0001542	0.0000047	0.0000012	0.0001600	0.0526	0.0012923	0.0021637
AT 802A	2	4	150	0.0031306	0.0003005	0.0000651	0.0000020	0.0000005	0.0000676	0.0431	0.0010603	0.0014284
AT 802A	2	4	200	0.0016536	0.0001588	0.0000344	0.0000011	0.0000003	0.0000357	0.0367	0.0009025	0.0010969
AT 802A	2	4	250	0.0009972	0.0000957	0.0000207	0.0000006	0.0000002	0.0000215	0.0315	0.0007741	0.0008914
AT 802A	2	4	300	0.0006438	0.0000618	0.0000134	0.0000004	0.0000001	0.0000139	0.0274	0.0006738	0.0007495
AT 802A	2	4	500	0.0001767	0.0000170	0.0000037	0.0000001	0.0000000	0.0000038	0.0176	0.0004322	0.0004530
AT 802A	2	4	1000	0.0000325	0.0000031	0.0000007	0.0000000	0.0000000	0.0000007	0.0076	0.0001878	0.0001916
AT 802A	2	4	1320	0.0000162	0.0000016	0.0000003	0.0000000	0.0000000	0.0000004	0.0051	0.0001259	0.0001278
AT 802A	2	4	2608	0.0000030	0.0000003	0.0000001	0.0000000	0.0000000	0.0000001	0.0019	0.0000460	0.0000463
AT 802A	2	6	25	0.1048047	0.0100613	0.0021804	0.0000669	0.0000163	0.0022636	0.1042	0.0025616	0.0148864
AT 802A	2	6	50	0.0398769	0.0038282	0.0008296	0.0000255	0.0000062	0.0008613	0.0884	0.0021732	0.0068626
AT 802A	2	6	75	0.0195598	0.0018777	0.0004069	0.0000125	0.0000030	0.0004225	0.0752	0.0018488	0.0041490
AT 802A	2	6	100	0.0111148	0.0010670	0.0002312	0.0000071	0.0000017	0.0002401	0.0650	0.0015979	0.0029050
AT 802A	2	6	150	0.0046959	0.0004508	0.0000977	0.0000030	0.0000007	0.0001014	0.0508	0.0012490	0.0018012
AT 802A	2	6	200	0.0024805	0.0002381	0.0000516	0.0000016	0.0000004	0.0000536	0.0414	0.0010190	0.0013107
AT 802A	2	6	250	0.0014959	0.0001436	0.0000311	0.0000010	0.0000002	0.0000323	0.0348	0.0008555	0.0010314
AT 802A	2	6	300	0.0009657	0.0000927	0.0000201	0.0000006	0.0000001	0.0000209	0.0298	0.0007322	0.0008458
AT 802A	2	6	500	0.0002651	0.0000254	0.0000055	0.0000002	0.0000000	0.0000057	0.0179	0.0004400	0.0004712
AT 802A	2	6	1000	0.0000487	0.0000047	0.0000010	0.0000000	0.0000000	0.0000011	0.0077	0.0001893	0.0001950
AT 802A	2	6	1320	0.0000243	0.0000023	0.0000005	0.0000000	0.0000000	0.0000005	0.0052	0.0001278	0.0001307
AT 802A	2	6	2608	0.0000044	0.0000004	0.0000001	0.0000000	0.0000000	0.0000001	0.0020	0.0000492	0.0000497

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2b - Drift Exposure for Infants with Airblast Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Orchard Airblast - Sparse Orchard - 60 Swath												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0141633	0.0013597	0.0002947	0.0000090	0.0000022	0.0003059	0.0292	0.0007178	0.0023834
AT 802A	2	1	50	0.0064505	0.0006192	0.0001342	0.0000041	0.0000010	0.0001393	0.0264	0.0006490	0.0014076
AT 802A	2	1	75	0.0036229	0.0003478	0.0000754	0.0000023	0.0000006	0.0000782	0.0239	0.0005870	0.0010130
AT 802A	2	1	100	0.0023132	0.0002221	0.0000481	0.0000015	0.0000004	0.0000500	0.0220	0.0005408	0.0008129
AT 802A	2	1	150	0.0011771	0.0001130	0.0000245	0.0000008	0.0000002	0.0000254	0.0194	0.0004759	0.0006143
AT 802A	2	1	200	0.0007101	0.0000682	0.0000148	0.0000005	0.0000001	0.0000153	0.0175	0.0004306	0.0005141
AT 802A	2	1	250	0.0004765	0.0000457	0.0000099	0.0000003	0.0000001	0.0000103	0.0161	0.0003958	0.0004518
AT 802A	2	1	300	0.0003408	0.0000327	0.0000071	0.0000002	0.0000001	0.0000074	0.0149	0.0003675	0.0004076
AT 802A	2	1	500	0.0001250	0.0000120	0.0000026	0.0000001	0.0000000	0.0000027	0.0117	0.0002876	0.0003023
AT 802A	2	1	1000	0.0000259	0.0000025	0.0000005	0.0000000	0.0000000	0.0000006	0.0065	0.0001598	0.0001628
AT 802A	2	1	1320	0.0000121	0.0000012	0.0000003	0.0000000	0.0000000	0.0000003	0.0046	0.0001131	0.0001145
AT 802A	2	1	2608	0.0000006	0.0000001	0.0000000	0.0000000	0.0000000	0.0000000	0.0016	0.0000393	0.0000394
AT 802A	2	2	25	0.0283266	0.0027194	0.0005893	0.0000181	0.0000044	0.0006118	0.0493	0.0012120	0.0045431
AT 802A	2	2	50	0.0129010	0.0012385	0.0002684	0.0000082	0.0000020	0.0002786	0.0437	0.0010743	0.0025914
AT 802A	2	2	75	0.0072458	0.0006956	0.0001507	0.0000046	0.0000011	0.0001565	0.0386	0.0009488	0.0018009
AT 802A	2	2	100	0.0046264	0.0004441	0.0000962	0.0000030	0.0000007	0.0000999	0.0350	0.0008604	0.0014045
AT 802A	2	2	150	0.0023542	0.0002260	0.0000490	0.0000015	0.0000004	0.0000508	0.0300	0.0007368	0.0010137
AT 802A	2	2	200	0.0014201	0.0001363	0.0000295	0.0000009	0.0000002	0.0000307	0.0264	0.0006498	0.0008168
AT 802A	2	2	250	0.0009531	0.0000915	0.0000198	0.0000006	0.0000001	0.0000206	0.0237	0.0005826	0.0006947
AT 802A	2	2	300	0.0006817	0.0000654	0.0000142	0.0000004	0.0000001	0.0000147	0.0215	0.0005280	0.0006082
AT 802A	2	2	500	0.0002499	0.0000240	0.0000052	0.0000002	0.0000000	0.0000054	0.0153	0.0003761	0.0004055
AT 802A	2	2	1000	0.0000519	0.0000050	0.0000011	0.0000000	0.0000000	0.0000011	0.0072	0.0001770	0.0001831
AT 802A	2	2	1320	0.0000242	0.0000023	0.0000005	0.0000000	0.0000000	0.0000005	0.0049	0.0001205	0.0001233
AT 802A	2	2	2608	0.0000013	0.0000001	0.0000000	0.0000000	0.0000000	0.0000000	0.0016	0.0000393	0.0000395
AT 802A	2	4	25	0.0566532	0.0054387	0.0011786	0.0000362	0.0000088	0.0012236	0.0795	0.0019539	0.0086162
AT 802A	2	4	50	0.0258020	0.0024770	0.0005368	0.0000165	0.0000040	0.0005573	0.0688	0.0016918	0.0047261
AT 802A	2	4	75	0.0144915	0.0013912	0.0003015	0.0000093	0.0000022	0.0003130	0.0594	0.0014610	0.0031652
AT 802A	2	4	100	0.0092529	0.0008883	0.0001925	0.0000059	0.0000014	0.0001998	0.0526	0.0012923	0.0023805
AT 802A	2	4	150	0.0047085	0.0004520	0.0000980	0.0000030	0.0000007	0.0001017	0.0431	0.0010603	0.0016140
AT 802A	2	4	200	0.0028402	0.0002727	0.0000591	0.0000018	0.0000004	0.0000613	0.0367	0.0009025	0.0012365
AT 802A	2	4	250	0.0019061	0.0001830	0.0000397	0.0000012	0.0000003	0.0000412	0.0315	0.0007741	0.0009983
AT 802A	2	4	300	0.0013633	0.0001309	0.0000284	0.0000009	0.0000002	0.0000294	0.0274	0.0006738	0.0008342
AT 802A	2	4	500	0.0004999	0.0000480	0.0000104	0.0000003	0.0000001	0.0000108	0.0176	0.0004322	0.0004910
AT 802A	2	4	1000	0.0001037	0.0000100	0.0000022	0.0000001	0.0000000	0.0000022	0.0076	0.0001878	0.0002000
AT 802A	2	4	1320	0.0000484	0.0000046	0.0000010	0.0000000	0.0000000	0.0000010	0.0051	0.0001259	0.0001316
AT 802A	2	4	2608	0.0000026	0.0000002	0.0000001	0.0000000	0.0000000	0.0000001	0.0019	0.0000460	0.0000463
AT 802A	2	6	25	0.0849798	0.0081581	0.0017679	0.0000543	0.0000132	0.0018354	0.1042	0.0025616	0.0125550
AT 802A	2	6	50	0.0387029	0.0037155	0.0008052	0.0000247	0.0000060	0.0008359	0.0884	0.0021732	0.0067246
AT 802A	2	6	75	0.0217373	0.0020868	0.0004522	0.0000139	0.0000034	0.0004695	0.0752	0.0018488	0.0044050
AT 802A	2	6	100	0.0138793	0.0013324	0.0002887	0.0000089	0.0000022	0.0002998	0.0650	0.0015979	0.0032301
AT 802A	2	6	150	0.0070627	0.0006780	0.0001469	0.0000045	0.0000011	0.0001525	0.0508	0.0012490	0.0020796
AT 802A	2	6	200	0.0042604	0.0004090	0.0000886	0.0000027	0.0000007	0.0000920	0.0414	0.0010190	0.0015200
AT 802A	2	6	250	0.0028592	0.0002745	0.0000595	0.0000018	0.0000004	0.0000618	0.0348	0.0008555	0.0011917
AT 802A	2	6	300	0.0020450	0.0001963	0.0000425	0.0000013	0.0000003	0.0000442	0.0298	0.0007322	0.0009727
AT 802A	2	6	500	0.0007498	0.0000720	0.0000156	0.0000005	0.0000001	0.0000162	0.0179	0.0004400	0.0005282
AT 802A	2	6	1000	0.0001556	0.0000149	0.0000032	0.0000001	0.0000000	0.0000034	0.0077	0.0001893	0.0002076
AT 802A	2	6	1320	0.0000726	0.0000070	0.0000015	0.0000000	0.0000000	0.0000016	0.0052	0.0001278	0.0001364
AT 802A	2	6	2608	0.0000039	0.0000004	0.0000001	0.0000000	0.0000000	0.0000001	0.0020	0.0000492	0.0000496

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2b - Drift Exposure for Infants with Airblast Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Orchard Airblast - Dormant Apple - 60 Swath								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	6	27	14	4	3
AT 802A	2	1	50	16	70	15	7	5
AT 802A	2	1	75	32	142	17	10	6
AT 802A	2	1	100	56	250	18	13	7
AT 802A	2	1	150	133	592	21	18	8
AT 802A	2	1	200	252	1120	23	21	8
AT 802A	2	1	250	418	1857	25	24	9
AT 802A	2	1	300	647	2877	27	26	9
AT 802A	2	1	500	2358	10480	35	34	10
AT 802A	2	1	1000	12835	57048	63	62	11
AT 802A	2	1	1320	25672	114106	88	88	12
AT 802A	2	1	2608	140763	625668	254	254	13
AT 802A	2	2	25	3	13	8	2	2
AT 802A	2	2	50	8	35	9	4	3
AT 802A	2	2	75	16	71	11	6	4
AT 802A	2	2	100	28	125	12	8	5
AT 802A	2	2	150	67	296	14	11	6
AT 802A	2	2	200	126	560	15	13	7
AT 802A	2	2	250	209	929	17	16	7
AT 802A	2	2	300	324	1438	19	18	8
AT 802A	2	2	500	1179	5240	27	26	9
AT 802A	2	2	1000	6417	28524	56	56	11
AT 802A	2	2	1320	12836	57053	83	82	12
AT 802A	2	2	2608	70381	312835	254	253	13
AT 802A	2	4	25	1	7	5	<1	<1
AT 802A	2	4	50	4	17	6	2	2
AT 802A	2	4	75	8	36	7	3	3
AT 802A	2	4	100	14	62	8	5	3
AT 802A	2	4	150	33	148	9	7	5
AT 802A	2	4	200	63	280	11	9	6
AT 802A	2	4	250	104	464	13	11	6
AT 802A	2	4	300	162	719	15	13	7
AT 802A	2	4	500	589	2620	23	22	9
AT 802A	2	4	1000	3209	14262	53	52	11
AT 802A	2	4	1320	6418	28527	79	78	12
AT 802A	2	4	2608	35191	156418	218	216	13
AT 802A	2	6	25	<1	4	4	<1	<1
AT 802A	2	6	50	3	12	5	1	1
AT 802A	2	6	75	5	24	5	2	2
AT 802A	2	6	100	9	42	6	3	3
AT 802A	2	6	150	22	99	8	6	4
AT 802A	2	6	200	42	187	10	8	5
AT 802A	2	6	250	70	310	12	10	6
AT 802A	2	6	300	108	479	14	12	6
AT 802A	2	6	500	393	1747	23	21	8
AT 802A	2	6	1000	2139	9508	53	51	11
AT 802A	2	6	1320	4279	19018	78	77	12
AT 802A	2	6	2608	23460	104278	203	201	13

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for infants was 0.00027 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for infants was 0.000439 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2b - Drift Exposure for Infants with Airblast Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Orchard Airblast - Sparse Orchard - 60 Swath								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	7	33	14	4	3
AT 802A	2	1	50	16	72	15	7	5
AT 802A	2	1	75	29	128	17	10	6
AT 802A	2	1	100	45	200	18	12	7
AT 802A	2	1	150	88	393	21	16	8
AT 802A	2	1	200	147	652	23	19	8
AT 802A	2	1	250	219	972	25	22	9
AT 802A	2	1	300	306	1358	27	25	9
AT 802A	2	1	500	834	3705	35	33	10
AT 802A	2	1	1000	4017	17853	63	61	11
AT 802A	2	1	1320	8609	38265	88	87	12
AT 802A	2	1	2608	161568	718145	254	254	13
AT 802A	2	2	25	4	16	8	2	2
AT 802A	2	2	50	8	36	9	4	3
AT 802A	2	2	75	14	64	11	6	4
AT 802A	2	2	100	23	100	12	7	5
AT 802A	2	2	150	44	197	14	10	6
AT 802A	2	2	200	73	326	15	12	7
AT 802A	2	2	250	109	486	17	14	7
AT 802A	2	2	300	153	679	19	16	8
AT 802A	2	2	500	417	1853	27	25	9
AT 802A	2	2	1000	2008	8927	56	55	11
AT 802A	2	2	1320	4304	19133	83	81	12
AT 802A	2	2	2608	80784	359071	254	253	13
AT 802A	2	4	25	2	8	5	1	1
AT 802A	2	4	50	4	18	6	2	2
AT 802A	2	4	75	7	32	7	3	3
AT 802A	2	4	100	11	50	8	4	3
AT 802A	2	4	150	22	98	9	6	4
AT 802A	2	4	200	37	163	11	8	5
AT 802A	2	4	250	55	243	13	10	6
AT 802A	2	4	300	76	340	15	12	6
AT 802A	2	4	500	208	926	23	20	8
AT 802A	2	4	1000	1004	4463	53	50	11
AT 802A	2	4	1320	2152	9566	79	76	12
AT 802A	2	4	2608	40392	179536	218	216	13
AT 802A	2	6	25	1	5	4	<1	<1
AT 802A	2	6	50	3	12	5	1	1
AT 802A	2	6	75	5	21	5	2	2
AT 802A	2	6	100	8	33	6	3	3
AT 802A	2	6	150	15	66	8	5	4
AT 802A	2	6	200	24	109	10	7	4
AT 802A	2	6	250	36	162	12	8	5
AT 802A	2	6	300	51	226	14	10	6
AT 802A	2	6	500	139	618	23	19	8
AT 802A	2	6	1000	669	2976	53	48	11
AT 802A	2	6	1320	1435	6378	78	73	12
AT 802A	2	6	2608	26928	119691	203	202	13

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for infants was 0.00027 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for infants was 0.000439 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2c - Drift Exposure for Infants with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - High Boom 40 swath/50th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0029980	0.0002878	0.0000624	0.0000019	0.0000005	0.0000648	0.0292	0.0007178	0.0010704
AT 802A	2	1	50	0.0019882	0.0001909	0.0000414	0.0000013	0.0000003	0.0000429	0.0264	0.0006490	0.0008828
AT 802A	2	1	75	0.0014832	0.0001424	0.0000309	0.0000009	0.0000002	0.0000320	0.0239	0.0005870	0.0007614
AT 802A	2	1	100	0.0011677	0.0001121	0.0000243	0.0000007	0.0000002	0.0000252	0.0220	0.0005408	0.0006781
AT 802A	2	1	150	0.0008521	0.0000818	0.0000177	0.0000005	0.0000001	0.0000184	0.0194	0.0004759	0.0005761
AT 802A	2	1	200	0.0006627	0.0000636	0.0000138	0.0000004	0.0000001	0.0000143	0.0175	0.0004306	0.0005085
AT 802A	2	1	250	0.0005365	0.0000515	0.0000112	0.0000003	0.0000001	0.0000116	0.0161	0.0003958	0.0004589
AT 802A	2	1	300	0.0004418	0.0000424	0.0000092	0.0000003	0.0000001	0.0000095	0.0149	0.0003675	0.0004195
AT 802A	2	1	500	0.0002293	0.0000220	0.0000048	0.0000001	0.0000000	0.0000050	0.0117	0.0002876	0.0003146
AT 802A	2	1	1000	0.0000690	0.0000066	0.0000014	0.0000000	0.0000000	0.0000015	0.0065	0.0001598	0.0001679
AT 802A	2	1	1320	0.0000375	0.0000036	0.0000008	0.0000000	0.0000000	0.0000008	0.0046	0.0001131	0.0001175
AT 802A	2	1	2608	0.0000055	0.0000005	0.0000001	0.0000000	0.0000000	0.0000001	0.0016	0.0000393	0.0000400
AT 802A	2	2	25	0.0059961	0.0005756	0.0001247	0.0000038	0.0000009	0.0001295	0.0493	0.0012120	0.0019171
AT 802A	2	2	50	0.0039763	0.0003817	0.0000827	0.0000025	0.0000006	0.0000859	0.0437	0.0010743	0.0015419
AT 802A	2	2	75	0.0029665	0.0002848	0.0000617	0.0000019	0.0000005	0.0000641	0.0386	0.0009488	0.0012977
AT 802A	2	2	100	0.0023353	0.0002242	0.0000486	0.0000015	0.0000004	0.0000504	0.0350	0.0008604	0.0011350
AT 802A	2	2	150	0.0017041	0.0001636	0.0000355	0.0000011	0.0000003	0.0000368	0.0300	0.0007368	0.0009372
AT 802A	2	2	200	0.0013254	0.0001272	0.0000276	0.0000008	0.0000002	0.0000286	0.0264	0.0006498	0.0008056
AT 802A	2	2	250	0.0010730	0.0001030	0.0000223	0.0000007	0.0000002	0.0000232	0.0237	0.0005826	0.0007088
AT 802A	2	2	300	0.0008836	0.0000848	0.0000184	0.0000006	0.0000001	0.0000191	0.0215	0.0005280	0.0006319
AT 802A	2	2	500	0.0004585	0.0000440	0.0000095	0.0000003	0.0000001	0.0000099	0.0153	0.0003761	0.0004300
AT 802A	2	2	1000	0.0001380	0.0000132	0.0000029	0.0000001	0.0000000	0.0000030	0.0072	0.0001770	0.0001932
AT 802A	2	2	1320	0.0000749	0.0000072	0.0000016	0.0000000	0.0000000	0.0000016	0.0049	0.0001205	0.0001293
AT 802A	2	2	2608	0.0000111	0.0000011	0.0000002	0.0000000	0.0000000	0.0000002	0.0016	0.0000393	0.0000406
AT 802A	2	4	25	0.0119921	0.0011512	0.0002495	0.0000077	0.0000019	0.0002590	0.0795	0.0019539	0.0033641
AT 802A	2	4	50	0.0079527	0.0007635	0.0001654	0.0000051	0.0000012	0.0001718	0.0688	0.0016918	0.0026270
AT 802A	2	4	75	0.0059329	0.0005696	0.0001234	0.0000038	0.0000009	0.0001281	0.0594	0.0014610	0.0021587
AT 802A	2	4	100	0.0046706	0.0004484	0.0000972	0.0000030	0.0000007	0.0001009	0.0526	0.0012923	0.0018416
AT 802A	2	4	150	0.0034083	0.0003272	0.0000709	0.0000022	0.0000005	0.0000736	0.0431	0.0010603	0.0014611
AT 802A	2	4	200	0.0026509	0.0002545	0.0000551	0.0000017	0.0000004	0.0000573	0.0367	0.0009025	0.0012142
AT 802A	2	4	250	0.0021460	0.0002060	0.0000446	0.0000014	0.0000003	0.0000463	0.0315	0.0007741	0.0010265
AT 802A	2	4	300	0.0017673	0.0001697	0.0000368	0.0000011	0.0000003	0.0000382	0.0274	0.0006738	0.0008817
AT 802A	2	4	500	0.0009170	0.0000880	0.0000191	0.0000006	0.0000001	0.0000198	0.0176	0.0004322	0.0005400
AT 802A	2	4	1000	0.0002759	0.0000265	0.0000057	0.0000002	0.0000000	0.0000060	0.0076	0.0001878	0.0002203
AT 802A	2	4	1320	0.0001498	0.0000144	0.0000031	0.0000001	0.0000000	0.0000032	0.0051	0.0001259	0.0001435
AT 802A	2	4	2608	0.0000222	0.0000021	0.0000005	0.0000000	0.0000000	0.0000005	0.0019	0.0000460	0.0000486
AT 802A	2	6	25	0.0179882	0.0017269	0.0003742	0.0000115	0.0000028	0.0003885	0.1042	0.0025622	0.0046775
AT 802A	2	6	50	0.0119290	0.0011452	0.0002482	0.0000076	0.0000019	0.0002576	0.0884	0.0021732	0.0035760
AT 802A	2	6	75	0.0088994	0.0008543	0.0001851	0.0000057	0.0000014	0.0001922	0.0884	0.0021732	0.0032197
AT 802A	2	6	100	0.0070059	0.0006726	0.0001458	0.0000045	0.0000011	0.0001513	0.0650	0.0015968	0.0024206
AT 802A	2	6	150	0.0051124	0.0004908	0.0001064	0.0000033	0.0000008	0.0001104	0.0884	0.0021732	0.0027744
AT 802A	2	6	200	0.0039763	0.0003817	0.0000827	0.0000025	0.0000006	0.0000859	0.0884	0.0021732	0.0026408
AT 802A	2	6	250	0.0032189	0.0003090	0.0000670	0.0000021	0.0000005	0.0000695	0.0348	0.0008557	0.0012342
AT 802A	2	6	300	0.0026509	0.0002545	0.0000551	0.0000017	0.0000004	0.0000573	0.0884	0.0021732	0.0024849
AT 802A	2	6	500	0.0013755	0.0001321	0.0000286	0.0000009	0.0000002	0.0000297	0.0179	0.0004404	0.0006021
AT 802A	2	6	1000	0.0004139	0.0000397	0.0000086	0.0000003	0.0000001	0.0000089	0.0077	0.0001885	0.0002372
AT 802A	2	6	1320	0.0002248	0.0000216	0.0000047	0.0000001	0.0000000	0.0000049	0.0052	0.0001283	0.0001547
AT 802A	2	6	2608	0.0000333	0.0000032	0.0000007	0.0000000	0.0000000	0.0000007	0.0020	0.0000483	0.0000522

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2c - Drift Exposure for Infants with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - Low Boom 40 swath/50th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0015779	0.0001515	0.0000328	0.0000010	0.0000002	0.0000341	0.0292	0.0007178	0.0009034
AT 802A	2	1	50	0.0010730	0.0001030	0.0000223	0.0000007	0.0000002	0.0000232	0.0264	0.0006490	0.0007752
AT 802A	2	1	75	0.0008205	0.0000788	0.0000171	0.0000005	0.0000001	0.0000177	0.0239	0.0005870	0.0006835
AT 802A	2	1	100	0.0006312	0.0000606	0.0000131	0.0000004	0.0000001	0.0000136	0.0220	0.0005408	0.0006151
AT 802A	2	1	150	0.0004734	0.0000454	0.0000098	0.0000003	0.0000001	0.0000102	0.0194	0.0004759	0.0005316
AT 802A	2	1	200	0.0003787	0.0000364	0.0000079	0.0000002	0.0000001	0.0000082	0.0175	0.0004306	0.0004751
AT 802A	2	1	250	0.0003156	0.0000303	0.0000066	0.0000002	0.0000000	0.0000068	0.0161	0.0003958	0.0004329
AT 802A	2	1	300	0.0002840	0.0000273	0.0000059	0.0000002	0.0000000	0.0000061	0.0149	0.0003675	0.0004009
AT 802A	2	1	500	0.0001625	0.0000156	0.0000034	0.0000001	0.0000000	0.0000035	0.0117	0.0002876	0.0003067
AT 802A	2	1	1000	0.0000616	0.0000059	0.0000013	0.0000000	0.0000000	0.0000013	0.0065	0.0001598	0.0001670
AT 802A	2	1	1320	0.0000376	0.0000036	0.0000008	0.0000000	0.0000000	0.0000008	0.0046	0.0001131	0.0001175
AT 802A	2	1	2608	0.0000080	0.0000008	0.0000002	0.0000000	0.0000000	0.0000002	0.0016	0.0000393	0.0000403
AT 802A	2	2	25	0.0031558	0.0003030	0.0000657	0.0000020	0.0000005	0.0000682	0.0493	0.0012120	0.0015831
AT 802A	2	2	50	0.0021460	0.0002060	0.0000446	0.0000014	0.0000003	0.0000463	0.0437	0.0010743	0.0013267
AT 802A	2	2	75	0.0016410	0.0001575	0.0000341	0.0000010	0.0000003	0.0000354	0.0386	0.0009488	0.0011418
AT 802A	2	2	100	0.0012623	0.0001212	0.0000263	0.0000008	0.0000002	0.0000273	0.0350	0.0008604	0.0010089
AT 802A	2	2	150	0.0009467	0.0000909	0.0000197	0.0000006	0.0000001	0.0000204	0.0300	0.0007368	0.0008481
AT 802A	2	2	200	0.0007574	0.0000727	0.0000158	0.0000005	0.0000001	0.0000164	0.0264	0.0006498	0.0007388
AT 802A	2	2	250	0.0006312	0.0000606	0.0000131	0.0000004	0.0000001	0.0000136	0.0237	0.0005826	0.0006568
AT 802A	2	2	300	0.0005680	0.0000545	0.0000118	0.0000004	0.0000001	0.0000123	0.0215	0.0005280	0.0005948
AT 802A	2	2	500	0.0003251	0.0000312	0.0000068	0.0000002	0.0000001	0.0000070	0.0153	0.0003761	0.0004144
AT 802A	2	2	1000	0.0001232	0.0000118	0.0000026	0.0000001	0.0000000	0.0000027	0.0072	0.0001770	0.0001915
AT 802A	2	2	1320	0.0000752	0.0000072	0.0000016	0.0000000	0.0000000	0.0000016	0.0049	0.0001205	0.0001293
AT 802A	2	2	2608	0.0000160	0.0000015	0.0000003	0.0000000	0.0000000	0.0000003	0.0016	0.0000393	0.0000412
AT 802A	2	4	25	0.0063116	0.0006059	0.0001313	0.0000040	0.0000010	0.0001363	0.0795	0.0019539	0.0026961
AT 802A	2	4	50	0.0042919	0.0004120	0.0000893	0.0000027	0.0000007	0.0000927	0.0688	0.0016918	0.0021965
AT 802A	2	4	75	0.0032821	0.0003151	0.0000683	0.0000021	0.0000005	0.0000709	0.0594	0.0014610	0.0018470
AT 802A	2	4	100	0.0025247	0.0002424	0.0000525	0.0000016	0.0000004	0.0000545	0.0526	0.0012923	0.0015892
AT 802A	2	4	150	0.0018935	0.0001818	0.0000394	0.0000012	0.0000003	0.0000409	0.0431	0.0010603	0.0012829
AT 802A	2	4	200	0.0015148	0.0001454	0.0000315	0.0000010	0.0000002	0.0000327	0.0367	0.0009025	0.0010806
AT 802A	2	4	250	0.0012623	0.0001212	0.0000263	0.0000008	0.0000002	0.0000273	0.0315	0.0007741	0.0009226
AT 802A	2	4	300	0.0011361	0.0001091	0.0000236	0.0000007	0.0000002	0.0000245	0.0274	0.0006738	0.0008074
AT 802A	2	4	500	0.0006501	0.0000624	0.0000135	0.0000004	0.0000001	0.0000140	0.0176	0.0004322	0.0005086
AT 802A	2	4	1000	0.0002463	0.0000236	0.0000051	0.0000002	0.0000000	0.0000053	0.0076	0.0001878	0.0002168
AT 802A	2	4	1320	0.0001504	0.0000144	0.0000031	0.0000001	0.0000000	0.0000032	0.0051	0.0001259	0.0001435
AT 802A	2	4	2608	0.0000321	0.0000031	0.0000007	0.0000000	0.0000000	0.0000007	0.0019	0.0000460	0.0000497
AT 802A	2	6	25	0.0094675	0.0009089	0.0001970	0.0000060	0.0000015	0.0002045	0.1042	0.0025622	0.0036755
AT 802A	2	6	50	0.0064379	0.0006180	0.0001339	0.0000041	0.0000010	0.0001390	0.0884	0.0021732	0.0029302
AT 802A	2	6	75	0.0049231	0.0004726	0.0001024	0.0000031	0.0000008	0.0001063	0.0884	0.0021732	0.0027521
AT 802A	2	6	100	0.0037870	0.0003636	0.0000788	0.0000024	0.0000006	0.0000818	0.0650	0.0015968	0.0020421
AT 802A	2	6	150	0.0028402	0.0002727	0.0000591	0.0000018	0.0000004	0.0000613	0.0884	0.0021732	0.0025072
AT 802A	2	6	200	0.0022722	0.0002181	0.0000473	0.0000015	0.0000004	0.0000491	0.0884	0.0021732	0.0024404
AT 802A	2	6	250	0.0018935	0.0001818	0.0000394	0.0000012	0.0000003	0.0000409	0.0348	0.0008557	0.0010784
AT 802A	2	6	300	0.0017041	0.0001636	0.0000355	0.0000011	0.0000003	0.0000368	0.0884	0.0021732	0.0023736
AT 802A	2	6	500	0.0009752	0.0000936	0.0000203	0.0000006	0.0000002	0.0000211	0.0179	0.0004404	0.0005550
AT 802A	2	6	1000	0.0003695	0.0000355	0.0000077	0.0000002	0.0000001	0.0000080	0.0077	0.0001885	0.0002319
AT 802A	2	6	1320	0.0002255	0.0000217	0.0000047	0.0000001	0.0000000	0.0000049	0.0052	0.0001283	0.0001548
AT 802A	2	6	2608	0.0000481	0.0000046	0.0000010	0.0000000	0.0000000	0.0000010	0.0020	0.0000483	0.0000539

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2c - Drift Exposure for Infants with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - High Boom 40 swath/90th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0042604	0.0004090	0.0000886	0.0000027	0.0000007	0.0000920	0.0292	0.0172280	0.0177290
AT 802A	2	1	50	0.0030611	0.0002939	0.0000637	0.0000020	0.0000005	0.0000661	0.0264	0.0155760	0.0159360
AT 802A	2	1	75	0.0023669	0.0002272	0.0000492	0.0000015	0.0000004	0.0000511	0.0239	0.0140870	0.0143654
AT 802A	2	1	100	0.0018935	0.0001818	0.0000394	0.0000012	0.0000003	0.0000409	0.0220	0.0129800	0.0132027
AT 802A	2	1	150	0.0014201	0.0001363	0.0000295	0.0000009	0.0000002	0.0000307	0.0194	0.0114218	0.0115888
AT 802A	2	1	200	0.0011361	0.0001091	0.0000236	0.0000007	0.0000002	0.0000245	0.0175	0.0103339	0.0104675
AT 802A	2	1	250	0.0009467	0.0000909	0.0000197	0.0000006	0.0000001	0.0000204	0.0161	0.0094990	0.0096103
AT 802A	2	1	300	0.0008205	0.0000788	0.0000171	0.0000005	0.0000001	0.0000177	0.0149	0.0088204	0.0089169
AT 802A	2	1	500	0.0005392	0.0000518	0.0000112	0.0000003	0.0000001	0.0000116	0.0117	0.0069030	0.0069664
AT 802A	2	1	1000	0.0003012	0.0000289	0.0000063	0.0000002	0.0000000	0.0000065	0.0065	0.0038350	0.0038704
AT 802A	2	1	1320	0.0002377	0.0000228	0.0000049	0.0000002	0.0000000	0.0000051	0.0046	0.0027140	0.0027420
AT 802A	2	1	2608	0.0001320	0.0000127	0.0000027	0.0000001	0.0000000	0.0000029	0.0016	0.0009440	0.0009595
AT 802A	2	2	25	0.0085207	0.0008180	0.0001773	0.0000054	0.0000013	0.0001840	0.0493	0.0290870	0.0300890
AT 802A	2	2	50	0.0061223	0.0005877	0.0001274	0.0000039	0.0000010	0.0001322	0.0437	0.0257830	0.0265030
AT 802A	2	2	75	0.0047337	0.0004544	0.0000985	0.0000030	0.0000007	0.0001022	0.0386	0.0227713	0.0233280
AT 802A	2	2	100	0.0037870	0.0003636	0.0000788	0.0000024	0.0000006	0.0000818	0.0350	0.0206500	0.0210953
AT 802A	2	2	150	0.0028402	0.0002727	0.0000591	0.0000018	0.0000004	0.0000613	0.0300	0.0176834	0.0180174
AT 802A	2	2	200	0.0022722	0.0002181	0.0000473	0.0000015	0.0000004	0.0000491	0.0264	0.0155942	0.0158614
AT 802A	2	2	250	0.0018935	0.0001818	0.0000394	0.0000012	0.0000003	0.0000409	0.0237	0.0139830	0.0142057
AT 802A	2	2	300	0.0016410	0.0001575	0.0000341	0.0000010	0.0000003	0.0000354	0.0215	0.0126718	0.0128648
AT 802A	2	2	500	0.0010783	0.0001035	0.0000224	0.0000007	0.0000002	0.0000233	0.0153	0.0090270	0.0091538
AT 802A	2	2	1000	0.0006025	0.0000578	0.0000125	0.0000004	0.0000001	0.0000130	0.0072	0.0042480	0.0043188
AT 802A	2	2	1320	0.0004754	0.0000456	0.0000099	0.0000003	0.0000001	0.0000103	0.0049	0.0028910	0.0029469
AT 802A	2	2	2608	0.0002640	0.0000253	0.0000055	0.0000002	0.0000000	0.0000057	0.0016	0.0009440	0.0009751
AT 802A	2	4	25	0.0170414	0.0016360	0.0003545	0.0000109	0.0000026	0.0003681	0.0795	0.0468932	0.0488972
AT 802A	2	4	50	0.0122446	0.0011755	0.0002547	0.0000078	0.0000019	0.0002645	0.0688	0.0406038	0.0420437
AT 802A	2	4	75	0.0094675	0.0009089	0.0001970	0.0000060	0.0000015	0.0002045	0.0594	0.0350637	0.0361771
AT 802A	2	4	100	0.0075740	0.0007271	0.0001576	0.0000048	0.0000012	0.0001636	0.0526	0.0310163	0.0319070
AT 802A	2	4	150	0.0056805	0.0005453	0.0001182	0.0000036	0.0000009	0.0001227	0.0431	0.0254467	0.0261147
AT 802A	2	4	200	0.0045444	0.0004363	0.0000945	0.0000029	0.0000007	0.0000981	0.0367	0.0216589	0.0221933
AT 802A	2	4	250	0.0037870	0.0003636	0.0000788	0.0000024	0.0000006	0.0000818	0.0315	0.0185791	0.0190244
AT 802A	2	4	300	0.0032821	0.0003151	0.0000683	0.0000021	0.0000005	0.0000709	0.0274	0.0161719	0.0165579
AT 802A	2	4	500	0.0021567	0.0002070	0.0000449	0.0000014	0.0000003	0.0000466	0.0176	0.0103722	0.0106258
AT 802A	2	4	1000	0.0012049	0.0001157	0.0000251	0.0000008	0.0000002	0.0000260	0.0076	0.0045076	0.0046493
AT 802A	2	4	1320	0.0009509	0.0000913	0.0000198	0.0000006	0.0000001	0.0000205	0.0051	0.0030208	0.0031326
AT 802A	2	4	2608	0.0005281	0.0000507	0.0000110	0.0000003	0.0000001	0.0000114	0.0019	0.0011033	0.0011654
AT 802A	2	6	25	0.0255621	0.0024540	0.0005318	0.0000163	0.0000040	0.0005521	0.1042	0.0614780	0.0644841
AT 802A	2	6	50	0.0183669	0.0017632	0.0003821	0.0000117	0.0000029	0.0003967	0.0884	0.0521560	0.0543159
AT 802A	2	6	75	0.0142012	0.0013633	0.0002954	0.0000091	0.0000022	0.0003067	0.0752	0.0443705	0.0460405
AT 802A	2	6	100	0.0113609	0.0010907	0.0002364	0.0000073	0.0000018	0.0002454	0.0650	0.0383500	0.0396860
AT 802A	2	6	150	0.0085207	0.0008180	0.0001773	0.0000054	0.0000013	0.0001840	0.0508	0.0299761	0.0309781
AT 802A	2	6	200	0.0068166	0.0006544	0.0001418	0.0000044	0.0000011	0.0001472	0.0414	0.0244549	0.0252565
AT 802A	2	6	250	0.0056805	0.0005453	0.0001182	0.0000036	0.0000009	0.0001227	0.0348	0.0205320	0.0212000
AT 802A	2	6	300	0.0049231	0.0004726	0.0001024	0.0000031	0.0000008	0.0001063	0.0298	0.0175729	0.0181519
AT 802A	2	6	500	0.0032350	0.0003106	0.0000673	0.0000021	0.0000005	0.0000699	0.0179	0.0105610	0.0109414
AT 802A	2	6	1000	0.0018074	0.0001735	0.0000376	0.0000012	0.0000003	0.0000390	0.0077	0.0045430	0.0047555
AT 802A	2	6	1320	0.0014263	0.0001369	0.0000297	0.0000009	0.0000002	0.0000308	0.0052	0.0030680	0.0032357
AT 802A	2	6	2608	0.0007921	0.0000760	0.0000165	0.0000005	0.0000001	0.0000171	0.0020	0.0011800	0.0012732

