

BATCH QUALITY CONTROL

ALS EP-068 : PESTICIDES

QC LOT No. : OCOPS1401
MATRIX: Soil

ANALYST: K. HEGARTY

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Conc	DCS Conc	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	Low	High	%
EP-068A : ORGANOCHLORINE PESTICIDES									
a-BHC	<LOR	0.25	0.19	0.19	75	1	57	115	20
HCB	<LOR	0.25	0.19	0.20	77	2	58	111	20
b- & g-BHC	<LOR	0.50	0.40	0.40	80	0	69	110	20
d-BHC	<LOR	0.25	0.20	0.21	81	3	68	111	20
Heptachlor	<LOR	0.25	0.20	0.21	81	5	62	110	20
Aldrin	<LOR	0.25	0.20	0.21	82	3	63	112	20
Heptachlor epoxide	<LOR	0.25	0.20	0.21	81	3	68	109	20
trans-Chlordane	<LOR	0.25	0.20	0.22	85	8	63	114	20
Endosulfan 1	<LOR	0.25	0.21	0.21	85	2	67	116	20
cis-Chlordane	<LOR	0.25	0.21	0.22	85	6	63	117	20
Dieldrin	<LOR	0.25	0.21	0.22	86	7	54	132	20
DDE	<LOR	0.25	0.21	0.21	85	1	58	127	20
Endrin	<LOR	0.25	0.22	0.22	90	0	55	125	20
Endosulfan 2	<LOR	0.25	0.20	0.21	82	2	55	127	20
DDD	<LOR	0.25	0.21	0.22	85	3	61	125	20
Endrin aldehyde	<LOR	0.25	0.18	0.19	76	5	58	112	20
Endosulfan sulfate	<LOR	0.25	0.24	0.25	98	3	61	126	20
DDT	<LOR	0.25	0.23	0.23	93	1	60	128	20
Endrin ketone	<LOR	0.25	0.23	0.24	94	3	48	133	20
Methoxychlor	<LOR	0.25	0.16	0.16	66	1	50	123	20
EP-068B : ORGANOPHOSPHORUS PESTICIDES									
Dichlorvos	<LOR	0.25	0.15	0.17	64	8	57	106	20
Demeton-s-methyl	<LOR	0.25	0.18	0.19	73	5	61	103	20
Monocrotophos	<LOR	0.25	0.22	0.23	90	2	49	118	20
Dimethoate	<LOR	0.25	0.21	0.21	84	2	60	114	20
Diazinon	<LOR	0.25	0.20	0.20	80	2	61	114	20
Chlorpyrifos methyl	<LOR	0.25	0.20	0.21	82	2	66	109	20
Parathion methyl	<LOR	0.25	0.22	0.22	87	3	64	108	20
Malathion	<LOR	0.25	0.20	0.21	82	1	57	127	20
Fenthion	<LOR	0.25	0.20	0.20	80	2	62	118	20
Chlorpyrifos	<LOR	0.25	0.21	0.21	84	2	66	114	20
Parathion	<LOR	0.25	0.21	0.22	87	4	64	112	20
Pirimiphos ethyl	<LOR	0.25	0.20	0.20	80	1	61	119	20
Chlorfenvinphos E	<LOR	0.25	N/A	N/A	N/A		--	--	
Chlorfenvinphos Z	<LOR	0.25	0.21	0.21	83	2	63	118	20
Bromophos ethyl	<LOR	0.25	0.19	0.20	80	5	61	121	20
Fenamiphos	<LOR	0.25	0.20	0.21	83	4	58	122	20
Prothiofos	<LOR	0.25	0.20	0.22	85	6	63	119	20
Ethion	<LOR	0.25	0.21	0.21	85	1	60	125	20
Carbofenthion	<LOR	0.25	0.22	0.24	93	8	56	131	20
Azinphos methyl	<LOR	0.25	0.27	0.26	107	3	37	120	20
EP-068C : TRIAZINE PESTICIDES									
Simazine	<LOR	0.25	0.20	0.21	82	1	1	119	20
Atrazine	<LOR	0.25	0.20	0.20	79	1	60	113	20
EP-068D : SYNTHETIC PYRETHROIDS									
Cypermethrins	<LOR	0.25	0.17	0.18	69	6	65	119	20

COMMENTS:

- 1) The control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL

ALS EP-068 : PESTICIDES

QC LOT No. : OCOPS1402
MATRIX: Soil

ANALYST: K. HEGARTY

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Conc	DCS Conc	Average Rec.	RPD	Rec.	RPD	
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	Low	High	%
EP-068A : ORGANOCHLORINE PESTICIDES									
a-BHC	<LOR	0.25	0.21	0.21	84	4	57	115	20
HCB	<LOR	0.25	0.21	0.22	86	4	58	111	20
b- & g-BHC	<LOR	0.50	0.44	0.45	89	3	69	110	20
d-BHC	<LOR	0.25	0.22	0.22	89	2	68	111	20
Heptachlor	<LOR	0.25	0.24	0.25	98	1	62	110	20
Aldrin	<LOR	0.25	0.22	0.23	89	4	63	112	20
Heptachlor epoxide	<LOR	0.25	0.22	0.21	87	5	68	109	20
trans-Chlordane	<LOR	0.25	0.22	0.22	89	3	63	114	20
Endosulfan 1	<LOR	0.25	0.26	0.25	102	2	67	116	20
cis-Chlordane	<LOR	0.25	0.23	0.23	91	0	63	117	20
Dieldrin	<LOR	0.25	0.23	0.22	89	3	54	132	20
DDE	<LOR	0.25	0.22	0.21	85	2	58	127	20
Endrin	<LOR	0.25	0.23	0.24	95	3	55	125	20
Endosulfan 2	<LOR	0.25	0.23	0.23	92	0	55	127	20
DDD	<LOR	0.25	0.24	0.23	94	4	61	125	20
Endrin aldehyde	<LOR	0.25	0.21	0.21	85	1	58	112	20
Endosulfan sulfate	<LOR	0.25	0.22	0.21	86	4	61	126	20
DDT	<LOR	0.25	0.22	0.21	86	7	60	128	20
Endrin ketone	<LOR	0.25	0.25	0.24	97	3	48	133	20
Methoxychlor	<LOR	0.25	0.24	0.23	94	5	50	123	20
EP-068B : ORGANOPHOSPHORUS PESTICIDES									
Dichlorvos	<LOR	0.25	0.19	0.20	78	2	57	106	20
Demeton-s-methyl	<LOR	0.25	0.21	0.21	83	1	61	103	20
Monocrotophos	<LOR	0.25	0.22	0.21	86	3	49	118	20
Dimethoate	<LOR	0.25	0.22	0.22	88	3	60	114	20
Diazinon	<LOR	0.25	0.23	0.22	90	3	61	114	20
Chlorpyrifos methyl	<LOR	0.25	0.23	0.23	92	1	66	109	20
Parathion methyl	<LOR	0.25	0.22	0.23	89	4	64	108	20
Malathion	<LOR	0.25	0.24	0.22	92	7	57	127	20
Fenthion	<LOR	0.25	0.22	0.22	89	1	62	118	20
Chlorpyrifos	<LOR	0.25	0.23	0.23	92	1	66	114	20
Parathion	<LOR	0.25	0.24	0.25	98	6	64	112	20
Pirimiphos ethyl	<LOR	0.25	0.22	0.22	86	0	61	119	20
Chlorfenvinphos E	<LOR	0.25	N/A	N/A	N/A		--	--	
Chlorfenvinphos Z	<LOR	0.25	0.24	0.22	93	7	63	118	20
Bromophos ethyl	<LOR	0.25	0.23	0.23	92	2	61	121	20
Fenamiphos	<LOR	0.25	0.23	0.23	92	0	58	122	20
Prothiofos	<LOR	0.25	0.22	0.21	88	4	63	119	20
Ethion	<LOR	0.25	0.24	0.24	96	1	60	125	20
Carbofenthion	<LOR	0.25	0.24	0.23	94	2	56	131	20
Azinphos methyl	<LOR	0.25	0.23	0.21	87	11	37	120	20
EP-068C : TRIAZINE PESTICIDES									
Simazine	<LOR	0.25	0.22	0.22	89	1	1	119	20
Atrazine	<LOR	0.25	0.23	0.22	91	3	60	113	20
EP-068D : SYNTHETIC PYRETHROIDS									
Cypermethrins	<LOR	0.25	0.24	0.25	99	2	65	119	20

COMMENTS:

- 1) The control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL

ALS EP-068 : PESTICIDES

QC LOT No. : OCOPS1403
MATRIX: Soil

ANALYST: K. HEGARTY

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Conc	DCS Conc	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	Low	High	%
EP-068A : ORGANOCHLORINE PESTICIDES									
a-BHC	<LOR	0.25	0.21	0.21	83	0	57	115	20
HCB	<LOR	0.25	0.22	0.21	86	5	58	111	20
b- & g-BHC	<LOR	0.50	0.43	0.42	86	2	69	110	20
d-BHC	<LOR	0.25	0.21	0.21	84	0	68	111	20
Heptachlor	<LOR	0.25	0.21	0.21	83	0	62	110	20
Aldrin	<LOR	0.25	0.21	0.21	84	1	63	112	20
Heptachlor epoxide	<LOR	0.25	0.20	0.21	82	2	68	109	20
trans-Chlordane	<LOR	0.25	0.20	0.21	81	5	63	114	20
Endosulfan 1	<LOR	0.25	0.23	0.24	95	5	67	116	20
cis-Chlordane	<LOR	0.25	0.20	0.21	83	4	63	117	20
Dieldrin	<LOR	0.25	0.21	0.21	83	1	54	132	20
DDE	<LOR	0.25	0.19	0.20	79	4	58	127	20
Endrin	<LOR	0.25	0.22	0.22	89	1	55	125	20
Endosulfan 2	<LOR	0.25	0.20	0.20	81	1	55	127	20
DDD	<LOR	0.25	0.22	0.22	87	1	61	125	20
Endrin aldehyde	<LOR	0.25	0.20	0.20	80	2	58	112	20
Endosulfan sulfate	<LOR	0.25	0.21	0.22	86	3	61	126	20
DDT	<LOR	0.25	0.23	0.23	92	2	60	128	20
Endrin ketone	<LOR	0.25	0.22	0.22	86	1	48	133	20
Methoxychlor	<LOR	0.25	0.21	0.20	82	2	50	123	20
EP-068B : ORGANOPHOSPHORUS PESTICIDES									
Dichlorvos	<LOR	0.25	0.22	0.20	84	6	57	106	20
Demeton-s-methyl	<LOR	0.25	0.21	0.20	81	4	61	103	20
Monocrotophos	<LOR	0.25	0.24	0.24	96	2	49	118	20
Dimethoate	<LOR	0.25	0.21	0.21	84	1	60	114	20
Diazinon	<LOR	0.25	0.21	0.20	84	4	61	114	20
Chlorpyrifos methyl	<LOR	0.25	0.21	0.21	84	1	66	109	20
Parathion methyl	<LOR	0.25	0.21	0.21	84	1	64	108	20
Malathion	<LOR	0.25	0.21	0.21	85	3	57	127	20
Fenthion	<LOR	0.25	0.21	0.20	83	3	62	118	20
Chlorpyrifos	<LOR	0.25	0.22	0.23	89	5	66	114	20
Parathion	<LOR	0.25	0.23	0.22	90	2	64	112	20
Pirimiphos ethyl	<LOR	0.25	0.22	0.21	87	4	61	119	20
Chlorfenvinphos E	<LOR	0.25	N/A	N/A	N/A		--	--	
Chlorfenvinphos Z	<LOR	0.25	0.21	0.22	86	5	63	118	20
Bromophos ethyl	<LOR	0.25	0.22	0.22	88	3	61	121	20
Fenamiphos	<LOR	0.25	0.21	0.21	84	3	58	122	20
Prothiofos	<LOR	0.25	0.22	0.22	89	2	63	119	20
Ethion	<LOR	0.25	0.24	0.23	93	3	60	125	20
Carbofenthion	<LOR	0.25	0.23	0.23	91	1	56	131	20
Azinphos methyl	<LOR	0.25	0.17	0.17	69	0	37	120	20
EP-068C : TRIAZINE PESTICIDES									
Simazine	<LOR	0.25	0.18	0.18	71	4	1	119	20
Atrazine	<LOR	0.25	0.23	0.22	91	4	60	113	20
EP-068D : SYNTHETIC PYRETHROIDS									
Cypermethrins	<LOR	0.25	0.22	0.21	86	2	65	119	20

COMMENTS:

- 1) The control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07).
- 2) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL

