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NAS FORT WORTH
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DRAFT BASEWIDE BACKGROUND STUDY VOLUME 2 APPENDICES A THROUGH G PART 2 NAS FORT WORTH TX
1/1/1997
JACOBS ENGINEERING

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Btch No.	: 96K097	DaTime Extrctd :	11/29/96 15:17
Sample ID	: CR-A153901	DaTime Analyzd :	11/29/96 15:17
Lab Cnt NO.:	K097-17	Dilutn Factor :	1
Lab File ID:	RKP494	Matrix :	SOIL
Ext Btch ID:	VOK2502	% Moisture :	20.1
Calib. Ref.:	RKP487	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	6.26	.667
1,1,2,2-Tetrachloroethane	ND	6.26	1.04
1,1,2-Trichloroethane	ND	6.26	1.06
1,1-Dichloroethane	ND	6.26	.531
1,1-Dichloroethene	ND	6.26	.653
1,2,3-Trichloropropane	ND	62.6	1.9
1,2-Dichloroethane	ND	6.26	.372
1,2-Dichloropropane	ND	6.26	1.2
2-Butanone	ND	125	2.83
2-Chloroethyl Vinyl Ether	ND	12.5	1.24
2-Hexanone	ND	62.6	1.65
4-Methyl-2-Pentanone	ND	62.6	1.95
Acetone	ND	125	5.61
Benzene	ND	6.26	.508
Bromodichloromethane	ND	6.26	.481
Bromoform	ND	6.26	.717
Bromomethane	ND	12.5	1.54
Carbon Disulfide	ND	6.26	.616
Carbon Tetrachloride	ND	6.26	.493
Chlorobenzene	ND	6.26	.548
Chloroethane	ND	12.5	1.15
Chloroform	ND	6.26	.568
Chloromethane	ND	12.5	1.17
Cis-1,2-Dichloroethene	ND	6.26	.584
Cis-1,3-Dichloropropene	ND	6.26	.501
Dibromochloromethane	ND	6.26	.483
Ethylbenzene	ND	6.26	.676
Methylene Chloride	ND	6.26	3.12
m/p-Xylenes	ND	12.5	.864
o-Xylene	ND	6.26	.477
Styrene	ND	6.26	.597
Tetrachloroethylene	ND	6.26	.392
Toluene	ND	6.26	.506
Trans-1,2-Dichloroethene	ND	6.26	.477
Trans-1,3-Dichloropropene	ND	6.26	.437
Trichloroethene	ND	6.26	.588
Vinyl Acetate	ND	62.6	1.02
Vinyl Chloride	ND	12.5	1.58

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	101	79-118
Bromofluorobenzene	88	86-115
Toluene-d8	110	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

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SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/27/96 23:05
Sample ID	: CR-A153903	DaTime Analyzd :	11/27/96 23:05
Lab Cnt NO.:	K097-19	Dilutn Factor :	1
Lab File ID:	RKP448	Matrix :	SOIL
Ext Btch ID:	VOK2302	% Moisture :	11.9
Calib. Ref.:	RKP434	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.68	.605
1,1,2,2-Tetrachloroethane	ND	5.68	.942
1,1,2-Trichloroethane	ND	5.68	.959
1,1-Dichloroethane	ND	5.68	.481
1,1-Dichloroethene	ND	5.68	.593
1,2,3-Trichloropropane	ND	56.8	1.73
1,2-Dichloroethane	ND	5.68	.337
1,2-Dichloropropane	ND	5.68	1.09
2-Butanone	ND	114	2.57
2-Chloroethyl Vinyl Ether	ND	11.4	1.13
2-Hexanone	ND	56.8	1.5
4-Methyl-2-Pentanone	ND	56.8	1.77
Acetone	6.34F	114	5.09
Benzene	ND	5.68	.461
Bromodichloromethane	ND	5.68	.436
Bromoform	ND	5.68	[illegible]
Bromomethane	ND	11.4	1.[illegible]
Carbon Disulfide	ND	5.68	.558
Carbon Tetrachloride	ND	5.68	.447
Chlorobenzene	ND	5.68	.497
Chloroethane	ND	11.4	1.04
Chloroform	ND	5.68	.515
Chloromethane	ND	11.4	1.06
Cis-1,2-Dichloroethene	ND	5.68	.53
Cis-1,3-Dichloropropene	ND	5.68	.454
Dibromochloromethane	ND	5.68	.438
Ethylbenzene	ND	5.68	.613
Methylene Chloride	2.84F	5.68	2.83
m/p-Xylenes	ND	11.4	.783
o-Xylene	ND	5.68	.432
Styrene	ND	5.68	.541
Tetrachloroethylene	ND	5.68	.355
Toluene	ND	5.68	.459
Trans-1,2-Dichloroethene	ND	5.68	.432
Trans-1,3-Dichloropropene	ND	5.68	.396
Trichloroethene	ND	5.68	.533
Vinyl Acetate	ND	56.8	.927
Vinyl Chloride	ND	11.4	1.43