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2c - Drift Exposure for Infants with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - Low Boom 40 swath/90th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0026824	0.0002575	0.0000558	0.0000017	0.0000004	0.0000579	0.0292	0.0172280	0.0175435
AT 802A	2	1	50	0.0019566	0.0001878	0.0000407	0.0000012	0.0000003	0.0000423	0.0264	0.0155760	0.0158061
AT 802A	2	1	75	0.0015148	0.0001454	0.0000315	0.0000010	0.0000002	0.0000327	0.0239	0.0140870	0.0142652
AT 802A	2	1	100	0.0012308	0.0001182	0.0000256	0.0000008	0.0000002	0.0000266	0.0220	0.0129800	0.0131247
AT 802A	2	1	150	0.0009152	0.0000879	0.0000190	0.0000006	0.0000001	0.0000198	0.0194	0.0114218	0.0115294
AT 802A	2	1	200	0.0007574	0.0000727	0.0000158	0.0000005	0.0000001	0.0000164	0.0175	0.0103339	0.0104230
AT 802A	2	1	250	0.0006312	0.0000606	0.0000131	0.0000004	0.0000001	0.0000136	0.0161	0.0094990	0.0095732
AT 802A	2	1	300	0.0005680	0.0000545	0.0000118	0.0000004	0.0000001	0.0000123	0.0149	0.0088204	0.0088872
AT 802A	2	1	500	0.0003811	0.0000366	0.0000079	0.0000002	0.0000001	0.0000082	0.0117	0.0069030	0.0069478
AT 802A	2	1	1000	0.0002186	0.0000210	0.0000045	0.0000001	0.0000000	0.0000047	0.0065	0.0038350	0.0038607
AT 802A	2	1	1320	0.0001738	0.0000167	0.0000036	0.0000001	0.0000000	0.0000038	0.0046	0.0027140	0.0027344
AT 802A	2	1	2608	0.0000977	0.0000094	0.0000020	0.0000001	0.0000000	0.0000021	0.0016	0.0009440	0.0009555
AT 802A	2	2	25	0.0053649	0.0005150	0.0001116	0.0000034	0.0000008	0.0001159	0.0493	0.0290870	0.0297179
AT 802A	2	2	50	0.0039132	0.0003757	0.0000814	0.0000025	0.0000006	0.0000845	0.0437	0.0257830	0.0262432
AT 802A	2	2	75	0.0030296	0.0002908	0.0000630	0.0000019	0.0000005	0.0000654	0.0386	0.0227713	0.0231276
AT 802A	2	2	100	0.0024615	0.0002363	0.0000512	0.0000016	0.0000004	0.0000532	0.0350	0.0206500	0.0209395
AT 802A	2	2	150	0.0018304	0.0001757	0.0000381	0.0000012	0.0000003	0.0000395	0.0300	0.0176834	0.0178987
AT 802A	2	2	200	0.0015148	0.0001454	0.0000315	0.0000010	0.0000002	0.0000327	0.0264	0.0155942	0.0157723
AT 802A	2	2	250	0.0012623	0.0001212	0.0000263	0.0000008	0.0000002	0.0000273	0.0237	0.0139830	0.0141314
AT 802A	2	2	300	0.0011361	0.0001091	0.0000236	0.0000007	0.0000002	0.0000245	0.0215	0.0126718	0.0128054
AT 802A	2	2	500	0.0007622	0.0000732	0.0000159	0.0000005	0.0000001	0.0000165	0.0153	0.0090270	0.0091166
AT 802A	2	2	1000	0.0004373	0.0000420	0.0000091	0.0000003	0.0000001	0.0000094	0.0072	0.0042480	0.0042994
AT 802A	2	2	1320	0.0003476	0.0000334	0.0000072	0.0000002	0.0000001	0.0000075	0.0049	0.0028910	0.0029319
AT 802A	2	2	2608	0.0001954	0.0000188	0.0000041	0.0000001	0.0000000	0.0000042	0.0016	0.0009440	0.0009670
AT 802A	2	4	25	0.0107298	0.0010301	0.0002232	0.0000069	0.0000017	0.0002317	0.0795	0.0468932	0.0481550
AT 802A	2	4	50	0.0078264	0.0007513	0.0001628	0.0000050	0.0000012	0.0001690	0.0688	0.0406038	0.0415242
AT 802A	2	4	75	0.0060592	0.0005817	0.0001261	0.0000039	0.0000009	0.0001309	0.0594	0.0350637	0.0357762
AT 802A	2	4	100	0.0049231	0.0004726	0.0001024	0.0000031	0.0000008	0.0001063	0.0526	0.0310163	0.0315952
AT 802A	2	4	150	0.0036607	0.0003514	0.0000762	0.0000023	0.0000006	0.0000791	0.0431	0.0254467	0.0258772
AT 802A	2	4	200	0.0030296	0.0002908	0.0000630	0.0000019	0.0000005	0.0000654	0.0367	0.0216589	0.0220152
AT 802A	2	4	250	0.0025247	0.0002424	0.0000525	0.0000016	0.0000004	0.0000545	0.0315	0.0185791	0.0188760
AT 802A	2	4	300	0.0022722	0.0002181	0.0000473	0.0000015	0.0000004	0.0000491	0.0274	0.0161719	0.0164391
AT 802A	2	4	500	0.0015245	0.0001464	0.0000317	0.0000010	0.0000002	0.0000329	0.0176	0.0103722	0.0105515
AT 802A	2	4	1000	0.0008745	0.0000840	0.0000182	0.0000006	0.0000001	0.0000189	0.0076	0.0045076	0.0046104
AT 802A	2	4	1320	0.0006951	0.0000667	0.0000145	0.0000004	0.0000001	0.0000150	0.0051	0.0030208	0.0031025
AT 802A	2	4	2608	0.0003907	0.0000375	0.0000081	0.0000002	0.0000001	0.0000084	0.0019	0.0011033	0.0011492
AT 802A	2	6	25	0.0160947	0.0015451	0.0003348	0.0000103	0.0000025	0.0003476	0.1042	0.0614780	0.0633707
AT 802A	2	6	50	0.0117396	0.0011270	0.0002442	0.0000075	0.0000018	0.0002536	0.0884	0.0521560	0.0535366
AT 802A	2	6	75	0.0090888	0.0008725	0.0001891	0.0000058	0.0000014	0.0001963	0.0752	0.0443705	0.0454393
AT 802A	2	6	100	0.0073846	0.0007089	0.0001536	0.0000047	0.0000011	0.0001595	0.0650	0.0383500	0.0392184
AT 802A	2	6	150	0.0054911	0.0005271	0.0001142	0.0000035	0.0000009	0.0001186	0.0508	0.0299761	0.0306218
AT 802A	2	6	200	0.0045444	0.0004363	0.0000945	0.0000029	0.0000007	0.0000981	0.0414	0.0244549	0.0249893
AT 802A	2	6	250	0.0037870	0.0003636	0.0000788	0.0000024	0.0000006	0.0000818	0.0348	0.0205320	0.0209773
AT 802A	2	6	300	0.0034083	0.0003272	0.0000709	0.0000022	0.0000005	0.0000736	0.0298	0.0175729	0.0179737
AT 802A	2	6	500	0.0022867	0.0002195	0.0000476	0.0000015	0.0000004	0.0000494	0.0179	0.0105610	0.0108299
AT 802A	2	6	1000	0.0013118	0.0001259	0.0000273	0.0000008	0.0000002	0.0000283	0.0077	0.0045430	0.0046973
AT 802A	2	6	1320	0.0010427	0.0001001	0.0000217	0.0000007	0.0000002	0.0000225	0.0052	0.0030680	0.0031906
AT 802A	2	6	2608	0.0005861	0.0000563	0.0000122	0.0000004	0.0000001	0.0000127	0.0020	0.0011800	0.0012489

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2c - Drift Exposure for Infants with Ground Boom Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Ground Boom - High Boom 40 swath/50th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	35	154	14	9	6
AT 802A	2	1	50	52	233	15	11	6
AT 802A	2	1	75	70	312	17	13	7
AT 802A	2	1	100	89	397	18	15	7
AT 802A	2	1	150	122	543	21	17	8
AT 802A	2	1	200	157	699	23	20	8
AT 802A	2	1	250	194	863	25	22	9
AT 802A	2	1	300	236	1048	27	24	9
AT 802A	2	1	500	454	2020	35	32	10
AT 802A	2	1	1000	1510	6712	63	60	11
AT 802A	2	1	1320	2781	12360	88	85	12
AT 802A	2	1	2608	18796	83545	254	250	13
AT 802A	2	2	25	17	77	8	5	4
AT 802A	2	2	50	26	116	9	6	4
AT 802A	2	2	75	35	156	11	8	5
AT 802A	2	2	100	45	198	12	9	5
AT 802A	2	2	150	61	272	14	11	6
AT 802A	2	2	200	79	349	15	12	7
AT 802A	2	2	250	97	432	17	14	7
AT 802A	2	2	300	118	524	19	16	7
AT 802A	2	2	500	227	1010	27	23	9
AT 802A	2	2	1000	755	3356	56	52	11
AT 802A	2	2	1320	1390	6180	83	77	12
AT 802A	2	2	2608	9398	41772	254	246	13
AT 802A	2	4	25	9	39	5	3	2
AT 802A	2	4	50	13	58	6	4	3
AT 802A	2	4	75	18	78	7	5	3
AT 802A	2	4	100	22	99	8	5	4
AT 802A	2	4	150	31	136	9	7	5
AT 802A	2	4	200	39	175	11	8	5
AT 802A	2	4	250	49	216	13	10	6
AT 802A	2	4	300	59	262	15	11	6
AT 802A	2	4	500	114	505	23	19	8
AT 802A	2	4	1000	378	1678	53	45	11
AT 802A	2	4	1320	695	3090	79	70	12
AT 802A	2	4	2608	4699	20886	218	206	13
AT 802A	2	6	25	6	26	4	2	2
AT 802A	2	6	50	9	39	5	3	2
AT 802A	2	6	75	12	52	5	3	3
AT 802A	2	6	100	15	66	6	4	3
AT 802A	2	6	150	20	91	5	4	3
AT 802A	2	6	200	26	116	5	4	3
AT 802A	2	6	250	32	144	12	8	5
AT 802A	2	6	300	39	175	5	4	3
AT 802A	2	6	500	76	337	23	17	8
AT 802A	2	6	1000	252	1119	53	42	11
AT 802A	2	6	1320	463	2060	78	65	12
AT 802A	2	6	2608	3133	13924	207	192	13

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for infants was 0.00027 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for infants was 0.000439 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2c - Drift Exposure for Infants with Ground Boom Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Ground Boom - Low Boom 40 swath/50th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	66	293	14	11	6
AT 802A	2	1	50	97	432	15	13	7
AT 802A	2	1	75	127	564	17	15	7
AT 802A	2	1	100	165	734	18	16	8
AT 802A	2	1	150	220	978	21	19	8
AT 802A	2	1	200	275	1223	23	21	8
AT 802A	2	1	250	330	1467	25	23	9
AT 802A	2	1	300	367	1630	27	25	9
AT 802A	2	1	500	641	2849	35	33	10
AT 802A	2	1	1000	1692	7519	63	60	11
AT 802A	2	1	1320	2771	12317	88	85	12
AT 802A	2	1	2608	12982	57703	254	248	13
AT 802A	2	2	25	33	147	8	6	4
AT 802A	2	2	50	49	216	9	8	5
AT 802A	2	2	75	63	282	11	9	5
AT 802A	2	2	100	83	367	12	10	6
AT 802A	2	2	150	110	489	14	12	6
AT 802A	2	2	200	138	611	15	14	7
AT 802A	2	2	250	165	734	17	15	7
AT 802A	2	2	300	183	815	19	17	8
AT 802A	2	2	500	320	1424	27	24	9
AT 802A	2	2	1000	846	3760	56	52	11
AT 802A	2	2	1320	1386	6158	83	77	12
AT 802A	2	2	2608	6491	28851	254	243	13
AT 802A	2	4	25	17	73	5	4	3
AT 802A	2	4	50	24	108	6	5	3
AT 802A	2	4	75	32	141	7	5	4
AT 802A	2	4	100	41	183	8	6	4
AT 802A	2	4	150	55	245	9	8	5
AT 802A	2	4	200	69	306	11	9	6
AT 802A	2	4	250	83	367	13	11	6
AT 802A	2	4	300	92	408	15	12	7
AT 802A	2	4	500	160	712	23	20	8
AT 802A	2	4	1000	423	1880	53	46	11
AT 802A	2	4	1320	693	3079	79	70	12
AT 802A	2	4	2608	3245	14426	218	201	13
AT 802A	2	6	25	11	49	4	3	2
AT 802A	2	6	50	16	72	5	3	3
AT 802A	2	6	75	21	94	5	4	3
AT 802A	2	6	100	28	122	6	5	4
AT 802A	2	6	150	37	163	5	4	3
AT 802A	2	6	200	46	204	5	4	3
AT 802A	2	6	250	55	245	12	9	6
AT 802A	2	6	300	61	272	5	4	3
AT 802A	2	6	500	107	475	23	18	8
AT 802A	2	6	1000	282	1253	53	43	11
AT 802A	2	6	1320	462	2053	78	65	12
AT 802A	2	6	2608	2164	9617	207	185	13

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for infants was 0.00027 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for infants was 0.000439 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2c - Drift Exposure for Infants with Ground Boom Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Ground Boom - High Boom 40 swath/90th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	24	109	<1	<1	<1
AT 802A	2	1	50	34	151	<1	<1	<1
AT 802A	2	1	75	44	196	<1	<1	<1
AT 802A	2	1	100	55	245	<1	<1	<1
AT 802A	2	1	150	73	326	<1	<1	<1
AT 802A	2	1	200	92	408	<1	<1	<1
AT 802A	2	1	250	110	489	1	1	<1
AT 802A	2	1	300	127	564	1	1	1
AT 802A	2	1	500	193	859	1	1	1
AT 802A	2	1	1000	346	1537	3	3	2
AT 802A	2	1	1320	438	1948	4	4	3
AT 802A	2	1	2608	789	3507	11	10	6
AT 802A	2	2	25	12	54	<1	<1	<1
AT 802A	2	2	50	17	76	<1	<1	<1
AT 802A	2	2	75	22	98	<1	<1	<1
AT 802A	2	2	100	28	122	<1	<1	<1
AT 802A	2	2	150	37	163	<1	<1	<1
AT 802A	2	2	200	46	204	<1	<1	<1
AT 802A	2	2	250	55	245	<1	<1	<1
AT 802A	2	2	300	63	282	<1	<1	<1
AT 802A	2	2	500	97	429	1	1	1
AT 802A	2	2	1000	173	769	2	2	2
AT 802A	2	2	1320	219	974	3	3	3
AT 802A	2	2	2608	394	1753	11	10	6
AT 802A	2	4	25	6	27	<1	<1	<1
AT 802A	2	4	50	9	38	<1	<1	<1
AT 802A	2	4	75	11	49	<1	<1	<1
AT 802A	2	4	100	14	61	<1	<1	<1
AT 802A	2	4	150	18	82	<1	<1	<1
AT 802A	2	4	200	23	102	<1	<1	<1
AT 802A	2	4	250	28	122	<1	<1	<1
AT 802A	2	4	300	32	141	<1	<1	<1
AT 802A	2	4	500	48	215	<1	<1	<1
AT 802A	2	4	1000	86	384	2	2	2
AT 802A	2	4	1320	110	487	3	3	3
AT 802A	2	4	2608	197	877	9	9	5
AT 802A	2	6	25	4	18	<1	<1	<1
AT 802A	2	6	50	6	25	<1	<1	<1
AT 802A	2	6	75	7	33	<1	<1	<1
AT 802A	2	6	100	9	41	<1	<1	<1
AT 802A	2	6	150	12	54	<1	<1	<1
AT 802A	2	6	200	15	68	<1	<1	<1
AT 802A	2	6	250	18	82	<1	<1	<1
AT 802A	2	6	300	21	94	<1	<1	<1
AT 802A	2	6	500	32	143	<1	<1	<1
AT 802A	2	6	1000	58	256	2	2	2
AT 802A	2	6	1320	73	325	3	3	3
AT 802A	2	6	2608	131	584	8	8	5

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for infants was 0.00027 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for infants was 0.000439 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2c - Drift Exposure for Infants with Ground Boom Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Ground Boom - Low Boom 40 swath/90th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	39	173	<1	<1	<1
AT 802A	2	1	50	53	237	<1	<1	<1
AT 802A	2	1	75	69	306	<1	<1	<1
AT 802A	2	1	100	85	376	<1	<1	<1
AT 802A	2	1	150	114	506	<1	<1	<1
AT 802A	2	1	200	138	611	<1	<1	<1
AT 802A	2	1	250	165	734	1	1	<1
AT 802A	2	1	300	183	815	1	1	1
AT 802A	2	1	500	273	1215	1	1	1
AT 802A	2	1	1000	476	2118	3	3	2
AT 802A	2	1	1320	599	2664	4	4	3
AT 802A	2	1	2608	1066	4740	11	10	6
AT 802A	2	2	25	19	86	<1	<1	<1
AT 802A	2	2	50	27	118	<1	<1	<1
AT 802A	2	2	75	34	153	<1	<1	<1
AT 802A	2	2	100	42	188	<1	<1	<1
AT 802A	2	2	150	57	253	<1	<1	<1
AT 802A	2	2	200	69	306	<1	<1	<1
AT 802A	2	2	250	83	367	<1	<1	<1
AT 802A	2	2	300	92	408	<1	<1	<1
AT 802A	2	2	500	137	607	1	1	1
AT 802A	2	2	1000	238	1059	2	2	2
AT 802A	2	2	1320	300	1332	3	3	3
AT 802A	2	2	2608	533	2370	11	10	6
AT 802A	2	4	25	10	43	<1	<1	<1
AT 802A	2	4	50	13	59	<1	<1	<1
AT 802A	2	4	75	17	76	<1	<1	<1
AT 802A	2	4	100	21	94	<1	<1	<1
AT 802A	2	4	150	28	126	<1	<1	<1
AT 802A	2	4	200	34	153	<1	<1	<1
AT 802A	2	4	250	41	183	<1	<1	<1
AT 802A	2	4	300	46	204	<1	<1	<1
AT 802A	2	4	500	68	304	<1	<1	<1
AT 802A	2	4	1000	119	529	2	2	2
AT 802A	2	4	1320	150	666	3	3	3
AT 802A	2	4	2608	267	1185	9	9	5
AT 802A	2	6	25	6	29	<1	<1	<1
AT 802A	2	6	50	9	39	<1	<1	<1
AT 802A	2	6	75	11	51	<1	<1	<1
AT 802A	2	6	100	14	63	<1	<1	<1
AT 802A	2	6	150	19	84	<1	<1	<1
AT 802A	2	6	200	23	102	<1	<1	<1
AT 802A	2	6	250	28	122	<1	<1	<1
AT 802A	2	6	300	31	136	<1	<1	<1
AT 802A	2	6	500	46	202	<1	<1	<1
AT 802A	2	6	1000	79	353	2	2	2
AT 802A	2	6	1320	100	444	3	3	3
AT 802A	2	6	2608	178	790	8	8	5

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for infants was 0.00027 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for infants was 0.000439 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2d - Drift Exposure for Children 1-2 Years Old with Aerial Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Drift-Modeling - AGDISP				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	External PBPK (mg/kg/day)	9.6% Absorption (mg/kg/day)	Hand to-Mouth (mg/kg/day)	Oral-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0302386	0.0029029	0.0006291	0.0000193	0.0000047	0.0006531	0.0292	0.0006424	0.0035500
AT 802A	2	1	50	0.0237997	0.0022848	0.0004951	0.0000152	0.0000037	0.0005140	0.0264	0.0005808	0.0028693
AT 802A	2	1	100	0.0160325	0.0015391	0.0003335	0.0000102	0.0000025	0.0003463	0.0220	0.0004840	0.0020256
AT 802A	2	1	250	0.0083576	0.0008023	0.0001739	0.0000053	0.0000013	0.0001805	0.0161	0.0003542	0.0011578
AT 802A	2	1	500	0.0049813	0.0004782	0.0001036	0.0000032	0.0000008	0.0001076	0.0117	0.0002574	0.0007364
AT 802A	2	1	1000	0.0026567	0.0002550	0.0000553	0.0000017	0.0000004	0.0000574	0.0065	0.0001430	0.0003985
AT 802A	2	1	1320	0.0017342	0.0001665	0.0000361	0.0000011	0.0000003	0.0000375	0.0046	0.0001010	0.0002677
AT 802A	2	1	2608	0.0003136	0.0000301	0.0000065	0.0000002	0.0000000	0.0000068	0.0016	0.0000354	0.0000656
Bell 205 Helicopter	2	1	25	0.0286519	0.0027506	0.0005961	0.0000183	0.0000044	0.0006188	0.0336	0.0007392	0.0034942
Bell 205 Helicopter	2	1	50	0.0175454	0.0016844	0.0003650	0.0000112	0.0000027	0.0003789	0.0274	0.0006028	0.0022899
Bell 205 Helicopter	2	1	100	0.0106637	0.0010237	0.0002218	0.0000068	0.0000017	0.0002303	0.0219	0.0004818	0.0015072
Bell 205 Helicopter	2	1	250	0.0068078	0.0006536	0.0001416	0.0000043	0.0000011	0.0001470	0.0153	0.0003366	0.0009912
Bell 205 Helicopter	2	1	500	0.0040404	0.0003879	0.0000841	0.0000026	0.0000006	0.0000873	0.0102	0.0002244	0.0006129
Bell 205 Helicopter	2	1	1000	0.0019741	0.0001895	0.0000411	0.0000013	0.0000003	0.0000426	0.0058	0.0001276	0.0003174
Bell 205 Helicopter	2	1	1320	0.0013837	0.0001328	0.0000288	0.0000009	0.0000002	0.0000299	0.0045	0.0000986	0.0002316
Bell 205 Helicopter	2	1	2608	0.0002214	0.0000213	0.0000046	0.0000001	0.0000000	0.0000048	0.0020	0.0000449	0.0000662
AT 802A	2	2	25	0.0605140	0.0058093	0.0012589	0.0000386	0.0000094	0.0013070	0.0493	0.0010846	0.0069033
AT 802A	2	2	50	0.0474518	0.0045554	0.0009872	0.0000303	0.0000074	0.0010249	0.0437	0.0009614	0.0055241
AT 802A	2	2	100	0.0316961	0.0030428	0.0006594	0.0000202	0.0000049	0.0006846	0.0350	0.0007700	0.0038177
AT 802A	2	2	250	0.0158665	0.0015232	0.0003301	0.0000101	0.0000025	0.0003427	0.0237	0.0005214	0.0020470
AT 802A	2	2	500	0.0086343	0.0008289	0.0001796	0.0000055	0.0000013	0.0001865	0.0153	0.0003366	0.0011668
AT 802A	2	2	1000	0.0033947	0.0003259	0.0000706	0.0000022	0.0000005	0.0000733	0.0072	0.0001584	0.0004848
AT 802A	2	2	1320	0.0019925	0.0001913	0.0000415	0.0000013	0.0000003	0.0000430	0.0049	0.0001082	0.0002998
AT 802A	2	2	2608	0.0003690	0.0000354	0.0000077	0.0000002	0.0000001	0.0000080	0.0016	0.0000359	0.0000713
Bell 205 Helicopter	2	2	25	0.0580787	0.0055756	0.0012083	0.0000371	0.0000090	0.0012544	0.0580	0.0012760	0.0068606
Bell 205 Helicopter	2	2	50	0.0357549	0.0034325	0.0007438	0.0000228	0.0000056	0.0007722	0.0458	0.0010076	0.0044456
Bell 205 Helicopter	2	2	100	0.0222500	0.0021360	0.0004629	0.0000142	0.0000035	0.0004806	0.0345	0.0007590	0.0028985
Bell 205 Helicopter	2	2	250	0.0123242	0.0011831	0.0002564	0.0000079	0.0000019	0.0002662	0.0215	0.0004730	0.0016580
Bell 205 Helicopter	2	2	500	0.0063097	0.0006057	0.0001313	0.0000040	0.0000010	0.0001363	0.0130	0.0002860	0.0008927
Bell 205 Helicopter	2	2	1000	0.0027674	0.0002657	0.0000576	0.0000018	0.0000004	0.0000598	0.0068	0.0001496	0.0004157
Bell 205 Helicopter	2	2	1320	0.0017711	0.0001700	0.0000368	0.0000011	0.0000003	0.0000383	0.0050	0.0001098	0.0002801
Bell 205 Helicopter	2	2	2608	0.0002952	0.0000283	0.0000061	0.0000002	0.0000000	0.0000064	0.0022	0.0000482	0.0000766
AT 802A	2	2.3	25	0.0695487	0.0066767	0.0014469	0.0000444	0.0000108	0.0015021	0.0526	0.0011568	0.0078442
AT 802A	2	2.3	50	0.0544847	0.0052305	0.0011335	0.0000348	0.0000085	0.0011768	0.0464	0.0010217	0.0062607
AT 802A	2	2.3	100	0.0363232	0.0034870	0.0007557	0.0000232	0.0000056	0.0007845	0.0371	0.0008171	0.0043097
AT 802A	2	2.3	250	0.0181616	0.0017435	0.0003778	0.0000116	0.0000028	0.0003923	0.0250	0.0005493	0.0022957
AT 802A	2	2.3	500	0.0096324	0.0009247	0.0002004	0.0000062	0.0000015	0.0002080	0.0159	0.0003489	0.0012751
AT 802A	2	2.3	1000	0.0037342	0.0003585	0.0000777	0.0000024	0.0000006	0.0000807	0.0075	0.0001641	0.0005232
AT 802A	2	2.3	1320	0.0021217	0.0002037	0.0000441	0.0000014	0.0000003	0.0000458	0.0051	0.0001122	0.0003162
AT 802A	2	2.3	2608	0.0004668	0.0000448	0.0000097	0.0000003	0.0000001	0.0000101	0.0017	0.0000370	0.0000818
Bell 205 Helicopter	2	2.3	25	0.0668329	0.0064160	0.0013904	0.0000427	0.0000104	0.0014435	0.0611	0.0013442	0.0077705
Bell 205 Helicopter	2	2.3	50	0.0411606	0.0039514	0.0008563	0.0000263	0.0000064	0.0008890	0.0482	0.0010608	0.0050186
Bell 205 Helicopter	2	2.3	100	0.0256723	0.0024645	0.0005341	0.0000164	0.0000040	0.0005545	0.0362	0.0007966	0.0032651
Bell 205 Helicopter	2	2.3	250	0.0139182	0.0013361	0.0002896	0.0000089	0.0000022	0.0003006	0.0222	0.0004880	0.0018263
Bell 205 Helicopter	2	2.3	500	0.0070015	0.0006721	0.0001457	0.0000045	0.0000011	0.0001512	0.0133	0.0002924	0.0009656
Bell 205 Helicopter	2	2.3	1000	0.0030128	0.0002892	0.0000627	0.0000019	0.0000005	0.0000651	0.0069	0.0001511	0.0004408
Bell 205 Helicopter	2	2.3	1320	0.0019095	0.0001833	0.0000397	0.0000012	0.0000003	0.0000412	0.0050	0.0001109	0.0002945
Bell 205 Helicopter	2	2.3	2608	0.0003819	0.0000367	0.0000079	0.0000002	0.0000001	0.0000082	0.0023	0.0000495	0.0000862

*Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2d - Drift Exposure for Children 1-2 Years Old with Aerial Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Drift-Modeling - AGDISP				Dermal Dose		Incidental Oral Dose						
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	External PBPK (mg/kg/day)	9.6% Absorption (mg/kg/day)	Hand to-Mouth (mg/kg/day)	Oral-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)	1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AT 802A	15	1	25	0.0259952	0.0024955	0.0005408	0.0000166	0.0000040	0.0005614	0.0413	0.0009088	0.0034084
AT 802A	15	1	50	0.0207925	0.0019961	0.0004326	0.0000133	0.0000032	0.0004491	0.0391	0.0008598	0.0028591
AT 802A	15	1	100	0.0139108	0.0013354	0.0002894	0.0000089	0.0000022	0.0003004	0.0348	0.0007658	0.0021034
AT 802A	15	1	250	0.0071399	0.0006854	0.0001485	0.0000046	0.0000011	0.0001542	0.0289	0.0006362	0.0013228
AT 802A	15	1	500	0.0044279	0.0004251	0.0000921	0.0000028	0.0000007	0.0000956	0.0243	0.0005344	0.0009601
AT 802A	15	1	1000	0.0033024	0.0003170	0.0000687	0.0000021	0.0000005	0.0000713	0.0190	0.0004171	0.0007347
AT 802A	15	1	1320	0.0029888	0.0002869	0.0000622	0.0000019	0.0000005	0.0000646	0.0164	0.0003610	0.0006484
AT 802A	15	1	2608	0.0008856	0.0000850	0.0000184	0.0000006	0.0000001	0.0000191	0.0090	0.0001976	0.0002827
Bell 205 Helicopter	15	1	25	0.0258845	0.0024849	0.0005385	0.0000165	0.0000040	0.0005591	0.0592	0.0013028	0.0037918
Bell 205 Helicopter	15	1	50	0.0150178	0.0014417	0.0003124	0.0000096	0.0000023	0.0003244	0.0517	0.0011370	0.0025810
Bell 205 Helicopter	15	1	100	0.0087081	0.0008360	0.0001812	0.0000056	0.0000014	0.0001881	0.0448	0.0009865	0.0018238
Bell 205 Helicopter	15	1	250	0.0060514	0.0005809	0.0001259	0.0000039	0.0000009	0.0001307	0.0367	0.0008065	0.0013884
Bell 205 Helicopter	15	1	500	0.0045386	0.0004357	0.0000944	0.0000029	0.0000007	0.0000980	0.0288	0.0006345	0.0010709
Bell 205 Helicopter	15	1	1000	0.0029704	0.0002852	0.0000618	0.0000019	0.0000005	0.0000642	0.0202	0.0004451	0.0007307
Bell 205 Helicopter	15	1	1320	0.0023800	0.0002285	0.0000495	0.0000015	0.0000004	0.0000514	0.0150	0.0003289	0.0005577
Bell 205 Helicopter	15	1	2608	0.0003874	0.0000372	0.0000081	0.0000002	0.0000001	0.0000084	0.0080	0.0001762	0.0002135
AT 802A	15	2	25	0.0543150	0.0052142	0.0011300	0.0000347	0.0000084	0.0011731	0.0703	0.0015462	0.0067688
AT 802A	15	2	50	0.0437620	0.0042011	0.0009104	0.0000279	0.0000068	0.0009452	0.0660	0.0014516	0.0056595
AT 802A	15	2	100	0.0298142	0.0028622	0.0006203	0.0000190	0.0000046	0.0006439	0.0579	0.0012729	0.0041397
AT 802A	15	2	250	0.0156820	0.0015055	0.0003262	0.0000100	0.0000024	0.0003387	0.0468	0.0010292	0.0025371
AT 802A	15	2	500	0.0099996	0.0009600	0.0002080	0.0000064	0.0000016	0.0002160	0.0381	0.0008384	0.0017999
AT 802A	15	2	1000	0.0072691	0.0006978	0.0001512	0.0000046	0.0000011	0.0001570	0.0279	0.0006129	0.0013119
AT 802A	15	2	1320	0.0063097	0.0006057	0.0001313	0.0000040	0.0000010	0.0001363	0.0227	0.0004998	0.0011066
AT 802A	15	2	2608	0.0015129	0.0001452	0.0000315	0.0000010	0.0000002	0.0000327	0.0103	0.0002268	0.0003723
Bell 205 Helicopter	15	2	25	0.0539091	0.0051753	0.0011215	0.0000344	0.0000084	0.0011643	0.0828	0.0018220	0.0070057
Bell 205 Helicopter	15	2	50	0.0321019	0.0030818	0.0006679	0.0000205	0.0000050	0.0006933	0.0715	0.0015728	0.0046596
Bell 205 Helicopter	15	2	100	0.0190029	0.0018243	0.0003953	0.0000121	0.0000030	0.0004104	0.0612	0.0013457	0.0031730
Bell 205 Helicopter	15	2	250	0.0132836	0.0012752	0.0002764	0.0000085	0.0000021	0.0002869	0.0488	0.0010736	0.0023509
Bell 205 Helicopter	15	2	500	0.0094461	0.0009068	0.0001965	0.0000060	0.0000015	0.0002040	0.0373	0.0008204	0.0017287
Bell 205 Helicopter	15	2	1000	0.0057193	0.0005491	0.0001190	0.0000037	0.0000009	0.0001235	0.0252	0.0005548	0.0011048
Bell 205 Helicopter	15	2	1320	0.0043541	0.0004180	0.0000906	0.0000028	0.0000007	0.0000940	0.0207	0.0004545	0.0008732
Bell 205 Helicopter	15	2	2608	0.0007749	0.0000744	0.0000161	0.0000005	0.0000001	0.0000167	0.0115	0.0002526	0.0003271
AT 802A	15	2.3	25	0.0628017	0.0060290	0.0013065	0.0000401	0.0000097	0.0013564	0.0779	0.0017131	0.0077519
AT 802A	15	2.3	50	0.0506657	0.0048639	0.0010541	0.0000324	0.0000079	0.0010943	0.0730	0.0016056	0.0064773
AT 802A	15	2.3	100	0.0344985	0.0033119	0.0007177	0.0000220	0.0000054	0.0007451	0.0637	0.0014007	0.0047180
AT 802A	15	2.3	250	0.0182040	0.0017476	0.0003787	0.0000116	0.0000028	0.0003932	0.0513	0.0011284	0.0028788
AT 802A	15	2.3	500	0.0115844	0.0011121	0.0002410	0.0000074	0.0000018	0.0002502	0.0415	0.0009128	0.0020267
AT 802A	15	2.3	1000	0.0084019	0.0008066	0.0001748	0.0000054	0.0000013	0.0001815	0.0299	0.0006569	0.0014648
AT 802A	15	2.3	1320	0.0070864	0.0006803	0.0001474	0.0000045	0.0000011	0.0001531	0.0241	0.0005298	0.0012112
AT 802A	15	2.3	2608	0.0017398	0.0001670	0.0000362	0.0000011	0.0000003	0.0000376	0.0106	0.0002339	0.0004011
Bell 205 Helicopter	15	2.3	25	0.0624623	0.0059964	0.0012995	0.0000399	0.0000097	0.0013491	0.0917	0.0020172	0.0080233
Bell 205 Helicopter	15	2.3	50	0.0372991	0.0035807	0.0007760	0.0000238	0.0000058	0.0008056	0.0789	0.0017358	0.0053223
Bell 205 Helicopter	15	2.3	100	0.0221503	0.0021264	0.0004608	0.0000141	0.0000034	0.0004784	0.0671	0.0014753	0.0036052
Bell 205 Helicopter	15	2.3	250	0.0153610	0.0014747	0.0003196	0.0000098	0.0000024	0.0003318	0.0532	0.0011697	0.0026468
Bell 205 Helicopter	15	2.3	500	0.0107781	0.0010347	0.0002242	0.0000069	0.0000017	0.0002328	0.0402	0.0008848	0.0019212
Bell 205 Helicopter	15	2.3	1000	0.0065348	0.0006273	0.0001360	0.0000042	0.0000010	0.0001411	0.0269	0.0005911	0.0012195
Bell 205 Helicopter	15	2.3	1320	0.0049647	0.0004766	0.0001033	0.0000032	0.0000008	0.0001072	0.0220	0.0004833	0.0009607
Bell 205 Helicopter	15	2.3	2608	0.0008911	0.0000855	0.0000185	0.0000006	0.0000001	0.0000192	0.0127	0.0002787	0.0003644

*Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2d - Drift Exposure for Children 1-2 Years Old with Aerial Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Drift-Modeling - AGDISP				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	3	15	16	3	2
AT 802A	2	1	50	4	19	17	3	3
AT 802A	2	1	100	6	29	21	5	4
AT 802A	2	1	250	12	55	28	9	6
AT 802A	2	1	500	21	93	39	14	7
AT 802A	2	1	1000	39	174	70	25	10
AT 802A	2	1	1320	60	267	99	37	11
AT 802A	2	1	2608	332	1476	282	152	15
Bell 205 Helicopter	2	1	25	4	16	14	3	2
Bell 205 Helicopter	2	1	50	6	26	17	4	3
Bell 205 Helicopter	2	1	100	10	43	21	7	5
Bell 205 Helicopter	2	1	250	15	68	30	10	6
Bell 205 Helicopter	2	1	500	26	115	45	16	8
Bell 205 Helicopter	2	1	1000	53	235	78	32	11
Bell 205 Helicopter	2	1	1320	75	335	101	43	12
Bell 205 Helicopter	2	1	2608	471	2091	223	151	15
AT 802A	2	2	25	2	8	9	1	1
AT 802A	2	2	50	2	10	10	2	2
AT 802A	2	2	100	3	15	13	3	2
AT 802A	2	2	250	7	29	19	5	4
AT 802A	2	2	500	12	54	30	9	6
AT 802A	2	2	1000	31	136	63	21	9
AT 802A	2	2	1320	52	232	92	33	11
AT 802A	2	2	2608	282	1255	279	140	15
Bell 205 Helicopter	2	2	25	2	8	8	1	1
Bell 205 Helicopter	2	2	50	3	13	10	2	2
Bell 205 Helicopter	2	2	100	5	21	13	3	3
Bell 205 Helicopter	2	2	250	8	38	21	6	4
Bell 205 Helicopter	2	2	500	17	73	35	11	7
Bell 205 Helicopter	2	2	1000	38	167	67	24	10
Bell 205 Helicopter	2	2	1320	59	261	91	36	11
Bell 205 Helicopter	2	2	2608	353	1568	208	131	15
AT 802A	2	2.3	25	1	7	9	1	1
AT 802A	2	2.3	50	2	8	10	2	1
AT 802A	2	2.3	100	3	13	12	2	2
AT 802A	2	2.3	250	6	25	18	4	3
AT 802A	2	2.3	500	11	48	29	8	5
AT 802A	2	2.3	1000	28	124	61	19	9
AT 802A	2	2.3	1320	49	218	89	32	11
AT 802A	2	2.3	2608	223	992	271	122	14
Bell 205 Helicopter	2	2.3	25	2	7	7	1	1
Bell 205 Helicopter	2	2.3	50	3	11	9	2	2
Bell 205 Helicopter	2	2.3	100	4	18	13	3	3
Bell 205 Helicopter	2	2.3	250	7	33	20	5	4
Bell 205 Helicopter	2	2.3	500	15	66	34	10	6
Bell 205 Helicopter	2	2.3	1000	35	154	66	23	10
Bell 205 Helicopter	2	2.3	1320	55	242	90	34	11
Bell 205 Helicopter	2	2.3	2608	273	1212	202	116	14

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 1-2 yrs old was 0.000423 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 1-2 yrs old was 0.000186 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2d - Drift Exposure for Children 1-2 Years Old with Aerial Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Drift-Modeling - AGDISP				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	15	1	25	4	18	11	3	2
AT 802A	15	1	50	5	22	12	3	3
AT 802A	15	1	100	7	33	13	5	4
AT 802A	15	1	250	15	65	16	8	5
AT 802A	15	1	500	24	105	19	10	6
AT 802A	15	1	1000	32	140	24	14	7
AT 802A	15	1	1320	35	155	28	15	8
AT 802A	15	1	2608	118	523	51	35	11
Bell 205 Helicopter	15	1	25	4	18	8	3	2
Bell 205 Helicopter	15	1	50	7	31	9	4	3
Bell 205 Helicopter	15	1	100	12	53	10	5	4
Bell 205 Helicopter	15	1	250	17	77	12	7	5
Bell 205 Helicopter	15	1	500	23	102	16	9	6
Bell 205 Helicopter	15	1	1000	35	156	22	14	7
Bell 205 Helicopter	15	1	1320	44	195	30	18	9
Bell 205 Helicopter	15	1	2608	269	1195	57	47	12
AT 802A	15	2	25	2	9	6	1	1
AT 802A	15	2	50	2	11	7	2	2
AT 802A	15	2	100	3	16	8	2	2
AT 802A	15	2	250	7	30	10	4	3
AT 802A	15	2	500	10	46	12	6	4
AT 802A	15	2	1000	14	64	16	8	5
AT 802A	15	2	1320	17	73	20	9	6
AT 802A	15	2	2608	69	306	44	27	10
Bell 205 Helicopter	15	2	25	2	9	5	1	1
Bell 205 Helicopter	15	2	50	3	14	6	2	2
Bell 205 Helicopter	15	2	100	5	24	7	3	3
Bell 205 Helicopter	15	2	250	8	35	9	4	3
Bell 205 Helicopter	15	2	500	11	49	12	6	4
Bell 205 Helicopter	15	2	1000	18	81	18	9	6
Bell 205 Helicopter	15	2	1320	24	106	22	11	7
Bell 205 Helicopter	15	2	2608	134	598	40	31	11
AT 802A	15	2.3	25	2	7	6	1	1
AT 802A	15	2.3	50	2	9	6	2	1
AT 802A	15	2.3	100	3	13	7	2	2
AT 802A	15	2.3	250	6	25	9	3	3
AT 802A	15	2.3	500	9	40	11	5	4
AT 802A	15	2.3	1000	12	55	15	7	5
AT 802A	15	2.3	1320	15	65	19	8	5
AT 802A	15	2.3	2608	60	266	43	25	10
Bell 205 Helicopter	15	2.3	25	2	7	5	1	1
Bell 205 Helicopter	15	2.3	50	3	12	6	2	2
Bell 205 Helicopter	15	2.3	100	5	21	7	3	2
Bell 205 Helicopter	15	2.3	250	7	30	9	4	3
Bell 205 Helicopter	15	2.3	500	10	43	11	5	4
Bell 205 Helicopter	15	2.3	1000	16	71	17	8	5
Bell 205 Helicopter	15	2.3	1320	21	93	21	10	6
Bell 205 Helicopter	15	2.3	2608	117	520	36	27	10

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 1-2 yrs old was 0.000423 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 1-2 yrs old was 0.000186 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2e - Drift Exposure for Children 1-2 Years Old with Airblast Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Orchard Airblast - Dormant Apple - 60 Swath												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose						
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)	1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AT 802A	2	1	25	0.0102117	0.0009803	0.0002124	0.0000065	0.0000016	0.0002206	0.0292	0.0006424	0.0018433
AT 802A	2	1	50	0.0038854	0.0003730	0.0000808	0.0000025	0.0000006	0.0000839	0.0264	0.0005808	0.0010377
AT 802A	2	1	75	0.0019058	0.0001830	0.0000396	0.0000012	0.0000003	0.0000412	0.0239	0.0005253	0.0007494
AT 802A	2	1	100	0.0010830	0.0001040	0.0000225	0.0000007	0.0000002	0.0000234	0.0220	0.0004840	0.0006114
AT 802A	2	1	150	0.0004575	0.0000439	0.0000095	0.0000003	0.0000001	0.0000099	0.0194	0.0004259	0.0004797
AT 802A	2	1	200	0.0002417	0.0000232	0.0000050	0.0000002	0.0000000	0.0000052	0.0175	0.0003853	0.0004138
AT 802A	2	1	250	0.0001458	0.0000140	0.0000030	0.0000001	0.0000000	0.0000031	0.0161	0.0003542	0.0003713
AT 802A	2	1	300	0.0000941	0.0000090	0.0000020	0.0000001	0.0000000	0.0000020	0.0149	0.0003289	0.0003400
AT 802A	2	1	500	0.0000258	0.0000025	0.0000005	0.0000000	0.0000000	0.0000006	0.0117	0.0002574	0.0002604
AT 802A	2	1	1000	0.0000047	0.0000005	0.0000001	0.0000000	0.0000000	0.0000001	0.0065	0.0001430	0.0001436
AT 802A	2	1	1320	0.0000024	0.0000002	0.0000000	0.0000000	0.0000000	0.0000001	0.0046	0.0001012	0.0001015
AT 802A	2	1	2608	0.0000004	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0016	0.0000352	0.0000353
AT 802A	2	2	25	0.0204235	0.0019607	0.0004249	0.0000130	0.0000032	0.0004411	0.0493	0.0010846	0.0034864
AT 802A	2	2	50	0.0077709	0.0007460	0.0001617	0.0000050	0.0000012	0.0001678	0.0437	0.0009614	0.0018752
AT 802A	2	2	75	0.0038116	0.0003659	0.0000793	0.0000024	0.0000006	0.0000823	0.0386	0.0008491	0.0012973
AT 802A	2	2	100	0.0021660	0.0002079	0.0000451	0.0000014	0.0000003	0.0000468	0.0350	0.0007700	0.0010247
AT 802A	2	2	150	0.0009151	0.0000878	0.0000190	0.0000006	0.0000001	0.0000198	0.0300	0.0006594	0.0007670
AT 802A	2	2	200	0.0004834	0.0000464	0.0000101	0.0000003	0.0000001	0.0000104	0.0264	0.0005815	0.0006383
AT 802A	2	2	250	0.0002915	0.0000280	0.0000061	0.0000002	0.0000000	0.0000063	0.0237	0.0005214	0.0005557
AT 802A	2	2	300	0.0001882	0.0000181	0.0000039	0.0000001	0.0000000	0.0000041	0.0215	0.0004725	0.0004946
AT 802A	2	2	500	0.0000517	0.0000050	0.0000011	0.0000000	0.0000000	0.0000011	0.0153	0.0003366	0.0003427
AT 802A	2	2	1000	0.0000095	0.0000009	0.0000002	0.0000000	0.0000000	0.0000002	0.0072	0.0001584	0.0001595
AT 802A	2	2	1320	0.0000047	0.0000005	0.0000001	0.0000000	0.0000000	0.0000001	0.0049	0.0001082	0.0001088
AT 802A	2	2	2608	0.0000009	0.0000001	0.0000000	0.0000000	0.0000000	0.0000000	0.0016	0.0000359	0.0000360
AT 802A	2	4	25	0.0408470	0.0039213	0.0008498	0.0000261	0.0000063	0.0008822	0.0795	0.0017486	0.0065521
AT 802A	2	4	50	0.0155418	0.0014920	0.0003233	0.0000099	0.0000024	0.0003357	0.0688	0.0015140	0.0033417
AT 802A	2	4	75	0.0076233	0.0007318	0.0001586	0.0000049	0.0000012	0.0001646	0.0594	0.0013075	0.0022039
AT 802A	2	4	100	0.0043319	0.0004159	0.0000901	0.0000028	0.0000007	0.0000936	0.0526	0.0011565	0.0016660
AT 802A	2	4	150	0.0018302	0.0001757	0.0000381	0.0000012	0.0000003	0.0000395	0.0431	0.0009489	0.0011641
AT 802A	2	4	200	0.0009667	0.0000928	0.0000201	0.0000006	0.0000002	0.0000209	0.0367	0.0008076	0.0009213
AT 802A	2	4	250	0.0005830	0.0000560	0.0000121	0.0000004	0.0000001	0.0000126	0.0315	0.0006928	0.0007613
AT 802A	2	4	300	0.0003764	0.0000361	0.0000078	0.0000002	0.0000001	0.0000081	0.0274	0.0006030	0.0006473
AT 802A	2	4	500	0.0001033	0.0000099	0.0000021	0.0000001	0.0000000	0.0000022	0.0176	0.0003868	0.0003989
AT 802A	2	4	1000	0.0000190	0.0000018	0.0000004	0.0000000	0.0000000	0.0000004	0.0076	0.0001681	0.0001703
AT 802A	2	4	1320	0.0000095	0.0000009	0.0000002	0.0000000	0.0000000	0.0000002	0.0051	0.0001126	0.0001138
AT 802A	2	4	2608	0.0000017	0.0000002	0.0000000	0.0000000	0.0000000	0.0000000	0.0019	0.0000411	0.0000413
AT 802A	2	6	25	0.0612704	0.0058820	0.0012747	0.0000391	0.0000095	0.0013233	0.1042	0.0022924	0.0094977
AT 802A	2	6	50	0.0233127	0.0022380	0.0004850	0.0000149	0.0000036	0.0005035	0.0884	0.0019448	0.0046863
AT 802A	2	6	75	0.0114349	0.0010978	0.0002379	0.0000073	0.0000018	0.0002470	0.0752	0.0016545	0.0029992
AT 802A	2	6	100	0.0064979	0.0006238	0.0001352	0.0000041	0.0000010	0.0001403	0.0650	0.0014300	0.0021941
AT 802A	2	6	150	0.0027453	0.0002635	0.0000571	0.0000018	0.0000004	0.0000593	0.0508	0.0011178	0.0014406
AT 802A	2	6	200	0.0014501	0.0001392	0.0000302	0.0000009	0.0000002	0.0000313	0.0414	0.0009119	0.0010824
AT 802A	2	6	250	0.0008745	0.0000840	0.0000182	0.0000006	0.0000001	0.0000189	0.0348	0.0007656	0.0008684
AT 802A	2	6	300	0.0005646	0.0000542	0.0000117	0.0000004	0.0000001	0.0000122	0.0298	0.0006553	0.0007217
AT 802A	2	6	500	0.0001550	0.0000149	0.0000032	0.0000001	0.0000000	0.0000033	0.0179	0.0003938	0.0004120
AT 802A	2	6	1000	0.0000285	0.0000027	0.0000006	0.0000000	0.0000000	0.0000006	0.0077	0.0001694	0.0001727
AT 802A	2	6	1320	0.0000142	0.0000014	0.0000003	0.0000000	0.0000000	0.0000003	0.0052	0.0001144	0.0001161
AT 802A	2	6	2608	0.0000026	0.0000002	0.0000001	0.0000000	0.0000000	0.0000001	0.0020	0.0000440	0.0000443

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2e - Drift Exposure for Children 1-2 Years Old with Airblast Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Orchard Airblast - Sparse Orchard - 60 Swath												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose						
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)	1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AT 802A	2	1	25	0.0082801	0.0007949	0.0001723	0.0000053	0.0000013	0.0001788	0.0292	0.0006424	0.0016161
AT 802A	2	1	50	0.0037711	0.0003620	0.0000785	0.0000024	0.0000006	0.0000814	0.0264	0.0005808	0.0010243
AT 802A	2	1	75	0.0021180	0.0002033	0.0000441	0.0000014	0.0000003	0.0000457	0.0239	0.0005253	0.0007744
AT 802A	2	1	100	0.0013523	0.0001298	0.0000281	0.0000009	0.0000002	0.0000292	0.0220	0.0004840	0.0006430
AT 802A	2	1	150	0.0006882	0.0000661	0.0000143	0.0000004	0.0000001	0.0000149	0.0194	0.0004259	0.0005068
AT 802A	2	1	200	0.0004151	0.0000399	0.0000086	0.0000003	0.0000001	0.0000090	0.0175	0.0003853	0.0004341
AT 802A	2	1	250	0.0002786	0.0000267	0.0000058	0.0000002	0.0000000	0.0000060	0.0161	0.0003542	0.0003870
AT 802A	2	1	300	0.0001993	0.0000191	0.0000041	0.0000001	0.0000000	0.0000043	0.0149	0.0003289	0.0003523
AT 802A	2	1	500	0.0000731	0.0000070	0.0000015	0.0000000	0.0000000	0.0000016	0.0117	0.0002574	0.0002660
AT 802A	2	1	1000	0.0000152	0.0000015	0.0000003	0.0000000	0.0000000	0.0000003	0.0065	0.0001430	0.0001448
AT 802A	2	1	1320	0.0000071	0.0000007	0.0000001	0.0000000	0.0000000	0.0000002	0.0046	0.0001012	0.0001020
AT 802A	2	1	2608	0.0000004	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0016	0.0000352	0.0000352
AT 802A	2	2	25	0.0165602	0.0015898	0.0003445	0.0000106	0.0000026	0.0003577	0.0493	0.0010846	0.0030320
AT 802A	2	2	50	0.0075421	0.0007240	0.0001569	0.0000048	0.0000012	0.0001629	0.0437	0.0009614	0.0018483
AT 802A	2	2	75	0.0042360	0.0004067	0.0000881	0.0000027	0.0000007	0.0000915	0.0386	0.0008491	0.0013472
AT 802A	2	2	100	0.0027047	0.0002596	0.0000563	0.0000017	0.0000004	0.0000584	0.0350	0.0007700	0.0010881
AT 802A	2	2	150	0.0013763	0.0001321	0.0000286	0.0000009	0.0000002	0.0000297	0.0300	0.0006594	0.0008212
AT 802A	2	2	200	0.0008302	0.0000797	0.0000173	0.0000005	0.0000001	0.0000179	0.0264	0.0005815	0.0006791
AT 802A	2	2	250	0.0005572	0.0000535	0.0000116	0.0000004	0.0000001	0.0000120	0.0237	0.0005214	0.0005869
AT 802A	2	2	300	0.0003985	0.0000383	0.0000083	0.0000003	0.0000001	0.0000086	0.0215	0.0004725	0.0005194
AT 802A	2	2	500	0.0001461	0.0000140	0.0000030	0.0000001	0.0000000	0.0000032	0.0153	0.0003366	0.0003538
AT 802A	2	2	1000	0.0000303	0.0000029	0.0000006	0.0000000	0.0000000	0.0000007	0.0072	0.0001584	0.0001620
AT 802A	2	2	1320	0.0000141	0.0000014	0.0000003	0.0000000	0.0000000	0.0000003	0.0049	0.0001078	0.0001095
AT 802A	2	2	2608	0.0000008	0.0000001	0.0000000	0.0000000	0.0000000	0.0000000	0.0016	0.0000352	0.0000353
AT 802A	2	4	25	0.0331204	0.0031796	0.0006890	0.0000212	0.0000051	0.0007153	0.0795	0.0017486	0.0056434
AT 802A	2	4	50	0.0150842	0.0014481	0.0003138	0.0000096	0.0000023	0.0003258	0.0688	0.0015140	0.0032879
AT 802A	2	4	75	0.0084720	0.0008133	0.0001763	0.0000054	0.0000013	0.0001830	0.0594	0.0013075	0.0023037
AT 802A	2	4	100	0.0054094	0.0005193	0.0001125	0.0000035	0.0000008	0.0001168	0.0526	0.0011565	0.0017927
AT 802A	2	4	150	0.0027526	0.0002643	0.0000573	0.0000018	0.0000004	0.0000595	0.0431	0.0009489	0.0012726
AT 802A	2	4	200	0.0016604	0.0001594	0.0000345	0.0000011	0.0000003	0.0000359	0.0367	0.0008076	0.0010029
AT 802A	2	4	250	0.0011143	0.0001070	0.0000232	0.0000007	0.0000002	0.0000241	0.0315	0.0006928	0.0008238
AT 802A	2	4	300	0.0007970	0.0000765	0.0000166	0.0000005	0.0000001	0.0000172	0.0274	0.0006030	0.0006967
AT 802A	2	4	500	0.0002922	0.0000281	0.0000061	0.0000002	0.0000000	0.0000063	0.0176	0.0003868	0.0004211
AT 802A	2	4	1000	0.0000606	0.0000058	0.0000013	0.0000000	0.0000000	0.0000013	0.0076	0.0001681	0.0001752
AT 802A	2	4	1320	0.0000283	0.0000027	0.0000006	0.0000000	0.0000000	0.0000006	0.0051	0.0001126	0.0001160
AT 802A	2	4	2608	0.0000015	0.0000001	0.0000000	0.0000000	0.0000000	0.0000000	0.0019	0.0000411	0.0000413
AT 802A	2	6	25	0.0496805	0.0047693	0.0010336	0.0000317	0.0000077	0.0010730	0.1042	0.0022924	0.0081347
AT 802A	2	6	50	0.0226263	0.0021721	0.0004707	0.0000145	0.0000035	0.0004887	0.0884	0.0019448	0.0046056
AT 802A	2	6	75	0.0127079	0.0012200	0.0002644	0.0000081	0.0000020	0.0002745	0.0752	0.0016545	0.0031489
AT 802A	2	6	100	0.0081140	0.0007789	0.0001688	0.0000052	0.0000013	0.0001752	0.0650	0.0014300	0.0023842
AT 802A	2	6	150	0.0041290	0.0003964	0.0000859	0.0000026	0.0000006	0.0000892	0.0508	0.0011178	0.0016033
AT 802A	2	6	200	0.0024907	0.0002391	0.0000518	0.0000016	0.0000004	0.0000538	0.0414	0.0009119	0.0012048
AT 802A	2	6	250	0.0016715	0.0001605	0.0000348	0.0000011	0.0000003	0.0000361	0.0348	0.0007656	0.0009622
AT 802A	2	6	300	0.0011955	0.0001148	0.0000249	0.0000008	0.0000002	0.0000258	0.0298	0.0006553	0.0007959
AT 802A	2	6	500	0.0004383	0.0000421	0.0000091	0.0000003	0.0000001	0.0000095	0.0179	0.0003938	0.0004453
AT 802A	2	6	1000	0.0000910	0.0000087	0.0000019	0.0000001	0.0000000	0.0000020	0.0077	0.0001694	0.0001801
AT 802A	2	6	1320	0.0000424	0.0000041	0.0000009	0.0000000	0.0000000	0.0000009	0.0052	0.0001144	0.0001194
AT 802A	2	6	2608	0.0000023	0.0000002	0.0000000	0.0000000	0.0000000	0.0000000	0.0020	0.0000440	0.0000443

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

RAS RISK CALCULATIONS								
Orchard Airblast - Dormant Apple - 60 Swath								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	10	45	16	5	4
AT 802A	2	1	50	27	119	17	10	6
AT 802A	2	1	75	55	243	19	13	7
AT 802A	2	1	100	96	428	21	16	8
AT 802A	2	1	150	228	1012	23	21	9
AT 802A	2	1	200	431	1916	26	24	10
AT 802A	2	1	250	715	3177	28	27	10
AT 802A	2	1	300	1107	4921	30	29	11
AT 802A	2	1	500	4033	17926	39	38	12
AT 802A	2	1	1000	21954	97582	70	70	13
AT 802A	2	1	1320	43912	195181	99	99	14
AT 802A	2	1	2608	240779	1070225	284	284	16
AT 802A	2	2	25	5	23	9	3	2
AT 802A	2	2	50	13	60	10	5	4
AT 802A	2	2	75	27	121	12	8	5
AT 802A	2	2	100	48	214	13	10	6
AT 802A	2	2	150	114	506	15	13	7
AT 802A	2	2	200	215	958	17	16	8
AT 802A	2	2	250	357	1588	19	18	9
AT 802A	2	2	300	554	2460	21	20	9
AT 802A	2	2	500	2016	8963	30	29	11
AT 802A	2	2	1000	10977	48791	63	63	13
AT 802A	2	2	1320	21956	97591	92	92	14
AT 802A	2	2	2608	120389	535113	279	278	16
AT 802A	2	4	25	3	11	6	2	1
AT 802A	2	4	50	7	30	7	3	3
AT 802A	2	4	75	14	61	8	5	4
AT 802A	2	4	100	24	107	9	6	4
AT 802A	2	4	150	57	253	11	9	6
AT 802A	2	4	200	108	479	12	11	7
AT 802A	2	4	250	179	794	14	13	7
AT 802A	2	4	300	277	1230	17	15	8
AT 802A	2	4	500	1008	4481	26	25	10
AT 802A	2	4	1000	5488	24395	59	59	13
AT 802A	2	4	1320	10978	48795	89	88	14
AT 802A	2	4	2608	60195	267557	243	242	15
AT 802A	2	6	25	2	8	4	1	<1
AT 802A	2	6	50	4	20	5	2	2
AT 802A	2	6	75	9	40	6	3	3
AT 802A	2	6	100	16	71	7	5	4
AT 802A	2	6	150	38	169	9	7	5
AT 802A	2	6	200	72	319	11	9	6
AT 802A	2	6	250	119	529	13	12	7
AT 802A	2	6	300	185	820	15	14	8
AT 802A	2	6	500	672	2988	25	24	10
AT 802A	2	6	1000	3659	16264	59	58	13
AT 802A	2	6	1320	7319	32530	87	86	14
AT 802A	2	6	2608	40130	178371	227	226	15

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 1-2 yrs old was 0.000423 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 1-2 yrs old was 0.000186 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water

RAS RISK CALCULATIONS								
Orchard Airblast - Sparse Orchard - 60 Swath								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	13	56	16	6	4
AT 802A	2	1	50	28	123	17	10	6
AT 802A	2	1	75	49	219	19	13	7
AT 802A	2	1	100	77	342	21	16	8
AT 802A	2	1	150	151	673	23	20	9
AT 802A	2	1	200	251	1115	26	23	10
AT 802A	2	1	250	374	1662	28	26	10
AT 802A	2	1	300	523	2324	30	28	10
AT 802A	2	1	500	1426	6338	39	38	11
AT 802A	2	1	1000	6871	30538	70	69	13
AT 802A	2	1	1320	14726	65454	99	98	14
AT 802A	2	1	2608	276366	1228403	284	284	16
AT 802A	2	2	25	6	28	9	3	3
AT 802A	2	2	50	14	61	10	5	4
AT 802A	2	2	75	25	109	12	7	5
AT 802A	2	2	100	39	171	13	9	6
AT 802A	2	2	150	76	336	15	12	7
AT 802A	2	2	200	125	558	17	15	8
AT 802A	2	2	250	187	831	19	17	8
AT 802A	2	2	300	261	1162	21	19	9
AT 802A	2	2	500	713	3169	30	28	10
AT 802A	2	2	1000	3435	15269	63	62	13
AT 802A	2	2	1320	7363	32727	93	91	14
AT 802A	2	2	2608	138183	614202	284	283	16
AT 802A	2	4	25	3	14	6	2	2
AT 802A	2	4	50	7	31	7	3	3
AT 802A	2	4	75	12	55	8	4	3
AT 802A	2	4	100	19	86	9	6	4
AT 802A	2	4	150	38	168	11	8	5
AT 802A	2	4	200	63	279	12	10	6
AT 802A	2	4	250	93	415	14	12	7
AT 802A	2	4	300	131	581	17	14	8
AT 802A	2	4	500	356	1584	26	24	10
AT 802A	2	4	1000	1718	7635	59	57	13
AT 802A	2	4	1320	3681	16364	89	86	14
AT 802A	2	4	2608	69092	307101	243	242	15
AT 802A	2	6	25	2	9	4	1	1
AT 802A	2	6	50	5	20	5	2	2
AT 802A	2	6	75	8	36	6	3	3
AT 802A	2	6	100	13	57	7	4	3
AT 802A	2	6	150	25	112	9	6	5
AT 802A	2	6	200	42	186	11	8	6
AT 802A	2	6	250	62	277	13	10	6
AT 802A	2	6	300	87	387	15	13	7
AT 802A	2	6	500	238	1056	25	22	9
AT 802A	2	6	1000	1145	5090	59	56	13
AT 802A	2	6	1320	2454	10909	87	84	14
AT 802A	2	6	2608	46061	204734	227	226	15

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 1-2 yrs old was 0.000423 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 1-2 yrs old was 0.000186 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water

Appendix 2f - Drift Exposure for Children 1-2 Years Old with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - High Boom 40 swath/50th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0017527	0.0001683	0.0000365	0.0000011	0.0000003	0.0000379	0.0292	0.0006424	0.0008485
AT 802A	2	1	50	0.0011623	0.0001116	0.0000242	0.0000007	0.0000002	0.0000251	0.0264	0.0005808	0.0007175
AT 802A	2	1	75	0.0008671	0.0000832	0.0000180	0.0000006	0.0000001	0.0000187	0.0239	0.0005253	0.0006273
AT 802A	2	1	100	0.0006826	0.0000655	0.0000142	0.0000004	0.0000001	0.0000147	0.0220	0.0004840	0.0005643
AT 802A	2	1	150	0.0004981	0.0000478	0.0000104	0.0000003	0.0000001	0.0000108	0.0194	0.0004259	0.0004845
AT 802A	2	1	200	0.0003874	0.0000372	0.0000081	0.0000002	0.0000001	0.0000084	0.0175	0.0003853	0.0004309
AT 802A	2	1	250	0.0003136	0.0000301	0.0000065	0.0000002	0.0000000	0.0000068	0.0161	0.0003542	0.0003911
AT 802A	2	1	300	0.0002583	0.0000248	0.0000054	0.0000002	0.0000000	0.0000056	0.0149	0.0003289	0.0003593
AT 802A	2	1	500	0.0001340	0.0000129	0.0000028	0.0000001	0.0000000	0.0000029	0.0117	0.0002574	0.0002732
AT 802A	2	1	1000	0.0000403	0.0000039	0.0000008	0.0000000	0.0000000	0.0000009	0.0065	0.0001430	0.0001477
AT 802A	2	1	1320	0.0000219	0.0000021	0.0000005	0.0000000	0.0000000	0.0000005	0.0046	0.0001012	0.0001038
AT 802A	2	1	2608	0.0000032	0.0000003	0.0000001	0.0000000	0.0000000	0.0000001	0.0016	0.0000352	0.0000356
AT 802A	2	2	25	0.0035054	0.0003365	0.0000729	0.0000022	0.0000005	0.0000757	0.0493	0.0010846	0.0014968
AT 802A	2	2	50	0.0023246	0.0002232	0.0000484	0.0000015	0.0000004	0.0000502	0.0437	0.0009614	0.0012348
AT 802A	2	2	75	0.0017342	0.0001665	0.0000361	0.0000011	0.0000003	0.0000375	0.0386	0.0008491	0.0010530
AT 802A	2	2	100	0.0013653	0.0001311	0.0000284	0.0000009	0.0000002	0.0000295	0.0350	0.0007700	0.0009306
AT 802A	2	2	150	0.0009963	0.0000956	0.0000207	0.0000006	0.0000002	0.0000215	0.0300	0.0006594	0.0007765
AT 802A	2	2	200	0.0007749	0.0000744	0.0000161	0.0000005	0.0000001	0.0000167	0.0264	0.0005815	0.0006726
AT 802A	2	2	250	0.0006273	0.0000602	0.0000131	0.0000004	0.0000001	0.0000135	0.0237	0.0005214	0.0005952
AT 802A	2	2	300	0.0005166	0.0000496	0.0000107	0.0000003	0.0000001	0.0000112	0.0215	0.0004725	0.0005333
AT 802A	2	2	500	0.0002681	0.0000257	0.0000056	0.0000002	0.0000000	0.0000058	0.0153	0.0003366	0.0003681
AT 802A	2	2	1000	0.0000807	0.0000077	0.0000017	0.0000001	0.0000000	0.0000017	0.0072	0.0001584	0.0001679
AT 802A	2	2	1320	0.0000438	0.0000042	0.0000009	0.0000000	0.0000000	0.0000009	0.0049	0.0001082	0.0001134
AT 802A	2	2	2608	0.0000065	0.0000006	0.0000001	0.0000000	0.0000000	0.0000001	0.0016	0.0000359	0.0000366
AT 802A	2	4	25	0.0070108	0.0006730	0.0001459	0.0000045	0.0000011	0.0001514	0.0795	0.0017486	0.0025730
AT 802A	2	4	50	0.0046492	0.0004463	0.0000967	0.0000030	0.0000007	0.0001004	0.0688	0.0015140	0.0020608
AT 802A	2	4	75	0.0034685	0.0003330	0.0000722	0.0000022	0.0000005	0.0000749	0.0594	0.0013075	0.0017153
AT 802A	2	4	100	0.0027305	0.0002621	0.0000568	0.0000017	0.0000004	0.0000590	0.0526	0.0011565	0.0014776
AT 802A	2	4	150	0.0019925	0.0001913	0.0000415	0.0000013	0.0000003	0.0000430	0.0431	0.0009489	0.0011832
AT 802A	2	4	200	0.0015497	0.0001488	0.0000322	0.0000010	0.0000002	0.0000335	0.0367	0.0008076	0.0009899
AT 802A	2	4	250	0.0012546	0.0001204	0.0000261	0.0000008	0.0000002	0.0000271	0.0315	0.0006928	0.0008403
AT 802A	2	4	300	0.0010332	0.0000992	0.0000215	0.0000007	0.0000002	0.0000223	0.0274	0.0006030	0.0007245
AT 802A	2	4	500	0.0005361	0.0000515	0.0000112	0.0000003	0.0000001	0.0000116	0.0176	0.0003868	0.0004498
AT 802A	2	4	1000	0.0001613	0.0000155	0.0000034	0.0000001	0.0000000	0.0000035	0.0076	0.0001681	0.0001870
AT 802A	2	4	1320	0.0000876	0.0000084	0.0000018	0.0000001	0.0000000	0.0000019	0.0051	0.0001126	0.0001229
AT 802A	2	4	2608	0.0000130	0.0000012	0.0000003	0.0000000	0.0000000	0.0000003	0.0019	0.0000411	0.0000427
AT 802A	2	6	25	0.0105162	0.0010096	0.0002188	0.0000067	0.0000016	0.0002271	0.1042	0.0022924	0.0035291
AT 802A	2	6	50	0.0069739	0.0006695	0.0001451	0.0000045	0.0000011	0.0001506	0.0884	0.0019448	0.0027649
AT 802A	2	6	75	0.0052027	0.0004995	0.0001082	0.0000033	0.0000008	0.0001124	0.0752	0.0016545	0.0022663
AT 802A	2	6	100	0.0040958	0.0003932	0.0000852	0.0000026	0.0000006	0.0000885	0.0650	0.0014300	0.0019117
AT 802A	2	6	150	0.0029888	0.0002869	0.0000622	0.0000019	0.0000005	0.0000646	0.0508	0.0011178	0.0014692
AT 802A	2	6	200	0.0023246	0.0002232	0.0000484	0.0000015	0.0000004	0.0000502	0.0414	0.0009119	0.0011852
AT 802A	2	6	250	0.0018818	0.0001807	0.0000392	0.0000012	0.0000003	0.0000406	0.0348	0.0007656	0.0009869
AT 802A	2	6	300	0.0015497	0.0001488	0.0000322	0.0000010	0.0000002	0.0000335	0.0298	0.0006553	0.0008375
AT 802A	2	6	500	0.0008042	0.0000772	0.0000167	0.0000005	0.0000001	0.0000174	0.0179	0.0003938	0.0004884
AT 802A	2	6	1000	0.0002420	0.0000232	0.0000050	0.0000002	0.0000000	0.0000052	0.0077	0.0001694	0.0001979
AT 802A	2	6	1320	0.0001314	0.0000126	0.0000027	0.0000001	0.0000000	0.0000028	0.0052	0.0001144	0.0001299
AT 802A	2	6	2608	0.0000194	0.0000019	0.0000004	0.0000000	0.0000000	0.0000004	0.0020	0.0000440	0.0000463