ALS EP-068 : PESTICIDES

QC LOT No. : OCOPS1404
MATRIX: Soil

ANALYST: K. HEGARTY

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Conc	DCS Conc	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	Low	High	%
EP-068A : ORGANOCHLORINE PESTICIDES									
a-BHC	<LOR	0.25	0.20	0.21	82	1	57	115	20
HCB	<LOR	0.25	0.21	0.21	84	2	58	111	20
b- & g-BHC	<LOR	0.50	0.44	0.44	88	0	69	110	20
d-BHC	<LOR	0.25	0.21	0.20	83	2	68	111	20
Heptachlor	<LOR	0.25	0.21	0.20	81	2	62	110	20
Aldrin	<LOR	0.25	0.21	0.21	83	1	63	112	20
Heptachlor epoxide	<LOR	0.25	0.21	0.21	84	1	68	109	20
trans-Chlordane	<LOR	0.25	0.21	0.20	82	1	63	114	20
Endosulfan 1	<LOR	0.25	0.22	0.22	89	2	67	116	20
cis-Chlordane	<LOR	0.25	0.21	0.21	85	1	63	117	20
Dieldrin	<LOR	0.25	0.21	0.20	82	2	54	132	20
DDE	<LOR	0.25	0.20	0.20	82	1	58	127	20
Endrin	<LOR	0.25	0.22	0.21	87	3	55	125	20
Endosulfan 2	<LOR	0.25	0.21	0.21	83	0	55	127	20
DDD	<LOR	0.25	0.22	0.22	89	2	61	125	20
Endrin aldehyde	<LOR	0.25	0.19	0.20	78	3	58	112	20
Endosulfan sulfate	<LOR	0.25	0.22	0.22	88	3	61	126	20
DDT	<LOR	0.25	0.23	0.23	91	2	60	128	20
Endrin ketone	<LOR	0.25	0.22	0.22	88	2	48	133	20
Methoxychlor	<LOR	0.25	0.23	0.22	89	4	50	123	20
EP-068B : ORGANOPHOSPHORUS PESTICIDES									
Dichlorvos	<LOR	0.25	0.19	0.19	77	1	57	106	20
Demeton-s-methyl	<LOR	0.25	0.20	0.20	79	2	61	103	20
Monocrotophos	<LOR	0.25	0.23	0.22	90	1	49	118	20
Dimethoate	<LOR	0.25	0.22	0.21	86	4	60	114	20
Diazinon	<LOR	0.25	0.21	0.21	83	2	61	114	20
Chlorpyrifos methyl	<LOR	0.25	0.21	0.21	83	2	66	109	20
Parathion methyl	<LOR	0.25	0.21	0.21	83	1	64	108	20
Malathion	<LOR	0.25	0.20	0.20	80	3	57	127	20
Fenthion	<LOR	0.25	0.21	0.21	85	1	62	118	20
Chlorpyrifos	<LOR	0.25	0.22	0.22	89	0	66	114	20
Parathion	<LOR	0.25	0.21	0.21	85	0	64	112	20
Pirimiphos ethyl	<LOR	0.25	0.20	0.20	81	2	61	119	20
Chlorfenvinphos E	<LOR	0.25	N/A	N/A	N/A		--	--	
Chlorfenvinphos Z	<LOR	0.25	0.23	0.22	89	5	63	118	20
Bromophos ethyl	<LOR	0.25	0.21	0.22	86	2	61	121	20
Fenamiphos	<LOR	0.25	0.22	0.21	86	3	58	122	20
Prothiofos	<LOR	0.25	0.22	0.22	89	2	63	119	20
Ethion	<LOR	0.25	0.22	0.22	87	1	60	125	20
Carbofenthion	<LOR	0.25	0.22	0.22	88	0	56	131	20
Azinphos methyl	<LOR	0.25	0.22	0.22	89	0	37	120	20
EP-068C : TRIAZINE PESTICIDES									
Simazine	<LOR	0.25	0.18	0.17	70	0	1	119	20
Atrazine	<LOR	0.25	0.22	0.22	88	3	60	113	20
EP-068D : SYNTHETIC PYRETHROIDS									
Cypermethrins	<LOR	0.25	0.24	0.23	93	4	65	119	20

COMMENTS:

- 1) The control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) * : Recovery or RPD falls outside of the recommended control limits.

**ORGANICS QUALITY CONTROL REPORT**

BATCH No. : EB57692

DATE BATCH RECEIVED : 18/08/03

CLIENT : Gilbert & Sutherland

DATE BATCH COMPLETED : 02/09/03

Where applicable, internal standards are added to sample extracts prior to instrumental analysis.

Absolute peak areas and retention times fall within the criteria specified in the individual methods.

Method Code	Test	Matrix	Method Reference		QC Lot Number	Date	Date
			Extraction	Analysis		Samples Extracted	Samples Analysed
EP-068	Pesticides	Soil	Tumbler	USEPA 8270B	OCOPS1418	25/08/03	26/08/03
					OCOPS1419	25/08/03	26/08/03
					OCOPS1420	25/08/03	26/08/03
					OCOPS1421	25/08/03	26/08/03
					OCOPS1422	25/08/03	26/08/03
					OCOPS1423	25/08/03	26/08/03
					OCOPS1424	25/08/03	26/08/03
					OCOPS1425	25/08/03	26/08/03

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1418				ANALYST K. HEGARTY			
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
EP068A : OC Pesticides									
a-BHC	<0.025	0.25	95.6	98	96.8	2.48	61.2	100	0 - 20
HCB	<0.025	0.25	91	93.3	92.2	2.5	61.7	101	0 - 20
b- & g-BHC	<0.05	0.5	101	99.2	100	1.8	70.2	101	0 - 20
d-BHC	<0.025	0.25	103	100	102 *	2.96	68.1	96.4	0 - 20
Heptachlor	<0.025	0.25	93.5	95.7	94.6	2.33	62	103	0 - 20
Aldrin	<0.025	0.25	94.6	95.6	95.1	1.05	59.5	107	0 - 20
Heptachlor epoxide	<0.025	0.25	86.7	80.7	83.7	7.17	66	99.1	0 - 20
Chlordane peak no 1	<0.025	0.25	86.4	80	83.2	7.69	67.3	102	0 - 20
Endosulfan 1	<0.025	0.25	110	104	107	5.61	66.3	114	0 - 20
Chlordane peak no. 2	<0.025	0.25	88.7	83.1	85.9	6.52	64.5	104	0 - 20
Dieldrin	<0.025	0.25	100	97.3	98.7	2.74	58.4	116	0 - 20
DDE	<0.025	0.25	91.7	86	88.9	6.42	72.7	92.5	0 - 20
Endrin	<0.025	0.25	106	95.5	101	10.4	70.8	106	0 - 20
Endosulfan 2	<0.025	0.25	103	102	103 *	0.98	72.2	100	0 - 20
DDD	<0.025	0.25	99.9	95.3	97.6	4.71	68.5	102	0 - 20
Endrin aldehyde	<0.025	0.25	89.3	86.7	88	2.95	56.7	105	1 - 20
Endosulfan sulfate	<0.025	0.25	100	101	101	1	67.8	107	0 - 20
DDT	0.122	0.25	113	106	110	6.39	60.9	120	0 - 20
Endrin ketone	<0.025	0.25	98.5	94.2	96.4	4.46	60	111	0 - 20
Methoxychlor	<0.1	0.25	105	99.4	102	5.48	47.4	124	0 - 20
EP0678 : OP Pesticides									
Dichlorvos	<0.025	0.25	82.7	85.4	84.1	3.21	53.6	99.6	0 - 20
Demeton-s-methyl	<0.025	0.25	92.6	96.9	94.8	4.54	55.9	99	0 - 20
Monocrotophos	<0.1	0.25	104	103	104	0.97	52.3	124	0 - 20
Dimethoate	<0.025	0.25	108	103	106 *	4.74	70.7	104	0 - 20
Diazinon	<0.025	0.25	99	97.6	98.3	1.42	66	101	0 - 20
Chlorpyrifos methyl	<0.025	0.25	95.7	91.8	93.8	4.16	66.2	98.3	0 - 20
Parathion methyl	<0.1	0.25	94.6	95.6	95.1	1.05	69.4	97.3	0 - 20
Malathion	<0.025	0.25	109	97.4	103 *	11.2	66	102	0 - 20
Fenthion	<0.025	0.25	94.7	93.2	94	1.6	69.7	95.4	0 - 20
Chlorpyrifos	<0.025	0.25	101	95	98	6.12	69	101	0 - 20
Parathion	<0.1	0.25	117	112	115	4.37	50.1	122	0 - 20
Pirimphos ethyl	<0.025	0.25	89	86.2	87.6	3.2	72.3	93.6	0 - 20
Chlorfenvinphos Z	<0.025	0.25	96.7	93.1	94.9	3.79	67.2	107	0 - 20
Bromophos ethyl	<0.025	0.25	96.8	89.2	93	8.17	73.8	97.4	0 - 20
Fenamiphos	<0.025	0.25	95.4	87.3	91.4	8.87	70.7	100	0 - 20
Prothiofos	<0.025	0.25	92.1	86.4	89.3	6.39	70.8	99.2	0 - 20

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1418				ANALYST K. HEGARTY			
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
Ethion	<0.025	0.25	101	95.2	98.1	5.91	67.6	106	0 - 20
Carbofenthion	<0.025	0.25	88.1	79.8	84	9.89	62.5	108	0 - 20
Azinphos methyl	<0.025	0.25	112	105	109	6.45	42.4	115	0 - 20
EP068C : Triazines									
Simazine	<0.025	0.25	110	105	108	4.65	1	112	0 - 20
Atrazine	<0.025	0.25	100	96.8	98.4	3.25	70.2	104	0 - 20
EP068D :Pyrethroids									
Cypermethrins(multipeaks)	<0.1	0.25	111	106	109	4.61	45.8	126	0 - 20
EP068S : OC.Surrogate									
Dibromo-DDE	90.1%	1.25	88.4	78.8	83.6	11.5	66.7	101	0 - 20
EP068T : OP.Surrogate									
DEF	78.4%	1.25	83.9	76.7	80.3	8.97	60.6	101	0 - 20

COMMENTS:

- 1) The recovery control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) The control limits on RPD (relative percent deviation) are fixed.
- 3) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1419			ANALYST K. HEGARTY				
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
EP068A : OC Pesticides									
a-BHC	<0.025	0.25	85	85.4	85.2	0.47	61.2	100	0 - 20
HCB	<0.025	0.25	80.3	87.3	83.8	8.35	61.7	101	0 - 20
b- & g-BHC	<0.05	0.5	89.6	90.5	90.1	1	70.2	101	0 - 20
d-BHC	<0.025	0.25	84.6	87.5	86.1	3.37	68.1	96.4	0 - 20
Heptachlor	<0.025	0.25	81.1	84.5	82.8	4.11	62	103	0 - 20
Aldrin	<0.025	0.25	80.9	88	84.5	8.41	59.5	107	0 - 20
Heptachlor epoxide	<0.025	0.25	74	81.6	77.8	9.77	66	99.1	0 - 20
Chlordane peak no 1	<0.025	0.25	65.6	77.9	71.8	17.1	67.3	102	0 - 20
Endosulfan 1	<0.025	0.25	85.4	93.6	89.5	9.16	66.3	114	0 - 20
Chlordane peak no. 2	<0.025	0.25	80.4	84.2	82.3	4.62	64.5	104	0 - 20
Dieldrin	<0.025	0.25	82.8	88.7	85.8	6.88	58.4	116	0 - 20
DDE	<0.025	0.25	79.2	84.5	81.9	6.48	72.7	92.5	0 - 20
Endrin	<0.025	0.25	82	80.7	81.4	1.6	70.8	106	0 - 20
Endosulfan 2	<0.025	0.25	85.5	95	90.3	10.5	72.2	100	0 - 20
DDD	<0.025	0.25	88.8	99.5	94.2	11.4	68.5	102	0 - 20
Endrin aldehyde	<0.025	0.25	77.5	82.9	80.2	6.73	56.7	105	1 - 20
Endosulfan sulfate	<0.025	0.25	85.3	96.6	91	12.4	67.8	107	0 - 20
DDT	<0.1	0.25	93.6	96.1	94.9	2.64	60.9	120	0 - 20
Endrin ketone	<0.025	0.25	85	90.8	87.9	6.6	60	111	0 - 20
Methoxychlor	<0.1	0.25	85.9	88.3	87.1	2.76	47.4	124	0 - 20
EP0678 : OP Pesticides									
Dichlorvos	<0.025	0.25	81.3	82.1	81.7	0.98	53.6	99.6	0 - 20
Demeton-s-methyl	<0.025	0.25	85.1	83.9	84.5	1.42	55.9	99	0 - 20
Monocrotophos	<0.1	0.25	67	65	66	3.03	52.3	124	0 - 20
Dimethoate	<0.025	0.25	87.6	88.3	88	0.8	70.7	104	0 - 20
Diazinon	<0.025	0.25	89.6	92.4	91	3.08	66	101	0 - 20
Chlorpyrifos methyl	<0.025	0.25	88.1	87.8	88	0.34	66.2	98.3	0 - 20
Parathion methyl	<0.1	0.25	80.9	88	84.5	8.41	69.4	97.3	0 - 20
Malathion	<0.025	0.25	81.2	93.1	87.2	13.7	66	102	0 - 20
Fenthion	<0.025	0.25	83	87.8	85.4	5.62	69.7	95.4	0 - 20
Chlorpyrifos	<0.025	0.25	92	95.1	93.6	3.31	69	101	0 - 20
Parathion	<0.1	0.25	88.2	83.7	86	5.24	50.1	122	0 - 20
Pirimphos ethyl	<0.025	0.25	83.8	86.4	85.1	3.06	72.3	93.6	0 - 20
Chlorfenvinphos Z	<0.025	0.25	83.2	88.4	85.8	6.06	67.2	107	0 - 20
Bromophos ethyl	<0.025	0.25	87.5	91.8	89.7	4.8	73.8	97.4	0 - 20
Fenamiphos	<0.025	0.25	80.8	85.2	83	5.3	70.7	100	0 - 20
Prothiofos	<0.025	0.25	82.1	88.5	85.3	7.5	70.8	99.2	0 - 20