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	99	79-118
Bromofluorobenzene	93	86-115
Toluene-d8	97	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/27/96 23:34
Sample ID	: CR-A154001	DaTime Analyzd :	11/27/96 23:34
Lab Cnt NO.	: K097-21	Dilutn Factor :	1
Lab File ID	: RKP449	Matrix :	SOIL
Ext Btch ID	: VOK2302	% Moisture :	14.4
Calib. Ref.	: RKP434	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.84	.623
1,1,2,2-Tetrachloroethane	ND	5.84	.97
1,1,2-Trichloroethane	ND	5.84	.987
1,1-Dichloroethane	ND	5.84	.495
1,1-Dichloroethene	ND	5.84	.61
1,2,3-Trichloropropane	ND	58.4	1.78
1,2-Dichloroethane	ND	5.84	.347
1,2-Dichloropropane	ND	5.84	1.12
2-Butanone	ND	117	2.64
2-Chloroethyl Vinyl Ether	ND	11.7	1.16
2-Hexanone	ND	58.4	1.54
4-Methyl-2-Pentanone	ND	58.4	1.82
Acetone	ND	117	5.24
Benzene	ND	5.84	.474
Bromodichloromethane	ND	5.84	.449
Bromoform	ND	5.84	.669
Bromomethane	ND	11.7	1.43
Carbon Disulfide	ND	5.84	.575
Carbon Tetrachloride	ND	5.84	.46
Chlorobenzene	ND	5.84	.512
Chloroethane	ND	11.7	1.07
Chloroform	ND	5.84	.53
Chloromethane	ND	11.7	1.09
Cis-1,2-Dichloroethene	ND	5.84	.546
Cis-1,3-Dichloropropene	ND	5.84	.467
Dibromochloromethane	ND	5.84	.451
Ethylbenzene	ND	5.84	.631
Methylene Chloride	3.65F	5.84	2.91
m/p-Xylenes	ND	11.7	.806
o-Xylene	ND	5.84	.445
Styrene	ND	5.84	.557
Tetrachloroethylene	ND	5.84	.366
Toluene	ND	5.84	.472
Trans-1,2-Dichloroethene	ND	5.84	.445
Trans-1,3-Dichloropropene	ND	5.84	.408
Trichloroethene	ND	5.84	.549
Vinyl Acetate	ND	58.4	.954
Vinyl Chloride	ND	11.7	1.48