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2f - Drift Exposure for Children 1-2 Years Old with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - Low Boom 40 swath/50th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0009225	0.0000886	0.0000192	0.0000006	0.0000001	0.0000199	0.0292	0.0006424	0.0007509
AT 802A	2	1	50	0.0006273	0.0000602	0.0000131	0.0000004	0.0000001	0.0000135	0.0264	0.0005808	0.0006546
AT 802A	2	1	75	0.0004797	0.0000460	0.0000100	0.0000003	0.0000001	0.0000104	0.0239	0.0005253	0.0005817
AT 802A	2	1	100	0.0003690	0.0000354	0.0000077	0.0000002	0.0000001	0.0000080	0.0220	0.0004840	0.0005274
AT 802A	2	1	150	0.0002767	0.0000266	0.0000058	0.0000002	0.0000000	0.0000060	0.0194	0.0004259	0.0004584
AT 802A	2	1	200	0.0002214	0.0000213	0.0000046	0.0000001	0.0000000	0.0000048	0.0175	0.0003853	0.0004114
AT 802A	2	1	250	0.0001845	0.0000177	0.0000038	0.0000001	0.0000000	0.0000040	0.0161	0.0003542	0.0003759
AT 802A	2	1	300	0.0001660	0.0000159	0.0000035	0.0000001	0.0000000	0.0000036	0.0149	0.0003289	0.0003484
AT 802A	2	1	500	0.0000950	0.0000091	0.0000020	0.0000001	0.0000000	0.0000021	0.0117	0.0002574	0.0002686
AT 802A	2	1	1000	0.0000360	0.0000035	0.0000007	0.0000000	0.0000000	0.0000008	0.0065	0.0001430	0.0001472
AT 802A	2	1	1320	0.0000220	0.0000021	0.0000005	0.0000000	0.0000000	0.0000005	0.0046	0.0001012	0.0001038
AT 802A	2	1	2608	0.0000047	0.0000005	0.0000001	0.0000000	0.0000000	0.0000001	0.0016	0.0000352	0.0000358
AT 802A	2	2	25	0.0018449	0.0001771	0.0000384	0.0000012	0.0000003	0.0000398	0.0493	0.0010846	0.0013016
AT 802A	2	2	50	0.0012546	0.0001204	0.0000261	0.0000008	0.0000002	0.0000271	0.0437	0.0009614	0.0011089
AT 802A	2	2	75	0.0009594	0.0000921	0.0000200	0.0000006	0.0000001	0.0000207	0.0386	0.0008491	0.0009619
AT 802A	2	2	100	0.0007380	0.0000708	0.0000154	0.0000005	0.0000001	0.0000159	0.0350	0.0007700	0.0008568
AT 802A	2	2	150	0.0005535	0.0000531	0.0000115	0.0000004	0.0000001	0.0000120	0.0300	0.0006594	0.0007245
AT 802A	2	2	200	0.0004428	0.0000425	0.0000092	0.0000003	0.0000001	0.0000096	0.0264	0.0005815	0.0006335
AT 802A	2	2	250	0.0003690	0.0000354	0.0000077	0.0000002	0.0000001	0.0000080	0.0237	0.0005214	0.0005648
AT 802A	2	2	300	0.0003321	0.0000319	0.0000069	0.0000002	0.0000001	0.0000072	0.0215	0.0004725	0.0005116
AT 802A	2	2	500	0.0001900	0.0000182	0.0000040	0.0000001	0.0000000	0.0000041	0.0153	0.0003366	0.0003589
AT 802A	2	2	1000	0.0000720	0.0000069	0.0000015	0.0000000	0.0000000	0.0000016	0.0072	0.0001584	0.0001669
AT 802A	2	2	1320	0.0000440	0.0000042	0.0000009	0.0000000	0.0000000	0.0000009	0.0049	0.0001078	0.0001130
AT 802A	2	2	2608	0.0000094	0.0000009	0.0000002	0.0000000	0.0000000	0.0000002	0.0016	0.0000352	0.0000363
AT 802A	2	4	25	0.0036899	0.0003542	0.0000768	0.0000024	0.0000006	0.0000797	0.0795	0.0017486	0.0021825
AT 802A	2	4	50	0.0025091	0.0002409	0.0000522	0.0000016	0.0000004	0.0000542	0.0688	0.0015140	0.0018091
AT 802A	2	4	75	0.0019187	0.0001842	0.0000399	0.0000012	0.0000003	0.0000414	0.0594	0.0013075	0.0015331
AT 802A	2	4	100	0.0014760	0.0001417	0.0000307	0.0000009	0.0000002	0.0000319	0.0526	0.0011565	0.0013301
AT 802A	2	4	150	0.0011070	0.0001063	0.0000230	0.0000007	0.0000002	0.0000239	0.0431	0.0009489	0.0010790
AT 802A	2	4	200	0.0008856	0.0000850	0.0000184	0.0000006	0.0000001	0.0000191	0.0367	0.0008076	0.0009118
AT 802A	2	4	250	0.0007380	0.0000708	0.0000154	0.0000005	0.0000001	0.0000159	0.0315	0.0006928	0.0007796
AT 802A	2	4	300	0.0006642	0.0000638	0.0000138	0.0000004	0.0000001	0.0000143	0.0274	0.0006030	0.0006811
AT 802A	2	4	500	0.0003801	0.0000365	0.0000079	0.0000002	0.0000001	0.0000082	0.0176	0.0003868	0.0004315
AT 802A	2	4	1000	0.0001440	0.0000138	0.0000030	0.0000001	0.0000000	0.0000031	0.0076	0.0001681	0.0001850
AT 802A	2	4	1320	0.0000879	0.0000084	0.0000018	0.0000001	0.0000000	0.0000019	0.0051	0.0001126	0.0001230
AT 802A	2	4	2608	0.0000188	0.0000018	0.0000004	0.0000000	0.0000000	0.0000004	0.0019	0.0000411	0.0000433
AT 802A	2	6	25	0.0055348	0.0005313	0.0001151	0.0000035	0.0000009	0.0001195	0.1042	0.0022924	0.0029433
AT 802A	2	6	50	0.0037637	0.0003613	0.0000783	0.0000024	0.0000006	0.0000813	0.0884	0.0019448	0.0023874
AT 802A	2	6	75	0.0028781	0.0002763	0.0000599	0.0000018	0.0000004	0.0000622	0.0752	0.0016545	0.0019930
AT 802A	2	6	100	0.0022139	0.0002125	0.0000461	0.0000014	0.0000003	0.0000478	0.0650	0.0014300	0.0016904
AT 802A	2	6	150	0.0016604	0.0001594	0.0000345	0.0000011	0.0000003	0.0000359	0.0508	0.0011178	0.0013130
AT 802A	2	6	200	0.0013284	0.0001275	0.0000276	0.0000008	0.0000002	0.0000287	0.0414	0.0009119	0.0010681
AT 802A	2	6	250	0.0011070	0.0001063	0.0000230	0.0000007	0.0000002	0.0000239	0.0348	0.0007656	0.0008958
AT 802A	2	6	300	0.0009963	0.0000956	0.0000207	0.0000006	0.0000002	0.0000215	0.0298	0.0006553	0.0007724
AT 802A	2	6	500	0.0005701	0.0000547	0.0000119	0.0000004	0.0000001	0.0000123	0.0179	0.0003938	0.0004608
AT 802A	2	6	1000	0.0002160	0.0000207	0.0000045	0.0000001	0.0000000	0.0000047	0.0077	0.0001694	0.0001948
AT 802A	2	6	1320	0.0001319	0.0000127	0.0000027	0.0000001	0.0000000	0.0000028	0.0052	0.0001144	0.0001299
AT 802A	2	6	2608	0.0000281	0.0000027	0.0000006	0.0000000	0.0000000	0.0000006	0.0020	0.0000440	0.0000473

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2f - Drift Exposure for Children 1-2 Years Old with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - High Boom 40 swath/90th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0024907	0.0002391	0.0000518	0.0000016	0.0000004	0.0000538	0.0292	0.0151840	0.0154769
AT 802A	2	1	50	0.0017896	0.0001718	0.0000372	0.0000011	0.0000003	0.0000387	0.0264	0.0137280	0.0139385
AT 802A	2	1	75	0.0013837	0.0001328	0.0000288	0.0000009	0.0000002	0.0000299	0.0239	0.0124157	0.0125784
AT 802A	2	1	100	0.0011070	0.0001063	0.0000230	0.0000007	0.0000002	0.0000239	0.0220	0.0114400	0.0115702
AT 802A	2	1	150	0.0008302	0.0000797	0.0000173	0.0000005	0.0000001	0.0000179	0.0194	0.0100667	0.0101643
AT 802A	2	1	200	0.0006642	0.0000638	0.0000138	0.0000004	0.0000001	0.0000143	0.0175	0.0091079	0.0091860
AT 802A	2	1	250	0.0005535	0.0000531	0.0000115	0.0000004	0.0000001	0.0000120	0.0161	0.0083720	0.0084371
AT 802A	2	1	300	0.0004797	0.0000460	0.0000100	0.0000003	0.0000001	0.0000104	0.0149	0.0077739	0.0078303
AT 802A	2	1	500	0.0003152	0.0000303	0.0000066	0.0000002	0.0000000	0.0000068	0.0117	0.0060840	0.0061211
AT 802A	2	1	1000	0.0001761	0.0000169	0.0000037	0.0000001	0.0000000	0.0000038	0.0065	0.0033800	0.0034007
AT 802A	2	1	1320	0.0001390	0.0000133	0.0000029	0.0000001	0.0000000	0.0000030	0.0046	0.0023920	0.0024083
AT 802A	2	1	2608	0.0000772	0.0000074	0.0000016	0.0000000	0.0000000	0.0000017	0.0016	0.0008320	0.0008411
AT 802A	2	2	25	0.0049813	0.0004782	0.0001036	0.0000032	0.0000008	0.0001076	0.0493	0.0256360	0.0262218
AT 802A	2	2	50	0.0035792	0.0003436	0.0000745	0.0000023	0.0000006	0.0000773	0.0437	0.0227240	0.0231449
AT 802A	2	2	75	0.0027674	0.0002657	0.0000576	0.0000018	0.0000004	0.0000598	0.0386	0.0200696	0.0203950
AT 802A	2	2	100	0.0022139	0.0002125	0.0000461	0.0000014	0.0000003	0.0000478	0.0350	0.0182000	0.0184604
AT 802A	2	2	150	0.0016604	0.0001594	0.0000345	0.0000011	0.0000003	0.0000359	0.0300	0.0155854	0.0157807
AT 802A	2	2	200	0.0013284	0.0001275	0.0000276	0.0000008	0.0000002	0.0000287	0.0264	0.0137440	0.0139002
AT 802A	2	2	250	0.0011070	0.0001063	0.0000230	0.0000007	0.0000002	0.0000239	0.0237	0.0123240	0.0124542
AT 802A	2	2	300	0.0009594	0.0000921	0.0000200	0.0000006	0.0000001	0.0000207	0.0215	0.0111684	0.0112812
AT 802A	2	2	500	0.0006304	0.0000605	0.0000131	0.0000004	0.0000001	0.0000136	0.0153	0.0079560	0.0080301
AT 802A	2	2	1000	0.0003522	0.0000338	0.0000073	0.0000002	0.0000001	0.0000076	0.0072	0.0037440	0.0037854
AT 802A	2	2	1320	0.0002779	0.0000267	0.0000058	0.0000002	0.0000000	0.0000060	0.0049	0.0025480	0.0025807
AT 802A	2	2	2608	0.0001544	0.0000148	0.0000032	0.0000001	0.0000000	0.0000033	0.0016	0.0008320	0.0008502
AT 802A	2	4	25	0.0099627	0.0009564	0.0002073	0.0000064	0.0000015	0.0002152	0.0795	0.0413296	0.0425012
AT 802A	2	4	50	0.0071584	0.0006872	0.0001489	0.0000046	0.0000011	0.0001546	0.0688	0.0357864	0.0366282
AT 802A	2	4	75	0.0055348	0.0005313	0.0001151	0.0000035	0.0000009	0.0001195	0.0594	0.0309036	0.0315545
AT 802A	2	4	100	0.0044279	0.0004251	0.0000921	0.0000028	0.0000007	0.0000956	0.0526	0.0273364	0.0278571
AT 802A	2	4	150	0.0033209	0.0003188	0.0000691	0.0000021	0.0000005	0.0000717	0.0431	0.0224276	0.0228181
AT 802A	2	4	200	0.0026567	0.0002550	0.0000553	0.0000017	0.0000004	0.0000574	0.0367	0.0190892	0.0194016
AT 802A	2	4	250	0.0022139	0.0002125	0.0000461	0.0000014	0.0000003	0.0000478	0.0315	0.0163748	0.0166352
AT 802A	2	4	300	0.0019187	0.0001842	0.0000399	0.0000012	0.0000003	0.0000414	0.0274	0.0142532	0.0144788
AT 802A	2	4	500	0.0012608	0.0001210	0.0000262	0.0000008	0.0000002	0.0000272	0.0176	0.0091416	0.0092899
AT 802A	2	4	1000	0.0007044	0.0000676	0.0000147	0.0000004	0.0000001	0.0000152	0.0076	0.0039728	0.0040556
AT 802A	2	4	1320	0.0005559	0.0000534	0.0000116	0.0000004	0.0000001	0.0000120	0.0051	0.0026624	0.0027278
AT 802A	2	4	2608	0.0003087	0.0000296	0.0000064	0.0000002	0.0000000	0.0000067	0.0019	0.0009724	0.0010087
AT 802A	2	6	25	0.0149440	0.0014346	0.0003109	0.0000095	0.0000023	0.0003228	0.1042	0.0541840	0.0559414
AT 802A	2	6	50	0.0107375	0.0010308	0.0002234	0.0000069	0.0000017	0.0002319	0.0884	0.0459680	0.0472307
AT 802A	2	6	75	0.0083022	0.0007970	0.0001727	0.0000053	0.0000013	0.0001793	0.0752	0.0391062	0.0400825
AT 802A	2	6	100	0.0066418	0.0006376	0.0001382	0.0000042	0.0000010	0.0001434	0.0650	0.0338000	0.0345811
AT 802A	2	6	150	0.0049813	0.0004782	0.0001036	0.0000032	0.0000008	0.0001076	0.0508	0.0264196	0.0270054
AT 802A	2	6	200	0.0039851	0.0003826	0.0000829	0.0000025	0.0000006	0.0000861	0.0414	0.0215534	0.0220221
AT 802A	2	6	250	0.0033209	0.0003188	0.0000691	0.0000021	0.0000005	0.0000717	0.0348	0.0180960	0.0184865
AT 802A	2	6	300	0.0028781	0.0002763	0.0000599	0.0000018	0.0000004	0.0000622	0.0298	0.0154880	0.0158265
AT 802A	2	6	500	0.0018912	0.0001816	0.0000393	0.0000012	0.0000003	0.0000408	0.0179	0.0093080	0.0095304
AT 802A	2	6	1000	0.0010566	0.0001014	0.0000220	0.0000007	0.0000002	0.0000228	0.0077	0.0040040	0.0041283
AT 802A	2	6	1320	0.0008338	0.0000800	0.0000173	0.0000005	0.0000001	0.0000180	0.0052	0.0027040	0.0028021
AT 802A	2	6	2608	0.0004631	0.0000445	0.0000096	0.0000003	0.0000001	0.0000100	0.0020	0.0010400	0.0010945

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2f - Drift Exposure for Children 1-2 Years Old with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - Low Boom 40 swath/90th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0015682	0.0001505	0.0000326	0.0000010	0.0000002	0.0000339	0.0292	0.0151840	0.0153684
AT 802A	2	1	50	0.0011439	0.0001098	0.0000238	0.0000007	0.0000002	0.0000247	0.0264	0.0137280	0.0138625
AT 802A	2	1	75	0.0008856	0.0000850	0.0000184	0.0000006	0.0000001	0.0000191	0.0239	0.0124157	0.0125198
AT 802A	2	1	100	0.0007195	0.0000691	0.0000150	0.0000005	0.0000001	0.0000155	0.0220	0.0114400	0.0115246
AT 802A	2	1	150	0.0005350	0.0000514	0.0000111	0.0000003	0.0000001	0.0000116	0.0194	0.0100667	0.0101296
AT 802A	2	1	200	0.0004428	0.0000425	0.0000092	0.0000003	0.0000001	0.0000096	0.0175	0.0091079	0.0091600
AT 802A	2	1	250	0.0003690	0.0000354	0.0000077	0.0000002	0.0000001	0.0000080	0.0161	0.0083720	0.0084154
AT 802A	2	1	300	0.0003321	0.0000319	0.0000069	0.0000002	0.0000001	0.0000072	0.0149	0.0077739	0.0078130
AT 802A	2	1	500	0.0002228	0.0000214	0.0000046	0.0000001	0.0000000	0.0000048	0.0117	0.0060840	0.0061102
AT 802A	2	1	1000	0.0001278	0.0000123	0.0000027	0.0000001	0.0000000	0.0000028	0.0065	0.0033800	0.0033950
AT 802A	2	1	1320	0.0001016	0.0000098	0.0000021	0.0000001	0.0000000	0.0000022	0.0046	0.0023920	0.0024039
AT 802A	2	1	2608	0.0000571	0.0000055	0.0000012	0.0000000	0.0000000	0.0000012	0.0016	0.0008320	0.0008387
AT 802A	2	2	25	0.0031364	0.0003011	0.0000653	0.0000020	0.0000005	0.0000677	0.0493	0.0256360	0.0260048
AT 802A	2	2	50	0.0022877	0.0002196	0.0000476	0.0000015	0.0000004	0.0000494	0.0437	0.0227240	0.0229930
AT 802A	2	2	75	0.0017711	0.0001700	0.0000368	0.0000011	0.0000003	0.0000383	0.0386	0.0200696	0.0202779
AT 802A	2	2	100	0.0014391	0.0001381	0.0000299	0.0000009	0.0000002	0.0000311	0.0350	0.0182000	0.0183692
AT 802A	2	2	150	0.0010701	0.0001027	0.0000223	0.0000007	0.0000002	0.0000231	0.0300	0.0155854	0.0157112
AT 802A	2	2	200	0.0008856	0.0000850	0.0000184	0.0000006	0.0000001	0.0000191	0.0264	0.0137440	0.0138482
AT 802A	2	2	250	0.0007380	0.0000708	0.0000154	0.0000005	0.0000001	0.0000159	0.0237	0.0123240	0.0124108
AT 802A	2	2	300	0.0006642	0.0000638	0.0000138	0.0000004	0.0000001	0.0000143	0.0215	0.0111684	0.0112465
AT 802A	2	2	500	0.0004456	0.0000428	0.0000093	0.0000003	0.0000001	0.0000096	0.0153	0.0079560	0.0080084
AT 802A	2	2	1000	0.0002556	0.0000245	0.0000053	0.0000002	0.0000000	0.0000055	0.0072	0.0037440	0.0037741
AT 802A	2	2	1320	0.0002032	0.0000195	0.0000042	0.0000001	0.0000000	0.0000044	0.0049	0.0025584	0.0025823
AT 802A	2	2	2608	0.0001142	0.0000110	0.0000024	0.0000001	0.0000000	0.0000025	0.0016	0.0008476	0.0008610
AT 802A	2	4	25	0.0062728	0.0006022	0.0001305	0.0000040	0.0000010	0.0001355	0.0795	0.0413296	0.0420673
AT 802A	2	4	50	0.0045754	0.0004392	0.0000952	0.0000029	0.0000007	0.0000988	0.0688	0.0357864	0.0363245
AT 802A	2	4	75	0.0035423	0.0003401	0.0000737	0.0000023	0.0000005	0.0000765	0.0594	0.0309036	0.0313202
AT 802A	2	4	100	0.0028781	0.0002763	0.0000599	0.0000018	0.0000004	0.0000622	0.0526	0.0273364	0.0276749
AT 802A	2	4	150	0.0021401	0.0002055	0.0000445	0.0000014	0.0000003	0.0000462	0.0431	0.0224276	0.0226793
AT 802A	2	4	200	0.0017711	0.0001700	0.0000368	0.0000011	0.0000003	0.0000383	0.0367	0.0190892	0.0192975
AT 802A	2	4	250	0.0014760	0.0001417	0.0000307	0.0000009	0.0000002	0.0000319	0.0315	0.0163748	0.0165484
AT 802A	2	4	300	0.0013284	0.0001275	0.0000276	0.0000008	0.0000002	0.0000287	0.0274	0.0142532	0.0144094
AT 802A	2	4	500	0.0008912	0.0000856	0.0000185	0.0000006	0.0000001	0.0000192	0.0176	0.0091416	0.0092464
AT 802A	2	4	1000	0.0005113	0.0000491	0.0000106	0.0000003	0.0000001	0.0000110	0.0076	0.0039728	0.0040329
AT 802A	2	4	1320	0.0004064	0.0000390	0.0000085	0.0000003	0.0000001	0.0000088	0.0051	0.0026624	0.0027102
AT 802A	2	4	2608	0.0002284	0.0000219	0.0000048	0.0000001	0.0000000	0.0000049	0.0019	0.0009724	0.0009993
AT 802A	2	6	25	0.0094092	0.0009033	0.0001958	0.0000060	0.0000015	0.0002032	0.1042	0.0541840	0.0552905
AT 802A	2	6	50	0.0068632	0.0006589	0.0001428	0.0000044	0.0000011	0.0001482	0.0884	0.0459680	0.0467751
AT 802A	2	6	75	0.0053134	0.0005101	0.0001105	0.0000034	0.0000008	0.0001148	0.0752	0.0391062	0.0397310
AT 802A	2	6	100	0.0043172	0.0004144	0.0000898	0.0000028	0.0000007	0.0000932	0.0650	0.0338000	0.0343077
AT 802A	2	6	150	0.0032102	0.0003082	0.0000668	0.0000021	0.0000005	0.0000693	0.0508	0.0264196	0.0267971
AT 802A	2	6	200	0.0026567	0.0002550	0.0000553	0.0000017	0.0000004	0.0000574	0.0414	0.0215534	0.0218659
AT 802A	2	6	250	0.0022139	0.0002125	0.0000461	0.0000014	0.0000003	0.0000478	0.0348	0.0180960	0.0183564
AT 802A	2	6	300	0.0019925	0.0001913	0.0000415	0.0000013	0.0000003	0.0000430	0.0298	0.0154880	0.0157223
AT 802A	2	6	500	0.0013369	0.0001283	0.0000278	0.0000009	0.0000002	0.0000289	0.0179	0.0093080	0.0094652
AT 802A	2	6	1000	0.0007669	0.0000736	0.0000160	0.0000005	0.0000001	0.0000166	0.0077	0.0040040	0.0040942
AT 802A	2	6	1320	0.0006096	0.0000585	0.0000127	0.0000004	0.0000001	0.0000132	0.0052	0.0027040	0.0027757
AT 802A	2	6	2608	0.0003426	0.0000329	0.0000071	0.0000002	0.0000001	0.0000074	0.0020	0.0010400	0.0010803

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 1.7 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose.

Appendix 2f - Drift Exposure for Children 1-2 Years Old with Ground Boom Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Ground Boom - High Boom 40 swath/50th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	59	264	16	12	7
AT 802A	2	1	50	90	398	17	14	8
AT 802A	2	1	75	120	534	19	16	8
AT 802A	2	1	100	153	678	21	18	9
AT 802A	2	1	150	209	929	23	21	9
AT 802A	2	1	200	269	1195	26	23	10
AT 802A	2	1	250	332	1476	28	26	10
AT 802A	2	1	300	403	1793	30	28	10
AT 802A	2	1	500	777	3455	39	37	11
AT 802A	2	1	1000	2583	11481	70	68	13
AT 802A	2	1	1320	4757	21143	99	96	14
AT 802A	2	1	2608	32151	142906	284	281	16
AT 802A	2	2	25	30	132	9	7	5
AT 802A	2	2	50	45	199	10	8	5
AT 802A	2	2	75	60	267	12	9	6
AT 802A	2	2	100	76	339	13	11	6
AT 802A	2	2	150	105	465	15	13	7
AT 802A	2	2	200	134	598	17	15	8
AT 802A	2	2	250	166	738	19	17	8
AT 802A	2	2	300	202	896	21	19	9
AT 802A	2	2	500	389	1727	30	27	10
AT 802A	2	2	1000	1291	5740	63	60	13
AT 802A	2	2	1320	2378	10571	92	88	14
AT 802A	2	2	2608	16075	71453	279	273	15
AT 802A	2	4	25	15	66	6	4	3
AT 802A	2	4	50	22	100	7	5	4
AT 802A	2	4	75	30	133	8	6	4
AT 802A	2	4	100	38	170	9	7	5
AT 802A	2	4	150	52	232	11	8	6
AT 802A	2	4	200	67	299	12	10	6
AT 802A	2	4	250	83	369	14	12	7
AT 802A	2	4	300	101	448	17	14	7
AT 802A	2	4	500	194	864	26	22	9
AT 802A	2	4	1000	646	2870	59	53	13
AT 802A	2	4	1320	1189	5286	89	81	14
AT 802A	2	4	2608	8038	35726	243	234	15
AT 802A	2	6	25	10	44	4	3	2
AT 802A	2	6	50	15	66	5	4	3
AT 802A	2	6	75	20	89	6	4	3
AT 802A	2	6	100	25	113	7	5	4
AT 802A	2	6	150	35	155	9	7	5
AT 802A	2	6	200	45	199	11	8	6
AT 802A	2	6	250	55	246	13	10	6
AT 802A	2	6	300	67	299	15	12	7
AT 802A	2	6	500	130	576	25	20	9
AT 802A	2	6	1000	430	1913	59	51	12
AT 802A	2	6	1320	793	3524	87	77	14
AT 802A	2	6	2608	5358	23818	227	216	15

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 1-2 yrs old was 0.000423 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 1-2 yrs old was 0.000186 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

RAS RISK CALCULATIONS								
Ground Boom - Low Boom 40 swath/50th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	113	502	16	13	7
AT 802A	2	1	50	166	738	17	15	8
AT 802A	2	1	75	217	965	19	17	8
AT 802A	2	1	100	282	1255	21	19	9
AT 802A	2	1	150	376	1673	23	22	9
AT 802A	2	1	200	471	2091	26	24	10
AT 802A	2	1	250	565	2510	28	27	10
AT 802A	2	1	300	627	2788	30	29	10
AT 802A	2	1	500	1096	4873	39	37	11
AT 802A	2	1	1000	2894	12862	70	68	13
AT 802A	2	1	1320	4740	21068	99	96	14
AT 802A	2	1	2608	22206	98702	284	280	16
AT 802A	2	2	25	56	251	9	8	5
AT 802A	2	2	50	83	369	10	9	6
AT 802A	2	2	75	109	483	12	10	6
AT 802A	2	2	100	141	627	13	12	7
AT 802A	2	2	150	188	837	15	14	7
AT 802A	2	2	200	235	1046	17	16	8
AT 802A	2	2	250	282	1255	19	18	9
AT 802A	2	2	300	314	1394	21	20	9
AT 802A	2	2	500	548	2436	30	28	10
AT 802A	2	2	1000	1447	6431	63	60	13
AT 802A	2	2	1320	2370	10534	93	89	14
AT 802A	2	2	2608	11103	49351	284	275	15
AT 802A	2	4	25	28	125	6	5	4
AT 802A	2	4	50	42	185	7	6	4
AT 802A	2	4	75	54	241	8	7	5
AT 802A	2	4	100	71	314	9	8	5
AT 802A	2	4	150	94	418	11	9	6
AT 802A	2	4	200	118	523	12	11	7
AT 802A	2	4	250	141	627	14	13	7
AT 802A	2	4	300	157	697	17	15	8
AT 802A	2	4	500	274	1218	26	23	10
AT 802A	2	4	1000	723	3216	59	54	13
AT 802A	2	4	1320	1185	5267	89	81	14
AT 802A	2	4	2608	5551	24676	243	231	15
AT 802A	2	6	25	19	84	4	3	3
AT 802A	2	6	50	28	123	5	4	3
AT 802A	2	6	75	36	161	6	5	4
AT 802A	2	6	100	47	209	7	6	4
AT 802A	2	6	150	63	279	9	8	5
AT 802A	2	6	200	78	349	11	9	6
AT 802A	2	6	250	94	418	13	11	7
AT 802A	2	6	300	105	465	15	13	7
AT 802A	2	6	500	183	812	25	22	9
AT 802A	2	6	1000	482	2144	59	51	12
AT 802A	2	6	1320	790	3511	87	77	14
AT 802A	2	6	2608	3701	16450	227	211	15

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).

b/Acute dietary exposure estimate for children 1-2 yrs old was 0.000423 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 1-2 yrs old was 0.000186 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2f - Drift Exposure for Children 1-2 Years Old with Ground Boom Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Ground Boom - High Boom 40 swath/90th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	42	186	<1	<1	<1
AT 802A	2	1	50	58	259	<1	<1	<1
AT 802A	2	1	75	75	335	<1	<1	<1
AT 802A	2	1	100	94	418	<1	<1	<1
AT 802A	2	1	150	125	558	<1	<1	<1
AT 802A	2	1	200	157	697	1	1	1
AT 802A	2	1	250	188	837	1	1	1
AT 802A	2	1	300	217	965	1	1	1
AT 802A	2	1	500	330	1469	2	2	1
AT 802A	2	1	1000	591	2629	3	3	2
AT 802A	2	1	1320	750	3332	4	4	3
AT 802A	2	1	2608	1350	5999	12	12	7
AT 802A	2	2	25	21	93	<1	<1	<1
AT 802A	2	2	50	29	129	<1	<1	<1
AT 802A	2	2	75	38	167	<1	<1	<1
AT 802A	2	2	100	47	209	<1	<1	<1
AT 802A	2	2	150	63	279	<1	<1	<1
AT 802A	2	2	200	78	349	<1	<1	<1
AT 802A	2	2	250	94	418	<1	<1	<1
AT 802A	2	2	300	109	483	<1	<1	<1
AT 802A	2	2	500	165	734	1	1	1
AT 802A	2	2	1000	296	1315	3	3	2
AT 802A	2	2	1320	375	1666	4	4	3
AT 802A	2	2	2608	675	2999	12	12	7
AT 802A	2	4	25	10	46	<1	<1	<1
AT 802A	2	4	50	15	65	<1	<1	<1
AT 802A	2	4	75	19	84	<1	<1	<1
AT 802A	2	4	100	24	105	<1	<1	<1
AT 802A	2	4	150	31	139	<1	<1	<1
AT 802A	2	4	200	39	174	<1	<1	<1
AT 802A	2	4	250	47	209	<1	<1	<1
AT 802A	2	4	300	54	241	<1	<1	<1
AT 802A	2	4	500	83	367	1	1	1
AT 802A	2	4	1000	148	657	3	2	2
AT 802A	2	4	1320	187	833	4	4	3
AT 802A	2	4	2608	337	1500	10	10	6
AT 802A	2	6	25	7	31	<1	<1	<1
AT 802A	2	6	50	10	43	<1	<1	<1
AT 802A	2	6	75	13	56	<1	<1	<1
AT 802A	2	6	100	16	70	<1	<1	<1
AT 802A	2	6	150	21	93	<1	<1	<1
AT 802A	2	6	200	26	116	<1	<1	<1
AT 802A	2	6	250	31	139	<1	<1	<1
AT 802A	2	6	300	36	161	<1	<1	<1
AT 802A	2	6	500	55	245	1	1	<1
AT 802A	2	6	1000	99	438	2	2	2
AT 802A	2	6	1320	125	555	4	4	3
AT 802A	2	6	2608	225	1000	10	9	6

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 1-2 yrs old was 0.000423 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 1-2 yrs old was 0.000186 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2f - Drift Exposure for Children 1-2 Years Old with Ground Boom Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Ground Boom - Low Boom 40 swath/90th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	66	295	<1	<1	<1
AT 802A	2	1	50	91	405	<1	<1	<1
AT 802A	2	1	75	118	523	<1	<1	<1
AT 802A	2	1	100	145	643	<1	<1	<1
AT 802A	2	1	150	195	865	<1	<1	<1
AT 802A	2	1	200	235	1046	1	1	1
AT 802A	2	1	250	282	1255	1	1	1
AT 802A	2	1	300	314	1394	1	1	1
AT 802A	2	1	500	468	2078	2	2	1
AT 802A	2	1	1000	815	3622	3	3	2
AT 802A	2	1	1320	1025	4558	4	4	3
AT 802A	2	1	2608	1824	8108	12	12	7
AT 802A	2	2	25	33	148	<1	<1	<1
AT 802A	2	2	50	46	202	<1	<1	<1
AT 802A	2	2	75	59	261	<1	<1	<1
AT 802A	2	2	100	72	322	<1	<1	<1
AT 802A	2	2	150	97	433	<1	<1	<1
AT 802A	2	2	200	118	523	<1	<1	<1
AT 802A	2	2	250	141	627	<1	<1	<1
AT 802A	2	2	300	157	697	<1	<1	<1
AT 802A	2	2	500	234	1039	1	1	1
AT 802A	2	2	1000	407	1811	3	3	2
AT 802A	2	2	1320	513	2279	4	4	3
AT 802A	2	2	2608	912	4054	12	12	7
AT 802A	2	4	25	17	74	<1	<1	<1
AT 802A	2	4	50	23	101	<1	<1	<1
AT 802A	2	4	75	29	131	<1	<1	<1
AT 802A	2	4	100	36	161	<1	<1	<1
AT 802A	2	4	150	49	216	<1	<1	<1
AT 802A	2	4	200	59	261	<1	<1	<1
AT 802A	2	4	250	71	314	<1	<1	<1
AT 802A	2	4	300	78	349	<1	<1	<1
AT 802A	2	4	500	117	520	1	1	1
AT 802A	2	4	1000	204	906	3	2	2
AT 802A	2	4	1320	256	1139	4	4	3
AT 802A	2	4	2608	456	2027	10	10	6
AT 802A	2	6	25	11	49	<1	<1	<1
AT 802A	2	6	50	15	67	<1	<1	<1
AT 802A	2	6	75	20	87	<1	<1	<1
AT 802A	2	6	100	24	107	<1	<1	<1
AT 802A	2	6	150	32	144	<1	<1	<1
AT 802A	2	6	200	39	174	<1	<1	<1
AT 802A	2	6	250	47	209	<1	<1	<1
AT 802A	2	6	300	52	232	<1	<1	<1
AT 802A	2	6	500	78	346	1	1	<1
AT 802A	2	6	1000	136	604	2	2	2
AT 802A	2	6	1320	171	760	4	4	3
AT 802A	2	6	2608	304	1351	10	9	6

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 1-2 yrs old was 0.000423 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 1-2 yrs old was 0.000186 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2g - Drift Exposure for Children 6-12 Years Old with Aerial Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Drift-Modeling - AGDISP				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
Aircraft	Spray Vol (gal/acre)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0555402	0.0053319	NA	NA	NA	NA	0.0218	0.0003488	0.0056807
AT 802A	2	1	50	0.0437138	0.0041965	NA	NA	NA	NA	0.0194	0.0003104	0.0045069
AT 802A	2	1	100	0.0294475	0.0028270	NA	NA	NA	NA	0.0163	0.0002608	0.0030878
AT 802A	2	1	250	0.0153506	0.0014737	NA	NA	NA	NA	0.0118	0.0001888	0.0016625
AT 802A	2	1	500	0.0091494	0.0008783	NA	NA	NA	NA	0.0085	0.0001360	0.0010143
AT 802A	2	1	1000	0.0048797	0.0004684	NA	NA	NA	NA	0.0047	0.0000752	0.0005436
AT 802A	2	1	1320	0.0031853	0.0003058	NA	NA	NA	NA	0.0033	0.0000528	0.0003586
AT 802A	2	1	2608	0.0005761	0.0000553	NA	NA	NA	NA	0.0012	0.0000192	0.0000745
Bell 205 Helicopter	2	1	25	0.0526260	0.0050521	NA	NA	NA	NA	0.0240	0.0003840	0.0054361
Bell 205 Helicopter	2	1	50	0.0322262	0.0030937	NA	NA	NA	NA	0.0197	0.0003152	0.0034089
Bell 205 Helicopter	2	1	100	0.0195865	0.0018803	NA	NA	NA	NA	0.0158	0.0002528	0.0021331
Bell 205 Helicopter	2	1	250	0.0125042	0.0012004	NA	NA	NA	NA	0.0111	0.0001776	0.0013780
Bell 205 Helicopter	2	1	500	0.0074212	0.0007124	NA	NA	NA	NA	0.0074	0.0001184	0.0008308
Bell 205 Helicopter	2	1	1000	0.0036259	0.0003481	NA	NA	NA	NA	0.0042	0.0000672	0.0004153
Bell 205 Helicopter	2	1	1320	0.0025415	0.0002440	NA	NA	NA	NA	0.0032	0.0000512	0.0002952
Bell 205 Helicopter	2	1	2608	0.0004066	0.0000390	NA	NA	NA	NA	0.0015	0.0000240	0.0000630
AT 802A	2	2	25	0.1111482	0.0106702	NA	NA	NA	NA	0.0367	0.0005872	0.0112574
AT 802A	2	2	50	0.0871564	0.0083670	NA	NA	NA	NA	0.0320	0.0005120	0.0088790
AT 802A	2	2	100	0.0582172	0.0055889	NA	NA	NA	NA	0.0259	0.0004144	0.0060033
AT 802A	2	2	250	0.0291425	0.0027977	NA	NA	NA	NA	0.0174	0.0002784	0.0030761
AT 802A	2	2	500	0.0158589	0.0015225	NA	NA	NA	NA	0.0111	0.0001776	0.0017001
AT 802A	2	2	1000	0.0062351	0.0005986	NA	NA	NA	NA	0.0052	0.0000832	0.0006818
AT 802A	2	2	1320	0.0036598	0.0003513	NA	NA	NA	NA	0.0036	0.0000576	0.0004089
AT 802A	2	2	2608	0.0006777	0.0000651	NA	NA	NA	NA	0.0012	0.0000192	0.0000843
Bell 205 Helicopter	2	2	25	0.1066751	0.0102408	NA	NA	NA	NA	0.0404	0.0006464	0.0108872
Bell 205 Helicopter	2	2	75	0.0523887	0.0050293	NA	NA	NA	NA	0.0292	0.0004672	0.0054965
Bell 205 Helicopter	2	2	200	0.0262960	0.0025244	NA	NA	NA	NA	0.0186	0.0002976	0.0028220
Bell 205 Helicopter	2	2	300	0.0187732	0.0018022	NA	NA	NA	NA	0.0145	0.0002320	0.0020342
Bell 205 Helicopter	2	2	500	0.0115892	0.0011126	NA	NA	NA	NA	0.0093	0.0001488	0.0012614
Bell 205 Helicopter	2	2	1000	0.0050830	0.0004880	NA	NA	NA	NA	0.0049	0.0000784	0.0005664
Bell 205 Helicopter	2	2	1320	0.0032531	0.0003123	NA	NA	NA	NA	0.0036	0.0000578	0.0003701
Bell 205 Helicopter	2	2	2608	0.0005422	0.0000520	NA	NA	NA	NA	0.0016	0.0000254	0.0000775
AT 802A	2	2.3	25	0.1277425	0.0122633	NA	NA	NA	NA	0.0394	0.0006304	0.0128937
AT 802A	2	2.3	50	0.1000740	0.0096071	NA	NA	NA	NA	0.0341	0.0005456	0.0101527
AT 802A	2	2.3	100	0.0667160	0.0064047	NA	NA	NA	NA	0.0275	0.0004400	0.0068447
AT 802A	2	2.3	250	0.0333580	0.0032024	NA	NA	NA	NA	0.0183	0.0002928	0.0034952
AT 802A	2	2.3	500	0.0176922	0.0016985	NA	NA	NA	NA	0.0115	0.0001840	0.0018825
AT 802A	2	2.3	1000	0.0068587	0.0006584	NA	NA	NA	NA	0.0054	0.0000864	0.0007448
AT 802A	2	2.3	1320	0.0038970	0.0003741	NA	NA	NA	NA	0.0037	0.0000592	0.0004333
AT 802A	2	2.3	2608	0.0008573	0.0000823	NA	NA	NA	NA	0.0012	0.0000192	0.0001015
Bell 205 Helicopter	2	2.3	25	0.1227544	0.0117844	NA	NA	NA	NA	0.0435	0.0006960	0.0124804
Bell 205 Helicopter	2	2.3	50	0.0756011	0.0072577	NA	NA	NA	NA	0.0345	0.0005520	0.0078097
Bell 205 Helicopter	2	2.3	100	0.0471533	0.0045267	NA	NA	NA	NA	0.0260	0.0004160	0.0049427
Bell 205 Helicopter	2	2.3	250	0.0255641	0.0024542	NA	NA	NA	NA	0.0160	0.0002560	0.0027102
Bell 205 Helicopter	2	2.3	500	0.0128600	0.0012346	NA	NA	NA	NA	0.0096	0.0001536	0.0013882
Bell 205 Helicopter	2	2.3	1000	0.0055337	0.0005312	NA	NA	NA	NA	0.0050	0.0000800	0.0006112
Bell 205 Helicopter	2	2.3	1320	0.0035073	0.0003367	NA	NA	NA	NA	0.0037	0.0000592	0.0003959
Bell 205 Helicopter	2	2.3	2608	0.0007015	0.0000673	NA	NA	NA	NA	0.0016	0.0000256	0.0000929

* Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

Appendix 2g - Drift Exposure for Children 6-12 Years Old with Aerial Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Drift-Modeling - AGDISP				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
Aircraft	Spray Vol (gal/acre)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	15	1	25	0.0477463	0.0045836	NA	NA	NA	NA	0.0306	0.0004896	0.0050732
AT 802A	15	1	50	0.0381902	0.0036663	NA	NA	NA	NA	0.0287	0.0004592	0.0041255
AT 802A	15	1	100	0.0255505	0.0024529	NA	NA	NA	NA	0.0256	0.0004096	0.0028625
AT 802A	15	1	250	0.0131141	0.0012590	NA	NA	NA	NA	0.0212	0.0003392	0.0015982
AT 802A	15	1	500	0.0081328	0.0007807	NA	NA	NA	NA	0.0177	0.0002832	0.0010639
AT 802A	15	1	1000	0.0060657	0.0005823	NA	NA	NA	NA	0.0138	0.0002208	0.0008031
AT 802A	15	1	1320	0.0054896	0.0005270	NA	NA	NA	NA	0.0119	0.0001904	0.0007174
AT 802A	15	1	2608	0.0016266	0.0001561	NA	NA	NA	NA	0.0065	0.0001040	0.0002601
Bell 205 Helicopter	15	1	25	0.0475430	0.0045641	NA	NA	NA	NA	0.0426	0.0006816	0.0052457
Bell 205 Helicopter	15	1	50	0.0275837	0.0026480	NA	NA	NA	NA	0.0373	0.0005968	0.0032448
Bell 205 Helicopter	15	1	100	0.0159945	0.0015355	NA	NA	NA	NA	0.0325	0.0005200	0.0020555
Bell 205 Helicopter	15	1	250	0.0111148	0.0010670	NA	NA	NA	NA	0.0266	0.0004256	0.0014926
Bell 205 Helicopter	15	1	500	0.0083361	0.0008003	NA	NA	NA	NA	0.0209	0.0003344	0.0011347
Bell 205 Helicopter	15	1	1000	0.0054557	0.0005238	NA	NA	NA	NA	0.0147	0.0002352	0.0007590
Bell 205 Helicopter	15	1	1320	0.0043714	0.0004197	NA	NA	NA	NA	0.0108	0.0001728	0.0005925
Bell 205 Helicopter	15	1	2608	0.0007116	0.0000683	NA	NA	NA	NA	0.0064	0.0001024	0.0001707
AT 802A	15	2	25	0.0997623	0.0095772	NA	NA	NA	NA	0.0522	0.0008352	0.0104124
AT 802A	15	2	50	0.0803791	0.0077164	NA	NA	NA	NA	0.0484	0.0007744	0.0084908
AT 802A	15	2	100	0.0547608	0.0052570	NA	NA	NA	NA	0.0426	0.0006816	0.0059386
AT 802A	15	2	250	0.0288036	0.0027651	NA	NA	NA	NA	0.0342	0.0005472	0.0033123
AT 802A	15	2	500	0.0183666	0.0017632	NA	NA	NA	NA	0.0278	0.0004448	0.0022080
AT 802A	15	2	1000	0.0133513	0.0012817	NA	NA	NA	NA	0.0202	0.0003232	0.0016049
AT 802A	15	2	1320	0.0115892	0.0011126	NA	NA	NA	NA	0.0165	0.0002640	0.0013766
AT 802A	15	2	2608	0.0027787	0.0002668	NA	NA	NA	NA	0.0075	0.0001200	0.0003868
Bell 205 Helicopter	15	2	25	0.0990168	0.0095056	NA	NA	NA	NA	0.0596	0.0009536	0.0104592
Bell 205 Helicopter	15	2	50	0.0589628	0.0056604	NA	NA	NA	NA	0.0516	0.0008256	0.0064860
Bell 205 Helicopter	15	2	100	0.0349032	0.0033507	NA	NA	NA	NA	0.0443	0.0007088	0.0040595
Bell 205 Helicopter	15	2	250	0.0243984	0.0023422	NA	NA	NA	NA	0.0353	0.0005648	0.0029070
Bell 205 Helicopter	15	2	500	0.0173500	0.0016656	NA	NA	NA	NA	0.0270	0.0004320	0.0020976
Bell 205 Helicopter	15	2	1000	0.0105049	0.0010085	NA	NA	NA	NA	0.0183	0.0002928	0.0013013
Bell 205 Helicopter	15	2	1320	0.0079972	0.0007677	NA	NA	NA	NA	0.0150	0.0002400	0.0010077
Bell 205 Helicopter	15	2	2608	0.0014232	0.0001366	NA	NA	NA	NA	0.0083	0.0001328	0.0002694
AT 802A	15	2.3	25	0.1153501	0.0110736	NA	NA	NA	NA	0.0579	0.0009264	0.0120000
AT 802A	15	2.3	50	0.0930595	0.0089337	NA	NA	NA	NA	0.0536	0.0008576	0.0097913
AT 802A	15	2.3	100	0.0633646	0.0060830	NA	NA	NA	NA	0.0469	0.0007504	0.0068334
AT 802A	15	2.3	250	0.0334359	0.0032099	NA	NA	NA	NA	0.0375	0.0006000	0.0038099
AT 802A	15	2.3	500	0.0212774	0.0020426	NA	NA	NA	NA	0.0303	0.0004848	0.0025274
AT 802A	15	2.3	1000	0.0154320	0.0014815	NA	NA	NA	NA	0.0217	0.0003472	0.0018287
AT 802A	15	2.3	1320	0.0130159	0.0012495	NA	NA	NA	NA	0.0175	0.0002800	0.0015295
AT 802A	15	2.3	2608	0.0031955	0.0003068					0.0077	0.0001232	0.0004300
Bell 205 Helicopter	15	2.3	25	0.1147266	0.0110138	NA	NA	NA	NA	0.0659	0.0010544	0.0120682
Bell 205 Helicopter	15	2.3	50	0.0685086	0.0065768	NA	NA	NA	NA	0.0569	0.0009104	0.0074872
Bell 205 Helicopter	15	2.3	100	0.0406843	0.0039057	NA	NA	NA	NA	0.0485	0.0007760	0.0046817
Bell 205 Helicopter	15	2.3	250	0.0282140	0.0027085	NA	NA	NA	NA	0.0385	0.0006160	0.0033245
Bell 205 Helicopter	15	2.3	500	0.0197966	0.0019005	NA	NA	NA	NA	0.0291	0.0004656	0.0023661
Bell 205 Helicopter	15	2.3	1000	0.0120026	0.0011523	NA	NA	NA	NA	0.0195	0.0003120	0.0014643
Bell 205 Helicopter	15	2.3	1320	0.0091189	0.0008754	NA	NA	NA	NA	0.0159	0.0002544	0.0011298
Bell 205 Helicopter	15	2.3	2608	0.0016367	0.0001571	NA	NA	NA	NA	0.0092	0.0001472	0.0003043

* Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

RAS RISK CALCULATIONS								
Drift-Modeling - AGDISP				Margins of Exposure[a]				
Aircraft	Spray Vol (gal/acre)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	2	NA	29	2	2
AT 802A	2	1	50	2	NA	32	2	2
AT 802A	2	1	100	4	NA	38	3	3
AT 802A	2	1	250	7	NA	53	6	5
AT 802A	2	1	500	11	NA	74	10	8
AT 802A	2	1	1000	21	NA	133	18	12
AT 802A	2	1	1320	33	NA	189	28	15
AT 802A	2	1	2608	181	NA	521	134	26
Bell 205 Helicopter	2	1	25	2	NA	26	2	2
Bell 205 Helicopter	2	1	50	3	NA	32	3	3
Bell 205 Helicopter	2	1	100	5	NA	40	5	4
Bell 205 Helicopter	2	1	250	8	NA	56	7	6
Bell 205 Helicopter	2	1	500	14	NA	84	12	9
Bell 205 Helicopter	2	1	1000	29	NA	149	24	14
Bell 205 Helicopter	2	1	1320	41	NA	195	34	17
Bell 205 Helicopter	2	1	2608	256	NA	417	159	27
AT 802A	2	2	25	<1	NA	17	<1	<1
AT 802A	2	2	50	1	NA	20	1	1
AT 802A	2	2	100	2	NA	24	2	2
AT 802A	2	2	250	4	NA	36	3	3
AT 802A	2	2	500	7	NA	56	6	5
AT 802A	2	2	1000	17	NA	120	15	10
AT 802A	2	2	1320	28	NA	174	24	14
AT 802A	2	2	2608	154	NA	521	119	26
Bell 205 Helicopter	2	2	25	<1	NA	15	<1	<1
Bell 205 Helicopter	2	2	75	2	NA	21	2	2
Bell 205 Helicopter	2	2	200	4	NA	34	4	3
Bell 205 Helicopter	2	2	300	6	NA	43	5	4
Bell 205 Helicopter	2	2	500	9	NA	67	8	6
Bell 205 Helicopter	2	2	1000	20	NA	128	18	11
Bell 205 Helicopter	2	2	1320	32	NA	173	27	15
Bell 205 Helicopter	2	2	2608	192	NA	393	129	26
AT 802A	2	2.3	25	<1	NA	16	<1	<1
AT 802A	2	2.3	50	1	NA	18	<1	<1
AT 802A	2	2.3	100	2	NA	23	1	1
AT 802A	2	2.3	250	3	NA	34	3	3
AT 802A	2	2.3	500	6	NA	54	5	5
AT 802A	2	2.3	1000	15	NA	116	13	10
AT 802A	2	2.3	1320	27	NA	169	23	14
AT 802A	2	2.3	2608	122	NA	521	99	25
Bell 205 Helicopter	2	2.3	25	<1	NA	14	<1	<1
Bell 205 Helicopter	2	2.3	50	1	NA	18	1	1
Bell 205 Helicopter	2	2.3	100	2	NA	24	2	2
Bell 205 Helicopter	2	2.3	250	4	NA	39	4	3
Bell 205 Helicopter	2	2.3	500	8	NA	65	7	6
Bell 205 Helicopter	2	2.3	1000	19	NA	125	16	11
Bell 205 Helicopter	2	2.3	1320	30	NA	169	25	14
Bell 205 Helicopter	2	2.3	2608	149	NA	391	108	25

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 6-12 yrs old was 0.000189 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 6-12 yrs old was 0.000115 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring

Appendix 2g - Drift Exposure for Children 6-12 Years Old with Aerial Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Drift-Modeling - AGDISP				Margins of Exposure[a]				
Aircraft	Spray Vol (gal/acre)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	15	1	25	2	NA	20	2	2
AT 802A	15	1	50	3	NA	22	2	2
AT 802A	15	1	100	4	NA	24	3	3
AT 802A	15	1	250	8	NA	29	6	5
AT 802A	15	1	500	13	NA	35	9	7
AT 802A	15	1	1000	17	NA	45	12	9
AT 802A	15	1	1320	19	NA	53	14	10
AT 802A	15	1	2608	64	NA	96	38	18
Bell 205 Helicopter	15	1	25	2	NA	15	2	2
Bell 205 Helicopter	15	1	50	4	NA	17	3	3
Bell 205 Helicopter	15	1	100	7	NA	19	5	4
Bell 205 Helicopter	15	1	250	9	NA	23	7	6
Bell 205 Helicopter	15	1	500	12	NA	30	9	7
Bell 205 Helicopter	15	1	1000	19	NA	43	13	9
Bell 205 Helicopter	15	1	1320	24	NA	58	17	11
Bell 205 Helicopter	15	1	2608	146	NA	98	59	21
AT 802A	15	2	25	1	NA	12	<1	<1
AT 802A	15	2	50	1	NA	13	1	1
AT 802A	15	2	100	2	NA	15	2	2
AT 802A	15	2	250	4	NA	18	3	3
AT 802A	15	2	500	6	NA	22	5	4
AT 802A	15	2	1000	8	NA	31	6	5
AT 802A	15	2	1320	9	NA	38	7	6
AT 802A	15	2	2608	37	NA	83	26	14
Bell 205 Helicopter	15	2	25	1	NA	10	<1	<1
Bell 205 Helicopter	15	2	50	2	NA	12	2	1
Bell 205 Helicopter	15	2	100	3	NA	14	2	2
Bell 205 Helicopter	15	2	250	4	NA	18	3	3
Bell 205 Helicopter	15	2	500	6	NA	23	5	4
Bell 205 Helicopter	15	2	1000	10	NA	34	8	6
Bell 205 Helicopter	15	2	1320	13	NA	42	10	8
Bell 205 Helicopter	15	2	2608	73	NA	75	37	17
AT 802A	15	2.3	25	<1	NA	11	<1	<1
AT 802A	15	2.3	50	1	NA	12	1	<1
AT 802A	15	2.3	100	2	NA	13	1	1
AT 802A	15	2.3	250	3	NA	17	3	2
AT 802A	15	2.3	500	5	NA	21	4	4
AT 802A	15	2.3	1000	7	NA	29	5	5
AT 802A	15	2.3	1320	8	NA	36	7	5
AT 802A	15	2.3	2608	33	NA	81	23	14
Bell 205 Helicopter	15	2.3	25	<1	NA	9	<1	<1
Bell 205 Helicopter	15	2.3	50	2	NA	11	1	1
Bell 205 Helicopter	15	2.3	100	3	NA	13	2	2
Bell 205 Helicopter	15	2.3	250	4	NA	16	3	3
Bell 205 Helicopter	15	2.3	500	5	NA	21	4	4
Bell 205 Helicopter	15	2.3	1000	9	NA	32	7	6
Bell 205 Helicopter	15	2.3	1320	11	NA	39	9	7
Bell 205 Helicopter	15	2.3	2608	64	NA	68	33	16

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 6-12 yrs old was 0.000189 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 6-12 yrs old was 0.000115 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring

EAS EXPOSURE ESTIMATES												
Orchard Airblast - Dormant Apple - 60 Swath												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose						
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)	1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AT 802A	2	1	25	0.0187563	0.0018006	NA	NA	NA	NA	0.0218	0.0003488	0.0021494
AT 802A	2	1	50	0.0071365	0.0006851	NA	NA	NA	NA	0.0194	0.0003104	0.0009955
AT 802A	2	1	75	0.0035005	0.0003360	NA	NA	NA	NA	0.0176	0.0002816	0.0006176
AT 802A	2	1	100	0.0019891	0.0001910	NA	NA	NA	NA	0.0163	0.0002608	0.0004518
AT 802A	2	1	150	0.0008404	0.0000807	NA	NA	NA	NA	0.0143	0.0002288	0.0003095
AT 802A	2	1	200	0.0004439	0.0000426	NA	NA	NA	NA	0.0129	0.0002064	0.0002490
AT 802A	2	1	250	0.0002677	0.0000257	NA	NA	NA	NA	0.0118	0.0001888	0.0002145
AT 802A	2	1	300	0.0001728	0.0000166	NA	NA	NA	NA	0.0109	0.0001744	0.0001910
AT 802A	2	1	500	0.0000474	0.0000046	NA	NA	NA	NA	0.0085	0.0001360	0.0001406
AT 802A	2	1	1000	0.0000087	0.0000008	NA	NA	NA	NA	0.0047	0.0000752	0.0000760
AT 802A	2	1	1320	0.0000044	0.0000004	NA	NA	NA	NA	0.0033	0.0000528	0.0000532
AT 802A	2	1	2608	0.0000008	0.0000001	NA	NA	NA	NA	0.0012	0.0000192	0.0000193
AT 802A	2	2	25	0.0375125	0.0036012	NA	NA	NA	NA	0.0367	0.0005872	0.0041884
AT 802A	2	2	50	0.0142731	0.0013702	NA	NA	NA	NA	0.0320	0.0005120	0.0018822
AT 802A	2	2	75	0.0070010	0.0006721	NA	NA	NA	NA	0.0285	0.0004560	0.0011281
AT 802A	2	2	100	0.0039783	0.0003819	NA	NA	NA	NA	0.0259	0.0004144	0.0007963
AT 802A	2	2	150	0.0016808	0.0001614	NA	NA	NA	NA	0.0221	0.0003536	0.0005150
AT 802A	2	2	200	0.0008878	0.0000852	NA	NA	NA	NA	0.0195	0.0003120	0.0003972
AT 802A	2	2	250	0.0005354	0.0000514	NA	NA	NA	NA	0.0174	0.0002784	0.0003298
AT 802A	2	2	300	0.0003456	0.0000332	NA	NA	NA	NA	0.0157	0.0002512	0.0002844
AT 802A	2	2	500	0.0000949	0.0000091	NA	NA	NA	NA	0.0111	0.0001776	0.0001867
AT 802A	2	2	1000	0.0000174	0.0000017	NA	NA	NA	NA	0.0052	0.0000832	0.0000849
AT 802A	2	2	1320	0.0000087	0.0000008	NA	NA	NA	NA	0.0036	0.0000576	0.0000584
AT 802A	2	2	2608	0.0000016	0.0000002	NA	NA	NA	NA	0.0012	0.0000192	0.0000194
AT 802A	2	4	25	0.0750250	0.0072024	NA	NA	NA	NA	0.0596	0.0009536	0.0081560
AT 802A	2	4	50	0.0285461	0.0027404	NA	NA	NA	NA	0.0503	0.0008048	0.0035452
AT 802A	2	4	75	0.0140020	0.0013442	NA	NA	NA	NA	0.0439	0.0007024	0.0020466
AT 802A	2	4	100	0.0079566	0.0007638	NA	NA	NA	NA	0.0389	0.0006224	0.0013862
AT 802A	2	4	150	0.0033616	0.0003227	NA	NA	NA	NA	0.0319	0.0005104	0.0008331
AT 802A	2	4	200	0.0017757	0.0001705	NA	NA	NA	NA	0.0269	0.0004304	0.0006009
AT 802A	2	4	250	0.0010708	0.0001028	NA	NA	NA	NA	0.0230	0.0003680	0.0004708
AT 802A	2	4	300	0.0006913	0.0000664	NA	NA	NA	NA	0.0200	0.0003200	0.0003864
AT 802A	2	4	500	0.0001898	0.0000182	NA	NA	NA	NA	0.0128	0.0002048	0.0002230
AT 802A	2	4	1000	0.0000349	0.0000033	NA	NA	NA	NA	0.0055	0.0000880	0.0000913
AT 802A	2	4	1320	0.0000174	0.0000017	NA	NA	NA	NA	0.0037	0.0000592	0.0000609
AT 802A	2	4	2608	0.0000032	0.0000003	NA	NA	NA	NA	0.0014	0.0000224	0.0000227
AT 802A	2	6	25	0.1125375	0.0108036	NA	NA	NA	NA	0.0781	0.0012496	0.0120532
AT 802A	2	6	50	0.0428192	0.0041106	NA	NA	NA	NA	0.0643	0.0010288	0.0051394
AT 802A	2	6	75	0.0210029	0.0020163	NA	NA	NA	NA	0.0550	0.0008800	0.0028963
AT 802A	2	6	100	0.0119349	0.0011457	NA	NA	NA	NA	0.0479	0.0007664	0.0019121
AT 802A	2	6	150	0.0050423	0.0004841	NA	NA	NA	NA	0.0377	0.0006032	0.0010873
AT 802A	2	6	200	0.0026635	0.0002557	NA	NA	NA	NA	0.0305	0.0004880	0.0007437
AT 802A	2	6	250	0.0016062	0.0001542	NA	NA	NA	NA	0.0253	0.0004048	0.0005590
AT 802A	2	6	300	0.0010369	0.0000995	NA	NA	NA	NA	0.0214	0.0003424	0.0004419
AT 802A	2	6	500	0.0002846	0.0000273	NA	NA	NA	NA	0.0130	0.0002080	0.0002353
AT 802A	2	6	1000	0.0000523	0.0000050	NA	NA	NA	NA	0.0055	0.0000880	0.0000930
AT 802A	2	6	1320	0.0000261	0.0000025	NA	NA	NA	NA	0.0038	0.0000608	0.0000633
AT 802A	2	6	2608	0.0000048	0.0000005	NA	NA	NA	NA	0.0014	0.0000224	0.0000229

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

EAS EXPOSURE ESTIMATES												
Orchard Airblast - Sparse Orchard - 60 Swath												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose						
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)	1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AT 802A	2	1	25	0.0152083	0.0014600	NA	NA	NA	NA	0.0218	0.0003488	0.0018088
AT 802A	2	1	50	0.0069264	0.0006649	NA	NA	NA	NA	0.0194	0.0003104	0.0009753
AT 802A	2	1	75	0.0038902	0.0003735	NA	NA	NA	NA	0.0176	0.0002816	0.0006551
AT 802A	2	1	100	0.0024839	0.0002385	NA	NA	NA	NA	0.0163	0.0002608	0.0004993
AT 802A	2	1	150	0.0012640	0.0001213	NA	NA	NA	NA	0.0143	0.0002288	0.0003501
AT 802A	2	1	200	0.0007624	0.0000732	NA	NA	NA	NA	0.0129	0.0002064	0.0002796
AT 802A	2	1	250	0.0005117	0.0000491	NA	NA	NA	NA	0.0118	0.0001888	0.0002379
AT 802A	2	1	300	0.0003660	0.0000351	NA	NA	NA	NA	0.0109	0.0001744	0.0002095
AT 802A	2	1	500	0.0001342	0.0000129	NA	NA	NA	NA	0.0085	0.0001360	0.0001489
AT 802A	2	1	1000	0.0000278	0.0000027	NA	NA	NA	NA	0.0047	0.0000752	0.0000779
AT 802A	2	1	1320	0.0000130	0.0000012	NA	NA	NA	NA	0.0033	0.0000528	0.0000540
AT 802A	2	1	2608	0.0000007	0.0000001	NA	NA	NA	NA	0.0012	0.0000192	0.0000193
AT 802A	2	2	25	0.0304166	0.0029200	NA	NA	NA	NA	0.0367	0.0005872	0.0035072
AT 802A	2	2	50	0.0138529	0.0013299	NA	NA	NA	NA	0.0320	0.0005120	0.0018419
AT 802A	2	2	75	0.0077804	0.0007469	NA	NA	NA	NA	0.0285	0.0004560	0.0012029
AT 802A	2	2	100	0.0049678	0.0004769	NA	NA	NA	NA	0.0259	0.0004144	0.0008913
AT 802A	2	2	150	0.0025279	0.0002427	NA	NA	NA	NA	0.0221	0.0003536	0.0005963
AT 802A	2	2	200	0.0015249	0.0001464	NA	NA	NA	NA	0.0195	0.0003120	0.0004584
AT 802A	2	2	250	0.0010234	0.0000982	NA	NA	NA	NA	0.0174	0.0002784	0.0003766
AT 802A	2	2	300	0.0007320	0.0000703	NA	NA	NA	NA	0.0157	0.0002512	0.0003215
AT 802A	2	2	500	0.0002684	0.0000258	NA	NA	NA	NA	0.0111	0.0001776	0.0002034
AT 802A	2	2	1000	0.0000557	0.0000053	NA	NA	NA	NA	0.0052	0.0000832	0.0000885
AT 802A	2	2	1320	0.0000260	0.0000025	NA	NA	NA	NA	0.0036	0.0000576	0.0000601
AT 802A	2	2	2608	0.0000014	0.0000001	NA	NA	NA	NA	0.0012	0.0000192	0.0000193
AT 802A	2	4	25	0.0608333	0.0058400	NA	NA	NA	NA	0.0596	0.0009536	0.0067936
AT 802A	2	4	50	0.0277057	0.0026597	NA	NA	NA	NA	0.0503	0.0008048	0.0034645
AT 802A	2	4	75	0.0155607	0.0014938	NA	NA	NA	NA	0.0439	0.0007024	0.0021962
AT 802A	2	4	100	0.0099356	0.0009538	NA	NA	NA	NA	0.0389	0.0006224	0.0015762
AT 802A	2	4	150	0.0050559	0.0004854	NA	NA	NA	NA	0.0319	0.0005104	0.0009958
AT 802A	2	4	200	0.0030498	0.0002928	NA	NA	NA	NA	0.0269	0.0004304	0.0007232
AT 802A	2	4	250	0.0020468	0.0001965	NA	NA	NA	NA	0.0230	0.0003680	0.0005645
AT 802A	2	4	300	0.0014639	0.0001405	NA	NA	NA	NA	0.0200	0.0003200	0.0004605
AT 802A	2	4	500	0.0005367	0.0000515	NA	NA	NA	NA	0.0128	0.0002048	0.0002563
AT 802A	2	4	1000	0.0001114	0.0000107	NA	NA	NA	NA	0.0055	0.0000880	0.0000987
AT 802A	2	4	1320	0.0000520	0.0000050	NA	NA	NA	NA	0.0037	0.0000592	0.0000642
AT 802A	2	4	2608	0.0000028	0.0000003	NA	NA	NA	NA	0.0014	0.0000224	0.0000227
AT 802A	2	6	25	0.0912499	0.0087600	NA	NA	NA	NA	0.0781	0.0012496	0.0100096
AT 802A	2	6	50	0.0415586	0.0039896	NA	NA	NA	NA	0.0643	0.0010288	0.0050184
AT 802A	2	6	75	0.0233411	0.0022407	NA	NA	NA	NA	0.0550	0.0008800	0.0031207
AT 802A	2	6	100	0.0149033	0.0014307	NA	NA	NA	NA	0.0479	0.0007664	0.0021971
AT 802A	2	6	150	0.0075838	0.0007280	NA	NA	NA	NA	0.0377	0.0006032	0.0013312
AT 802A	2	6	200	0.0045747	0.0004392	NA	NA	NA	NA	0.0305	0.0004880	0.0009272
AT 802A	2	6	250	0.0030701	0.0002947	NA	NA	NA	NA	0.0253	0.0004048	0.0006995
AT 802A	2	6	300	0.0021959	0.0002108	NA	NA	NA	NA	0.0214	0.0003424	0.0005532
AT 802A	2	6	500	0.0008051	0.0000773	NA	NA	NA	NA	0.0130	0.0002080	0.0002853
AT 802A	2	6	1000	0.0001671	0.0000160	NA	NA	NA	NA	0.0055	0.0000880	0.0001040
AT 802A	2	6	1320	0.0000780	0.0000075	NA	NA	NA	NA	0.0038	0.0000608	0.0000683
AT 802A	2	6	2608	0.0000042	0.0000004	NA	NA	NA	NA	0.0014	0.0000224	0.0000228

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

RAS RISK CALCULATIONS								
Orchard Airblast - Dormant Apple - 60 Swath								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	6	NA	29	5	4
AT 802A	2	1	50	15	NA	32	10	8
AT 802A	2	1	75	30	NA	36	16	11
AT 802A	2	1	100	52	NA	38	22	13
AT 802A	2	1	150	124	NA	44	32	16
AT 802A	2	1	200	235	NA	48	40	18
AT 802A	2	1	250	389	NA	53	47	19
AT 802A	2	1	300	603	NA	57	52	20
AT 802A	2	1	500	2196	NA	74	71	22
AT 802A	2	1	1000	11953	NA	133	132	26
AT 802A	2	1	1320	23908	NA	189	188	28
AT 802A	2	1	2608	131091	NA	521	519	31
AT 802A	2	2	25	3	NA	17	2	2
AT 802A	2	2	50	7	NA	20	5	5
AT 802A	2	2	75	15	NA	22	9	7
AT 802A	2	2	100	26	NA	24	13	9
AT 802A	2	2	150	62	NA	28	19	12
AT 802A	2	2	200	117	NA	32	25	14
AT 802A	2	2	250	195	NA	36	30	16
AT 802A	2	2	300	301	NA	40	35	17
AT 802A	2	2	500	1098	NA	56	54	20
AT 802A	2	2	1000	5976	NA	120	118	26
AT 802A	2	2	1320	11954	NA	174	171	28
AT 802A	2	2	2608	65545	NA	521	517	31
AT 802A	2	4	25	1	NA	10	1	1
AT 802A	2	4	50	4	NA	12	3	3
AT 802A	2	4	75	7	NA	14	5	4
AT 802A	2	4	100	13	NA	16	7	6
AT 802A	2	4	150	31	NA	20	12	9
AT 802A	2	4	200	59	NA	23	17	11
AT 802A	2	4	250	97	NA	27	21	13
AT 802A	2	4	300	151	NA	31	26	14
AT 802A	2	4	500	549	NA	49	45	19
AT 802A	2	4	1000	2988	NA	114	109	25
AT 802A	2	4	1320	5977	NA	169	164	27
AT 802A	2	4	2608	32773	NA	446	440	31
AT 802A	2	6	25	<1	NA	8	<1	<1
AT 802A	2	6	50	2	NA	10	2	2
AT 802A	2	6	75	5	NA	11	3	3
AT 802A	2	6	100	9	NA	13	5	5
AT 802A	2	6	150	21	NA	17	9	7
AT 802A	2	6	200	39	NA	20	13	10
AT 802A	2	6	250	65	NA	25	18	12
AT 802A	2	6	300	100	NA	29	23	13
AT 802A	2	6	500	366	NA	48	42	19
AT 802A	2	6	1000	1992	NA	114	108	25
AT 802A	2	6	1320	3985	NA	164	158	27
AT 802A	2	6	2608	21848	NA	446	437	31

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 6-12 yrs old was 0.000189 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 6-12 yrs old was 0.000115 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring

RAS RISK CALCULATIONS								
Orchard Airblast - Sparse Orchard - 60 Swath								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	7	NA	29	6	5
AT 802A	2	1	50	15	NA	32	10	8
AT 802A	2	1	75	27	NA	36	15	10
AT 802A	2	1	100	42	NA	38	20	12
AT 802A	2	1	150	82	NA	44	29	15
AT 802A	2	1	200	137	NA	48	36	17
AT 802A	2	1	250	204	NA	53	42	18
AT 802A	2	1	300	285	NA	57	48	19
AT 802A	2	1	500	776	NA	74	67	22
AT 802A	2	1	1000	3741	NA	133	128	26
AT 802A	2	1	1320	8017	NA	189	185	28
AT 802A	2	1	2608	150466	NA	521	519	31
AT 802A	2	2	25	3	NA	17	3	3
AT 802A	2	2	50	8	NA	20	5	5
AT 802A	2	2	75	13	NA	22	8	7
AT 802A	2	2	100	21	NA	24	11	8
AT 802A	2	2	150	41	NA	28	17	11
AT 802A	2	2	200	68	NA	32	22	13
AT 802A	2	2	250	102	NA	36	27	15
AT 802A	2	2	300	142	NA	40	31	16
AT 802A	2	2	500	388	NA	56	49	20
AT 802A	2	2	1000	1870	NA	120	113	25
AT 802A	2	2	1320	4009	NA	174	166	27
AT 802A	2	2	2608	75233	NA	521	517	31
AT 802A	2	4	25	2	NA	10	1	1
AT 802A	2	4	50	4	NA	12	3	3
AT 802A	2	4	75	7	NA	14	5	4
AT 802A	2	4	100	10	NA	16	6	5
AT 802A	2	4	150	21	NA	20	10	8
AT 802A	2	4	200	34	NA	23	14	10
AT 802A	2	4	250	51	NA	27	18	12
AT 802A	2	4	300	71	NA	31	22	13
AT 802A	2	4	500	194	NA	49	39	18
AT 802A	2	4	1000	935	NA	114	101	25
AT 802A	2	4	1320	2004	NA	169	156	27
AT 802A	2	4	2608	37616	NA	446	441	31
AT 802A	2	6	25	1	NA	8	<1	<1
AT 802A	2	6	50	3	NA	10	2	2
AT 802A	2	6	75	4	NA	11	3	3
AT 802A	2	6	100	7	NA	13	5	4
AT 802A	2	6	150	14	NA	17	8	6
AT 802A	2	6	200	23	NA	20	11	8
AT 802A	2	6	250	34	NA	25	14	10
AT 802A	2	6	300	47	NA	29	18	12
AT 802A	2	6	500	129	NA	48	35	17
AT 802A	2	6	1000	623	NA	114	96	25
AT 802A	2	6	1320	1336	NA	164	146	27
AT 802A	2	6	2608	25078	NA	446	439	31

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 6-12 yrs old was 0.000189 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 6-12 yrs old was 0.000115 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring