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1419				ANALYST K. HEGARTY			
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
Ethion	<0.025	0.25	86.5	94.1	90.3	8.42	67.6	106	0 - 20
Carbofenthion	<0.025	0.25	76.6	82.1	79.4	6.93	62.5	108	0 - 20
Azinphos methyl	<0.025	0.25	81.7	76.3	79	6.84	42.4	115	0 - 20
EP068C : Triazines									
Simazine	<0.025	0.25	112	113	113 *	0.89	1	112	0 - 20
Atrazine	<0.025	0.25	93.1	93.8	93.5	0.75	70.2	104	0 - 20
EP068D : Pyrethroids									
Cypermethrins(multipeaks)	<0.1	0.25	104	101	103	2.93	45.8	126	0 - 20
EP068S : OC Surrogate									
Dibromo-DDE	92%	1.25	95.1	99.9	97.5	4.92	66.7	101	0 - 20
EP068T : OP Surrogate									
DEF	94.2%	1.25	106	111	109 *	4.61	60.6	101	0 - 20

COMMENTS:

- 1) The recovery control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) The control limits on RPD (relative percent deviation) are fixed.
- 3) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1420				ANALYST K. HEGARTY			
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
EP068A.: OC Pesticides									
a-BHC	<0.025	0.25	79.7	84.5	82.1	5.85	61.2	100	0 - 20
HCB	<0.025	0.25	79.2	82.8	81	4.44	61.7	101	0 - 20
b- & g-BHC	<0.05	0.5	85.2	85.5	85.4	0.35	70.2	101	0 - 20
d-BHC	<0.025	0.25	81.7	88.5	85.1	7.99	68.1	96.4	0 - 20
Heptachlor	<0.025	0.25	84.8	91.2	88	7.27	62	103	0 - 20
Aldrin	<0.025	0.25	80.8	85.7	83.3	5.89	59.5	107	0 - 20
Heptachlor epoxide	<0.025	0.25	84.3	86.1	85.2	2.11	66	99.1	0 - 20
Chlordane peak no 1	<0.025	0.25	78.7	80.2	79.5	1.89	67.3	102	0 - 20
Endosulfan 1	<0.025	0.25	87.7	88.7	88.2	1.13	66.3	114	0 - 20
Chlordane peak no. 2	<0.025	0.25	80.6	81.1	80.9	0.62	64.5	104	0 - 20
Dieldrin	<0.025	0.25	80.8	82.4	81.6	1.96	58.4	116	0 - 20
DDE	<0.025	0.25	80.3	79.8	80.1	0.63	72.7	92.5	0 - 20
Endrin	<0.025	0.25	83.8	88.9	86.4	5.91	70.8	106	0 - 20
Endosulfan 2	<0.025	0.25	82.5	90.9	86.7	9.69	72.2	100	0 - 20
DDD	<0.025	0.25	85	88	86.5	3.47	68.5	102	0 - 20
Endrin aldehyde	<0.025	0.25	91.7	88.5	90.1	3.55	56.7	105	1 - 20
Endosulfan sulfate	<0.025	0.25	80.7	88	84.4	8.65	67.8	107	0 - 20
DDT	<0.1	0.25	85	95.3	90.2	11.4	60.9	120	0 - 20
Endrin ketone	<0.025	0.25	81.9	81.8	81.9	0.12	60	111	0 - 20
Methoxychlor	<0.1	0.25	67.4	74.8	71.1	10.4	47.4	124	0 - 20
EP0678 : OP Pesticides									
Dichlorvos	<0.025	0.25	77.1	77	77.1	0.13	53.6	99.6	0 - 20
Demeton-s-methyl	<0.025	0.25	83.3	81.5	82.4	2.18	55.9	99	0 - 20
Monocrotophos	<0.1	0.25	75.3	86.2	80.8	13.5	52.3	124	0 - 20
Dimethoate	<0.025	0.25	82.5	85.6	84.1	3.69	70.7	104	0 - 20
Diazinon	<0.025	0.25	86.4	85.7	86.1	0.81	66	101	0 - 20
Chlorpyrifos methyl	<0.025	0.25	92.1	95.2	93.7	3.31	66.2	98.3	0 - 20
Parathion methyl	<0.1	0.25	80.8	86.2	83.5	6.47	69.4	97.3	0 - 20
Malathion	<0.025	0.25	86.7	92.2	89.5	6.15	66	102	0 - 20
Fenthion	<0.025	0.25	80	80.3	80.2	0.37	69.7	95.4	0 - 20
Chlorpyrifos	<0.025	0.25	86.9	87.2	87.1	0.35	69	101	0 - 20
Parathion	<0.1	0.25	86	84.9	85.5	1.29	50.1	122	0 - 20
Pirimphos ethyl	<0.025	0.25	85	95.2	90.1	11.3	72.3	93.6	0 - 20
Chlorfenvinphos Z	<0.025	0.25	83	86.9	85	4.59	67.2	107	0 - 20
Bromophos ethyl	<0.025	0.25	80.9	89.4	85.2	9.98	73.8	97.4	0 - 20
Fenamiphos	<0.025	0.25	78.8	77.1	78	2.18	70.7	100	0 - 20
Prothiofos	<0.025	0.25	86.4	91.2	88.8	5.41	70.8	99.2	0 - 20

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1420				ANALYST K. HEGARTY			
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
Ethion	<0.025	0.25	86.2	87.1	86.7	1.04	67.6	106	0 - 20
Carbofenthion	<0.025	0.25	85.5	78.5	82	8.54	62.5	108	0 - 20
Azinphos methyl	<0.025	0.25	79.6	83.3	81.5	4.54	42.4	115	0 - 20
EP068C :: Triazines									
Simazine	<0.025	0.25	113	117	115 *	3.48	1	112	0 - 20
Atrazine	<0.025	0.25	87.7	86.6	87.2	1.26	70.2	104	0 - 20
EP068D ::Pyrethroids									
Cypermethrins(multipeaks)	<0.1	0.25	86.6	86.5	86.6	0.12	45.8	126	0 - 20
EP068S : OC Surrogate									
Dibromo-DDE	90%	1.25	89.5	89.6	89.6	0.11	66.7	101	0 - 20
EP068T : OP Surrogate									
DEF	84.4%	1.25	85.9	86.3	86.1	0.47	60.6	101	0 - 20

COMMENTS:

- 1) The recovery control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) The control limits on RPD (relative percent deviation) are fixed.
- 3) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL

ALS EP-068 : PESTICIDES

QC LOT No. : OCOPS1444
MATRIX: Soil

ANALYST: K. HEGARTY

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
	mg/kg	mg/kg	SCS Conc	DCS Conc	Average Rec.	RPD	Rec.		RPD
			mg/kg	mg/kg	%	%	Low	High	%
EP-068A : ORGANOCHLORINE PESTICIDES									
a-BHC	<LOR	0.25	0.21	0.21	84	0	61	109	20
HCB	<LOR	0.25	0.22	0.21	86	4	61	111	20
b- & g-BHC	<LOR	0.50	0.42	0.42	84	0	66	113	20
d-BHC	<LOR	0.25	0.22	0.22	87	1	63	108	20
Heptachlor	<LOR	0.25	0.23	0.23	92	0	67	102	20
Aldrin	<LOR	0.25	0.22	0.22	87	2	61	107	20
Heptachlor epoxide	<LOR	0.25	0.23	0.22	90	2	63	103	20
trans-Chlordane	<LOR	0.25	0.22	0.23	90	4	60	104	20
Endosulfan 1	<LOR	0.25	0.23	0.23	94	0	65	115	20
cis-Chlordane	<LOR	0.25	0.22	0.23	90	2	61	102	20
Dieldrin	<LOR	0.25	0.22	0.21	87	5	63	112	20
DDE	<LOR	0.25	0.22	0.22	89	1	66	104	20
Endrin	<LOR	0.25	0.19	0.22	83	12	1	150	20
Endosulfan 2	<LOR	0.25	0.22	0.23	90	1	71	108	20
DDD	<LOR	0.25	0.22	0.23	90	4	65	108	20
Endrin aldehyde	<LOR	0.25	0.24	0.24	96	1	47	125	20
Endosulfan sulfate	<LOR	0.25	0.23	0.23	91	0	63	109	20
DDT	<LOR	0.25	0.23	0.24	94	3	60	115	20
Endrin ketone	<LOR	0.25	0.21	0.22	87	6	42	140	20
Methoxychlor	<LOR	0.25	0.23	0.23	92	2	61	113	20
EP-068B : ORGANOPHOSPHORUS PESTICIDES									
Dichlorvos	<LOR	0.25	0.24	0.21	91	12	62	101	20
Demeton-s-methyl	<LOR	0.25	0.22	0.17	77	24 *	44	111	20
Monocrotophos	<LOR	0.25	0.19	0.18	74	5	36	117	20
Dimethoate	<LOR	0.25	0.16	0.18	70	11	62	110	20
Diazinon	<LOR	0.25	0.18	0.18	72	1	61	103	20
Chlorpyrifos methyl	<LOR	0.25	0.23	0.22	90	1	70	102	20
Parathion methyl	<LOR	0.25	0.22	0.22	89	1	60	105	20
Malathion	<LOR	0.25	0.23	0.23	93	2	62	107	20
Fenthion	<LOR	0.25	0.23	0.22	88	5	60	100	20
Chlorpyrifos	<LOR	0.25	0.22	0.22	89	2	70	106	20
Parathion	<LOR	0.25	0.23	0.23	92	2	48	118	20
Priniphos ethyl	<LOR	0.25	0.17	0.18	70	7	58	98	20
Chlorfenvinphos E	<LOR	0.25	N/A	N/A	N/A		--	--	
Chlorfenvinphos Z	<LOR	0.25	0.22	0.22	89	1	60	122	20
Bromophos ethyl	<LOR	0.25	0.22	0.23	92	4	66	104	20
Fenamiphos	<LOR	0.25	0.22	0.20	85	9	57	101	20
Prothiofos	<LOR	0.25	0.23	0.23	90	0	65	101	20
Ethion	<LOR	0.25	0.23	0.24	93	3	62	107	20
Carbofenthion	<LOR	0.25	0.23	0.23	93	1	64	102	20
Azinphos methyl	<LOR	0.25	0.26	0.23	99	12	42	112	20
EP-068C : TRIAZINE PESTICIDES									
Simazine	<LOR	0.25	0.10	0.10	42	1	1	140	20
Atrazine	<LOR	0.25	0.15	0.16	61 *	3	65	109	20
EP-068D : SYNTHETIC PYRETHROIDS									
Cypermethrins	<LOR	0.25	0.24	0.23	94	3	63	119	20

COMMENTS:

- 1) The control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL

ALS EP-068 : PESTICIDES

QC LOT No. : OCOPS1445

MATRIX: Soil

ANALYST: K. HEGARTY

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
	mg/kg	mg/kg	SCS Conc	DCS Conc	Average Rec.	RPD	Rec.		RPD
			mg/kg	mg/kg	%	%	Low	High	%
EP-068A : ORGANOCHLORINE PESTICIDES									
a-BHC	<LOR	0.25	0.18	0.17	70	4	61	109	20
HCb	<LOR	0.25	0.18	0.18	72	0	61	111	20
b- & g-BHC	<LOR	0.50	0.42	0.42	83	1	66	113	20
d-BHC	<LOR	0.25	0.18	0.17	70	4	63	108	20
Heptachlor	<LOR	0.25	0.19	0.18	73	3	67	102	20
Aldrin	<LOR	0.25	0.19	0.18	75	5	61	107	20
Heptachlor epoxide	<LOR	0.25	0.18	0.17	69	4	63	103	20
trans-Chlordane	<LOR	0.25	0.18	0.18	71	1	60	104	20
Endosulfan 1	<LOR	0.25	0.18	0.18	73	3	65	115	20
cis-Chlordane	<LOR	0.25	0.18	0.17	71	4	61	102	20
Dieldrin	<LOR	0.25	0.17	0.16	67	10	63	112	20
DDE	<LOR	0.25	0.18	0.18	73	3	66	104	20
Endrin	<LOR	0.25	0.18	0.18	70	0	1	150	20
Endosulfan 2	<LOR	0.25	0.18	0.18	71	2	71	108	20
DDD	<LOR	0.25	0.18	0.17	70	4	65	108	20
Endrin aldehyde	<LOR	0.25	0.21	0.22	86	2	47	125	20
Endosulfan sulfate	<LOR	0.25	0.18	0.17	71	4	63	109	20
DDT	<LOR	0.25	0.19	0.18	75	3	60	115	20
Endrin ketone	<LOR	0.25	0.18	0.18	71	2	42	140	20
Melthoxychlor	<LOR	0.25	0.19	0.18	73	3	61	113	20
EP-068B : ORGANOPHOSPHORUS PESTICIDES									
Dichlorvos	<LOR	0.25	0.19	0.18	72	5	62	101	20
Demeton-s-methyl	<LOR	0.25	0.16	0.16	64	4	44	111	20
Monocrotophos	<LOR	0.25	0.15	0.13	56	13	36	117	20
Dimethoate	<LOR	0.25	0.20	0.18	75	9	62	110	20
Diazinon	<LOR	0.25	0.16	0.16	63	4	61	103	20
Chlorpyrifos methyl	<LOR	0.25	0.18	0.17	71	4	70	102	20
Parathion methyl	<LOR	0.25	0.17	0.16	66	10	60	105	20
Malathion	<LOR	0.25	0.18	0.17	70	5	62	107	20
Fenthion	<LOR	0.25	0.17	0.15	65	12	60	100	20
Chlorpyrifos	<LOR	0.25	0.18	0.17	70	3	70	106	20
Parathion	<LOR	0.25	0.18	0.17	71	4	48	118	20
Pirimiphos ethyl	<LOR	0.25	0.12	0.12	49 *	3	58	98	20
Chlorfenvinphos E	<LOR	0.25	N/A	N/A	N/A		--	--	
Chlorfenvinphos Z	<LOR	0.25	0.17	0.16	67	6	60	122	20
Bromophos ethyl	<LOR	0.25	0.18	0.18	72	4	66	104	20
Fenamiphos	<LOR	0.25	0.16	0.14	60	15	57	101	20
Prothiofos	<LOR	0.25	0.18	0.18	72	3	65	101	20
Ethion	<LOR	0.25	0.18	0.18	72	5	62	107	20
Carbofenthion	<LOR	0.25	0.18	0.17	71	6	64	102	20
Azinphos methyl	<LOR	0.25	0.18	0.14	64	19	42	112	20
EP-068C : TRIAZINE PESTICIDES									
Simazine	<LOR	0.25	0.14	0.14	56	4	1	140	20
Atrazine	<LOR	0.25	0.20	0.18	76	6	65	109	20
EP-068D : SYNTHETIC PYRETHROIDS									
Cypermethrins	<LOR	0.25	0.18	0.18	73	2	63	119	20

COMMENTS:

- 1) The control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1421			ANALYST K. HEGARTY				
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
EP068A : OC Pesticides									
a-BHC	<0.025	0.25	73	77.7	75.4	6.24	61.2	100	0 - 20
HCB	<0.025	0.25	78	82.2	80.1	5.24	61.7	101	0 - 20
b- & g-BHC	<0.05	0.5	71.5	75.1	73.3	4.91	70.2	101	0 - 20
d-BHC	<0.025	0.25	68.2	74.6	71.4	8.96	68.1	96.4	0 - 20
Heptachlor	<0.025	0.25	71.2	77.2	74.2	8.09	62	103	0 - 20
Aldrin	<0.025	0.25	66.8	74.9	70.9	11.4	59.5	107	0 - 20
Heptachlor epoxide	<0.025	0.25	71.9	79.9	75.9	10.5	66	99.1	0 - 20
Chlordane peak no 1	<0.025	0.25	71.2	78.9	75.1	10.3	67.3	102	0 - 20
Endosulfan 1	<0.025	0.25	62.9	71.6	67.3	12.9	66.3	114	0 - 20
Chlordane peak no. 2	<0.025	0.25	70.5	79.5	75	12	64.5	104	0 - 20
Dieldrin	<0.025	0.25	63	68.5	65.8	8.37	58.4	116	0 - 20
DDE	<0.025	0.25	72.2	82.4	77.3	13.2	72.7	92.5	0 - 20
Endrin	<0.025	0.25	72	72.7	72.4	0.97	70.8	106	0 - 20
Endosulfan 2	<0.025	0.25	73	79.3	76.2	8.27	72.2	100	0 - 20
DDD	<0.025	0.25	68.3	75.6	72	10.1	68.5	102	0 - 20
Endrin aldehyde	<0.025	0.25	65.4	76.7	71.1	15.9	56.7	105	1 - 20
Endosulfan sulfate	<0.025	0.25	67.1	71.8	69.5	6.77	67.8	107	0 - 20
DDT	<0.1	0.25	67.1	71.8	69.5	6.77	60.9	120	0 - 20
Endrin ketone	<0.025	0.25	65.3	66.6	66	1.97	60	111	0 - 20
Methoxychlor	<0.1	0.25	73.3	75.5	74.4	2.96	47.4	124	0 - 20
EP0678 : OP Pesticides									
Dichlorvos	<0.025	0.25	66.5	76.8	71.7	14.4	53.6	99.6	0 - 20
Demeton-s-methyl	<0.025	0.25	75.8	79.4	77.6	4.64	55.9	99	0 - 20
Monocrotophos	<0.1	0.25	64.3	72.5	68.4	12	52.3	124	0 - 20
Dimethoate	<0.025	0.25	69.4	75.9	72.7	8.95	70.7	104	0 - 20
Diazinon	<0.025	0.25	69.1	75.7	72.4	9.12	66	101	0 - 20
Chlorpyrifos methyl	<0.025	0.25	77	84.9	81	9.76	66.2	98.3	0 - 20
Parathion methyl	<0.1	0.25	66.8	74.8	70.8	11.3	69.4	97.3	0 - 20
Malathion	<0.025	0.25	68.2	73.8	71	7.89	66	102	0 - 20
Fenthion	<0.025	0.25	67.6	74.2	70.9	9.31	69.7	95.4	0 - 20
Chlorpyrifos	<0.025	0.25	67.4	77.2	72.3	13.6	69	101	0 - 20
Parathion	<0.1	0.25	65.2	73	69.1	11.3	50.1	122	0 - 20
Pirimphos ethyl	<0.025	0.25	73.4	82.8	78.1	12	72.3	93.6	0 - 20
Chlorfenvinphos Z	<0.025	0.25	68.9	78.3	73.6	12.8	67.2	107	0 - 20
Bromophos ethyl	<0.025	0.25	71	79.1	75.1	10.8	73.8	97.4	0 - 20
Fenamiphos	<0.025	0.25	69.2	75	72.1	8.04	70.7	100	0 - 20
Prothiofos	<0.025	0.25	67.7	77.8	72.8	13.9	70.8	99.2	0 - 20

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1421			ANALYST K. HEGARTY				
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
Ethion	<0.025	0.25	65.7	70.4	68.1	6.91	67.6	106	0 - 20
Carbofenthion	<0.025	0.25	67.6	77.4	72.5	13.5	62.5	108	0 - 20
Azinphos methyl	<0.025	0.25	65.8	64.7	65.3	1.69	42.4	115	0 - 20
EP068C : Triazines									
Simazine	<0.025	0.25	97.4	106	102	8.46	1	112	0 - 20
Atrazine	<0.025	0.25	74.2	74.1	74.2	0.14	70.2	104	0 - 20
EP068D :Pyrethroids									
Cypermethrins(multipeaks)	<0.1	0.25	79.6	70	74.8	12.8	45.8	126	0 - 20
EP068S : OC Surrogate									
Dibromo-DDE	92.4%	1.25	105	99.7	102 *	5.18	66.7	101	0 - 20
EP068T : OP Surrogate									
DEF	81.8%	1.25	88.9	86	87.5	3.32	60.6	101	0 - 20

COMMENTS:

- 1) The recovery control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) The control limits on RPD (relative percent deviation) are fixed.
- 3) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1422				ANALYST K. HEGARTY			
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
EP068A : OC Pesticides									
a-BHC	<0.025	0.25	94.5	100	97.3	5.66	61.2	100	0 - 20
HCB	<0.025	0.25	91.3	103	97.2	12	61.7	101	0 - 20
b- & g-BHC	<0.05	0.5	99.7	109	104 *	8.91	70.2	101	0 - 20
d-BHC	<0.025	0.25	90.4	101	95.7	11.1	68.1	96.4	0 - 20
Heptachlor	<0.025	0.25	84.7	93.7	89.2	10.1	62	103	0 - 20
Aldrin	<0.025	0.25	80.9	93.8	87.4	14.8	59.5	107	0 - 20
Heptachlor epoxide	<0.025	0.25	90.9	92.1	91.5	1.31	66	99.1	0 - 20
Chlordane peak no 1	<0.025	0.25	84.3	93.2	88.8	10	67.3	102	0 - 20
Endosulfan 1	<0.025	0.25	90.7	101	95.9	10.7	66.3	114	0 - 20
Chlordane peak no. 2	<0.025	0.25	74.8	89.6	82.2	18	64.5	104	0 - 20
Dieldrin	<0.025	0.25	85.2	94.1	89.7	9.93	58.4	116	0 - 20
DDE	<0.025	0.25	94.2	103	98.6 *	8.92	72.7	92.5	0 - 20
Endrin	<0.025	0.25	56.1	60.3	58.2 *	7.22	70.8	106	0 - 20
Endosulfan 2	<0.025	0.25	90.3	98.6	94.5	8.79	72.2	100	0 - 20
DDD	<0.025	0.25	88.3	99.7	94	12.1	68.5	102	0 - 20
Endrin aldehyde	<0.025	0.25	110	115	113 *	4.44	56.7	105	1 - 20
Endosulfan sulfate	<0.025	0.25	86.5	100	93.3	14.5	67.8	107	0 - 20
DDT	<0.1	0.25	90.6	101	95.8	10.9	60.9	120	0 - 20
Endrin ketone	<0.025	0.25	103	112	108	8.37	60	111	0 - 20
Methoxychlor	<0.1	0.25	81.2	92.8	87	13.3	47.4	124	0 - 20
EP0678 : OP Pesticides									
Dichlorvos	<0.025	0.25	85.5	78.8	82.2	8.16	53.6	99.6	0 - 20
Demeton-s-methyl	<0.025	0.25	60.5	63.7	62.1	5.15	55.9	99	0 - 20
Monocrotophos	<0.1	0.25	68.1	68.8	68.5	1.02	52.3	124	0 - 20
Dimethoate	<0.025	0.25	83.3	84.8	84.1	1.78	70.7	104	0 - 20
Diazinon	<0.025	0.25	73	73.6	73.3	0.82	66	101	0 - 20
Chlorpyrifos methyl	<0.025	0.25	81.3	94.5	87.9	15	66.2	98.3	0 - 20
Parathion methyl	<0.1	0.25	80.9	93.7	87.3	14.7	69.4	97.3	0 - 20
Malathion	<0.025	0.25	85.8	94.2	90	9.33	66	102	0 - 20
Fenthion	<0.025	0.25	76.2	76.3	76.3	0.13	69.7	95.4	0 - 20
Chlorpyrifos	<0.025	0.25	85.5	99.3	92.4	14.9	69	101	0 - 20
Parathion	<0.1	0.25	79	91.2	85.1	14.3	50.1	122	0 - 20
Pirimphos ethyl	<0.025	0.25	70.4	57.8	64.1 *	19.7	72.3	93.6	0 - 20
Chlorfenvinphos Z	<0.025	0.25	84.4	92.8	88.6	9.48	67.2	107	0 - 20
Bromophos ethyl	<0.025	0.25	83.3	95.6	89.5	13.8	73.8	97.4	0 - 20
Fenamiphos	<0.025	0.25	70.8	71.7	71.3	1.26	70.7	100	0 - 20
Prothiofos	<0.025	0.25	79.9	94.1	87	16.3	70.8	99.2	0 - 20