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	102	79-118
Bromofluorobenzene	93	86-115
Toluene-d8	98	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/28/96 00:03
Sample ID	: CR-A154003	DaTime Analyzd :	11/28/96 00:03
Lab Cnt NO.	: K097-23	Dilutn Factor :	1
Lab File ID	: RKP450	Matrix :	SOIL
Ext Btch ID	: VOK2302	% Moisture :	6.7
Calib. Ref.	: RKP434	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.36	.571
1,1,2,2-Tetrachloroethane	ND	5.36	.89
1,1,2-Trichloroethane	ND	5.36	.906
1,1-Dichloroethane	ND	5.36	.454
1,1-Dichloroethene	ND	5.36	.559
1,2,3-Trichloropropane	ND	53.6	1.63
1,2-Dichloroethane	ND	5.36	.318
1,2-Dichloropropane	ND	5.36	1.03
2-Butanone	ND	107	2.42
2-Chloroethyl Vinyl Ether	ND	10.7	1.07
2-Hexanone	ND	53.6	1.42
4-Methyl-2-Pentanone	ND	53.6	1.67
Acetone	ND	107	4.8
Benzene	ND	5.36	.435
Bromodichloromethane	ND	5.36	.412
Bromoform	ND	5.36	.6[illegible]
Bromomethane	ND	10.7	1.[illegible]
Carbon Disulfide	ND	5.36	.527
Carbon Tetrachloride	ND	5.36	.422
Chlorobenzene	ND	5.36	.469
Chloroethane	ND	10.7	.985
Chloroform	ND	5.36	.487
Chloromethane	ND	10.7	1
Cis-1,2-Dichloroethene	ND	5.36	.501
Cis-1,3-Dichloropropene	ND	5.36	.429
Dibromochloromethane	ND	5.36	.414
Ethylbenzene	ND	5.36	.579
Methylene Chloride	3.62F	5.36	2.67
m/p-Xylenes	ND	10.7	.74
o-Xylene	ND	5.36	.408
Styrene	ND	5.36	.511
Tetrachloroethylene	ND	5.36	.335
Toluene	ND	5.36	.433
Trans-1,2-Dichloroethene	ND	5.36	.408
Trans-1,3-Dichloropropene	ND	5.36	.374
Trichloroethene	ND	5.36	.504
Vinyl Acetate	ND	53.6	.876
Vinyl Chloride	ND	10.7	1.35

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	100	79-118
Bromofluorobenzene	95	86-115
Toluene-d8	97	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/28/96 16:57
Sample ID	: CR-A154005	DaTime Analyzd :	11/28/96 16:57
Lab Cnt NO.	: K097-25	Dilutn Factor :	1
Lab File ID	: RKP480	Matrix :	WATER
Ext Btch ID	: VOK2402	% Moisture :	NA
Calib. Ref.	: RKP469	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	7.4	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	96	79-118
Bromofluorobenzene	94	86-115
Toluene-d8	92	88-110

PQL: Practical Quantitation Limit
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SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/28/96 17:25
Sample ID	: CR-A154008	DaTime Analyzd :	11/28/96 17:25
Lab Cnt NO.:	K097-28	Dilutn Factor :	1
Lab File ID:	RKP481	Matrix :	WATER
Ext Btch ID:	VOK2402	% Moisture :	NA
Calib. Ref.:	RKP469	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327*
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.2
Bromomethane	ND	10	.7
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	ND	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	97	79-118
Bromofluorobenzene	98	86-115
Toluene-d8	94	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/28/96 00:30
Sample ID	: CR-A154101	DaTime Analyzd :	11/28/96 00:30
Lab Cnt NO.	: K097-29	Dilutn Factor :	1
Lab File ID	: RKP451	Matrix :	SOIL
Ext Btch ID	: VOK2302	% Moisture :	19.8
Calib. Ref.	: RKP434	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	6.23	.665
1,1,2,2-Tetrachloroethane	ND	6.23	1.03
1,1,2-Trichloroethane	ND	6.23	1.05
1,1-Dichloroethane	ND	6.23	.529
1,1-Dichloroethene	ND	6.23	.651
1,2,3-Trichloropropane	ND	62.3	1.9
1,2-Dichloroethane	ND	6.23	.37
1,2-Dichloropropane	ND	6.23	1.2
2-Butanone	ND	125	2.82
2-Chloroethyl Vinyl Ether	ND	12.5	1.24
2-Hexanone	ND	62.3	1.65
4-Methyl-2-Pentanone	ND	62.3	1.95
Acetone	ND	125	5.59
Benzene	ND	6.23	.506
Bromodichloromethane	ND	6.23	.479
Bromoform	ND	6.23	.714
Bromomethane	ND	12.5	1.53
Carbon Disulfide	ND	6.23	.613
Carbon Tetrachloride	ND	6.23	.491
Chlorobenzene	ND	6.23	.546
Chloroethane	ND	12.5	1.15
Chloroform	ND	6.23	.566
Chloromethane	ND	12.5	1.16
Cis-1,2-Dichloroethene	ND	6.23	.582
Cis-1,3-Dichloropropene	ND	6.23	.499
Dibromochloromethane	ND	6.23	.481
Ethylbenzene	ND	6.23	.673
Methylene Chloride	6.45	6.23	3.1
m/p-Xylenes	ND	12.5	.86
o-Xylene	ND	6.23	.475
Styrene	ND	6.23	.595
Tetrachloroethylene	ND	6.23	.39
Toluene	ND	6.23	.504
Trans-1,2-Dichloroethene	ND	6.23	.475
Trans-1,3-Dichloropropene	ND	6.23	.435
Trichloroethene	ND	6.23	.586
Vinyl Acetate	ND	62.3	1.02
Vinyl Chloride	ND	12.5	1.57