Appendix 2i - Drift Exposure for Children 6-12 Years Old with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - High Boom 40 swath/50th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0032192	0.0003090	NA	NA	NA	NA	0.0218	0.0003488	0.0006578
AT 802A	2	1	50	0.0021349	0.0002049	NA	NA	NA	NA	0.0194	0.0003104	0.0005153
AT 802A	2	1	75	0.0015927	0.0001529	NA	NA	NA	NA	0.0176	0.0002816	0.0004345
AT 802A	2	1	100	0.0012538	0.0001204	NA	NA	NA	NA	0.0163	0.0002608	0.0003812
AT 802A	2	1	150	0.0009149	0.0000878	NA	NA	NA	NA	0.0143	0.0002288	0.0003166
AT 802A	2	1	200	0.0007116	0.0000683	NA	NA	NA	NA	0.0129	0.0002064	0.0002747
AT 802A	2	1	250	0.0005761	0.0000553	NA	NA	NA	NA	0.0118	0.0001888	0.0002441
AT 802A	2	1	300	0.0004744	0.0000455	NA	NA	NA	NA	0.0109	0.0001744	0.0002199
AT 802A	2	1	500	0.0002462	0.0000236	NA	NA	NA	NA	0.0085	0.0001360	0.0001596
AT 802A	2	1	1000	0.0000741	0.0000071	NA	NA	NA	NA	0.0047	0.0000752	0.0000823
AT 802A	2	1	1320	0.0000402	0.0000039	NA	NA	NA	NA	0.0033	0.0000528	0.0000567
AT 802A	2	1	2608	0.0000060	0.0000006	NA	NA	NA	NA	0.0012	0.0000192	0.0000198
AT 802A	2	2	25	0.0064385	0.0006181	NA	NA	NA	NA	0.0367	0.0005872	0.0012053
AT 802A	2	2	50	0.0042697	0.0004099	NA	NA	NA	NA	0.0320	0.0005120	0.0009219
AT 802A	2	2	75	0.0031853	0.0003058	NA	NA	NA	NA	0.0285	0.0004560	0.0007618
AT 802A	2	2	100	0.0025076	0.0002407	NA	NA	NA	NA	0.0259	0.0004144	0.0006551
AT 802A	2	2	150	0.0018299	0.0001757	NA	NA	NA	NA	0.0221	0.0003536	0.0005293
AT 802A	2	2	200	0.0014232	0.0001366	NA	NA	NA	NA	0.0195	0.0003120	0.0004486
AT 802A	2	2	250	0.0011521	0.0001106	NA	NA	NA	NA	0.0174	0.0002784	0.0003890
AT 802A	2	2	300	0.0009488	0.0000911	NA	NA	NA	NA	0.0157	0.0002512	0.0003423
AT 802A	2	2	500	0.0004923	0.0000473	NA	NA	NA	NA	0.0111	0.0001776	0.0002249
AT 802A	2	2	1000	0.0001481	0.0000142	NA	NA	NA	NA	0.0052	0.0000832	0.0000974
AT 802A	2	2	1320	0.0000804	0.0000077	NA	NA	NA	NA	0.0036	0.0000576	0.0000653
AT 802A	2	2	2608	0.0000119	0.0000011	NA	NA	NA	NA	0.0012	0.0000192	0.0000203
AT 802A	2	4	25	0.0128769	0.0012362	NA	NA	NA	NA	0.0596	0.0009536	0.0021898
AT 802A	2	4	50	0.0085394	0.0008198	NA	NA	NA	NA	0.0503	0.0008048	0.0016246
AT 802A	2	4	75	0.0063707	0.0006116	NA	NA	NA	NA	0.0439	0.0007024	0.0013140
AT 802A	2	4	100	0.0050152	0.0004815	NA	NA	NA	NA	0.0389	0.0006224	0.0011039
AT 802A	2	4	150	0.0036598	0.0003513	NA	NA	NA	NA	0.0319	0.0005104	0.0008617
AT 802A	2	4	200	0.0028465	0.0002733	NA	NA	NA	NA	0.0269	0.0004304	0.0007037
AT 802A	2	4	250	0.0023043	0.0002212	NA	NA	NA	NA	0.0230	0.0003680	0.0005892
AT 802A	2	4	300	0.0018977	0.0001822	NA	NA	NA	NA	0.0200	0.0003200	0.0005022
AT 802A	2	4	500	0.0009847	0.0000945	NA	NA	NA	NA	0.0128	0.0002048	0.0002993
AT 802A	2	4	1000	0.0002963	0.0000284	NA	NA	NA	NA	0.0055	0.0000880	0.0001164
AT 802A	2	4	1320	0.0001609	0.0000154	NA	NA	NA	NA	0.0037	0.0000592	0.0000746
AT 802A	2	4	2608	0.0000238	0.0000023	NA	NA	NA	NA	0.0014	0.0000224	0.0000247
AT 802A	2	6	25	0.0193154	0.0018543	NA	NA	NA	NA	0.0781	0.0012496	0.0031039
AT 802A	2	6	50	0.0128092	0.0012297	NA	NA	NA	NA	0.0643	0.0010288	0.0022585
AT 802A	2	6	75	0.0095560	0.0009174	NA	NA	NA	NA	0.0550	0.0008800	0.0017974
AT 802A	2	6	100	0.0075228	0.0007222	NA	NA	NA	NA	0.0479	0.0007664	0.0014886
AT 802A	2	6	150	0.0054896	0.0005270	NA	NA	NA	NA	0.0377	0.0006032	0.0011302
AT 802A	2	6	200	0.0042697	0.0004099	NA	NA	NA	NA	0.0305	0.0004880	0.0008979
AT 802A	2	6	250	0.0034564	0.0003318	NA	NA	NA	NA	0.0253	0.0004048	0.0007366
AT 802A	2	6	300	0.0028465	0.0002733	NA	NA	NA	NA	0.0214	0.0003424	0.0006157
AT 802A	2	6	500	0.0014770	0.0001418	NA	NA	NA	NA	0.0130	0.0002080	0.0003498
AT 802A	2	6	1000	0.0004444	0.0000427	NA	NA	NA	NA	0.0055	0.0000880	0.0001307
AT 802A	2	6	1320	0.0002413	0.0000232	NA	NA	NA	NA	0.0038	0.0000608	0.0000840
AT 802A	2	6	2608	0.0000357	0.0000034	NA	NA	NA	NA	0.0014	0.0000224	0.0000258

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

Appendix 2i - Drift Exposure for Children 6-12 Years Old with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - Low Boom 40 swath/50th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose						
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)	1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AT 802A	2	1	25	0.0016943	0.0001627	NA	NA	NA	NA	0.0218	0.0003488	0.0005115
AT 802A	2	1	50	0.0011521	0.0001106	NA	NA	NA	NA	0.0194	0.0003104	0.0004210
AT 802A	2	1	75	0.0008811	0.0000846	NA	NA	NA	NA	0.0176	0.0002816	0.0003662
AT 802A	2	1	100	0.0006777	0.0000651	NA	NA	NA	NA	0.0163	0.0002608	0.0003259
AT 802A	2	1	150	0.0005083	0.0000488	NA	NA	NA	NA	0.0143	0.0002288	0.0002776
AT 802A	2	1	200	0.0004066	0.0000390	NA	NA	NA	NA	0.0129	0.0002064	0.0002454
AT 802A	2	1	250	0.0003389	0.0000325	NA	NA	NA	NA	0.0118	0.0001888	0.0002213
AT 802A	2	1	300	0.0003050	0.0000293	NA	NA	NA	NA	0.0109	0.0001744	0.0002037
AT 802A	2	1	500	0.0001745	0.0000168	NA	NA	NA	NA	0.0085	0.0001360	0.0001528
AT 802A	2	1	1000	0.0000661	0.0000063	NA	NA	NA	NA	0.0047	0.0000752	0.0000815
AT 802A	2	1	1320	0.0000404	0.0000039	NA	NA	NA	NA	0.0033	0.0000528	0.0000567
AT 802A	2	1	2608	0.0000086	0.0000008	NA	NA	NA	NA	0.0012	0.0000192	0.0000200
AT 802A	2	2	25	0.0033887	0.0003253	NA	NA	NA	NA	0.0367	0.0005872	0.0009125
AT 802A	2	2	50	0.0023043	0.0002212	NA	NA	NA	NA	0.0320	0.0005120	0.0007332
AT 802A	2	2	75	0.0017621	0.0001692	NA	NA	NA	NA	0.0285	0.0004560	0.0006252
AT 802A	2	2	100	0.0013555	0.0001301	NA	NA	NA	NA	0.0259	0.0004144	0.0005445
AT 802A	2	2	150	0.0010166	0.0000976	NA	NA	NA	NA	0.0221	0.0003536	0.0004512
AT 802A	2	2	200	0.0008133	0.0000781	NA	NA	NA	NA	0.0195	0.0003120	0.0003901
AT 802A	2	2	250	0.0006777	0.0000651	NA	NA	NA	NA	0.0174	0.0002784	0.0003435
AT 802A	2	2	300	0.0006100	0.0000586	NA	NA	NA	NA	0.0157	0.0002512	0.0003098
AT 802A	2	2	500	0.0003490	0.0000335	NA	NA	NA	NA	0.0111	0.0001776	0.0002111
AT 802A	2	2	1000	0.0001322	0.0000127	NA	NA	NA	NA	0.0052	0.0000832	0.0000959
AT 802A	2	2	1320	0.0000807	0.0000078	NA	NA	NA	NA	0.0036	0.0000576	0.0000654
AT 802A	2	2	2608	0.0000172	0.0000017	NA	NA	NA	NA	0.0012	0.0000192	0.0000209
AT 802A	2	4	25	0.0067773	0.0006506	NA	NA	NA	NA	0.0596	0.0009536	0.0016042
AT 802A	2	4	50	0.0046086	0.0004424	NA	NA	NA	NA	0.0503	0.0008048	0.0012472
AT 802A	2	4	75	0.0035242	0.0003383	NA	NA	NA	NA	0.0439	0.0007024	0.0010407
AT 802A	2	4	100	0.0027109	0.0002602	NA	NA	NA	NA	0.0389	0.0006224	0.0008826
AT 802A	2	4	150	0.0020332	0.0001952	NA	NA	NA	NA	0.0319	0.0005104	0.0007056
AT 802A	2	4	200	0.0016266	0.0001561	NA	NA	NA	NA	0.0269	0.0004304	0.0005865
AT 802A	2	4	250	0.0013555	0.0001301	NA	NA	NA	NA	0.0230	0.0003680	0.0004981
AT 802A	2	4	300	0.0012199	0.0001171	NA	NA	NA	NA	0.0200	0.0003200	0.0004371
AT 802A	2	4	500	0.0006981	0.0000670	NA	NA	NA	NA	0.0128	0.0002048	0.0002718
AT 802A	2	4	1000	0.0002645	0.0000254	NA	NA	NA	NA	0.0055	0.0000880	0.0001134
AT 802A	2	4	1320	0.0001615	0.0000155	NA	NA	NA	NA	0.0037	0.0000592	0.0000747
AT 802A	2	4	2608	0.0000345	0.0000033	NA	NA	NA	NA	0.0014	0.0000224	0.0000257
AT 802A	2	6	25	0.0101660	0.0009759	NA	NA	NA	NA	0.0781	0.0012496	0.0022255
AT 802A	2	6	50	0.0069129	0.0006636	NA	NA	NA	NA	0.0643	0.0010288	0.0016924
AT 802A	2	6	75	0.0052863	0.0005075	NA	NA	NA	NA	0.0550	0.0008800	0.0013875
AT 802A	2	6	100	0.0040664	0.0003904	NA	NA	NA	NA	0.0479	0.0007664	0.0011568
AT 802A	2	6	150	0.0030498	0.0002928	NA	NA	NA	NA	0.0377	0.0006032	0.0008960
AT 802A	2	6	200	0.0024398	0.0002342	NA	NA	NA	NA	0.0305	0.0004880	0.0007222
AT 802A	2	6	250	0.0020332	0.0001952	NA	NA	NA	NA	0.0253	0.0004048	0.0006000
AT 802A	2	6	300	0.0018299	0.0001757	NA	NA	NA	NA	0.0214	0.0003424	0.0005181
AT 802A	2	6	500	0.0010471	0.0001005	NA	NA	NA	NA	0.0130	0.0002080	0.0003085
AT 802A	2	6	1000	0.0003967	0.0000381	NA	NA	NA	NA	0.0055	0.0000880	0.0001261
AT 802A	2	6	1320	0.0002422	0.0000233	NA	NA	NA	NA	0.0038	0.0000608	0.0000841
AT 802A	2	6	2608	0.0000517	0.0000050	NA	NA	NA	NA	0.0014	0.0000224	0.0000274

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

Appendix 2i - Drift Exposure for Children 6-12 Years Old with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - High Boom 40 swath/90th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose						
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)	1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AT 802A	2	1	25	0.0045747	0.0004392	NA	NA	NA	NA	0.0218	0.0003488	0.0007880
AT 802A	2	1	50	0.0032870	0.0003156	NA	NA	NA	NA	0.0194	0.0003104	0.0006260
AT 802A	2	1	75	0.0025415	0.0002440	NA	NA	NA	NA	0.0176	0.0002816	0.0005256
AT 802A	2	1	100	0.0020332	0.0001952	NA	NA	NA	NA	0.0163	0.0002608	0.0004560
AT 802A	2	1	150	0.0015249	0.0001464	NA	NA	NA	NA	0.0143	0.0002288	0.0003752
AT 802A	2	1	200	0.0012199	0.0001171	NA	NA	NA	NA	0.0129	0.0002064	0.0003235
AT 802A	2	1	250	0.0010166	0.0000976	NA	NA	NA	NA	0.0118	0.0001888	0.0002864
AT 802A	2	1	300	0.0008811	0.0000846	NA	NA	NA	NA	0.0109	0.0001744	0.0002590
AT 802A	2	1	500	0.0005789	0.0000556	NA	NA	NA	NA	0.0085	0.0001360	0.0001916
AT 802A	2	1	1000	0.0003235	0.0000311	NA	NA	NA	NA	0.0047	0.0000752	0.0001063
AT 802A	2	1	1320	0.0002553	0.0000245	NA	NA	NA	NA	0.0033	0.0000528	0.0000773
AT 802A	2	1	2608	0.0001418	0.0000136	NA	NA	NA	NA	0.0012	0.0000192	0.0000328
AT 802A	2	2	25	0.0091494	0.0008783	NA	NA	NA	NA	0.0367	0.0005872	0.0014655
AT 802A	2	2	50	0.0065740	0.0006311	NA	NA	NA	NA	0.0320	0.0005120	0.0011431
AT 802A	2	2	75	0.0050830	0.0004880	NA	NA	NA	NA	0.0285	0.0004560	0.0009440
AT 802A	2	2	100	0.0040664	0.0003904	NA	NA	NA	NA	0.0259	0.0004144	0.0008048
AT 802A	2	2	150	0.0030498	0.0002928	NA	NA	NA	NA	0.0221	0.0003536	0.0006464
AT 802A	2	2	200	0.0024398	0.0002342	NA	NA	NA	NA	0.0195	0.0003120	0.0005462
AT 802A	2	2	250	0.0020332	0.0001952	NA	NA	NA	NA	0.0174	0.0002784	0.0004736
AT 802A	2	2	300	0.0017621	0.0001692	NA	NA	NA	NA	0.0157	0.0002512	0.0004204
AT 802A	2	2	500	0.0011579	0.0001112	NA	NA	NA	NA	0.0111	0.0001776	0.0002888
AT 802A	2	2	1000	0.0006469	0.0000621	NA	NA	NA	NA	0.0052	0.0000832	0.0001453
AT 802A	2	2	1320	0.0005105	0.0000490	NA	NA	NA	NA	0.0036	0.0000576	0.0001066
AT 802A	2	2	2608	0.0002835	0.0000272	NA	NA	NA	NA	0.0012	0.0000192	0.0000464
AT 802A	2	4	25	0.0182988	0.0017567	NA	NA	NA	NA	0.0596	0.0009536	0.0027103
AT 802A	2	4	50	0.0131480	0.0012622	NA	NA	NA	NA	0.0503	0.0008048	0.0020670
AT 802A	2	4	75	0.0101660	0.0009759	NA	NA	NA	NA	0.0439	0.0007024	0.0016783
AT 802A	2	4	100	0.0081328	0.0007807	NA	NA	NA	NA	0.0389	0.0006224	0.0014031
AT 802A	2	4	150	0.0060996	0.0005856	NA	NA	NA	NA	0.0319	0.0005104	0.0010960
AT 802A	2	4	200	0.0048797	0.0004684	NA	NA	NA	NA	0.0269	0.0004304	0.0008988
AT 802A	2	4	250	0.0040664	0.0003904	NA	NA	NA	NA	0.0230	0.0003680	0.0007584
AT 802A	2	4	300	0.0035242	0.0003383	NA	NA	NA	NA	0.0200	0.0003200	0.0006583
AT 802A	2	4	500	0.0023158	0.0002223	NA	NA	NA	NA	0.0128	0.0002048	0.0004271
AT 802A	2	4	1000	0.0012938	0.0001242	NA	NA	NA	NA	0.0055	0.0000880	0.0002122
AT 802A	2	4	1320	0.0010210	0.0000980	NA	NA	NA	NA	0.0037	0.0000592	0.0001572
AT 802A	2	4	2608	0.0005671	0.0000544	NA	NA	NA	NA	0.0014	0.0000224	0.0000768
AT 802A	2	6	25	0.0274482	0.0026350	NA	NA	NA	NA	0.0781	0.0012496	0.0038846
AT 802A	2	6	50	0.0197220	0.0018933	NA	NA	NA	NA	0.0643	0.0010288	0.0029221
AT 802A	2	6	75	0.0152490	0.0014639	NA	NA	NA	NA	0.0550	0.0008800	0.0023439
AT 802A	2	6	100	0.0121992	0.0011711	NA	NA	NA	NA	0.0479	0.0007664	0.0019375
AT 802A	2	6	150	0.0091494	0.0008783	NA	NA	NA	NA	0.0377	0.0006032	0.0014815
AT 802A	2	6	200	0.0073195	0.0007027	NA	NA	NA	NA	0.0305	0.0004880	0.0011907
AT 802A	2	6	250	0.0060996	0.0005856	NA	NA	NA	NA	0.0253	0.0004048	0.0009904
AT 802A	2	6	300	0.0052863	0.0005075	NA	NA	NA	NA	0.0214	0.0003424	0.0008499
AT 802A	2	6	500	0.0034737	0.0003335	NA	NA	NA	NA	0.0130	0.0002080	0.0005415
AT 802A	2	6	1000	0.0019408	0.0001863	NA	NA	NA	NA	0.0055	0.0000880	0.0002743
AT 802A	2	6	1320	0.0015315	0.0001470	NA	NA	NA	NA	0.0038	0.0000608	0.0002078
AT 802A	2	6	2608	0.0008506	0.0000817	NA	NA	NA	NA	0.0014	0.0000224	0.0001041

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

Appendix 2i - Drift Exposure for Children 6-12 Years Old with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - Low Boom 40 swath/90th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose						
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)	1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AT 802A	2	1	25	0.0028804	0.0002765	NA	NA	NA	NA	0.0218	0.0003488	0.0006253
AT 802A	2	1	50	0.0021010	0.0002017	NA	NA	NA	NA	0.0194	0.0003104	0.0005121
AT 802A	2	1	75	0.0016266	0.0001561	NA	NA	NA	NA	0.0176	0.0002816	0.0004377
AT 802A	2	1	100	0.0013216	0.0001269	NA	NA	NA	NA	0.0163	0.0002608	0.0003877
AT 802A	2	1	150	0.0009827	0.0000943	NA	NA	NA	NA	0.0143	0.0002288	0.0003231
AT 802A	2	1	200	0.0008133	0.0000781	NA	NA	NA	NA	0.0129	0.0002064	0.0002845
AT 802A	2	1	250	0.0006777	0.0000651	NA	NA	NA	NA	0.0118	0.0001888	0.0002539
AT 802A	2	1	300	0.0006100	0.0000586	NA	NA	NA	NA	0.0109	0.0001744	0.0002330
AT 802A	2	1	500	0.0004092	0.0000393	NA	NA	NA	NA	0.0085	0.0001360	0.0001753
AT 802A	2	1	1000	0.0002348	0.0000225	NA	NA	NA	NA	0.0047	0.0000752	0.0000977
AT 802A	2	1	1320	0.0001866	0.0000179	NA	NA	NA	NA	0.0033	0.0000528	0.0000707
AT 802A	2	1	2608	0.0001049	0.0000101	NA	NA	NA	NA	0.0012	0.0000192	0.0000293
AT 802A	2	2	25	0.0057607	0.0005530	NA	NA	NA	NA	0.0367	0.0005872	0.0011402
AT 802A	2	2	50	0.0042019	0.0004034	NA	NA	NA	NA	0.0320	0.0005120	0.0009154
AT 802A	2	2	75	0.0032531	0.0003123	NA	NA	NA	NA	0.0285	0.0004560	0.0007683
AT 802A	2	2	100	0.0026432	0.0002537	NA	NA	NA	NA	0.0259	0.0004144	0.0006681
AT 802A	2	2	150	0.0019654	0.0001887	NA	NA	NA	NA	0.0221	0.0003536	0.0005423
AT 802A	2	2	200	0.0016266	0.0001561	NA	NA	NA	NA	0.0195	0.0003120	0.0004681
AT 802A	2	2	250	0.0013555	0.0001301	NA	NA	NA	NA	0.0174	0.0002784	0.0004085
AT 802A	2	2	300	0.0012199	0.0001171	NA	NA	NA	NA	0.0157	0.0002512	0.0003683
AT 802A	2	2	500	0.0008185	0.0000786	NA	NA	NA	NA	0.0111	0.0001776	0.0002562
AT 802A	2	2	1000	0.0004695	0.0000451	NA	NA	NA	NA	0.0052	0.0000832	0.0001283
AT 802A	2	2	1320	0.0003732	0.0000358	NA	NA	NA	NA	0.0036	0.0000576	0.0000934
AT 802A	2	2	2608	0.0002098	0.0000201	NA	NA	NA	NA	0.0012	0.0000192	0.0000393
AT 802A	2	4	25	0.0115215	0.0011061	NA	NA	NA	NA	0.0596	0.0009536	0.0020597
AT 802A	2	4	50	0.0084039	0.0008068	NA	NA	NA	NA	0.0503	0.0008048	0.0016116
AT 802A	2	4	75	0.0065062	0.0006246	NA	NA	NA	NA	0.0439	0.0007024	0.0013270
AT 802A	2	4	100	0.0052863	0.0005075	NA	NA	NA	NA	0.0389	0.0006224	0.0011299
AT 802A	2	4	150	0.0039309	0.0003774	NA	NA	NA	NA	0.0319	0.0005104	0.0008878
AT 802A	2	4	200	0.0032531	0.0003123	NA	NA	NA	NA	0.0269	0.0004304	0.0007427
AT 802A	2	4	250	0.0027109	0.0002602	NA	NA	NA	NA	0.0230	0.0003680	0.0006282
AT 802A	2	4	300	0.0024398	0.0002342	NA	NA	NA	NA	0.0200	0.0003200	0.0005542
AT 802A	2	4	500	0.0016370	0.0001571	NA	NA	NA	NA	0.0128	0.0002048	0.0003619
AT 802A	2	4	1000	0.0009391	0.0000902	NA	NA	NA	NA	0.0055	0.0000880	0.0001782
AT 802A	2	4	1320	0.0007464	0.0000717	NA	NA	NA	NA	0.0037	0.0000592	0.0001309
AT 802A	2	4	2608	0.0004196	0.0000403	NA	NA	NA	NA	0.0014	0.0000224	0.0000627
AT 802A	2	6	25	0.0172822	0.0016591	NA	NA	NA	NA	0.0781	0.0012496	0.0029087
AT 802A	2	6	50	0.0126058	0.0012102	NA	NA	NA	NA	0.0643	0.0010288	0.0022390
AT 802A	2	6	75	0.0097594	0.0009369	NA	NA	NA	NA	0.0550	0.0008800	0.0018169
AT 802A	2	6	100	0.0079295	0.0007612	NA	NA	NA	NA	0.0479	0.0007664	0.0015276
AT 802A	2	6	150	0.0058963	0.0005660	NA	NA	NA	NA	0.0377	0.0006032	0.0011692
AT 802A	2	6	200	0.0048797	0.0004684	NA	NA	NA	NA	0.0305	0.0004880	0.0009564
AT 802A	2	6	250	0.0040664	0.0003904	NA	NA	NA	NA	0.0253	0.0004048	0.0007952
AT 802A	2	6	300	0.0036598	0.0003513	NA	NA	NA	NA	0.0214	0.0003424	0.0006937
AT 802A	2	6	500	0.0024554	0.0002357	NA	NA	NA	NA	0.0130	0.0002080	0.0004437
AT 802A	2	6	1000	0.0014086	0.0001352	NA	NA	NA	NA	0.0055	0.0000880	0.0002232
AT 802A	2	6	1320	0.0011196	0.0001075	NA	NA	NA	NA	0.0038	0.0000608	0.0001683
AT 802A	2	6	2608	0.0006293	0.0000604	NA	NA	NA	NA	0.0014	0.0000224	0.0000828

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

Appendix 2i - Drift Exposure for Children 6-12 Years Old with Ground Boom Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Ground Boom - High Boom 40 swath/50th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	32	NA	29	15	10
AT 802A	2	1	50	49	NA	32	19	12
AT 802A	2	1	75	65	NA	36	23	14
AT 802A	2	1	100	83	NA	38	26	15
AT 802A	2	1	150	114	NA	44	32	16
AT 802A	2	1	200	146	NA	48	36	17
AT 802A	2	1	250	181	NA	53	41	18
AT 802A	2	1	300	220	NA	57	45	19
AT 802A	2	1	500	423	NA	74	63	22
AT 802A	2	1	1000	1406	NA	133	121	26
AT 802A	2	1	1320	2590	NA	189	176	28
AT 802A	2	1	2608	17504	NA	521	506	31
AT 802A	2	2	25	16	NA	17	8	7
AT 802A	2	2	50	24	NA	20	11	8
AT 802A	2	2	75	33	NA	22	13	9
AT 802A	2	2	100	42	NA	24	15	10
AT 802A	2	2	150	57	NA	28	19	12
AT 802A	2	2	200	73	NA	32	22	13
AT 802A	2	2	250	90	NA	36	26	14
AT 802A	2	2	300	110	NA	40	29	15
AT 802A	2	2	500	212	NA	56	44	19
AT 802A	2	2	1000	703	NA	120	103	25
AT 802A	2	2	1320	1295	NA	174	153	27
AT 802A	2	2	2608	8752	NA	521	492	31
AT 802A	2	4	25	8	NA	10	5	4
AT 802A	2	4	50	12	NA	12	6	5
AT 802A	2	4	75	16	NA	14	8	6
AT 802A	2	4	100	21	NA	16	9	7
AT 802A	2	4	150	28	NA	20	12	9
AT 802A	2	4	200	37	NA	23	14	10
AT 802A	2	4	250	45	NA	27	17	11
AT 802A	2	4	300	55	NA	31	20	12
AT 802A	2	4	500	106	NA	49	33	17
AT 802A	2	4	1000	352	NA	114	86	24
AT 802A	2	4	1320	647	NA	169	134	26
AT 802A	2	4	2608	4376	NA	446	405	30
AT 802A	2	6	25	5	NA	8	3	3
AT 802A	2	6	50	8	NA	10	4	4
AT 802A	2	6	75	11	NA	11	6	5
AT 802A	2	6	100	14	NA	13	7	6
AT 802A	2	6	150	19	NA	17	9	7
AT 802A	2	6	200	24	NA	20	11	8
AT 802A	2	6	250	30	NA	25	14	10
AT 802A	2	6	300	37	NA	29	16	11
AT 802A	2	6	500	71	NA	48	29	15
AT 802A	2	6	1000	234	NA	114	77	23
AT 802A	2	6	1320	432	NA	164	119	26
AT 802A	2	6	2608	2917	NA	446	387	30

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 6-12 yrs old was 0.000189 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 6-12 yrs old was 0.000115 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2i - Drift Exposure for Children 6-12 Years Old with Ground Boom Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Ground Boom - Low Boom 40 swath/50th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	61	NA	29	20	12
AT 802A	2	1	50	90	NA	32	24	14
AT 802A	2	1	75	118	NA	36	27	15
AT 802A	2	1	100	154	NA	38	31	16
AT 802A	2	1	150	205	NA	44	36	17
AT 802A	2	1	200	256	NA	48	41	18
AT 802A	2	1	250	307	NA	53	45	19
AT 802A	2	1	300	342	NA	57	49	20
AT 802A	2	1	500	597	NA	74	65	22
AT 802A	2	1	1000	1575	NA	133	123	26
AT 802A	2	1	1320	2581	NA	189	176	28
AT 802A	2	1	2608	12090	NA	521	499	31
AT 802A	2	2	25	31	NA	17	11	8
AT 802A	2	2	50	45	NA	20	14	10
AT 802A	2	2	75	59	NA	22	16	11
AT 802A	2	2	100	77	NA	24	18	12
AT 802A	2	2	150	102	NA	28	22	13
AT 802A	2	2	200	128	NA	32	26	14
AT 802A	2	2	250	154	NA	36	29	15
AT 802A	2	2	300	171	NA	40	32	16
AT 802A	2	2	500	298	NA	56	47	19
AT 802A	2	2	1000	788	NA	120	104	25
AT 802A	2	2	1320	1290	NA	174	153	27
AT 802A	2	2	2608	6045	NA	521	480	31
AT 802A	2	4	25	15	NA	10	6	5
AT 802A	2	4	50	23	NA	12	8	6
AT 802A	2	4	75	30	NA	14	10	7
AT 802A	2	4	100	38	NA	16	11	8
AT 802A	2	4	150	51	NA	20	14	10
AT 802A	2	4	200	64	NA	23	17	11
AT 802A	2	4	250	77	NA	27	20	12
AT 802A	2	4	300	85	NA	31	23	13
AT 802A	2	4	500	149	NA	49	37	17
AT 802A	2	4	1000	394	NA	114	88	24
AT 802A	2	4	1320	645	NA	169	134	26
AT 802A	2	4	2608	3022	NA	446	389	30
AT 802A	2	6	25	10	NA	8	4	4
AT 802A	2	6	50	15	NA	10	6	5
AT 802A	2	6	75	20	NA	11	7	6
AT 802A	2	6	100	26	NA	13	9	7
AT 802A	2	6	150	34	NA	17	11	8
AT 802A	2	6	200	43	NA	20	14	10
AT 802A	2	6	250	51	NA	25	17	11
AT 802A	2	6	300	57	NA	29	19	12
AT 802A	2	6	500	99	NA	48	32	16
AT 802A	2	6	1000	263	NA	114	79	23
AT 802A	2	6	1320	430	NA	164	119	26
AT 802A	2	6	2608	2015	NA	446	365	30

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 6-12 yrs old was 0.000189 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 6-12 yrs old was 0.000115 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2i - Drift Exposure for Children 6-12 Years Old with Ground Boom Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Ground Boom - High Boom 40 swath/90th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	23	NA	29	13	9
AT 802A	2	1	50	32	NA	32	16	11
AT 802A	2	1	75	41	NA	36	19	12
AT 802A	2	1	100	51	NA	38	22	13
AT 802A	2	1	150	68	NA	44	27	15
AT 802A	2	1	200	85	NA	48	31	16
AT 802A	2	1	250	102	NA	53	35	17
AT 802A	2	1	300	118	NA	57	39	18
AT 802A	2	1	500	180	NA	74	52	20
AT 802A	2	1	1000	322	NA	133	94	24
AT 802A	2	1	1320	408	NA	189	129	26
AT 802A	2	1	2608	735	NA	521	305	30
AT 802A	2	2	25	11	NA	17	7	6
AT 802A	2	2	50	16	NA	20	9	7
AT 802A	2	2	75	20	NA	22	11	8
AT 802A	2	2	100	26	NA	24	12	9
AT 802A	2	2	150	34	NA	28	15	11
AT 802A	2	2	200	43	NA	32	18	12
AT 802A	2	2	250	51	NA	36	21	13
AT 802A	2	2	300	59	NA	40	24	14
AT 802A	2	2	500	90	NA	56	35	17
AT 802A	2	2	1000	161	NA	120	69	22
AT 802A	2	2	1320	204	NA	174	94	24
AT 802A	2	2	2608	367	NA	521	215	29
AT 802A	2	4	25	6	NA	10	4	3
AT 802A	2	4	50	8	NA	12	5	4
AT 802A	2	4	75	10	NA	14	6	5
AT 802A	2	4	100	13	NA	16	7	6
AT 802A	2	4	150	17	NA	20	9	7
AT 802A	2	4	200	21	NA	23	11	8
AT 802A	2	4	250	26	NA	27	13	9
AT 802A	2	4	300	30	NA	31	15	10
AT 802A	2	4	500	45	NA	49	23	14
AT 802A	2	4	1000	81	NA	114	47	19
AT 802A	2	4	1320	102	NA	169	64	22
AT 802A	2	4	2608	184	NA	446	130	26
AT 802A	2	6	25	4	NA	8	3	2
AT 802A	2	6	50	5	NA	10	3	3
AT 802A	2	6	75	7	NA	11	4	4
AT 802A	2	6	100	9	NA	13	5	4
AT 802A	2	6	150	11	NA	17	7	6
AT 802A	2	6	200	14	NA	20	8	7
AT 802A	2	6	250	17	NA	25	10	8
AT 802A	2	6	300	20	NA	29	12	9
AT 802A	2	6	500	30	NA	48	18	12
AT 802A	2	6	1000	54	NA	114	36	17
AT 802A	2	6	1320	68	NA	164	48	20
AT 802A	2	6	2608	122	NA	446	96	25

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 6-12 yrs old was 0.000189 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 6-12 yrs old was 0.000115 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2i - Drift Exposure for Children 6-12 Years Old with Ground Boom Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Ground Boom - Low Boom 40 swath/90th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	36	NA	29	16	11
AT 802A	2	1	50	50	NA	32	20	12
AT 802A	2	1	75	64	NA	36	23	13
AT 802A	2	1	100	79	NA	38	26	14
AT 802A	2	1	150	106	NA	44	31	16
AT 802A	2	1	200	128	NA	48	35	17
AT 802A	2	1	250	154	NA	53	39	18
AT 802A	2	1	300	171	NA	57	43	19
AT 802A	2	1	500	255	NA	74	57	21
AT 802A	2	1	1000	444	NA	133	102	25
AT 802A	2	1	1320	558	NA	189	141	27
AT 802A	2	1	2608	993	NA	521	342	30
AT 802A	2	2	25	18	NA	17	9	7
AT 802A	2	2	50	25	NA	20	11	8
AT 802A	2	2	75	32	NA	22	13	9
AT 802A	2	2	100	39	NA	24	15	10
AT 802A	2	2	150	53	NA	28	18	12
AT 802A	2	2	200	64	NA	32	21	13
AT 802A	2	2	250	77	NA	36	24	14
AT 802A	2	2	300	85	NA	40	27	15
AT 802A	2	2	500	127	NA	56	39	18
AT 802A	2	2	1000	222	NA	120	78	23
AT 802A	2	2	1320	279	NA	174	107	25
AT 802A	2	2	2608	497	NA	521	254	29
AT 802A	2	4	25	9	NA	10	5	4
AT 802A	2	4	50	12	NA	12	6	5
AT 802A	2	4	75	16	NA	14	8	6
AT 802A	2	4	100	20	NA	16	9	7
AT 802A	2	4	150	26	NA	20	11	8
AT 802A	2	4	200	32	NA	23	13	10
AT 802A	2	4	250	38	NA	27	16	11
AT 802A	2	4	300	43	NA	31	18	12
AT 802A	2	4	500	64	NA	49	28	15
AT 802A	2	4	1000	111	NA	114	56	21
AT 802A	2	4	1320	140	NA	169	76	23
AT 802A	2	4	2608	248	NA	446	160	27
AT 802A	2	6	25	6	NA	8	3	3
AT 802A	2	6	50	8	NA	10	4	4
AT 802A	2	6	75	11	NA	11	6	5
AT 802A	2	6	100	13	NA	13	7	5
AT 802A	2	6	150	18	NA	17	9	7
AT 802A	2	6	200	21	NA	20	10	8
AT 802A	2	6	250	26	NA	25	13	9
AT 802A	2	6	300	28	NA	29	14	10
AT 802A	2	6	500	42	NA	48	23	13
AT 802A	2	6	1000	74	NA	114	45	19
AT 802A	2	6	1320	93	NA	164	59	21
AT 802A	2	6	2608	166	NA	446	121	26