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1422				ANALYST K. HEGARTY			
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
Ethion	<0.025	0.25	84	95.8	89.9	13.1	67.6	106	0 - 20
Carbofenthion	<0.025	0.25	80.3	94.1	87.2	15.8	62.5	108	0 - 20
Azinphos methyl	<0.025	0.25	66.3	70.8	68.6	6.56	42.4	115	0 - 20
EP068C : Triazines									
Simazine	<0.025	0.25	93.5	88.9	91.2	5.04	1	112	0 - 20
Atrazine	<0.025	0.25	85.7	90.7	88.2	5.67	70.2	104	0 - 20
EP068D :Pyrethroids									
Cypermelthrins(mullipeaks)	<0.1	0.25	92.9	94.7	93.8	1.92	45.8	126	0 - 20
EP068S : OC Surrogate									
Dibromo-DDE	86%	1.25	95.3	102	98.7	6.79	66.7	101	0 - 20
EP068T : OP Surrogate									
DEF	90.3%	1.25	95	97	96	2.08	60.6	101	0 - 20

COMMENTS:

- 1) The recovery control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) The control limits on RPD (relative percent deviation) are fixed.
- 3) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1423				ANALYST K. HEGARTY			
MATRIX:		Soils							
COMPOUND	Blank	Spike	SPIKE QC RESULTS				Control Limits		
	Conc	Level	SCS	DCS	Average	RPD	Rec.		RPD
	mg/kg	mg/kg	Rec.	Rec.	Rec.		Low	High	%
EP068A : OC Pesticides									
a-BHC	<0.025	0.25	84.9	84.3	84.6	0.71	61.2	100	0 - 20
HCB	<0.025	0.25	83.5	84.5	84	1.19	61.7	101	0 - 20
b- & g-BHC	<0.05	0.5	89.9	89.5	89.7	0.45	70.2	101	0 - 20
d-BHC	<0.025	0.25	95.1	82.5	88.8	14.2	68.1	96.4	0 - 20
Heptachlor	<0.025	0.25	83.9	77.7	80.8	7.67	62	103	0 - 20
Aldrin	<0.025	0.25	78	80.1	79.1	2.66	59.5	107	0 - 20
Heptachlor epoxide	<0.025	0.25	79.2	71.2	75.2	10.6	66	99.1	0 - 20
Chlordane peak no 1	<0.025	0.25	78	68.5	73.3	13	67.3	102	0 - 20
Endosulfan 1	<0.025	0.25	86.4	78.6	82.5	9.45	66.3	114	0 - 20
Chlordane peak no. 2	<0.025	0.25	71.1	68.8	70	3.29	64.5	104	0 - 20
Dieldrin	<0.025	0.25	99.4	85.4	92.4	15.2	58.4	116	0 - 20
DDE	<0.025	0.25	94.2	78.7	86.5	17.9	72.7	92.5	0 - 20
Endrin	<0.025	0.25	84.5	86.4	85.5	2.22	70.8	106	0 - 20
Endosulfan 2	<0.025	0.25	94.4	82.4	88.4	13.6	72.2	100	0 - 20
DDD	<0.025	0.25	92.3	82.4	87.4	11.3	68.5	102	0 - 20
Endrin aldehyde	<0.025	0.25	73.5	70.2	71.9	4.59	56.7	105	1 - 20
Endosulfan sulfate	<0.025	0.25	92.3	81.3	86.8	12.7	67.8	107	0 - 20
DDT	<0.1	0.25	96.3	89.3	92.8	7.54	60.9	120	0 - 20
Endrin ketone	<0.025	0.25	89.9	91.5	90.7	1.76	60	111	0 - 20
Methoxychlor	<0.1	0.25	95	78.6	86.8	18.9	47.4	124	0 - 20
EP0678 : OP Pesticides									
Dichlorvos	<0.025	0.25	87.6	82.5	85.1	6	53.6	99.6	0 - 20
Demeton-s-methyl	<0.025	0.25	69.2	72.7	71	4.93	55.9	99	0 - 20
Monocroptophos	<0.1	0.25	75.6	79.5	77.6	5.03	52.3	124	0 - 20
Dimethoate	<0.025	0.25	84.8	82.8	83.8	2.39	70.7	104	0 - 20
Diazinon	<0.025	0.25	90.2	79	84.6	13.2	66	101	0 - 20
Chlorpyrifos methyl	<0.025	0.25	82.9	78.8	80.9	5.07	66.2	98.3	0 - 20
Parathion methyl	<0.1	0.25	78	80.2	79.1	2.78	69.4	97.3	0 - 20
Malathion	<0.025	0.25	81.4	71	76.2	13.6	66	102	0 - 20
Fenthion	<0.025	0.25	78.4	72.6	75.5	7.68	69.7	95.4	0 - 20
Chlorpyrifos	<0.025	0.25	91.1	84.7	87.9	7.28	69	101	0 - 20
Parathion	<0.1	0.25	81	72.7	76.9	10.8	50.1	122	0 - 20
Pirimphos ethyl	<0.025	0.25	75.7	69	72.4	9.26	72.3	93.6	0 - 20
Chlorfenvinphos Z	<0.025	0.25	88.3	80.4	84.4	9.37	67.2	107	0 - 20
Bromophos ethyl	<0.025	0.25	81.8	72.4	77.1	12.2	73.8	97.4	0 - 20
Fenamiphos	<0.025	0.25	81.1	74.9	78	7.95	70.7	100	0 - 20
Prothiofos	<0.025	0.25	80.9	74.8	77.9	7.84	70.8	99.2	0 - 20

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1423				ANALYST K. HEGARTY			
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
Ethion	<0.025	0.25	92	84.2	88.1	8.85	67.6	106	0 - 20
Carbofenthion	<0.025	0.25	82.6	78.9	80.8	4.58	62.5	108	0 - 20
Azinphos methyl	<0.025	0.25	79.1	72.3	75.7	8.98	42.4	115	0 - 20
EP068C : Triazines									
Simazine	<0.025	0.25	114	114	114 *	0	1	112	0 - 20
Atrazine	<0.025	0.25	92.4	85.5	89	7.76	70.2	104	0 - 20
EP068D :Pyrethroids									
Cypermethrins(multipeaks)	<0.1	0.25	101	94.8	97.9	6.33	45.8	126	0 - 20
EP068S : OC Surrogate									
Dibromo-DDE	117%	1.25	106	103	105 *	2.87	66.7	101	0 - 20
EP068T : OP Surrogate									
DEF	85.3%	1.25	93	84.9	89	9.11	60.6	101	0 - 20

COMMENTS:

- 1) The recovery control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) The control limits on RPD (relative percent deviation) are fixed.
- 3) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1424				ANALYST K. HEGARTY			
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
EP068A : OC Pesticides									
a-BHC	<0.025	0.25	81.6	82.6	82.1	1.22	61.2	100	0 - 20
HCB	<0.025	0.25	79.3	81.1	80.2	2.24	61.7	101	0 - 20
b- & g-BHC	<0.05	0.5	85.7	87.3	86.5	1.85	70.2	101	0 - 20
d-BHC	<0.025	0.25	85.5	84.9	85.2	0.7	68.1	96.4	0 - 20
Heptachlor	<0.025	0.25	80.1	78.5	79.3	2.02	62	103	0 - 20
Aldrin	<0.025	0.25	72.4	75.2	73.8	3.79	59.5	107	0 - 20
Heptachlor epoxide	<0.025	0.25	78.1	79.6	78.9	1.9	66	99.1	0 - 20
Chlordane peak no 1	<0.025	0.25	76.8	79.7	78.3	3.71	67.3	102	0 - 20
Endosulfan 1	<0.025	0.25	81.9	83.4	82.7	1.81	66.3	114	0 - 20
Chlordane peak no. 2	<0.025	0.25	74.9	74	74.5	1.21	64.5	104	0 - 20
Dieldrin	<0.025	0.25	92.3	95.3	93.8	3.2	58.4	116	0 - 20
DDE	<0.025	0.25	85.2	82.9	84.1	2.74	72.7	92.5	0 - 20
Endrin	<0.025	0.25	66.9	78.3	72.6	15.7	70.8	106	0 - 20
Endosulfan 2	<0.025	0.25	87.6	87.3	87.5	0.34	72.2	100	0 - 20
DDD	<0.025	0.25	87.2	87.2	87.2	0	68.5	102	0 - 20
Endrin aldehyde	<0.025	0.25	80.4	75.4	77.9	6.42	56.7	105	1 - 20
Endosulfan sulfate	<0.025	0.25	89.9	88.5	89.2	1.57	67.8	107	0 - 20
DDT	<0.1	0.25	91.3	91.3	91.3	0	60.9	120	0 - 20
Endrin ketone	<0.025	0.25	116	103	110	11.9	60	111	0 - 20
Methoxychlor	<0.1	0.25	81.7	79.9	80.8	2.23	47.4	124	0 - 20
EP0678 : OP Pesticides									
Dichlorvos	<0.025	0.25	74.3	82.1	78.2	9.97	53.6	99.6	0 - 20
Demeton-s-methyl	<0.025	0.25	61.5	72.8	67.2	16.8	55.9	99	0 - 20
Monocrotophos	<0.1	0.25	68.3	68.6	68.5	0.44	52.3	124	0 - 20
Dimethoate	<0.025	0.25	74.2	78	76.1	4.99	70.7	104	0 - 20
Diazinon	<0.025	0.25	72.9	80	76.5	9.29	66	101	0 - 20
Chlorpyrifos methyl	<0.025	0.25	81.8	80	80.9	2.22	66.2	98.3	0 - 20
Parathion methyl	<0.1	0.25	72.4	75.2	73.8	3.79	69.4	97.3	0 - 20
Malathion	<0.025	0.25	74.9	75.1	75	0.27	66	102	0 - 20
Fenthion	<0.025	0.25	71.7	75.1	73.4	4.63	69.7	95.4	0 - 20
Chlorpyrifos	<0.025	0.25	84	85.4	84.7	1.65	69	101	0 - 20
Parathion	<0.1	0.25	77.4	76.7	77.1	0.91	50.1	122	0 - 20
Pirimphos ethyl	<0.025	0.25	69.7	80.3	75	14.1	72.3	93.6	0 - 20
Chlorfenvinphos Z	<0.025	0.25	80.6	84.5	82.6	4.72	67.2	107	0 - 20
Bromophos ethyl	<0.025	0.25	82.5	80.8	81.7	2.08	73.8	97.4	0 - 20
Fenamiphos	<0.025	0.25	73	78.1	75.6	6.75	70.7	100	0 - 20
Prothiofos	<0.025	0.25	76.9	76.3	76.6	0.78	70.8	99.2	0 - 20

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1424				ANALYST K. HEGARTY			
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
Ethion	<0.025	0.25	88.9	88.4	88.7	0.56	67.6	106	0 - 20
Carbofenthion	<0.025	0.25	86.7	83.7	85.2	3.52	62.5	108	0 - 20
Azinphos methyl	<0.025	0.25	68.7	67.3	68	2.06	42.4	115	0 - 20
EP068C : Triazines									
Simazine	<0.025	0.25	106	111	109	4.61	1	112	0 - 20
Atrazine	<0.025	0.25	82.8	84	83.4	1.44	70.2	104	0 - 20
EP068D : Pyrethroids									
Cypermethrins(mulipeaks)	<0.1	0.25	80.9	80.6	80.8	0.37	45.8	126	0 - 20
EP068S : OC Surrogate									
Dibromo-DDE	101%	1.25	114	114	114 *	0	66.7	101	0 - 20
EP068T : OP Surrogate									
DEF	80.2%	1.25	86.7	85.6	86.2	1.28	60.6	101	0 - 20

COMMENTS:

- 1) The recovery control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) The control limits on RPD (relative percent deviation) are fixed.
- 3) * : Recovery or RPD falls outside of the recommended control limits.