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	98	79-118
Bromofluorobenzene	91	86-115
Toluene-d8	106	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/28/96 00:58
Sample ID	: CR-A154103	DaTime Analyzd :	11/28/96 00:58
Lab Cnt NO.	: K097-31	Dilutn Factor :	1
Lab File ID	: RKP452	Matrix :	SOIL
Ext Btch ID	: VOK2302	% Moisture :	12.4
Calib. Ref.	: RKP434	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.71	.608
1,1,2,2-Tetrachloroethane	ND	5.71	.947
1,1,2-Trichloroethane	ND	5.71	.965
1,1-Dichloroethane	ND	5.71	.484
1,1-Dichloroethene	ND	5.71	.596
1,2,3-Trichloropropane	ND	57.1	1.74
1,2-Dichloroethane	ND	5.71	.339
1,2-Dichloropropane	ND	5.71	1.1
2-Butanone	ND	114	2.58
2-Chloroethyl Vinyl Ether	ND	11.4	1.13
2-Hexanone	ND	57.1	1.51
4-Methyl-2-Pentanone	ND	57.1	1.78
Acetone	ND	114	5.12
Benzene	ND	5.71	.463
Bromodichloromethane	ND	5.71	.438
Bromoform	ND	5.71	.6
Bromomethane	ND	11.4	1
Carbon Disulfide	ND	5.71	.562
Carbon Tetrachloride	ND	5.71	.45
Chlorobenzene	ND	5.71	.5
Chloroethane	ND	11.4	1.05
Chloroform	ND	5.71	.518
Chloromethane	ND	11.4	1.07
Cis-1,2-Dichloroethene	ND	5.71	.533
Cis-1,3-Dichloropropene	ND	5.71	.457
Dibromochloromethane	ND	5.71	.441
Ethylbenzene	ND	5.71	.616
Methylene Chloride	5.62F	5.71	2.84
m/p-Xylenes	ND	11.4	.788
o-Xylene	ND	5.71	.435
Styrene	ND	5.71	.545
Tetrachloroethylene	ND	5.71	.357
Toluene	ND	5.71	.461
Trans-1,2-Dichloroethene	ND	5.71	.435
Trans-1,3-Dichloropropene	ND	5.71	.398
Trichloroethene	ND	5.71	.537
Vinyl Acetate	ND	57.1	.933
Vinyl Chloride	ND	11.4	1.44

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	99	79-118
Bromofluorobenzene	95	86-115
Toluene-d8	104	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/28/96 01:27
Sample ID	: CR-A154201	DaTime Analyzd :	11/28/96 01:27
Lab Cnt NO.	: K097-33	Dilutn Factor :	1
Lab File ID	: RKP453	Matrix :	SOIL
Ext Btch ID	: VOK2302	% Moisture :	21.1
Calib. Ref.	: RKP434	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	6.34	.676
1,1,2,2-Tetrachloroethane	ND	6.34	1.05
1,1,2-Trichloroethane	ND	6.34	1.07
1,1-Dichloroethane	ND	6.34	.537
1,1-Dichloroethene	ND	6.34	.662
1,2,3-Trichloropropane	ND	63.4	1.93
1,2-Dichloroethane	ND	6.34	.376
1,2-Dichloropropane	ND	6.34	1.22
2-Butanone	ND	127	2.87
2-Chloroethyl Vinyl Ether	ND	12.7	1.26
2-Hexanone	ND	63.4	1.68
4-Methyl-2-Pentanone	ND	63.4	1.98
Acetone	ND	127	5.68
Benzene	ND	6.34	.515
Bromodichloromethane	ND	6.34	.487
Bromoform	ND	6.34	.726
Bromomethane	ND	12.7	1.56
Carbon Disulfide	ND	6.34	.624
Carbon Tetrachloride	ND	6.34	.499
Chlorobenzene	ND	6.34	.555
Chloroethane	ND	12.7	1.16
Chloroform	ND	6.34	.575
Chloromethane	ND	12.7	1.18
Cis-1,2-Dichloroethene	ND	6.34	.592
Cis-1,3-Dichloropropene	ND	6.34	.507
Dibromochloromethane	ND	6.34	.489
Ethylbenzene	ND	6.34	.684
Methylene Chloride	5.15F	6.34	3.16
m/p-Xylenes	ND	12.7	.875
o-Xylene	ND	6.34	.483
Styrene	ND	6.34	.605
Tetrachloroethylene	ND	6.34	.397
Toluene	ND	6.34	.512
Trans-1,2-Dichloroethene	ND	6.34	.483
Trans-1,3-Dichloropropene	ND	6.34	.442
Trichloroethene	ND	6.34	.596
Vinyl Acetate	ND	63.4	1.04
Vinyl Chloride	ND	12.7	1.6