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for children 6-12 yrs old was 0.000189 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for children 6-12 yrs old was 0.000115 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2j - Drift Exposure for Females 13-49 Years Old with Aerial Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Drift-Modeling - AGDISP				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
Aircraft	Spray Vol (gal/acre)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.020112	0.001931	NA	NA	NA	NA	0.0218	0.000262	0.002192
AT 802A	2	1	50	0.015829	0.001520	NA	NA	NA	NA	0.0194	0.000233	0.001752
AT 802A	2	1	100	0.010663	0.001024	NA	NA	NA	NA	0.0163	0.000196	0.001219
AT 802A	2	1	250	0.005559	0.000534	NA	NA	NA	NA	0.0118	0.000142	0.000675
AT 802A	2	1	500	0.003313	0.000318	NA	NA	NA	NA	0.0085	0.000102	0.000420
AT 802A	2	1	1000	0.001767	0.000170	NA	NA	NA	NA	0.0047	0.000056	0.000226
AT 802A	2	1	1320	0.001153	0.000111	NA	NA	NA	NA	0.0033	0.000040	0.000150
AT 802A	2	1	2608	0.000209	0.000020	NA	NA	NA	NA	0.0012	0.000014	0.000034
Bell 205 Helicopter	2	1	25	0.019057	0.001829	NA	NA	NA	NA	0.0240	0.000288	0.002117
Bell 205 Helicopter	2	1	50	0.011670	0.001120	NA	NA	NA	NA	0.0197	0.000236	0.001357
Bell 205 Helicopter	2	1	100	0.007093	0.000681	NA	NA	NA	NA	0.0158	0.000190	0.000870
Bell 205 Helicopter	2	1	250	0.004528	0.000435	NA	NA	NA	NA	0.0111	0.000133	0.000568
Bell 205 Helicopter	2	1	500	0.002687	0.000258	NA	NA	NA	NA	0.0074	0.000089	0.000347
Bell 205 Helicopter	2	1	1000	0.001313	0.000126	NA	NA	NA	NA	0.0042	0.000050	0.000176
Bell 205 Helicopter	2	1	1320	0.000920	0.000088	NA	NA	NA	NA	0.0032	0.000038	0.000127
Bell 205 Helicopter	2	1	2608	0.000147	0.000014	NA	NA	NA	NA	0.0015	0.000018	0.000032
AT 802A	2	2	25	0.040249	0.003864	NA	NA	NA	NA	0.0367	0.000440	0.004304
AT 802A	2	2	50	0.031561	0.003030	NA	NA	NA	NA	0.0320	0.000384	0.003414
AT 802A	2	2	100	0.021081	0.002024	NA	NA	NA	NA	0.0259	0.000311	0.002335
AT 802A	2	2	250	0.010553	0.001013	NA	NA	NA	NA	0.0174	0.000209	0.001222
AT 802A	2	2	500	0.005743	0.000551	NA	NA	NA	NA	0.0111	0.000133	0.000685
AT 802A	2	2	1000	0.002258	0.000217	NA	NA	NA	NA	0.0052	0.000062	0.000279
AT 802A	2	2	1320	0.001325	0.000127	NA	NA	NA	NA	0.0036	0.000043	0.000170
AT 802A	2	2	2608	0.000245	0.000024	NA	NA	NA	NA	0.0012	0.000014	0.000038
Bell 205 Helicopter	2	2	25	0.038629	0.003708	NA	NA	NA	NA	0.0404	0.000485	0.004193
Bell 205 Helicopter	2	2	50	0.023781	0.002283	NA	NA	NA	NA	0.0322	0.000386	0.002669
Bell 205 Helicopter	2	2	100	0.014799	0.001421	NA	NA	NA	NA	0.0246	0.000295	0.001716
Bell 205 Helicopter	2	2	250	0.008197	0.000787	NA	NA	NA	NA	0.0154	0.000185	0.000972
Bell 205 Helicopter	2	2	500	0.004197	0.000403	NA	NA	NA	NA	0.0093	0.000112	0.000514
Bell 205 Helicopter	2	2	1000	0.001841	0.000177	NA	NA	NA	NA	0.0049	0.000059	0.000236
Bell 205 Helicopter	2	2	1320	0.001178	0.000113	NA	NA	NA	NA	0.0036	0.000043	0.000156
Bell 205 Helicopter	2	2	2608	0.000196	0.000019	NA	NA	NA	NA	0.0016	0.000019	0.000038
AT 802A	2	2.3	25	0.046258	0.004441	NA	NA	NA	NA	0.0394	0.000473	0.004914
AT 802A	2	2.3	50	0.036239	0.003479	NA	NA	NA	NA	0.0341	0.000409	0.003888
AT 802A	2	2.3	100	0.024159	0.002319	NA	NA	NA	NA	0.0275	0.000330	0.002649
AT 802A	2	2.3	250	0.012080	0.001160	NA	NA	NA	NA	0.0183	0.000220	0.001379
AT 802A	2	2.3	500	0.006407	0.000615	NA	NA	NA	NA	0.0115	0.000138	0.000753
AT 802A	2	2.3	1000	0.002484	0.000238	NA	NA	NA	NA	0.0054	0.000065	0.000303
AT 802A	2	2.3	1320	0.001411	0.000135	NA	NA	NA	NA	0.0037	0.000044	0.000180
AT 802A	2	2.3	2608	0.000310	0.000030	NA	NA	NA	NA	0.0012	0.000014	0.000044
Bell 205 Helicopter	2	2.3	25	0.044451	0.004267	NA	NA	NA	NA	0.0435	0.000522	0.004789
Bell 205 Helicopter	2	2.3	50	0.027376	0.002628	NA	NA	NA	NA	0.0345	0.000414	0.003042
Bell 205 Helicopter	2	2.3	100	0.017075	0.001639	NA	NA	NA	NA	0.0260	0.000312	0.001951
Bell 205 Helicopter	2	2.3	250	0.009257	0.000889	NA	NA	NA	NA	0.0160	0.000192	0.001081
Bell 205 Helicopter	2	2.3	500	0.004657	0.000447	NA	NA	NA	NA	0.0096	0.000115	0.000562
Bell 205 Helicopter	2	2.3	1000	0.002004	0.000192	NA	NA	NA	NA	0.0050	0.000060	0.000252
Bell 205 Helicopter	2	2.3	1320	0.001270	0.000122	NA	NA	NA	NA	0.0037	0.000044	0.000166
Bell 205 Helicopter	2	2.3	2608	0.000254	0.000024	NA	NA	NA	NA	0.0016	0.000019	0.000044

* Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

Appendix 2j - Drift Exposure for Females 13-49 Years Old with Aerial Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Drift-Modeling - AGDISP				Dermal Dose		Incidental Oral Dose						
Aircraft	Spray Vol (gal/acre)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)	1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AT 802A	15	1	25	0.0172897	0.0016598	NA	NA	NA	NA	0.0306	0.0003672	0.0020270
AT 802A	15	1	50	0.0138293	0.0013276	NA	NA	NA	NA	0.0287	0.0003444	0.0016720
AT 802A	15	1	100	0.0092523	0.0008882	NA	NA	NA	NA	0.0256	0.0003072	0.0011954
AT 802A	15	1	250	0.0047488	0.0004559	NA	NA	NA	NA	0.0212	0.0002544	0.0007103
AT 802A	15	1	500	0.0029450	0.0002827	NA	NA	NA	NA	0.0177	0.0002124	0.0004951
AT 802A	15	1	1000	0.0021965	0.0002109	NA	NA	NA	NA	0.0138	0.0001656	0.0003765
AT 802A	15	1	1320	0.0019879	0.0001908	NA	NA	NA	NA	0.0119	0.0001428	0.0003336
AT 802A	15	1	2608	0.0005890	0.0000565	NA	NA	NA	NA	0.0065	0.0000780	0.0001345
Bell 205 Helicopter	15	1	25	0.0172161	0.0016527	NA	NA	NA	NA	0.0426	0.0005112	0.0021639
Bell 205 Helicopter	15	1	50	0.0099885	0.0009589	NA	NA	NA	NA	0.0373	0.0004476	0.0014065
Bell 205 Helicopter	15	1	100	0.0057919	0.0005560	NA	NA	NA	NA	0.0325	0.0003900	0.0009460
Bell 205 Helicopter	15	1	250	0.0040249	0.0003864	NA	NA	NA	NA	0.0266	0.0003192	0.0007056
Bell 205 Helicopter	15	1	500	0.0030186	0.0002898	NA	NA	NA	NA	0.0209	0.0002508	0.0005406
Bell 205 Helicopter	15	1	1000	0.0019756	0.0001897	NA	NA	NA	NA	0.0147	0.0001764	0.0003661
Bell 205 Helicopter	15	1	1320	0.0015830	0.0001520	NA	NA	NA	NA	0.0108	0.0001296	0.0002816
Bell 205 Helicopter	15	1	2608	0.0002577	0.0000247	NA	NA	NA	NA	0.0064	0.0000768	0.0001015
AT 802A	15	2	25	0.0361256	0.0034681	NA	NA	NA	NA	0.0522	0.0006264	0.0040945
AT 802A	15	2	50	0.0291066	0.0027942	NA	NA	NA	NA	0.0484	0.0005808	0.0033750
AT 802A	15	2	100	0.0198298	0.0019037	NA	NA	NA	NA	0.0426	0.0005112	0.0024149
AT 802A	15	2	250	0.0104303	0.0010013	NA	NA	NA	NA	0.0342	0.0004104	0.0014117
AT 802A	15	2	500	0.0066508	0.0006385	NA	NA	NA	NA	0.0278	0.0003336	0.0009721
AT 802A	15	2	1000	0.0048347	0.0004641	NA	NA	NA	NA	0.0202	0.0002424	0.0007065
AT 802A	15	2	1320	0.0041967	0.0004029	NA	NA	NA	NA	0.0165	0.0001980	0.0006009
AT 802A	15	2	2608	0.0010062	0.0000966	NA	NA	NA	NA	0.0075	0.0000900	0.0001866
Bell 205 Helicopter	15	2	25	0.0358557	0.0034421	NA	NA	NA	NA	0.0596	0.0007152	0.0041573
Bell 205 Helicopter	15	2	50	0.0213514	0.0020497	NA	NA	NA	NA	0.0516	0.0006192	0.0026689
Bell 205 Helicopter	15	2	100	0.0126391	0.0012133	NA	NA	NA	NA	0.0443	0.0005316	0.0017449
Bell 205 Helicopter	15	2	250	0.0088351	0.0008482	NA	NA	NA	NA	0.0353	0.0004236	0.0012718
Bell 205 Helicopter	15	2	500	0.0062827	0.0006031	NA	NA	NA	NA	0.0270	0.0003240	0.0009271
Bell 205 Helicopter	15	2	1000	0.0038040	0.0003652	NA	NA	NA	NA	0.0183	0.0002196	0.0005848
Bell 205 Helicopter	15	2	1320	0.0028959	0.0002780	NA	NA	NA	NA	0.0150	0.0001800	0.0004580
Bell 205 Helicopter	15	2	2608	0.0005154	0.0000495	NA	NA	NA	NA	0.0083	0.0000996	0.0001491
AT 802A	15	2.3	25	0.0417702	0.0040099	NA	NA	NA	NA	0.0579	0.0006948	0.0047047
AT 802A	15	2.3	50	0.0336984	0.0032350	NA	NA	NA	NA	0.0536	0.0006432	0.0038782
AT 802A	15	2.3	100	0.0229454	0.0022028	NA	NA	NA	NA	0.0469	0.0005628	0.0027656
AT 802A	15	2.3	250	0.0121077	0.0011623	NA	NA	NA	NA	0.0375	0.0004500	0.0016123
AT 802A	15	2.3	500	0.0077049	0.0007397	NA	NA	NA	NA	0.0303	0.0003636	0.0011033
AT 802A	15	2.3	1000	0.0055882	0.0005365	NA	NA	NA	NA	0.0217	0.0002604	0.0007969
AT 802A	15	2.3	1320	0.0047133	0.0004525	NA	NA	NA	NA	0.0175	0.0002100	0.0006625
AT 802A	15	2.3	2608	0.0011571	0.0001111	NA	NA	NA	NA	0.0077	0.0000924	0.0002035
Bell 205 Helicopter	15	2.3	25	0.0415445	0.0039883	NA	NA	NA	NA	0.0659	0.0007908	0.0047791
Bell 205 Helicopter	15	2.3	50	0.0248081	0.0023816	NA	NA	NA	NA	0.0569	0.0006828	0.0030644
Bell 205 Helicopter	15	2.3	100	0.0147325	0.0014143	NA	NA	NA	NA	0.0485	0.0005820	0.0019963
Bell 205 Helicopter	15	2.3	250	0.0102168	0.0009808	NA	NA	NA	NA	0.0385	0.0004620	0.0014428
Bell 205 Helicopter	15	2.3	500	0.0071687	0.0006882	NA	NA	NA	NA	0.0291	0.0003492	0.0010374
Bell 205 Helicopter	15	2.3	1000	0.0043464	0.0004173	NA	NA	NA	NA	0.0195	0.0002340	0.0006513
Bell 205 Helicopter	15	2.3	1320	0.0033021	0.0003170	NA	NA	NA	NA	0.0159	0.0001908	0.0005078
Bell 205 Helicopter	15	2.3	2608	0.0005927	0.0000569	NA	NA	NA	NA	0.0092	0.0001104	0.0001673

* Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

Appendix 2j - Drift Exposure for Females 13-49 Years Old with Aerial Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Drift-Modeling - AGDISP				Margins of Exposure[a]				
Aircraft	Spray Vol (gal/acre)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	5	NA	38	5	4
AT 802A	2	1	50	7	NA	43	6	5
AT 802A	2	1	100	10	NA	51	8	7
AT 802A	2	1	250	19	NA	71	15	11
AT 802A	2	1	500	31	NA	98	24	14
AT 802A	2	1	1000	59	NA	177	44	20
AT 802A	2	1	1320	90	NA	253	67	24
AT 802A	2	1	2608	499	NA	694	290	32
Bell 205 Helicopter	2	1	25	5	NA	35	5	4
Bell 205 Helicopter	2	1	50	9	NA	42	7	6
Bell 205 Helicopter	2	1	100	15	NA	53	11	9
Bell 205 Helicopter	2	1	250	23	NA	75	18	12
Bell 205 Helicopter	2	1	500	39	NA	113	29	16
Bell 205 Helicopter	2	1	1000	79	NA	198	57	22
Bell 205 Helicopter	2	1	1320	113	NA	260	79	25
Bell 205 Helicopter	2	1	2608	707	NA	556	311	33
AT 802A	2	2	25	3	NA	23	2	2
AT 802A	2	2	50	3	NA	26	3	3
AT 802A	2	2	100	5	NA	32	4	4
AT 802A	2	2	250	10	NA	48	8	7
AT 802A	2	2	500	18	NA	75	15	10
AT 802A	2	2	1000	46	NA	160	36	18
AT 802A	2	2	1320	79	NA	231	59	22
AT 802A	2	2	2608	424	NA	694	263	32
Bell 205 Helicopter	2	2	25	3	NA	21	2	2
Bell 205 Helicopter	2	2	50	4	NA	26	4	3
Bell 205 Helicopter	2	2	100	7	NA	34	6	5
Bell 205 Helicopter	2	2	250	13	NA	54	10	8
Bell 205 Helicopter	2	2	500	25	NA	90	19	13
Bell 205 Helicopter	2	2	1000	57	NA	170	42	20
Bell 205 Helicopter	2	2	1320	88	NA	231	64	23
Bell 205 Helicopter	2	2	2608	531	NA	524	264	32
AT 802A	2	2.3	25	2	NA	21	2	2
AT 802A	2	2.3	50	3	NA	24	3	2
AT 802A	2	2.3	100	4	NA	30	4	3
AT 802A	2	2.3	250	9	NA	46	7	6
AT 802A	2	2.3	500	16	NA	72	13	10
AT 802A	2	2.3	1000	42	NA	154	33	17
AT 802A	2	2.3	1320	74	NA	225	56	22
AT 802A	2	2.3	2608	336	NA	694	226	31
Bell 205 Helicopter	2	2.3	25	2	NA	19	2	2
Bell 205 Helicopter	2	2.3	50	4	NA	24	3	3
Bell 205 Helicopter	2	2.3	100	6	NA	32	5	4
Bell 205 Helicopter	2	2.3	250	11	NA	52	9	7
Bell 205 Helicopter	2	2.3	500	22	NA	87	18	12
Bell 205 Helicopter	2	2.3	1000	52	NA	167	40	19
Bell 205 Helicopter	2	2.3	1320	82	NA	225	60	23
Bell 205 Helicopter	2	2.3	2608	410	NA	521	229	31

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for females 13-49 yrs old was 0.00015 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for females 13-49 yrs old was 0.000125 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2j - Drift Exposure for Females 13-49 Years Old with Aerial Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Drift-Modeling - AGDISP				Margins of Exposure[a]				
Aircraft	Spray Vol (gal/acre)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	15	1	25	6	NA	27	5	4
AT 802A	15	1	50	8	NA	29	6	5
AT 802A	15	1	100	11	NA	33	8	7
AT 802A	15	1	250	22	NA	39	14	10
AT 802A	15	1	500	35	NA	47	20	13
AT 802A	15	1	1000	47	NA	60	27	15
AT 802A	15	1	1320	52	NA	70	30	16
AT 802A	15	1	2608	177	NA	128	74	24
Bell 205 Helicopter	15	1	25	6	NA	20	5	4
Bell 205 Helicopter	15	1	50	10	NA	22	7	6
Bell 205 Helicopter	15	1	100	18	NA	26	11	8
Bell 205 Helicopter	15	1	250	26	NA	31	14	10
Bell 205 Helicopter	15	1	500	35	NA	40	18	12
Bell 205 Helicopter	15	1	1000	53	NA	57	27	16
Bell 205 Helicopter	15	1	1320	66	NA	77	36	18
Bell 205 Helicopter	15	1	2608	404	NA	130	98	27
AT 802A	15	2	25	3	NA	16	2	2
AT 802A	15	2	50	4	NA	17	3	3
AT 802A	15	2	100	5	NA	20	4	4
AT 802A	15	2	250	10	NA	24	7	6
AT 802A	15	2	500	16	NA	30	10	8
AT 802A	15	2	1000	22	NA	41	14	10
AT 802A	15	2	1320	25	NA	51	17	11
AT 802A	15	2	2608	104	NA	111	54	22
Bell 205 Helicopter	15	2	25	3	NA	14	2	2
Bell 205 Helicopter	15	2	50	5	NA	16	4	3
Bell 205 Helicopter	15	2	100	8	NA	19	6	5
Bell 205 Helicopter	15	2	250	12	NA	24	8	6
Bell 205 Helicopter	15	2	500	17	NA	31	11	8
Bell 205 Helicopter	15	2	1000	27	NA	46	17	12
Bell 205 Helicopter	15	2	1320	36	NA	56	22	14
Bell 205 Helicopter	15	2	2608	202	NA	100	67	24
AT 802A	15	2.3	25	2	NA	14	2	2
AT 802A	15	2.3	50	3	NA	16	3	2
AT 802A	15	2.3	100	5	NA	18	4	3
AT 802A	15	2.3	250	9	NA	22	6	5
AT 802A	15	2.3	500	14	NA	28	9	7
AT 802A	15	2.3	1000	19	NA	38	13	9
AT 802A	15	2.3	1320	22	NA	48	15	11
AT 802A	15	2.3	2608	90	NA	108	49	21
Bell 205 Helicopter	15	2.3	25	3	NA	13	2	2
Bell 205 Helicopter	15	2.3	50	4	NA	15	3	3
Bell 205 Helicopter	15	2.3	100	7	NA	17	5	4
Bell 205 Helicopter	15	2.3	250	10	NA	22	7	6
Bell 205 Helicopter	15	2.3	500	15	NA	29	10	8
Bell 205 Helicopter	15	2.3	1000	24	NA	43	15	11
Bell 205 Helicopter	15	2.3	1320	32	NA	52	20	13
Bell 205 Helicopter	15	2.3	2608	176	NA	91	60	23

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).

b/Acute dietary exposure estimate for females 13-49 yrs old was 0.00015 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for females 13-49 yrs old was 0.000125 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2k - Drift Exposure for Females 13-49 Years Old with Airblast Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Orchard Airblast - Dormant Apple - 60 Swath												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose						
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)	1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AT 802A	2	1	25	0.0067920	0.0006520	NA	NA	NA	NA	0.0218	0.0002616	0.0009136
AT 802A	2	1	50	0.0025843	0.0002481	NA	NA	NA	NA	0.0194	0.0002328	0.0004809
AT 802A	2	1	75	0.0012676	0.0001217	NA	NA	NA	NA	0.0176	0.0002112	0.0003329
AT 802A	2	1	100	0.0007203	0.0000691	NA	NA	NA	NA	0.0163	0.0001956	0.0002647
AT 802A	2	1	150	0.0003043	0.0000292	NA	NA	NA	NA	0.0143	0.0001716	0.0002008
AT 802A	2	1	200	0.0001607	0.0000154	NA	NA	NA	NA	0.0129	0.0001548	0.0001702
AT 802A	2	1	250	0.0000969	0.0000093	NA	NA	NA	NA	0.0118	0.0001416	0.0001509
AT 802A	2	1	300	0.0000626	0.0000060	NA	NA	NA	NA	0.0109	0.0001308	0.0001368
AT 802A	2	1	500	0.0000172	0.0000016	NA	NA	NA	NA	0.0085	0.0001020	0.0001036
AT 802A	2	1	1000	0.0000032	0.0000003	NA	NA	NA	NA	0.0047	0.0000564	0.0000567
AT 802A	2	1	1320	0.0000016	0.0000002	NA	NA	NA	NA	0.0033	0.0000396	0.0000398
AT 802A	2	1	2608	0.0000003	0.0000000	NA	NA	NA	NA	0.0012	0.0000144	0.0000144
AT 802A	2	2	25	0.0135839	0.0013041	NA	NA	NA	NA	0.0367	0.0004404	0.0017445
AT 802A	2	2	50	0.0051685	0.0004962	NA	NA	NA	NA	0.0320	0.0003840	0.0008802
AT 802A	2	2	75	0.0025352	0.0002434	NA	NA	NA	NA	0.0285	0.0003420	0.0005854
AT 802A	2	2	100	0.0014406	0.0001383	NA	NA	NA	NA	0.0259	0.0003108	0.0004491
AT 802A	2	2	150	0.0006086	0.0000584	NA	NA	NA	NA	0.0221	0.0002652	0.0003236
AT 802A	2	2	200	0.0003215	0.0000309	NA	NA	NA	NA	0.0195	0.0002340	0.0002649
AT 802A	2	2	250	0.0001939	0.0000186	NA	NA	NA	NA	0.0174	0.0002088	0.0002274
AT 802A	2	2	300	0.0001252	0.0000120	NA	NA	NA	NA	0.0157	0.0001884	0.0002004
AT 802A	2	2	500	0.0000344	0.0000033	NA	NA	NA	NA	0.0111	0.0001332	0.0001365
AT 802A	2	2	1000	0.0000063	0.0000006	NA	NA	NA	NA	0.0052	0.0000624	0.0000630
AT 802A	2	2	1320	0.0000032	0.0000003	NA	NA	NA	NA	0.0036	0.0000432	0.0000435
AT 802A	2	2	2608	0.0000006	0.0000001	NA	NA	NA	NA	0.0012	0.0000144	0.0000145
AT 802A	2	4	25	0.0271678	0.0026081	NA	NA	NA	NA	0.0596	0.0007152	0.0033233
AT 802A	2	4	50	0.0103370	0.0009924	NA	NA	NA	NA	0.0503	0.0006036	0.0015960
AT 802A	2	4	75	0.0050703	0.0004868	NA	NA	NA	NA	0.0439	0.0005268	0.0010136
AT 802A	2	4	100	0.0028812	0.0002766	NA	NA	NA	NA	0.0389	0.0004668	0.0007434
AT 802A	2	4	150	0.0012173	0.0001169	NA	NA	NA	NA	0.0319	0.0003828	0.0004997
AT 802A	2	4	200	0.0006430	0.0000617	NA	NA	NA	NA	0.0269	0.0003228	0.0003845
AT 802A	2	4	250	0.0003878	0.0000372	NA	NA	NA	NA	0.0230	0.0002760	0.0003132
AT 802A	2	4	300	0.0002503	0.0000240	NA	NA	NA	NA	0.0200	0.0002400	0.0002640
AT 802A	2	4	500	0.0000687	0.0000066	NA	NA	NA	NA	0.0128	0.0001536	0.0001602
AT 802A	2	4	1000	0.0000126	0.0000012	NA	NA	NA	NA	0.0055	0.0000660	0.0000672
AT 802A	2	4	1320	0.0000063	0.0000006	NA	NA	NA	NA	0.0037	0.0000444	0.0000450
AT 802A	2	4	2608	0.0000012	0.0000001	NA	NA	NA	NA	0.0014	0.0000168	0.0000169
AT 802A	2	6	25	0.0407518	0.0039122	NA	NA	NA	NA	0.0781	0.0009372	0.0048494
AT 802A	2	6	50	0.0155055	0.0014885	NA	NA	NA	NA	0.0643	0.0007716	0.0022601
AT 802A	2	6	75	0.0076055	0.0007301	NA	NA	NA	NA	0.0550	0.0006600	0.0013901
AT 802A	2	6	100	0.0043218	0.0004149	NA	NA	NA	NA	0.0479	0.0005748	0.0009897
AT 802A	2	6	150	0.0018259	0.0001753	NA	NA	NA	NA	0.0377	0.0004524	0.0006277
AT 802A	2	6	200	0.0009645	0.0000926	NA	NA	NA	NA	0.0305	0.0003660	0.0004586
AT 802A	2	6	250	0.0005816	0.0000558	NA	NA	NA	NA	0.0253	0.0003036	0.0003594
AT 802A	2	6	300	0.0003755	0.0000360	NA	NA	NA	NA	0.0214	0.0002568	0.0002928
AT 802A	2	6	500	0.0001031	0.0000099	NA	NA	NA	NA	0.0130	0.0001560	0.0001659
AT 802A	2	6	1000	0.0000189	0.0000018	NA	NA	NA	NA	0.0055	0.0000660	0.0000678
AT 802A	2	6	1320	0.0000095	0.0000009	NA	NA	NA	NA	0.0038	0.0000456	0.0000465
AT 802A	2	6	2608	0.0000017	0.0000002	NA	NA	NA	NA	0.0014	0.0000168	0.0000170

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

EAS EXPOSURE ESTIMATES												
Orchard Airblast - Sparse Orchard - 60 Swath												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose						
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)	1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AT 802A	2	1	25	0.0055072	0.0005287	NA	NA	NA	NA	0.0218	0.0002616	0.0007903
AT 802A	2	1	50	0.0025082	0.0002408	NA	NA	NA	NA	0.0194	0.0002328	0.0004736
AT 802A	2	1	75	0.0014087	0.0001352	NA	NA	NA	NA	0.0176	0.0002112	0.0003464
AT 802A	2	1	100	0.0008995	0.0000863	NA	NA	NA	NA	0.0163	0.0001956	0.0002819
AT 802A	2	1	150	0.0004577	0.0000439	NA	NA	NA	NA	0.0143	0.0001716	0.0002155
AT 802A	2	1	200	0.0002761	0.0000265	NA	NA	NA	NA	0.0129	0.0001548	0.0001813
AT 802A	2	1	250	0.0001853	0.0000178	NA	NA	NA	NA	0.0118	0.0001416	0.0001594
AT 802A	2	1	300	0.0001325	0.0000127	NA	NA	NA	NA	0.0109	0.0001308	0.0001435
AT 802A	2	1	500	0.0000486	0.0000047	NA	NA	NA	NA	0.0085	0.0001020	0.0001067
AT 802A	2	1	1000	0.0000101	0.0000010	NA	NA	NA	NA	0.0047	0.0000564	0.0000574
AT 802A	2	1	1320	0.0000047	0.0000005	NA	NA	NA	NA	0.0033	0.0000396	0.0000401
AT 802A	2	1	2608	0.0000003	0.0000000	NA	NA	NA	NA	0.0012	0.0000144	0.0000144
AT 802A	2	2	25	0.0110144	0.0010574	NA	NA	NA	NA	0.0367	0.0004404	0.0014978
AT 802A	2	2	50	0.0050164	0.0004816	NA	NA	NA	NA	0.0320	0.0003840	0.0008656
AT 802A	2	2	75	0.0028174	0.0002705	NA	NA	NA	NA	0.0285	0.0003420	0.0006125
AT 802A	2	2	100	0.0017989	0.0001727	NA	NA	NA	NA	0.0259	0.0003108	0.0004835
AT 802A	2	2	150	0.0009154	0.0000879	NA	NA	NA	NA	0.0221	0.0002652	0.0003531
AT 802A	2	2	200	0.0005522	0.0000530	NA	NA	NA	NA	0.0195	0.0002340	0.0002870
AT 802A	2	2	250	0.0003706	0.0000356	NA	NA	NA	NA	0.0174	0.0002088	0.0002444
AT 802A	2	2	300	0.0002651	0.0000254	NA	NA	NA	NA	0.0157	0.0001884	0.0002138
AT 802A	2	2	500	0.0000972	0.0000093	NA	NA	NA	NA	0.0111	0.0001332	0.0001425
AT 802A	2	2	1000	0.0000202	0.0000019	NA	NA	NA	NA	0.0052	0.0000624	0.0000643
AT 802A	2	2	1320	0.0000094	0.0000009	NA	NA	NA	NA	0.0036	0.0000432	0.0000441
AT 802A	2	2	2608	0.0000005	0.0000000	NA	NA	NA	NA	0.0012	0.0000144	0.0000144
AT 802A	2	4	25	0.0220288	0.0021148	NA	NA	NA	NA	0.0596	0.0007152	0.0028300
AT 802A	2	4	50	0.0100327	0.0009631	NA	NA	NA	NA	0.0503	0.0006036	0.0015667
AT 802A	2	4	75	0.0056348	0.0005409	NA	NA	NA	NA	0.0439	0.0005268	0.0010677
AT 802A	2	4	100	0.0035978	0.0003454	NA	NA	NA	NA	0.0389	0.0004668	0.0008122
AT 802A	2	4	150	0.0018308	0.0001758	NA	NA	NA	NA	0.0319	0.0003828	0.0005586
AT 802A	2	4	200	0.0011044	0.0001060	NA	NA	NA	NA	0.0269	0.0003228	0.0004288
AT 802A	2	4	250	0.0007412	0.0000712	NA	NA	NA	NA	0.0230	0.0002760	0.0003472
AT 802A	2	4	300	0.0005301	0.0000509	NA	NA	NA	NA	0.0200	0.0002400	0.0002909
AT 802A	2	4	500	0.0001944	0.0000187	NA	NA	NA	NA	0.0128	0.0001536	0.0001723
AT 802A	2	4	1000	0.0000403	0.0000039	NA	NA	NA	NA	0.0055	0.0000660	0.0000699
AT 802A	2	4	1320	0.0000188	0.0000018	NA	NA	NA	NA	0.0037	0.0000444	0.0000462
AT 802A	2	4	2608	0.0000010	0.0000001	NA	NA	NA	NA	0.0014	0.0000168	0.0000169
AT 802A	2	6	25	0.0330432	0.0031721	NA	NA	NA	NA	0.0781	0.0009372	0.0041093
AT 802A	2	6	50	0.0150491	0.0014447	NA	NA	NA	NA	0.0643	0.0007716	0.0022163
AT 802A	2	6	75	0.0084522	0.0008114	NA	NA	NA	NA	0.0550	0.0006600	0.0014714
AT 802A	2	6	100	0.0053968	0.0005181	NA	NA	NA	NA	0.0479	0.0005748	0.0010929
AT 802A	2	6	150	0.0027462	0.0002636	NA	NA	NA	NA	0.0377	0.0004524	0.0007160
AT 802A	2	6	200	0.0016566	0.0001590	NA	NA	NA	NA	0.0305	0.0003660	0.0005250
AT 802A	2	6	250	0.0011117	0.0001067	NA	NA	NA	NA	0.0253	0.0003036	0.0004103
AT 802A	2	6	300	0.0007952	0.0000763	NA	NA	NA	NA	0.0214	0.0002568	0.0003331
AT 802A	2	6	500	0.0002915	0.0000280	NA	NA	NA	NA	0.0130	0.0001560	0.0001840
AT 802A	2	6	1000	0.0000605	0.0000058	NA	NA	NA	NA	0.0055	0.0000660	0.0000718
AT 802A	2	6	1320	0.0000282	0.0000027	NA	NA	NA	NA	0.0038	0.0000456	0.0000483
AT 802A	2	6	2608	0.0000015	0.0000001	NA	NA	NA	NA	0.0014	0.0000168	0.0000169

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

RAS RISK CALCULATIONS								
Orchard Airblast - Dormant Apple - 60 Swath								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	15	NA	38	11	8
AT 802A	2	1	50	40	NA	43	21	13
AT 802A	2	1	75	82	NA	47	30	16
AT 802A	2	1	100	145	NA	51	38	19
AT 802A	2	1	150	342	NA	58	50	21
AT 802A	2	1	200	648	NA	65	59	22
AT 802A	2	1	250	1075	NA	71	66	23
AT 802A	2	1	300	1664	NA	76	73	24
AT 802A	2	1	500	6063	NA	98	96	26
AT 802A	2	1	1000	33008	NA	177	176	30
AT 802A	2	1	1320	66021	NA	253	252	32
AT 802A	2	1	2608	362012	NA	694	693	35
AT 802A	2	2	25	8	NA	23	6	5
AT 802A	2	2	50	20	NA	26	11	9
AT 802A	2	2	75	41	NA	29	17	12
AT 802A	2	2	100	72	NA	32	22	14
AT 802A	2	2	150	171	NA	38	31	17
AT 802A	2	2	200	324	NA	43	38	19
AT 802A	2	2	250	537	NA	48	44	20
AT 802A	2	2	300	832	NA	53	50	21
AT 802A	2	2	500	3032	NA	75	73	24
AT 802A	2	2	1000	16504	NA	160	159	30
AT 802A	2	2	1320	33011	NA	231	230	31
AT 802A	2	2	2608	181006	NA	694	692	35
AT 802A	2	4	25	4	NA	14	3	3
AT 802A	2	4	50	10	NA	17	6	5
AT 802A	2	4	75	21	NA	19	10	8
AT 802A	2	4	100	36	NA	21	13	10
AT 802A	2	4	150	86	NA	26	20	13
AT 802A	2	4	200	162	NA	31	26	15
AT 802A	2	4	250	269	NA	36	32	17
AT 802A	2	4	300	416	NA	42	38	19
AT 802A	2	4	500	1516	NA	65	62	23
AT 802A	2	4	1000	8252	NA	152	149	29
AT 802A	2	4	1320	16505	NA	225	222	31
AT 802A	2	4	2608	90503	NA	595	591	34
AT 802A	2	6	25	3	NA	11	2	2
AT 802A	2	6	50	7	NA	13	4	4
AT 802A	2	6	75	14	NA	15	7	6
AT 802A	2	6	100	24	NA	17	10	8
AT 802A	2	6	150	57	NA	22	16	11
AT 802A	2	6	200	108	NA	27	22	14
AT 802A	2	6	250	179	NA	33	28	16
AT 802A	2	6	300	277	NA	39	34	18
AT 802A	2	6	500	1011	NA	64	60	23
AT 802A	2	6	1000	5501	NA	152	147	29
AT 802A	2	6	1320	11004	NA	219	215	31
AT 802A	2	6	2608	60335	NA	595	589	34

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for females 13-49 yrs old was 0.00015 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for females 13-49 yrs old was 0.000125 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2k - Drift Exposure for Females 13-49 Years Old with Airblast Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Orchard Airblast - Sparse Orchard - 60 Swath								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	19	NA	38	13	9
AT 802A	2	1	50	42	NA	43	21	13
AT 802A	2	1	75	74	NA	47	29	16
AT 802A	2	1	100	116	NA	51	35	18
AT 802A	2	1	150	228	NA	58	46	20
AT 802A	2	1	200	377	NA	65	55	22
AT 802A	2	1	250	562	NA	71	63	23
AT 802A	2	1	300	786	NA	76	70	24
AT 802A	2	1	500	2144	NA	98	94	26
AT 802A	2	1	1000	10330	NA	177	174	30
AT 802A	2	1	1320	22140	NA	253	250	32
AT 802A	2	1	2608	415517	NA	694	693	35
AT 802A	2	2	25	9	NA	23	7	6
AT 802A	2	2	50	21	NA	26	12	9
AT 802A	2	2	75	37	NA	29	16	11
AT 802A	2	2	100	58	NA	32	21	13
AT 802A	2	2	150	114	NA	38	28	16
AT 802A	2	2	200	189	NA	43	35	18
AT 802A	2	2	250	281	NA	48	41	19
AT 802A	2	2	300	393	NA	53	47	20
AT 802A	2	2	500	1072	NA	75	70	24
AT 802A	2	2	1000	5165	NA	160	155	29
AT 802A	2	2	1320	11070	NA	231	227	31
AT 802A	2	2	2608	207759	NA	694	692	35
AT 802A	2	4	25	5	NA	14	4	3
AT 802A	2	4	50	10	NA	17	6	5
AT 802A	2	4	75	18	NA	19	9	7
AT 802A	2	4	100	29	NA	21	12	9
AT 802A	2	4	150	57	NA	26	18	12
AT 802A	2	4	200	94	NA	31	23	14
AT 802A	2	4	250	141	NA	36	29	16
AT 802A	2	4	300	197	NA	42	34	18
AT 802A	2	4	500	536	NA	65	58	22
AT 802A	2	4	1000	2582	NA	152	143	29
AT 802A	2	4	1320	5535	NA	225	216	31
AT 802A	2	4	2608	103879	NA	595	592	34
AT 802A	2	6	25	3	NA	11	2	2
AT 802A	2	6	50	7	NA	13	5	4
AT 802A	2	6	75	12	NA	15	7	6
AT 802A	2	6	100	19	NA	17	9	7
AT 802A	2	6	150	38	NA	22	14	10
AT 802A	2	6	200	63	NA	27	19	12
AT 802A	2	6	250	94	NA	33	24	15
AT 802A	2	6	300	131	NA	39	30	16
AT 802A	2	6	500	357	NA	64	54	22
AT 802A	2	6	1000	1722	NA	152	139	29
AT 802A	2	6	1320	3690	NA	219	207	31
AT 802A	2	6	2608	69253	NA	595	590	34