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1425				ANALYST K. HEGARTY			
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
EP068A.: OC Pesticides									
a-BHC	<0.025	0.25	83	83.5	83.3	0.6	61.2	100	0 - 20
HCB	<0.025	0.25	83.6	82.2	82.9	1.69	61.7	101	0 - 20
b- & g-BHC	<0.05	0.5	87	86.9	87	0.12	70.2	101	0 - 20
d-BHC	<0.025	0.25	88.1	84.5	86.3	4.17	68.1	96.4	0 - 20
Heptachlor	<0.025	0.25	83.8	83.1	83.5	0.84	62	103	0 - 20
Aldrin	<0.025	0.25	77.7	78.8	78.3	1.41	59.5	107	0 - 20
Heptachlor epoxide	<0.025	0.25	84.7	84.2	84.5	0.59	66	99.1	0 - 20
Chlordane peak no 1	<0.025	0.25	82.2	82.5	82.4	0.36	67.3	102	0 - 20
Endosulfan 1	<0.025	0.25	99.6	94.8	97.2	4.94	66.3	114	0 - 20
Chlordane peak no. 2	<0.025	0.25	87.4	82.1	84.8	6.25	64.5	104	0 - 20
Dieldrin	<0.025	0.25	96.7	96.7	96.7	0	58.4	116	0 - 20
DDE	<0.025	0.25	91.2	85.5	88.4	6.45	72.7	92.5	0 - 20
Endrin	<0.025	0.25	81.3	74.7	78	8.46	70.8	106	0 - 20
Endosulfan 2	<0.025	0.25	91.5	87.3	89.4	4.7	72.2	100	0 - 20
DDD	<0.025	0.25	90.6	89.8	90.2	0.89	68.5	102	0 - 20
Endrin aldehyde	<0.025	0.25	102	97.1	99.6	4.92	56.7	105	1 - 20
Endosulfan sulfate	<0.025	0.25	98.4	92.8	95.6	5.86	67.8	107	0 - 20
DDT	<0.1	0.25	92.2	88.9	90.6	3.64	60.9	120	0 - 20
Endrin ketone	<0.025	0.25	118	98.2	108	18.3	60	111	0 - 20
Methoxychlor	<0.1	0.25	88.7	83.5	86.1	6.04	47.4	124	0 - 20
EP0678 : OP Pesticides									
Dichlorvos	<0.025	0.25	78.3	76.5	77.4	2.33	53.6	99.6	0 - 20
Demeton-s-methyl	<0.025	0.25	67.1	80.3	73.7	17.9	55.9	99	0 - 20
Monocrotophos	<0.1	0.25	72.4	83.8	78.1	14.6	52.3	124	0 - 20
Dimethoate	<0.025	0.25	78.8	85.3	82.1	7.92	70.7	104	0 - 20
Diazinon	<0.025	0.25	79.4	85.3	82.4	7.16	66	101	0 - 20
Chlorpyrifos methyl	<0.025	0.25	87.1	86.4	86.8	0.81	66.2	98.3	0 - 20
Parathion methyl	<0.1	0.25	77.7	78.8	78.3	1.41	69.4	97.3	0 - 20
Malathion	<0.025	0.25	92.5	90	91.3	2.74	66	102	0 - 20
Fenthion	<0.025	0.25	80	81.3	80.7	1.61	69.7	95.4	0 - 20
Chlorpyrifos	<0.025	0.25	87.9	93	90.5	5.64	69	101	0 - 20
Parathion	<0.1	0.25	62.4	63.5	63	1.75	50.1	122	0 - 20
Pirimphos ethyl	<0.025	0.25	69.6	78.1	73.9	11.5	72.3	93.6	0 - 20
Chlorfenvinphos Z	<0.025	0.25	93	91.1	92.1	2.06	67.2	107	0 - 20
Bromophos ethyl	<0.025	0.25	87.8	87.7	87.8	0.11	73.8	97.4	0 - 20
Fenamiphos	<0.025	0.25	71.8	77.7	74.8	7.89	70.7	100	0 - 20
Prothiofos	<0.025	0.25	83.4	84.3	83.9	1.07	70.8	99.2	0 - 20

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No. :		OCOPS1425		ANALYST K. HEGARTY					
MATRIX:		Soils							
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
Ethion	<0.025	0.25	88.3	86.3	87.3	2.29	67.6	106	0 - 20
Carbofenthion	<0.025	0.25	90	90.4	90.2	0.44	62.5	108	0 - 20
Azinphos methyl	<0.025	0.25	89.4	81.9	85.7	8.76	42.4	115	0 - 20
EP068C : Triazines									
Simazine	<0.025	0.25	102	105	104	2.9	1	112	0 - 20
Atrazine	<0.025	0.25	84.4	89.4	86.9	5.75	70.2	104	0 - 20
EP068D : Pyrethroids									
Cypermethrins(multi peaks)	<0.1	0.25	89.4	88.4	88.9	1.12	45.8	126	0 - 20
EP068S : OC Surrogate									
Dibromo-DDE	99.4%	1.25	115	102	109 *	12	66.7	101	0 - 20
EP068T : OP Surrogate									
DEF	85.3%	1.25	94.9	84.2	89.6	11.9	60.6	101	0 - 20

COMMENTS:

- 1) The recovery control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) The control limits on RPD (relative percent deviation) are fixed.
- 3) * : Recovery or RPD falls outside of the recommended control limits.

Batch: ES42791
Sub Batch: 0
Date of Issue: 22/10/2003
Client: GILBERT & SUTHERLAND PTY LTD
Client Reference:

CERTIFICATE OF ANALYSIS



METHOD	ANALYSIS DESCRIPTION	Laboratory I.D.		SAMPLE IDENTIFICATION									
		UNIT	LOR	1	2	3	4	5	6	7	8	9	10
				09/10/2003 4/58-C1	09/10/2003 4/58-C2	09/10/2003 4/58-C3	09/10/2003 4/58-C4	09/10/2003 4/58-C5	09/10/2003 4/58-C6	09/10/2003 4/58-C7	09/10/2003 4/58-C8	09/10/2003 4/58-C9	09/10/2003 4/58-C10
EA-055	Moisture Content (dried @ 103°C)	%	0.1	25.5	26.8	24.5	22.5	27.2	23.3	25.5	25.4	29.4	26.3
EG-005T	Arsenic - Total	mg/kg	1	4	9	8	8	7	9	7	10	7	4
EG-005T	Cadmium - Total	mg/kg	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
EG-005T	Copper - Total	mg/kg	1	62	61	66	64	50	64	54	69	52	62
EG-005T	Lead - Total	mg/kg	1	8	7	7	6	6	6	7	7	8	8
EG-005T	Zinc - Total	mg/kg	1	60	64	62	62	61	59	61	62	72	62
EG-035T	Mercury - Total	mg/kg	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1

Batch:

ES42791

Sub Batch:

0

Date of Issue:

22/10/2003

Client:

GILBERT & SUTHERLAND PTY LTD

Client Reference:

CERTIFICATE OF ANALYSIS



METHOD		ANALYSIS DESCRIPTION	UNIT	LOR	SAMPLE IDENTIFICATION									
					Laboratory I.D. Date Sampled		11	12	13	14	15	16	17	18
					09/10/2003 4/58-C11	09/10/2003 4/58-C12	09/10/2003 4/58-C13	09/10/2003 4/58-C14	09/10/2003 4/58-C15	09/10/2003 4/58-C16	09/10/2003 4/58-C17	09/10/2003 4/58-C18	09/10/2003 4/58-C19	09/10/2003 4/58-C20
EA-055	Moisture Content (dried @ 103°C)	%	0.1	25.9	26.4	25.8	25.6	28.7	25.6	27.4	24.2	28.8	9.0	
EG-005T	Arsenic - Total	mg/kg	1	3	3	4	31	31	2	3	3	5	10	
EG-005T	Cadmium - Total	mg/kg	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
EG-005T	Copper - Total	mg/kg	1	48	56	58	50	51	65	65	59	65	46	
EG-005T	Lead - Total	mg/kg	1	7	7	8	7	8	8	8	9	9	7	
EG-005T	Zinc - Total	mg/kg	1	63	53	61	59	57	52	60	55	55	217	
EG-035T	Mercury - Total	mg/kg	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	

Batch:

ES42791

Sub Batch:

0

Date of Issue:

22/10/2003

Client:

GILBERT & SUTHERLAND PTY LTD

Client Reference:

CERTIFICATE OF ANALYSIS



METHOD		ANALYSIS DESCRIPTION		Laboratory I.D. Date Sampled		21 09/10/2003 4/58-C21	22 09/10/2003 4/58-C22	23 09/10/2003 4/58-C23	24 09/10/2003 4/58-C24	SAMPLE IDENTIFICATION	
		UNIT		LOR							
EA-055	Moisture Content (dried @ 103°C)	%		0.1		19.8	22.3	23.0	22.7		
EG-005T	Arsenic - Total	mg/kg		1		4	6	1	2		
EG-005T	Cadmium - Total	mg/kg		1		<1	<1	<1	<1		
EG-005T	Copper - Total	mg/kg		1		53	50	47	57		
EG-005T	Lead - Total	mg/kg		1		9	11	8	7		
EG-005T	Zinc - Total	mg/kg		1		52	66	58	48		
EG-035T	Mercury - Total	mg/kg		0.1		0.1	0.2	0.1	0.2		

Batch: ES42791
 Sub Batch: 0
 Date of Issue: 22/10/2003
 Client: GILBERT & SUTHERLAND PTY LTD
 Client Reference:

QUALITY CONTROL REPORT



METHOD		ANALYSIS DESCRIPTION	UNIT	LOR	SAMPLE IDENTIFICATION									
					1	11	11	11	21	21	200	201	205	206
		Laboratory I.D.			09/10/2003	09/10/2003	09/10/2003	09/10/2003	09/10/2003	09/10/2003	13/10/2003	13/10/2003	13/10/2003	13/10/2003
		Date Sampled			4/58-C1	4/58-C11	4/58-C11	4/58-C11	4/58-C21	4/58-C21	METHOD	LCS1	METHOD	LCS2
					MS1	CHK	MS1	CHK	MS1	CHK	BLANK1		BLANK2	
CHECKS AND SPIKES														
EA-055	Moisture Content (dried @ 103°C)	%	0.1		56.0%	24.9	57.0%	24.9	50.0%	24.0	<1	94.0%	<1	<1
EG-005T	Arsenic - Total	mg/kg	1		86.0%	4	83.0%	3	82.0%	4	<1	96.0%	<1	<1
EG-005T	Cadmium - Total	mg/kg	1		86.0%	<1	86.0%	<1	85.0%	<1	<1	90.0%	<1	<1
EG-005T	Copper - Total	mg/kg	1		86.0%	59	82.0%	48	83.0%	58	<1	92.0%	<1	<1
EG-005T	Lead - Total	mg/kg	1		87.0%	8	82.0%	7	83.0%	10	<1	90.0%	<1	<1
EG-005T	Zinc - Total	mg/kg	1		103%	57	106%	64	105%	57	<0.1	99.0%	<0.1	98.0%
EG-035T	Mercury - Total	mg/kg	0.1			0.1		0.2		0.1				

Batch: ES42791
 Sub Batch: 0
 Date of Issue: 22/10/2003
 Client: GILBERT & SUTHERLAND PTY LTD
 Client Reference:

QUALITY CONTROL REPORT



METHOD		ANALYSIS DESCRIPTION		UNIT	LOR	Laboratory I.D. Date Sampled				SAMPLE IDENTIFICATION			



CERTIFICATE OF ANALYSIS

CONTACT: MR C BUTLER
CLIENT: GILBERT & SUTHERLAND PTY LTD
ADDRESS: P O BOX 4115
ROBINA QLD 4230
ORDER No.: GJ0128
PROJECT:

BATCH: ES42791
SUB BATCH: 1
LABORATORY: SYDNEY
DATE RECEIVED: 13/10/2003
DATE COMPLETED: 22/10/2003
SAMPLE TYPE: SOIL
No. of SAMPLES: 24

COMMENTS

Samples analysed on an as received basis. Results reported on a dry weight basis. All analysis and Laboratory QC conducted in accordance with Schedule B(3) NEPM Guideline on Laboratory Analysis of Potentially Contaminated Soil (December 1999).

NOTES

This is the Final Report and supersedes any preliminary reports with this batch number. All pages of this report have been checked and approved for release.

ISSUING LABORATORY: SYDNEY

Address
277-289 Woodpark Road
SMITHFIELD NSW 2164

Phone: 61-2-8784 8555
Fax: 61-2-8784 8500
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Signatory

LABORATORIES

AUSTRALASIA

Brisbane
Melbourne
Sydney
Newcastle
Auckland

Hong Kong
Singapore
Kuala Lumpur
Bogor
Mumbai

AMERICAS

Vancouver
Santiago
Antofagasta
Lima



NATA Accredited Laboratory Number 825

Site: SYDNEY

(This Laboratory is accredited by the National Association of Testing Authorities, Australia. The results reported herein have been performed in accordance with its terms of accreditation. This document shall not be reproduced except in full.)