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	97	79-118
Bromofluorobenzene	86	86-115
Toluene-d8	106	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/28/96 01:56
Sample ID	: CR-A154203	DaTime Analyzd :	11/28/96 01:56
Lab Cnt NO.	: K097-35	Dilutn Factor :	1
Lab File ID	: RKP454	Matrix :	SOIL
Ext Btch ID	: VOK2302	% Moisture :	10.8
Calib. Ref.	: RKP434	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.61	.598
1,1,2,2-Tetrachloroethane	ND	5.61	.93
1,1,2-Trichloroethane	ND	5.61	.947
1,1-Dichloroethane	ND	5.61	.475
1,1-Dichloroethene	ND	5.61	.585
1,2,3-Trichloropropane	ND	56.1	1.71
1,2-Dichloroethane	ND	5.61	.333
1,2-Dichloropropane	ND	5.61	1.08
2-Butanone	ND	112	2.54
2-Chloroethyl Vinyl Ether	ND	11.2	1.11
2-Hexanone	ND	56.1	1.48
4-Methyl-2-Pentanone	ND	56.1	1.75
Acetone	ND	112	5.03
Benzene	ND	5.61	.455
Bromodichloromethane	ND	5.61	.43
Bromoform	ND	5.61	.6[illegible]
Bromomethane	ND	11.2	1.[illegible]
Carbon Disulfide	ND	5.61	.552
Carbon Tetrachloride	ND	5.61	.442
Chlorobenzene	ND	5.61	.491
Chloroethane	ND	11.2	1.03
Chloroform	ND	5.61	.509
Chloromethane	ND	11.2	1.05
Cis-1,2-Dichloroethene	ND	5.61	.524
Cis-1,3-Dichloropropene	ND	5.61	.448
Dibromochloromethane	ND	5.61	.433
Ethylbenzene	ND	5.61	.605
Methylene Chloride	5.42F	5.61	2.79
m/p-Xylenes	ND	11.2	.774
o-Xylene	ND	5.61	.427
Styrene	ND	5.61	.535
Tetrachloroethylene	ND	5.61	.351
Toluene	ND	5.61	.453
Trans-1,2-Dichloroethene	ND	5.61	.427
Trans-1,3-Dichloropropene	ND	5.61	.391
Trichloroethene	ND	5.61	.527
Vinyl Acetate	ND	56.1	.916
Vinyl Chloride	ND	11.2	1.42