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for females 13-49 yrs old was 0.00015 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for females 13-49 yrs old was 0.000125 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2l - Drift Exposures for Females 13-49 Years Old with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - High Boom 40 swath/50th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose						
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)	1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AT 802A	2	1	25	0.0011657	0.0001119	NA	NA	NA	NA	0.0218	0.0002616	0.0003735
AT 802A	2	1	50	0.0007731	0.0000742	NA	NA	NA	NA	0.0194	0.0002328	0.0003070
AT 802A	2	1	75	0.0005767	0.0000554	NA	NA	NA	NA	0.0176	0.0002112	0.0002666
AT 802A	2	1	100	0.0004540	0.0000436	NA	NA	NA	NA	0.0163	0.0001956	0.0002392
AT 802A	2	1	150	0.0003313	0.0000318	NA	NA	NA	NA	0.0143	0.0001716	0.0002034
AT 802A	2	1	200	0.0002577	0.0000247	NA	NA	NA	NA	0.0129	0.0001548	0.0001795
AT 802A	2	1	250	0.0002086	0.0000200	NA	NA	NA	NA	0.0118	0.0001416	0.0001616
AT 802A	2	1	300	0.0001718	0.0000165	NA	NA	NA	NA	0.0109	0.0001308	0.0001473
AT 802A	2	1	500	0.0000891	0.0000086	NA	NA	NA	NA	0.0085	0.0001020	0.0001106
AT 802A	2	1	1000	0.0000268	0.0000026	NA	NA	NA	NA	0.0047	0.0000564	0.0000590
AT 802A	2	1	1320	0.0000146	0.0000014	NA	NA	NA	NA	0.0033	0.0000396	0.0000410
AT 802A	2	1	2608	0.0000022	0.0000002	NA	NA	NA	NA	0.0012	0.0000144	0.0000146
AT 802A	2	2	25	0.0023315	0.0002238	NA	NA	NA	NA	0.0367	0.0004404	0.0006642
AT 802A	2	2	50	0.0015461	0.0001484	NA	NA	NA	NA	0.0320	0.0003840	0.0005324
AT 802A	2	2	75	0.0011535	0.0001107	NA	NA	NA	NA	0.0285	0.0003420	0.0004527
AT 802A	2	2	100	0.0009080	0.0000872	NA	NA	NA	NA	0.0259	0.0003108	0.0003980
AT 802A	2	2	150	0.0006626	0.0000636	NA	NA	NA	NA	0.0221	0.0002652	0.0003288
AT 802A	2	2	200	0.0005154	0.0000495	NA	NA	NA	NA	0.0195	0.0002340	0.0002835
AT 802A	2	2	250	0.0004172	0.0000401	NA	NA	NA	NA	0.0174	0.0002088	0.0002489
AT 802A	2	2	300	0.0003436	0.0000330	NA	NA	NA	NA	0.0157	0.0001884	0.0002214
AT 802A	2	2	500	0.0001783	0.0000171	NA	NA	NA	NA	0.0111	0.0001332	0.0001503
AT 802A	2	2	1000	0.0000536	0.0000051	NA	NA	NA	NA	0.0052	0.0000624	0.0000675
AT 802A	2	2	1320	0.0000291	0.0000028	NA	NA	NA	NA	0.0036	0.0000432	0.0000460
AT 802A	2	2	2608	0.0000043	0.0000004	NA	NA	NA	NA	0.0012	0.0000144	0.0000148
AT 802A	2	4	25	0.0046630	0.0004476	NA	NA	NA	NA	0.0596	0.0007152	0.0011628
AT 802A	2	4	50	0.0030923	0.0002969	NA	NA	NA	NA	0.0503	0.0006036	0.0009005
AT 802A	2	4	75	0.0023069	0.0002215	NA	NA	NA	NA	0.0439	0.0005268	0.0007483
AT 802A	2	4	100	0.0018161	0.0001743	NA	NA	NA	NA	0.0389	0.0004668	0.0006411
AT 802A	2	4	150	0.0013253	0.0001272	NA	NA	NA	NA	0.0319	0.0003828	0.0005100
AT 802A	2	4	200	0.0010308	0.0000990	NA	NA	NA	NA	0.0269	0.0003228	0.0004218
AT 802A	2	4	250	0.0008344	0.0000801	NA	NA	NA	NA	0.0230	0.0002760	0.0003561
AT 802A	2	4	300	0.0006872	0.0000660	NA	NA	NA	NA	0.0200	0.0002400	0.0003060
AT 802A	2	4	500	0.0003566	0.0000342	NA	NA	NA	NA	0.0128	0.0001536	0.0001878
AT 802A	2	4	1000	0.0001073	0.0000103	NA	NA	NA	NA	0.0055	0.0000660	0.0000763
AT 802A	2	4	1320	0.0000583	0.0000056	NA	NA	NA	NA	0.0037	0.0000444	0.0000500
AT 802A	2	4	2608	0.0000086	0.0000008	NA	NA	NA	NA	0.0014	0.0000168	0.0000176
AT 802A	2	6	25	0.0069944	0.0006715	NA	NA	NA	NA	0.0781	0.0009372	0.0016087
AT 802A	2	6	50	0.0046384	0.0004453	NA	NA	NA	NA	0.0643	0.0007716	0.0012169
AT 802A	2	6	75	0.0034604	0.0003322	NA	NA	NA	NA	0.0550	0.0006600	0.0009922
AT 802A	2	6	100	0.0027241	0.0002615	NA	NA	NA	NA	0.0479	0.0005748	0.0008363
AT 802A	2	6	150	0.0019879	0.0001908	NA	NA	NA	NA	0.0377	0.0004524	0.0006432
AT 802A	2	6	200	0.0015461	0.0001484	NA	NA	NA	NA	0.0305	0.0003660	0.0005144
AT 802A	2	6	250	0.0012516	0.0001202	NA	NA	NA	NA	0.0253	0.0003036	0.0004238
AT 802A	2	6	300	0.0010308	0.0000990	NA	NA	NA	NA	0.0214	0.0002568	0.0003558
AT 802A	2	6	500	0.0005349	0.0000513	NA	NA	NA	NA	0.0130	0.0001560	0.0002073
AT 802A	2	6	1000	0.0001609	0.0000154	NA	NA	NA	NA	0.0055	0.0000660	0.0000814
AT 802A	2	6	1320	0.0000874	0.0000084	NA	NA	NA	NA	0.0038	0.0000456	0.0000540
AT 802A	2	6	2608	0.0000129	0.0000012	NA	NA	NA	NA	0.0014	0.0000168	0.0000180

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

Appendix 2l - Drift Exposures for Females 13-49 Years Old with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - Low Boom 40 swath/50th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0006135	0.0000589	NA	NA	NA	NA	0.0218	0.0002616	0.0003205
AT 802A	2	1	50	0.0004172	0.0000401	NA	NA	NA	NA	0.0194	0.0002328	0.0002729
AT 802A	2	1	75	0.0003190	0.0000306	NA	NA	NA	NA	0.0176	0.0002112	0.0002418
AT 802A	2	1	100	0.0002454	0.0000236	NA	NA	NA	NA	0.0163	0.0001956	0.0002192
AT 802A	2	1	150	0.0001841	0.0000177	NA	NA	NA	NA	0.0143	0.0001716	0.0001893
AT 802A	2	1	200	0.0001473	0.0000141	NA	NA	NA	NA	0.0129	0.0001548	0.0001689
AT 802A	2	1	250	0.0001227	0.0000118	NA	NA	NA	NA	0.0118	0.0001416	0.0001534
AT 802A	2	1	300	0.0001104	0.0000106	NA	NA	NA	NA	0.0109	0.0001308	0.0001414
AT 802A	2	1	500	0.0000632	0.0000061	NA	NA	NA	NA	0.0085	0.0001020	0.0001081
AT 802A	2	1	1000	0.0000239	0.0000023	NA	NA	NA	NA	0.0047	0.0000564	0.0000587
AT 802A	2	1	1320	0.0000146	0.0000014	NA	NA	NA	NA	0.0033	0.0000396	0.0000410
AT 802A	2	1	2608	0.0000031	0.0000003	NA	NA	NA	NA	0.0012	0.0000144	0.0000147
AT 802A	2	2	25	0.0012271	0.0001178	NA	NA	NA	NA	0.0367	0.0004404	0.0005582
AT 802A	2	2	50	0.0008344	0.0000801	NA	NA	NA	NA	0.0320	0.0003840	0.0004641
AT 802A	2	2	75	0.0006381	0.0000613	NA	NA	NA	NA	0.0285	0.0003420	0.0004033
AT 802A	2	2	100	0.0004908	0.0000471	NA	NA	NA	NA	0.0259	0.0003108	0.0003579
AT 802A	2	2	150	0.0003681	0.0000353	NA	NA	NA	NA	0.0221	0.0002652	0.0003005
AT 802A	2	2	200	0.0002945	0.0000283	NA	NA	NA	NA	0.0195	0.0002340	0.0002623
AT 802A	2	2	250	0.0002454	0.0000236	NA	NA	NA	NA	0.0174	0.0002088	0.0002324
AT 802A	2	2	300	0.0002209	0.0000212	NA	NA	NA	NA	0.0157	0.0001884	0.0002096
AT 802A	2	2	500	0.0001264	0.0000121	NA	NA	NA	NA	0.0111	0.0001332	0.0001453
AT 802A	2	2	1000	0.0000479	0.0000046	NA	NA	NA	NA	0.0052	0.0000624	0.0000670
AT 802A	2	2	1320	0.0000292	0.0000028	NA	NA	NA	NA	0.0036	0.0000432	0.0000460
AT 802A	2	2	2608	0.0000062	0.0000006	NA	NA	NA	NA	0.0012	0.0000144	0.0000150
AT 802A	2	4	25	0.0024542	0.0002356	NA	NA	NA	NA	0.0596	0.0007152	0.0009508
AT 802A	2	4	50	0.0016688	0.0001602	NA	NA	NA	NA	0.0503	0.0006036	0.0007638
AT 802A	2	4	75	0.0012762	0.0001225	NA	NA	NA	NA	0.0439	0.0005268	0.0006493
AT 802A	2	4	100	0.0009817	0.0000942	NA	NA	NA	NA	0.0389	0.0004668	0.0005610
AT 802A	2	4	150	0.0007363	0.0000707	NA	NA	NA	NA	0.0319	0.0003828	0.0004535
AT 802A	2	4	200	0.0005890	0.0000565	NA	NA	NA	NA	0.0269	0.0003228	0.0003793
AT 802A	2	4	250	0.0004908	0.0000471	NA	NA	NA	NA	0.0230	0.0002760	0.0003231
AT 802A	2	4	300	0.0004418	0.0000424	NA	NA	NA	NA	0.0200	0.0002400	0.0002824
AT 802A	2	4	500	0.0002528	0.0000243	NA	NA	NA	NA	0.0128	0.0001536	0.0001779
AT 802A	2	4	1000	0.0000958	0.0000092	NA	NA	NA	NA	0.0055	0.0000660	0.0000752
AT 802A	2	4	1320	0.0000585	0.0000056	NA	NA	NA	NA	0.0037	0.0000444	0.0000500
AT 802A	2	4	2608	0.0000125	0.0000012	NA	NA	NA	NA	0.0014	0.0000168	0.0000180
AT 802A	2	6	25	0.0036813	0.0003534	NA	NA	NA	NA	0.0781	0.0009372	0.0012906
AT 802A	2	6	50	0.0025033	0.0002403	NA	NA	NA	NA	0.0643	0.0007716	0.0010119
AT 802A	2	6	75	0.0019143	0.0001838	NA	NA	NA	NA	0.0550	0.0006600	0.0008438
AT 802A	2	6	100	0.0014725	0.0001414	NA	NA	NA	NA	0.0479	0.0005748	0.0007162
AT 802A	2	6	150	0.0011044	0.0001060	NA	NA	NA	NA	0.0377	0.0004524	0.0005584
AT 802A	2	6	200	0.0008835	0.0000848	NA	NA	NA	NA	0.0305	0.0003660	0.0004508
AT 802A	2	6	250	0.0007363	0.0000707	NA	NA	NA	NA	0.0253	0.0003036	0.0003743
AT 802A	2	6	300	0.0006626	0.0000636	NA	NA	NA	NA	0.0214	0.0002568	0.0003204
AT 802A	2	6	500	0.0003792	0.0000364	NA	NA	NA	NA	0.0130	0.0001560	0.0001924
AT 802A	2	6	1000	0.0001437	0.0000138	NA	NA	NA	NA	0.0055	0.0000660	0.0000798
AT 802A	2	6	1320	0.0000877	0.0000084	NA	NA	NA	NA	0.0038	0.0000456	0.0000540
AT 802A	2	6	2608	0.0000187	0.0000018	NA	NA	NA	NA	0.0014	0.0000168	0.0000186

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

Appendix 2l - Drift Exposures for Females 13-49 Years Old with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - High Boom 40 swath/90th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose						
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)	1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AT 802A	2	1	25	0.0016566	0.0001590	NA	NA	NA	NA	0.0218	0.0002616	0.0004206
AT 802A	2	1	50	0.0011903	0.0001143	NA	NA	NA	NA	0.0194	0.0002328	0.0003471
AT 802A	2	1	75	0.0009203	0.0000884	NA	NA	NA	NA	0.0176	0.0002112	0.0002996
AT 802A	2	1	100	0.0007363	0.0000707	NA	NA	NA	NA	0.0163	0.0001956	0.0002663
AT 802A	2	1	150	0.0005522	0.0000530	NA	NA	NA	NA	0.0143	0.0001716	0.0002246
AT 802A	2	1	200	0.0004418	0.0000424	NA	NA	NA	NA	0.0129	0.0001548	0.0001972
AT 802A	2	1	250	0.0003681	0.0000353	NA	NA	NA	NA	0.0118	0.0001416	0.0001769
AT 802A	2	1	300	0.0003190	0.0000306	NA	NA	NA	NA	0.0109	0.0001308	0.0001614
AT 802A	2	1	500	0.0002096	0.0000201	NA	NA	NA	NA	0.0085	0.0001020	0.0001221
AT 802A	2	1	1000	0.0001171	0.0000112	NA	NA	NA	NA	0.0047	0.0000564	0.0000676
AT 802A	2	1	1320	0.0000924	0.0000089	NA	NA	NA	NA	0.0033	0.0000396	0.0000485
AT 802A	2	1	2608	0.0000513	0.0000049	NA	NA	NA	NA	0.0012	0.0000144	0.0000193
AT 802A	2	2	25	0.0033132	0.0003181	NA	NA	NA	NA	0.0367	0.0004404	0.0007585
AT 802A	2	2	50	0.0023806	0.0002285	NA	NA	NA	NA	0.0320	0.0003840	0.0006125
AT 802A	2	2	75	0.0018406	0.0001767	NA	NA	NA	NA	0.0285	0.0003420	0.0005187
AT 802A	2	2	100	0.0014725	0.0001414	NA	NA	NA	NA	0.0259	0.0003108	0.0004522
AT 802A	2	2	150	0.0011044	0.0001060	NA	NA	NA	NA	0.0221	0.0002652	0.0003712
AT 802A	2	2	200	0.0008835	0.0000848	NA	NA	NA	NA	0.0195	0.0002340	0.0003188
AT 802A	2	2	250	0.0007363	0.0000707	NA	NA	NA	NA	0.0174	0.0002088	0.0002795
AT 802A	2	2	300	0.0006381	0.0000613	NA	NA	NA	NA	0.0157	0.0001884	0.0002497
AT 802A	2	2	500	0.0004193	0.0000403	NA	NA	NA	NA	0.0111	0.0001332	0.0001735
AT 802A	2	2	1000	0.0002343	0.0000225	NA	NA	NA	NA	0.0052	0.0000624	0.0000849
AT 802A	2	2	1320	0.0001849	0.0000177	NA	NA	NA	NA	0.0036	0.0000432	0.0000609
AT 802A	2	2	2608	0.0001027	0.0000099	NA	NA	NA	NA	0.0012	0.0000144	0.0000243
AT 802A	2	4	25	0.0066263	0.0006361	NA	NA	NA	NA	0.0596	0.0007152	0.0013513
AT 802A	2	4	50	0.0047611	0.0004571	NA	NA	NA	NA	0.0503	0.0006036	0.0010607
AT 802A	2	4	75	0.0036813	0.0003534	NA	NA	NA	NA	0.0439	0.0005268	0.0008802
AT 802A	2	4	100	0.0029450	0.0002827	NA	NA	NA	NA	0.0389	0.0004668	0.0007495
AT 802A	2	4	150	0.0022088	0.0002120	NA	NA	NA	NA	0.0319	0.0003828	0.0005948
AT 802A	2	4	200	0.0017670	0.0001696	NA	NA	NA	NA	0.0269	0.0003228	0.0004924
AT 802A	2	4	250	0.0014725	0.0001414	NA	NA	NA	NA	0.0230	0.0002760	0.0004174
AT 802A	2	4	300	0.0012762	0.0001225	NA	NA	NA	NA	0.0200	0.0002400	0.0003625
AT 802A	2	4	500	0.0008386	0.0000805	NA	NA	NA	NA	0.0128	0.0001536	0.0002341
AT 802A	2	4	1000	0.0004685	0.0000450	NA	NA	NA	NA	0.0055	0.0000660	0.0001110
AT 802A	2	4	1320	0.0003697	0.0000355	NA	NA	NA	NA	0.0037	0.0000444	0.0000799
AT 802A	2	4	2608	0.0002053	0.0000197	NA	NA	NA	NA	0.0014	0.0000168	0.0000365
AT 802A	2	6	25	0.0099395	0.0009542	NA	NA	NA	NA	0.0781	0.0009372	0.0018914
AT 802A	2	6	50	0.0071417	0.0006856	NA	NA	NA	NA	0.0643	0.0007716	0.0014572
AT 802A	2	6	75	0.0055219	0.0005301	NA	NA	NA	NA	0.0550	0.0006600	0.0011901
AT 802A	2	6	100	0.0044175	0.0004241	NA	NA	NA	NA	0.0479	0.0005748	0.0009989
AT 802A	2	6	150	0.0033132	0.0003181	NA	NA	NA	NA	0.0377	0.0004524	0.0007705
AT 802A	2	6	200	0.0026505	0.0002544	NA	NA	NA	NA	0.0305	0.0003660	0.0006204
AT 802A	2	6	250	0.0022088	0.0002120	NA	NA	NA	NA	0.0253	0.0003036	0.0005156
AT 802A	2	6	300	0.0019143	0.0001838	NA	NA	NA	NA	0.0214	0.0002568	0.0004406
AT 802A	2	6	500	0.0012579	0.0001208	NA	NA	NA	NA	0.0130	0.0001560	0.0002768
AT 802A	2	6	1000	0.0007028	0.0000675	NA	NA	NA	NA	0.0055	0.0000660	0.0001335
AT 802A	2	6	1320	0.0005546	0.0000532	NA	NA	NA	NA	0.0038	0.0000456	0.0000988
AT 802A	2	6	2608	0.0003080	0.0000296	NA	NA	NA	NA	0.0014	0.0000168	0.0000464

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

Appendix 2l - Drift Exposures for Females 13-49 Years Old with Ground Boom Application of Chlorpyrifos

EAS EXPOSURE ESTIMATES												
Ground Boom - Low Boom 40 swath/90th Percentile												
Drift Modeling - AgDRIFT				Dermal Dose		Incidental Oral Dose				1-hr TWA air conc.* (mg/m3)	Inhalation Dose (mg/kg/day)	Drift ADD (mg/kg/day)
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	external PBPK (mg/kg/day)	9.6% absorption (mg/kg/day)	Hand-to-Mouth (mg/kg/day)	Object-to-Mouth (mg/kg/day)	Soil Ingestion (mg/kg/day)	Combined (mg/kg/day)			
AT 802A	2	1	25	0.0010430	0.0001001	NA	NA	NA	NA	0.0218	0.0002616	0.0003617
AT 802A	2	1	50	0.0007608	0.0000730	NA	NA	NA	NA	0.0194	0.0002328	0.0003058
AT 802A	2	1	75	0.0005890	0.0000565	NA	NA	NA	NA	0.0176	0.0002112	0.0002677
AT 802A	2	1	100	0.0004786	0.0000459	NA	NA	NA	NA	0.0163	0.0001956	0.0002415
AT 802A	2	1	150	0.0003559	0.0000342	NA	NA	NA	NA	0.0143	0.0001716	0.0002058
AT 802A	2	1	200	0.0002945	0.0000283	NA	NA	NA	NA	0.0129	0.0001548	0.0001831
AT 802A	2	1	250	0.0002454	0.0000236	NA	NA	NA	NA	0.0118	0.0001416	0.0001652
AT 802A	2	1	300	0.0002209	0.0000212	NA	NA	NA	NA	0.0109	0.0001308	0.0001520
AT 802A	2	1	500	0.0001482	0.0000142	NA	NA	NA	NA	0.0085	0.0001020	0.0001162
AT 802A	2	1	1000	0.0000850	0.0000082	NA	NA	NA	NA	0.0047	0.0000564	0.0000646
AT 802A	2	1	1320	0.0000676	0.0000065	NA	NA	NA	NA	0.0033	0.0000396	0.0000461
AT 802A	2	1	2608	0.0000380	0.0000036	NA	NA	NA	NA	0.0012	0.0000144	0.0000180
AT 802A	2	2	25	0.0020861	0.0002003	NA	NA	NA	NA	0.0367	0.0004404	0.0006407
AT 802A	2	2	50	0.0015216	0.0001461	NA	NA	NA	NA	0.0320	0.0003840	0.0005301
AT 802A	2	2	75	0.0011780	0.0001131	NA	NA	NA	NA	0.0285	0.0003420	0.0004551
AT 802A	2	2	100	0.0009571	0.0000919	NA	NA	NA	NA	0.0259	0.0003108	0.0004027
AT 802A	2	2	150	0.0007117	0.0000683	NA	NA	NA	NA	0.0221	0.0002652	0.0003335
AT 802A	2	2	200	0.0005890	0.0000565	NA	NA	NA	NA	0.0195	0.0002340	0.0002905
AT 802A	2	2	250	0.0004908	0.0000471	NA	NA	NA	NA	0.0174	0.0002088	0.0002559
AT 802A	2	2	300	0.0004418	0.0000424	NA	NA	NA	NA	0.0157	0.0001884	0.0002308
AT 802A	2	2	500	0.0002964	0.0000285	NA	NA	NA	NA	0.0111	0.0001332	0.0001617
AT 802A	2	2	1000	0.0001700	0.0000163	NA	NA	NA	NA	0.0052	0.0000624	0.0000787
AT 802A	2	2	1320	0.0001351	0.0000130	NA	NA	NA	NA	0.0036	0.0000432	0.0000562
AT 802A	2	2	2608	0.0000760	0.0000073	NA	NA	NA	NA	0.0012	0.0000144	0.0000217
AT 802A	2	4	25	0.0041721	0.0004005	NA	NA	NA	NA	0.0596	0.0007152	0.0011157
AT 802A	2	4	50	0.0030432	0.0002921	NA	NA	NA	NA	0.0503	0.0006036	0.0008957
AT 802A	2	4	75	0.0023560	0.0002262	NA	NA	NA	NA	0.0439	0.0005268	0.0007530
AT 802A	2	4	100	0.0019143	0.0001838	NA	NA	NA	NA	0.0389	0.0004668	0.0006506
AT 802A	2	4	150	0.0014234	0.0001366	NA	NA	NA	NA	0.0319	0.0003828	0.0005194
AT 802A	2	4	200	0.0011780	0.0001131	NA	NA	NA	NA	0.0269	0.0003228	0.0004359
AT 802A	2	4	250	0.0009817	0.0000942	NA	NA	NA	NA	0.0230	0.0002760	0.0003702
AT 802A	2	4	300	0.0008835	0.0000848	NA	NA	NA	NA	0.0200	0.0002400	0.0003248
AT 802A	2	4	500	0.0005928	0.0000569	NA	NA	NA	NA	0.0128	0.0001536	0.0002105
AT 802A	2	4	1000	0.0003401	0.0000326	NA	NA	NA	NA	0.0055	0.0000660	0.0000986
AT 802A	2	4	1320	0.0002703	0.0000259	NA	NA	NA	NA	0.0037	0.0000444	0.0000703
AT 802A	2	4	2608	0.0001519	0.0000146	NA	NA	NA	NA	0.0014	0.0000168	0.0000314
AT 802A	2	6	25	0.0062582	0.0006008	NA	NA	NA	NA	0.0781	0.0009372	0.0015380
AT 802A	2	6	50	0.0045648	0.0004382	NA	NA	NA	NA	0.0643	0.0007716	0.0012098
AT 802A	2	6	75	0.0035340	0.0003393	NA	NA	NA	NA	0.0550	0.0006600	0.0009993
AT 802A	2	6	100	0.0028714	0.0002757	NA	NA	NA	NA	0.0479	0.0005748	0.0008505
AT 802A	2	6	150	0.0021351	0.0002050	NA	NA	NA	NA	0.0377	0.0004524	0.0006574
AT 802A	2	6	200	0.0017670	0.0001696	NA	NA	NA	NA	0.0305	0.0003660	0.0005356
AT 802A	2	6	250	0.0014725	0.0001414	NA	NA	NA	NA	0.0253	0.0003036	0.0004450
AT 802A	2	6	300	0.0013253	0.0001272	NA	NA	NA	NA	0.0214	0.0002568	0.0003840
AT 802A	2	6	500	0.0008892	0.0000854	NA	NA	NA	NA	0.0130	0.0001560	0.0002414
AT 802A	2	6	1000	0.0005101	0.0000490	NA	NA	NA	NA	0.0055	0.0000660	0.0001150
AT 802A	2	6	1320	0.0004054	0.0000389	NA	NA	NA	NA	0.0038	0.0000456	0.0000845
AT 802A	2	6	2608	0.0002279	0.0000219	NA	NA	NA	NA	0.0014	0.0000168	0.0000387

* AGDISP modeling for AT802A 2GPA with various application rates was used for inhalation surrogates. Therefore, the air concentrations will be the same for airblast and ground boom at the same application rates. Breathing height was assumed to be 5 ft.

Abbreviations: TWA = Time Weighted Average, ADD = Absorbed Daily Dose, NA = Not Applicable.

RAS RISK CALCULATIONS								
Ground Boom - High Boom 40 swath/50th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	89	NA	38	27	15
AT 802A	2	1	50	135	NA	43	33	17
AT 802A	2	1	75	181	NA	47	38	18
AT 802A	2	1	100	229	NA	51	42	19
AT 802A	2	1	150	314	NA	58	49	21
AT 802A	2	1	200	404	NA	65	56	22
AT 802A	2	1	250	499	NA	71	62	23
AT 802A	2	1	300	606	NA	76	68	24
AT 802A	2	1	500	1169	NA	98	90	26
AT 802A	2	1	1000	3884	NA	177	170	30
AT 802A	2	1	1320	7152	NA	253	244	32
AT 802A	2	1	2608	48339	NA	694	685	35
AT 802A	2	2	25	45	NA	23	15	11
AT 802A	2	2	50	67	NA	26	19	12
AT 802A	2	2	75	90	NA	29	22	14
AT 802A	2	2	100	115	NA	32	25	15
AT 802A	2	2	150	157	NA	38	30	17
AT 802A	2	2	200	202	NA	43	35	18
AT 802A	2	2	250	250	NA	48	40	19
AT 802A	2	2	300	303	NA	53	45	20
AT 802A	2	2	500	584	NA	75	67	24
AT 802A	2	2	1000	1942	NA	160	148	29
AT 802A	2	2	1320	3576	NA	231	217	31
AT 802A	2	2	2608	24169	NA	694	675	35
AT 802A	2	4	25	22	NA	14	9	7
AT 802A	2	4	50	34	NA	17	11	9
AT 802A	2	4	75	45	NA	19	13	10
AT 802A	2	4	100	57	NA	21	16	11
AT 802A	2	4	150	79	NA	26	20	13
AT 802A	2	4	200	101	NA	31	24	14
AT 802A	2	4	250	125	NA	36	28	16
AT 802A	2	4	300	152	NA	42	33	17
AT 802A	2	4	500	292	NA	65	53	22
AT 802A	2	4	1000	971	NA	152	131	28
AT 802A	2	4	1320	1788	NA	225	200	31
AT 802A	2	4	2608	12085	NA	595	567	34
AT 802A	2	6	25	15	NA	11	6	5
AT 802A	2	6	50	22	NA	13	8	7
AT 802A	2	6	75	30	NA	15	10	8
AT 802A	2	6	100	38	NA	17	12	9
AT 802A	2	6	150	52	NA	22	16	11
AT 802A	2	6	200	67	NA	27	19	13
AT 802A	2	6	250	83	NA	33	24	14
AT 802A	2	6	300	101	NA	39	28	16
AT 802A	2	6	500	195	NA	64	48	21
AT 802A	2	6	1000	647	NA	152	123	28
AT 802A	2	6	1320	1192	NA	219	185	30
AT 802A	2	6	2608	8057	NA	595	554	34

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for females 13-49 yrs old was 0.00015 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for females 13-49 yrs old was 0.000125 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2l - Drift Exposures for Females 13-49 Years Old with Ground Boom Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Ground Boom - Low Boom 40 swath/50th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	170	NA	38	31	17
AT 802A	2	1	50	250	NA	43	37	18
AT 802A	2	1	75	326	NA	47	41	19
AT 802A	2	1	100	424	NA	51	46	20
AT 802A	2	1	150	566	NA	58	53	22
AT 802A	2	1	200	707	NA	65	59	23
AT 802A	2	1	250	849	NA	71	65	23
AT 802A	2	1	300	943	NA	76	71	24
AT 802A	2	1	500	1648	NA	98	93	26
AT 802A	2	1	1000	4351	NA	177	170	30
AT 802A	2	1	1320	7127	NA	253	244	32
AT 802A	2	1	2608	33387	NA	694	680	35
AT 802A	2	2	25	85	NA	23	18	12
AT 802A	2	2	50	125	NA	26	22	14
AT 802A	2	2	75	163	NA	29	25	15
AT 802A	2	2	100	212	NA	32	28	16
AT 802A	2	2	150	283	NA	38	33	17
AT 802A	2	2	200	354	NA	43	38	19
AT 802A	2	2	250	424	NA	48	43	20
AT 802A	2	2	300	472	NA	53	48	21
AT 802A	2	2	500	824	NA	75	69	24
AT 802A	2	2	1000	2175	NA	160	149	29
AT 802A	2	2	1320	3563	NA	231	217	31
AT 802A	2	2	2608	16693	NA	694	667	34
AT 802A	2	4	25	42	NA	14	11	8
AT 802A	2	4	50	62	NA	17	13	10
AT 802A	2	4	75	82	NA	19	15	11
AT 802A	2	4	100	106	NA	21	18	12
AT 802A	2	4	150	141	NA	26	22	14
AT 802A	2	4	200	177	NA	31	26	15
AT 802A	2	4	250	212	NA	36	31	17
AT 802A	2	4	300	236	NA	42	35	18
AT 802A	2	4	500	412	NA	65	56	22
AT 802A	2	4	1000	1088	NA	152	133	29
AT 802A	2	4	1320	1782	NA	225	200	31
AT 802A	2	4	2608	8347	NA	595	556	34
AT 802A	2	6	25	28	NA	11	8	6
AT 802A	2	6	50	42	NA	13	10	8
AT 802A	2	6	75	54	NA	15	12	9
AT 802A	2	6	100	71	NA	17	14	10
AT 802A	2	6	150	94	NA	22	18	12
AT 802A	2	6	200	118	NA	27	22	14
AT 802A	2	6	250	141	NA	33	27	15
AT 802A	2	6	300	157	NA	39	31	17
AT 802A	2	6	500	275	NA	64	52	21
AT 802A	2	6	1000	725	NA	152	125	28
AT 802A	2	6	1320	1188	NA	219	185	30
AT 802A	2	6	2608	5564	NA	595	538	34

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for females 13-49 yrs old was 0.00015 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for females 13-49 yrs old was 0.000125 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2l - Drift Exposures for Females 13-49 Years Old with Ground Boom Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Ground Boom - High Boom 40 swath/90th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	63	NA	38	24	14
AT 802A	2	1	50	88	NA	43	29	16
AT 802A	2	1	75	113	NA	47	33	17
AT 802A	2	1	100	141	NA	51	38	18
AT 802A	2	1	150	189	NA	58	45	20
AT 802A	2	1	200	236	NA	65	51	21
AT 802A	2	1	250	283	NA	71	57	22
AT 802A	2	1	300	326	NA	76	62	23
AT 802A	2	1	500	497	NA	98	82	25
AT 802A	2	1	1000	889	NA	177	148	29
AT 802A	2	1	1320	1127	NA	253	206	31
AT 802A	2	1	2608	2029	NA	694	517	34
AT 802A	2	2	25	31	NA	23	13	10
AT 802A	2	2	50	44	NA	26	16	11
AT 802A	2	2	75	57	NA	29	19	13
AT 802A	2	2	100	71	NA	32	22	14
AT 802A	2	2	150	94	NA	38	27	15
AT 802A	2	2	200	118	NA	43	31	17
AT 802A	2	2	250	141	NA	48	36	18
AT 802A	2	2	300	163	NA	53	40	19
AT 802A	2	2	500	248	NA	75	58	22
AT 802A	2	2	1000	445	NA	160	118	28
AT 802A	2	2	1320	563	NA	231	164	30
AT 802A	2	2	2608	1015	NA	694	412	33
AT 802A	2	4	25	16	NA	14	7	6
AT 802A	2	4	50	22	NA	17	9	7
AT 802A	2	4	75	28	NA	19	11	9
AT 802A	2	4	100	35	NA	21	13	10
AT 802A	2	4	150	47	NA	26	17	11
AT 802A	2	4	200	59	NA	31	20	13
AT 802A	2	4	250	71	NA	36	24	14
AT 802A	2	4	300	82	NA	42	28	16
AT 802A	2	4	500	124	NA	65	43	20
AT 802A	2	4	1000	222	NA	152	90	26
AT 802A	2	4	1320	282	NA	225	125	28
AT 802A	2	4	2608	507	NA	595	274	32
AT 802A	2	6	25	10	NA	11	5	5
AT 802A	2	6	50	15	NA	13	7	6
AT 802A	2	6	75	19	NA	15	8	7
AT 802A	2	6	100	24	NA	17	10	8
AT 802A	2	6	150	31	NA	22	13	10
AT 802A	2	6	200	39	NA	27	16	11
AT 802A	2	6	250	47	NA	33	19	13
AT 802A	2	6	300	54	NA	39	23	14
AT 802A	2	6	500	83	NA	64	36	18
AT 802A	2	6	1000	148	NA	152	75	24
AT 802A	2	6	1320	188	NA	219	101	27
AT 802A	2	6	2608	338	NA	595	216	31

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for females 13-49 yrs old was 0.00015 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for females 13-49 yrs old was 0.000125 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.

Appendix 2l - Drift Exposures for Females 13-49 Years Old with Ground Boom Application of Chlorpyrifos

RAS RISK CALCULATIONS								
Ground Boom - Low Boom 40 swath/90th Percentile								
Drift Modeling - AgDRIFT				Margins of Exposure[a]				
AirCraft	Spray Vol (gal/arce)	App Rate (lb-ai/A)	Downwind Distance (ft)	Dermal	Combined Incidental Oral	Inhalation	Combined Drift	Combined Drift, Diet & Drinking Water[b]
AT 802A	2	1	25	100	NA	38	28	16
AT 802A	2	1	50	137	NA	43	33	17
AT 802A	2	1	75	177	NA	47	37	18
AT 802A	2	1	100	218	NA	51	41	19
AT 802A	2	1	150	293	NA	58	49	21
AT 802A	2	1	200	354	NA	65	55	22
AT 802A	2	1	250	424	NA	71	61	23
AT 802A	2	1	300	472	NA	76	66	23
AT 802A	2	1	500	703	NA	98	86	26
AT 802A	2	1	1000	1225	NA	177	155	29
AT 802A	2	1	1320	1542	NA	253	217	31
AT 802A	2	1	2608	2742	NA	694	554	34
AT 802A	2	2	25	50	NA	23	16	11
AT 802A	2	2	50	68	NA	26	19	12
AT 802A	2	2	75	88	NA	29	22	14
AT 802A	2	2	100	109	NA	32	25	15
AT 802A	2	2	150	146	NA	38	30	16
AT 802A	2	2	200	177	NA	43	34	18
AT 802A	2	2	250	212	NA	48	39	19
AT 802A	2	2	300	236	NA	53	43	20
AT 802A	2	2	500	351	NA	75	62	23
AT 802A	2	2	1000	613	NA	160	127	28
AT 802A	2	2	1320	771	NA	231	178	30
AT 802A	2	2	2608	1371	NA	694	461	34
AT 802A	2	4	25	25	NA	14	9	7
AT 802A	2	4	50	34	NA	17	11	9
AT 802A	2	4	75	44	NA	19	13	10
AT 802A	2	4	100	54	NA	21	15	11
AT 802A	2	4	150	73	NA	26	19	13
AT 802A	2	4	200	88	NA	31	23	14
AT 802A	2	4	250	106	NA	36	27	15
AT 802A	2	4	300	118	NA	42	31	17
AT 802A	2	4	500	176	NA	65	48	21
AT 802A	2	4	1000	306	NA	152	101	27
AT 802A	2	4	1320	385	NA	225	142	29
AT 802A	2	4	2608	686	NA	595	319	33
AT 802A	2	6	25	17	NA	11	7	6
AT 802A	2	6	50	23	NA	13	8	7
AT 802A	2	6	75	29	NA	15	10	8
AT 802A	2	6	100	36	NA	17	12	9
AT 802A	2	6	150	49	NA	22	15	11
AT 802A	2	6	200	59	NA	27	19	12
AT 802A	2	6	250	71	NA	33	22	14
AT 802A	2	6	300	79	NA	39	26	15
AT 802A	2	6	500	117	NA	64	41	19
AT 802A	2	6	1000	204	NA	152	87	26
AT 802A	2	6	1320	257	NA	219	118	28
AT 802A	2	6	2608	457	NA	595	259	32

a/ Margin of Exposure = NOEL / Exposure. NOEL = 0.01 mg/kg based on ↑ anxiety and locomotor activity in PND21 male rats (Silva et al 2017).
b/Acute dietary exposure estimate for females 13-49 yrs old was 0.00015 mg/kg/day at the 99.9th percentile consumption rate. Acute drinking water exposure estimated for females 13-49 yrs old was 0.000125 mg/kg/day at the 99.9th percentile consumption rate for DPR's surface water monitoring data.