Batch: ES42791
Sub Batch: 1
Date of Issue: 22/10/2003
Client: GILBERT & SUTHERLAND PTY LTD
Client Reference:

CERTIFICATE OF ANALYSIS



METHOD	ANALYSIS DESCRIPTION	UNIT	Laboratory I.D. Date Sampled	SAMPLE IDENTIFICATION									
				1	2	3	4	5	6	7	8	9	10
EA-055	Moisture Content (dried @ 103°C)	%		09/10/2003 4/58-C1	09/10/2003 4/58-C2	09/10/2003 4/58-C3	09/10/2003 4/58-C4	09/10/2003 4/58-C5	09/10/2003 4/58-C6	09/10/2003 4/58-C7	09/10/2003 4/58-C8	09/10/2003 4/58-C9	09/10/2003 4/58-C10
EP-068A-SS	ORGANOCHLORINE PESTICIDES		0.1	25.5	26.8	24.5	22.5	27.2	23.3	26.5	25.4	29.4	26.3
EP-068A-SS	alpha-BHC	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	HCB	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	beta-BHC & gamma-BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
EP-068A-SS	delta-BHC	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Heptachlor	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Aldrin	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Heptachlor epoxide	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Chlordane - trans	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Endosulfan 1	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Chlordane - cis	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Dieldrin	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	DDE	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Endrin	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Endosulfan 2	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	DDD	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Endrin aldehyde	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Endosulfan sulfate	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	DDT	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EP-068A-SS	Endrin ketone	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Methoxychlor	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EP-068B-SS	ORGANOPHOSPHORUS PESTICIDES												
EP-068B-SS	Dichlorvos	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Demeton-S-methyl	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Monocrotophos	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EP-068B-SS	Dimethoate	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Diazinon	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Chlorpyrifos-methyl	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Parathion-methyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EP-068B-SS	Malathion	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Fenthion	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Chlorpyrifos	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Parathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Batch: ES42791

Sub Batch: 1

Date of Issue: 22/10/2003

Client: GILBERT & SUTHERLAND PTY LTD

Client Reference:

CERTIFICATE OF ANALYSIS



METHOD		ANALYSIS DESCRIPTION	UNIT	Laboratory I.D. Date Sampled	SAMPLE IDENTIFICATION									
					1	2	3	4	5	6	7	8	9	10
EP-068B-SS		Plimphos-ethyl	mg/kg	0.05	09/10/2003 4/58-C1	09/10/2003 4/58-C2	09/10/2003 4/58-C3	09/10/2003 4/58-C4	09/10/2003 4/58-C5	09/10/2003 4/58-C6	09/10/2003 4/58-C7	09/10/2003 4/58-C8	09/10/2003 4/58-C9	09/10/2003 4/58-C10
EP-068B-SS		Chlorfenvinphos E	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS		Chlorfenvinphos Z	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS		Bromophos-ethyl	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS		Fenamiphos	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS		Prothiophos	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS		Ethion	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS		Carbophenothion	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS		Azinphos-methyl	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068S-SS		ORGANOCHLORINE PESTICIDE SURROGATE												
EP-068S-SS		Dibromo-DDE	%	1	91	80	92	99	91	97	115	111	96	105
EP-068T-SS		ORGANOPHOSPHORUS PESTICIDE SURROGATE												
EP-068T-SS		DEF	%	1	111	115	109	118	118	120	115	123	116	120

Batch: ES42791
Sub Batch: 1
Date of Issue: 22/10/2003
Client: GILBERT & SUTHERLAND PTY LTD
Client Reference:

CERTIFICATE OF ANALYSIS



METHOD	ANALYSIS DESCRIPTION	UNIT	Laboratory I.D. Date Sampled	SAMPLE IDENTIFICATION									
				11	12	13	14	15	16	17	18	19	20
EA-055	Moisture Content (dried @ 103°C)	%	0.1	09/10/2003 4/58-C11	09/10/2003 4/58-C12	09/10/2003 4/58-C13	09/10/2003 4/58-C14	09/10/2003 4/58-C15	09/10/2003 4/58-C16	09/10/2003 4/58-C17	09/10/2003 4/58-C18	09/10/2003 4/58-C19	09/10/2003 4/58-C20
EP-068A-SS	ORGANOCHLORINE PESTICIDES												
EP-068A-SS	alpha-BHC	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	gamma-BHC	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	delta-BHC & gamma-BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
EP-068A-SS	delta-BHC	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Heptachlor	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Aldrin	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Heptachlor epoxide	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Chlordane - trans	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Endosulfan 1	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Chlordane - cis	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Dieldrin	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	DDE	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Endrin	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Endosulfan 2	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	DDD	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Endrin aldehyde	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Endosulfan sulfate	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	DDT	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EP-068A-SS	Endrin ketone	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068A-SS	Methoxychlor	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EP-068B-SS	ORGANOPHOSPHORUS PESTICIDES												
EP-068B-SS	Dichlorvos	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Demeton-S-methyl	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Monocrotophos	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EP-068B-SS	Dimethoate	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Diazinon	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Chlorpyrifos-methyl	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Parathion-methyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EP-068B-SS	Malathion	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Fenthion	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Chlorpyrifos	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Parathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Batch: ES42791
 Sub Batch: 1
 Date of Issue: 22/10/2003
 Client: GILBERT & SUTHERLAND PTY LTD
 Client Reference:

CERTIFICATE OF ANALYSIS



(ALS)

Laboratory I.D. Date Sampled		SAMPLE IDENTIFICATION											
METHOD	ANALYSIS DESCRIPTION	UNIT	LOR	11 09/10/2003 4/58-C11	12 09/10/2003 4/58-C12	13 09/10/2003 4/58-C13	14 09/10/2003 4/58-C14	15 09/10/2003 4/58-C15	16 09/10/2003 4/58-C16	17 09/10/2003 4/58-C17	18 09/10/2003 4/58-C18	19 09/10/2003 4/58-C19	20 09/10/2003 4/58-C20
EP-068B-SS	Pirimphos-ethyl	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Chlorfenvinphos E	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Chlorfenvinphos Z	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Bromophos-ethyl	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Fenamiphos	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Prothiofos	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Ethion	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Carbophenothion	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068B-SS	Azinphos-methyl	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068S-SS	ORGANOCHLORINE PESTICIDE SURROGATE	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EP-068S-SS	Dibromo-DDE	%	1	100	95	110	90	79	104	85	78	86	98
EP-068T-SS	ORGANOPHOSPHORUS PESTICIDE SURROGATE	%	1	116	96	115	117	122	121	112	116	112	117
EP-068T-SS	DEF	%											

ALS Environmental



ORGANICS QUALITY CONTROL REPORT

BATCH NO: ES42791

DATE BATCH RECEIVED: 13/10/2003

CLIENT: Cash Sale

DATE BATCH COMPLETED: 22/10/2003

PROJECT: gilbert&sutherland gj0128

Method Code	Test	Matrix	Method Reference		QC Lot Number	Date Samples Extracted	Date Samples Analysed
			Extraction	Analysis			
EP-068	Pesticides	Soil	Tumbler	USEPA 8270B	NOCOPS1449	17/10/03	18/10/03
EP-068	Pesticides	Soil	Tumbler	USEPA 8270B	NOCOPS1450	17/10/03	18/10/03

Where applicable, internal standards are added to sample extracts prior to instrumental analysis. Absolute peak areas and retention times fall within the criteria specified in the individual methods. Continuing Calibration (CC) standards are run at the frequency of 1 in every 20 samples.

Abbreviations: SV = semivolatile, V = volatile

*: In-house methods

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No : NOCOPS1449		ANALYST N. MAHAIR							
MATRIX Soils									
COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec.	DCS Rec.	Average Rec.	RPD	Rec.	RPD	
	mg/kg	mg/kg	%	%	%	%	Low	High	%
EP068A : OC Pesticides									
a-BHC	<0.025	0.25	83.1	84.6	84.2	1.64	73.6	104	0-20
γ-HCH	<0.025	0.25	87.4	83	85.2	5.16	77.1	103	0-20
β- & γ-HCH	<0.05	0.5	91.5	92.4	92.1	0.66	81.5	107	0-20
α-HCH	<0.025	0.25	81.4	83.4	85.6	10.8	78.1	104	0-20
Heptachlor	<0.025	0.25	85.3	80.6	86.1	16.3	75.3	103	0-20
Aldrin	<0.025	0.25	80.4	81.3	80.9	0.29	76.3	103	0-20
Heptachlor epoxide	<0.025	0.25	83.6	85.8	84.7	2.72	76	101	0-20
Chlordane peak no. 1	<0.025	0.25	80.8	81.4	81	0.98	76.8	106	0-20
Endosulfan 1	<0.025	0.25	82.3	80.9	81.6	1.72	76.6	103	0-20
Chlordane peak no. 2	<0.025	0.25	85.2	82.2	83.7	3.58	79.3	101	0-20
Dieldrin	<0.025	0.25	81.4	85.2	83.3	4.56	76.2	103	0-20
DDE	<0.025	0.25	80.9	80.2	80.6	0.87	77	103	0-20
Endrin	<0.025	0.25	86.7	88.1	86.9	2.76	73.6	107	0-20
Endosulfan 2	<0.025	0.25	90.1	88.6	89.4	1.68	78.2	101	0-20
DDD	<0.025	0.25	83.8	80	81.9	4.64	76.4	103	0-20
Endrin aldehyde	<0.025	0.25	92.2	80.9	86.6	13.1	74	107	1-20
Endosulfan sulfate	<0.025	0.25	85.9	90.3	86.1	4.99	78.8	102	0-20
DDT	<0.1	0.25	80.5	81.5	81.2	0.86	73.4	107	0-20
Endrin ketone	<0.025	0.25	81.6	90.3	86.1	8.85	81.2	100	0-20
Methoxychlor	<0.1	0.25	80.6	80.1	80.4	0.62	66.1	107	0-20
EP068B : OP Pesticides									
Dichlorvos	<0.025	0.25	84.2	84.6	84.4	0.47	79.5	101	0-20
Demeton-methyl	<0.025	0.25	83.7	87.8	85.7	4.56	78.1	102	0-20
Monocrotophos	<0.1	0.25	40	43.9	42	3.3	34	126	0-20
Dimethoate	<0.025	0.25	88.9	97.1	95	8.92	76	102	0-20
Diazinon	<0.025	0.25	80.2	84.1	82.2	4.73	77.2	104	0-20
Chlorpyrifos methyl	<0.025	0.25	81.6	80.2	80.9	1.73	80	103	0-20
Parathion methyl	<0.1	0.25	80.3	87.4	83.9	8.47	76.7	99.3	0-20
Malathion	<0.025	0.25	81.7	81.9	81.8	0.24	76.6	101	0-20
Fenthion	<0.025	0.25	89.3	82.8	86.1	7.55	76.5	97.7	0-20
Chlorpyrifos	<0.025	0.25	86.5	83.7	89.6	13.2	79.7	103	0-20
Parathion	<0.1	0.25	86.6	89.8	89.2	1.46	76.8	105.4	0-20
Pirimphos ethyl	<0.025	0.25	80.9	84.1	82.5	3.86	79.2	99.2	0-20
Chlorfenvinphos Z	<0.025	0.25	85.5	81.9	83.7	4.3	76.1	104	0-20
Bromophos ethyl	<0.025	0.25	61	81.5	86.3	11	76.1	102	0-20
Fenamiphos	<0.025	0.25	82.6	80.5	81.5	2.45	75.1	102	0-20
Prothipfos	<0.025	0.25	82.6	84.6	83.6	2.4	75	102	0-20
Ethion	<0.025	0.25	84.8	83.6	84.2	1.43	73.6	104	0-20
Carbofenthiion	<0.025	0.25	65.8	81.0	89.8	3.1	76.8	102	0-20
Azinphos methyl	<0.025	0.25	83.4	87.6	85.5	4.61	72.1	102	0-20

BATCH QUALITY CONTROL - CONTROL SPIKE/DUPLICATE

ALS EP-068 : Pesticides

QC LOT No. :

NOCOPS1449

ANALYST N. MAHABIR

MATRIX:

Soils

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Rec	DCS Rec.	Average Rec.	RPD	Rec		RPD
	mg/kg	mg/kg	%		%	%	Low	High	%
EP068C : Triazines									
Simazine	<0.025	0.25	68	68.1	68.1	0.15	63.8	110	0 - 20
Atrazine	<0.025	0.25	83.8	81.2	82.5	3.15	57.5	111	0 - 20
EP068D : Pyrethroids									
Cypermethrins(multi peaks)	<0.1	0.25	84.1	81.7	82.9	2.8	76.3	99.2	0 - 20
EP068E : OC Surrogate									
Dibromo-DDE	87.1%	0.5	87.5	90.9	89.2	3.81	75.5	106	0 - 20
EP068F : OP Surrogate									
DEF	85.2%	0.5	86.2	87.8	87	1.84	74.3	106	0 - 20

COMMENTS:

- 1) The recovery control limits are based on ALS laboratory statistical data. (Method QWI-ORG/07)
- 2) The control limits on RPD (relative percent deviation) are fixed
- 3) * : Recovery or RPD falls outside of the recommended control limits

BATCH QUALITY CONTROL - DUPLICATE

ALS EP-060 : Pesticides

QC LOT No. : NOCOPS1449
MATRIX : Soils
ANALYST : N. MAHABIR

COMPOUND		QC DUPLICATE RESULTS			
		ES42791	ES42791	RPD	Cont Limit
		2	2D		
	LOR mg/kg	mg/kg	mg/kg		%
EP060A : OC Pesticides					
α-BHC	0.025	<0.025	<0.025	n/a	
γ-BHC	0.025	<0.025	<0.025	n/a	
β- & γ-BHC	0.05	<0.05	<0.05	n/a	
δ-BHC	0.025	<0.025	<0.025	n/a	
Heptachlor	0.025	<0.025	<0.025	n/a	
Endrin	0.025	<0.025	<0.025	n/a	
Heptachlor epoxide	0.025	<0.025	<0.025	n/a	
Chlordane peak no. 1	0.025	<0.025	<0.025	n/a	
Endosulfan 1	0.025	<0.025	<0.025	n/a	
Chlordane peak no. 2	0.025	<0.025	<0.025	n/a	
Dieldrin	0.025	<0.025	<0.025	n/a	
ODE	0.025	<0.025	<0.025	n/a	
Endrin	0.025	<0.025	<0.025	n/a	
Endosulfan 2	0.025	<0.025	<0.025	n/a	
DDD	0.025	<0.025	<0.025	n/a	
Endrin aldehyde	0.025	<0.025	<0.025	n/a	
Endosulfan sulfate	0.025	<0.025	<0.025	n/a	
DDT	0.1	<0.1	<0.1	n/a	
Endrin ketone	0.025	<0.025	<0.025	n/a	
Methoxychlor	0.1	<0.1	<0.1	n/a	
EP060B : OP Pesticides					
Dichlorvos	0.025	<0.025	<0.025	n/a	
Demeton-s-methyl	0.025	<0.025	<0.025	n/a	
Monocrotophos	0.1	<0.1	<0.1	n/a	
Disulfoton	0.025	<0.025	<0.025	n/a	
Diazinon	0.025	<0.025	<0.025	n/a	
Chlorpyrifos methyl	0.025	<0.025	<0.025	n/a	
Parathion methyl	0.1	<0.1	<0.1	n/a	
Malathion	0.025	<0.025	<0.025	n/a	
Fenthion	0.025	<0.025	<0.025	n/a	
Chlorpyrifos	0.025	<0.025	<0.025	n/a	
Parathion	0.1	<0.1	<0.1	n/a	
Fenitrothion	0.025	<0.025	<0.025	n/a	
Chlorfenvinphos E	0.025	<0.025	<0.025	n/a	
Chlorfenvinphos Z	0.025	<0.025	<0.025	n/a	
Bromophos ethyl	0.025	<0.025	<0.025	n/a	
Fenamiphos	0.025	<0.025	<0.025	n/a	
Prothiofos	0.025	<0.025	<0.025	n/a	
Fenitron	0.025	<0.025	<0.025	n/a	
Carbofenthoion	0.025	<0.025	<0.025	n/a	
Azinphos methyl	0.025	<0.025	<0.025	n/a	

BATCH QUALITY CONTROL - DUPLICATE

ALS EP-068 : Pesticides

QC LOT No. : NOCOPS1449
 MATRIX : Soils
 ANALYST: N. MAHABIR

COMPOUND		QC DUPLICATE RESULTS			
		ES42791	ES42791	RPD	Cont. Limit
		± mg/kg	±D mg/kg		
LOR mg/kg					%
EP068C: Triazines					
Simazine	0.025	<0.025	<0.025	n/a	
Atrazine	0.025	<0.025	<0.025	n/a	
EP068D: Pyrethroids					
Cypermethrine(multipeaks)	0.1	<0.1	<0.1	n/a	
EP068S: OC Surrogates					
Dibromo-DDE	1%	80.4%	93.1%	14.6	0 - 20
EP068T: CP Surrogate					
DEF	1%	115%	119%	5.42	0 - 20

Note: The permitted range for RPD (relative percent deviation) is specified in ALS Method QWI-EN/38 and is dependent on the magnitude of results in comparison to the level of reporting:

Result < 10 times LOR, no limit.

Result between 10 and 20 times LOR, 0% - 50%.

Results > 20 times LOR, 0% - 20%.

BATCH QUALITY CONTROL -- DUPLICATE

ALS PP-055 : Pesticides

QC LOT NO.

NOCOPS144E

MATRIX:

Soils

ANALYST:

N. MAHABIR

COMPOUND	LOR mg/kg	QC DUPLICATE RESULTS		
		ES42791	ES42791	RPD
		E	ED	
EP055A / OC Pesticides				
o-BHC	0.025	<0.025	<0.025	n/a
γ-BHC	0.025	<0.025	<0.025	n/a
α- & β-BHC	0.05	<0.05	<0.05	n/a
δ-BHC	0.025	<0.025	<0.025	n/a
heptachlor	0.025	<0.025	<0.025	n/a
Endrin	0.025	<0.025	<0.025	n/a
Heptachlor epoxide	0.025	<0.025	<0.025	n/a
Chlordane peak no. 1	0.025	<0.025	<0.025	n/a
Endosulfan I	0.025	<0.025	<0.025	n/a
Chlordane peak no. 2	0.025	<0.025	<0.025	n/a
Endrin	0.025	<0.025	<0.025	n/a
DDE	0.025	<0.025	<0.025	n/a
Endrin	0.025	<0.025	<0.025	n/a
Endosulfan I	0.025	<0.025	<0.025	n/a
DDE	0.025	<0.025	<0.025	n/a
Endrin aldehyde	0.025	<0.025	<0.025	n/a
Endosulfan sulfate	0.025	<0.025	<0.025	n/a
DDE	0.1	<0.1	<0.1	n/a
Endrin ketone	0.025	<0.025	<0.025	n/a
Methoxychlor	0.1	<0.1	<0.1	n/a
EP055B / OP Pesticides				
Dichlorvos	0.025	<0.025	<0.025	n/a
Demeton-s-methyl	0.025	<0.025	<0.025	n/a
Monocrotophos	0.1	<0.1	<0.1	n/a
Dimethoate	0.025	<0.025	<0.025	n/a
Disulfoton	0.025	<0.025	<0.025	n/a
Chlorpyrifos methyl	0.025	<0.025	<0.025	n/a
Parathion methyl	0.1	<0.1	<0.1	n/a
Malathion	0.025	<0.025	<0.025	n/a
Phosphor	0.025	<0.025	<0.025	n/a
Chlorpyrifos	0.025	<0.025	<0.025	n/a
Parathion	0.1	<0.1	<0.1	n/a
Phosphos ethyl	0.025	<0.025	<0.025	n/a
Chlorfenvinphos E	0.025	<0.025	<0.025	n/a
Chlorfenvinphos E	0.025	<0.025	<0.025	n/a
3-bromophos ethyl	0.025	<0.025	<0.025	n/a
Phenathion	0.025	<0.025	<0.025	n/a
Phenathion	0.025	<0.025	<0.025	n/a
Phenathion	0.025	<0.025	<0.025	n/a
Carbofenthiol	0.025	<0.025	<0.025	n/a
Phenathion methyl	0.025	<0.025	<0.025	n/a

BATCH QUALITY CONTROL - DUPLICATE

ALS EF-066 : Pesticides

QC LOT No. : NOCOPS1449
 MATRIX : Soils
 ANALYST : N. MAHARIF

COMPOUND		QC DUPLICATE RESULTS			
		ES42791	ES42791	RPD	Cont Limit
		± mg/kg	± mg/kg	%	%
EP0380 : Triazines					
Simazine	0.025	<0.025	<0.025	n/a	
Atrazine	0.025	<0.025	<0.025	n/a	
EP066D : Pyrethroids					
Cypermethrins(multipeaks)	0.1	<0.1	<0.1	n/a	
EP060S : QC Surrogates					
Dibromo-DDE	1%	111%	110%	0.905	0 - 20
EP066T : OP Surrogates					
DEF	1%	123%	118%	4.15	0 - 20

Note: The permitted range for RPD (relative percent deviation) is specified in ALS Method QWI-EN/38 and is dependent on the magnitude of results in comparison to the level of reporting:

Result < 10 times LOR, no limit.

Result between 10 and 20 times LOR, 0% - 50%.

Results > 20 times LOR, 0% - 20%.

BATCH QUALITY CONTROL -- CONTROL SPIKE/DUPLICATE									
ALS EP-068 : Pesticides									
QC LOT No.:	NOCOFS1450			ANALYST: R. MAHABES					
MATRIX:	Soils								
COMPOUND	Blank	Spike	SPIKE QC RESULTS				Control Limits		
	Conc	Level	SCS	DCS	Average	RPD	Rec.	RPD	
	mg/kg	mg/kg	Rec.	Rec.	Rec.	%	%	%	
EP068A : GC Pesticides									
p-BHC	<0.025	0.25	81	83.4	82.2	2.2	73.1	104	0-70
γ-HCH	<0.025	0.25	81	80.4	80.7	1.34	73.1	103	0-70
β- & γ-HCH	<0.05	0.5	81	71.5	71.5	0.55	61.5	77	0-70
α-HCH	<0.025	0.25	81	85	83.5	2.25	75.1	104	0-70
Heptachlor	<0.025	0.25	81	81.8	81.4	0.65	72.5	103	0-70
Aldrin	<0.025	0.25	85.2	80.1	82.7	5.17	75.3	103	0-70
Heptachlor epoxide	<0.025	0.25	85.5	89.5	87.5	4.22	75	101	0-70
Chlordane peak no. 1	<0.025	0.25	80.4	80	80.5	0.57	75.5	105	0-70
Endosulfan 1	<0.025	0.25	80.7	80.5	80.6	0.25	75.5	105	0-70
Chlordane peak no. 2	<0.025	0.25	85.7	84.7	85.2	1.07	75.5	101	0-70
Dieldrin	<0.025	0.25	82	85.8	86.5	7.35	75.2	105	0-70
DDE	<0.025	0.25	88.2	81.5	84.1	6.54	75	105	0-70
Endrin	<0.025	0.25	85.4	87.5	86.4	4.57	73.5	107	0-70
Endosulfan 2	<0.025	0.25	88.2	85	86.6	3.7	75.2	101	0-70
DDD	<0.025	0.25	85	87.6	86.8	1.84	75.4	103	0-70
Endrin aldehyde	<0.025	0.25	89.3	80.2	84.6	10.7	74	107	1-20
Endosulfan sulfate	<0.025	0.25	85	81.5	83.5	5.37	75.5	102	0-70
DDT	<0.1	0.25	82	82.8	82.4	0.97	73.4	107	0-70
Endrin ketone	<0.025	0.25	83.5	81.3	87.5	6.22	81.2	100	0-70
Methoxychlor	<0.1	0.25	81	81.2	81.2	0.12	69	107	0-70
EP068B : HPL Pesticides									
Dichlorvos	<0.025	0.25	82	81.5	84.5	1.57	73.5	101	0-70
Carbofenthion methyl	<0.025	0.25	83.5	80.7	81.1	1.4	75	102	0-70
Monocrotophos	<0.1	0.25	82	85.5	83	4.15	75	105	0-70
Dimethoate	<0.025	0.25	84	92.5	88	2.24	75	102	0-70
Diazinon	<0.025	0.25	83.2	85.7	83.5	0.6	73.2	101	0-70
Chlorpyrifos methyl	<0.025	0.25	81.7	80.7	80.9	1.25	80	103	0-70
Parathion methyl	<0.1	0.25	80.5	82.5	81.7	2.2	75.7	85.3	0-70
Malathion	<0.025	0.25	82.5	83.5	83.3	1.2	75.5	101	0-70
Fenthion	<0.025	0.25	85	85.8	85.5	2.53	75.5	107	0-70
Chlorpyrifos	<0.025	0.25	80.2	83.5	81.5	4.03	73.2	103	0-70
Parathion	<0.1	0.25	81.2	85	84.6	2.04	75.5	85.4	0-70
Phosphos ethyl	<0.025	0.25	80.5	81.2	80.8	1.11	75.2	82.5	0-70
Chlorfenvinphos Z	<0.025	0.25	83.7	84	83.3	0.35	75.4	104	0-70
Bromophos ethyl	<0.025	0.25	85.5	80.5	85.7	1.5	75.1	105	0-70
Phenathion	<0.025	0.25	80.5	81	80.8	0.57	75.1	103	0-70
Promethion	<0.025	0.25	85.5	87.5	84.5	4.35	75	107	0-70
Ethion	<0.025	0.25	80.4	87.4	84.5	3.65	73.5	104	0-70
Carbofenthion	<0.025	0.25	75	89.5	85	0.5	75.5	105	0-70
Azinphos methyl	<0.025	0.25	81	84	80.7	1.37	75	107	0-70