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	96	79-118
Bromofluorobenzene	93	86-115
Toluene-d8	101	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/28/96 02:23
Sample ID	: CR-A154303	DaTime Analyzd :	11/28/96 02:23
Lab Cnt NO.:	K097-37	Dilutn Factor :	1
Lab File ID:	RKP455	Matrix :	SOIL
Ext Btch ID:	VOK2302	% Moisture :	9.4
Calib. Ref.:	RKP434	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.52	.588
1,1,2,2-Tetrachloroethane	ND	5.52	.916
1,1,2-Trichloroethane	ND	5.52	.933
1,1-Dichloroethane	ND	5.52	.468
1,1-Dichloroethene	ND	5.52	.576
1,2,3-Trichloropropane	ND	55.2	1.68
1,2-Dichloroethane	ND	5.52	.328
1,2-Dichloropropane	ND	5.52	1.06
2-Butanone	ND	110	2.5
2-Chloroethyl Vinyl Ether	ND	11	1.1
2-Hexanone	ND	55.2	1.46
4-Methyl-2-Pentanone	ND	55.2	1.72
Acetone	5.75F	110	4.95
Benzene	ND	5.52	.448
Bromodichloromethane	ND	5.52	.424
Bromoform	ND	5.52	.632
Bromomethane	ND	11	1.35
Carbon Disulfide	ND	5.52	.543
Carbon Tetrachloride	ND	5.52	.435
Chlorobenzene	ND	5.52	.483
Chloroethane	ND	11	1.01
Chloroform	ND	5.52	.501
Chloromethane	ND	11	1.03
Cis-1,2-Dichloroethene	ND	5.52	.515
Cis-1,3-Dichloropropene	ND	5.52	.442
Dibromochloromethane	ND	5.52	.426
Ethylbenzene	ND	5.52	.596
Methylene Chloride	6.06	5.52	2.75
m/p-Xylenes	ND	11	.762
o-Xylene	ND	5.52	.421
Styrene	ND	5.52	.526
Tetrachloroethylene	ND	5.52	.345
Toluene	ND	5.52	.446
Trans-1,2-Dichloroethene	ND	5.52	.421
Trans-1,3-Dichloropropene	ND	5.52	.385
Trichloroethene	ND	5.52	.519
Vinyl Acetate	ND	55.2	.902
Vinyl Chloride	ND	11	1.39

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	96	79-118
Bromofluorobenzene	95	86-115
Toluene-d8	99	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/28/96 02:51
Sample ID	: CR-A154403	DaTime Analyzd :	11/28/96 02:51
Lab Cnt NO.	: K097-39	Dilutn Factor :	1
Lab File ID	: RKP456	Matrix :	SOIL
Ext Btch ID	: VOK2302	% Moisture :	9.7
Calib. Ref.	: RKP434	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.54	.59
1,1,2,2-Tetrachloroethane	ND	5.54	.919
1,1,2-Trichloroethane	ND	5.54	.936
1,1-Dichloroethane	ND	5.54	.47
1,1-Dichloroethene	ND	5.54	.578
1,2,3-Trichloropropane	ND	55.4	1.69
1,2-Dichloroethane	ND	5.54	.329
1,2-Dichloropropane	ND	5.54	1.06
2-Butanone	ND	111	2.5
2-Chloroethyl Vinyl Ether	ND	11.1	1.1
2-Hexanone	ND	55.4	1.46
4-Methyl-2-Pentanone	ND	55.4	1.73
Acetone	8.06F	111	4.96
Benzene	ND	5.54	.45
Bromodichloromethane	ND	5.54	.42
Bromoform	ND	5.54	.6
Bromomethane	ND	11.1	1.[illegible]
Carbon Disulfide	ND	5.54	.545
Carbon Tetrachloride	ND	5.54	.436
Chlorobenzene	ND	5.54	.485
Chloroethane	ND	11.1	1.02
Chloroform	ND	5.54	.503
Chloromethane	ND	11.1	1.03
Cis-1,2-Dichloroethene	ND	5.54	.517
Cis-1,3-Dichloropropene	ND	5.54	.443
Dibromochloromethane	ND	5.54	.427
Ethylbenzene	ND	5.54	.598
Methylene Chloride	5.93	5.54	2.76
m/p-Xylenes	ND	11.1	.764
o-Xylene	ND	5.54	.422
Styrene	ND	5.54	.528
Tetrachloroethylene	ND	5.54	.347
Toluene	ND	5.54	.447
Trans-1,2-Dichloroethene	ND	5.54	.422
Trans-1,3-Dichloropropene	ND	5.54	.386
Trichloroethene	ND	5.54	.52
Vinyl Acetate	ND	55.4	.905
Vinyl Chloride	ND	11.1	1.4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	100	79-118
Bromofluorobenzene	98	86-115
Toluene-d8	99	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/28/96 17:52
Sample ID	: CR-A154405	DaTime Analyzd :	11/28/96 17:52
Lab Cnt NO.	: K097-41	Dilutn Factor :	1
Lab File ID	: RKP482	Matrix :	WATER
Ext Btch ID	: VOK2402	% Moisture :	NA
Calib. Ref.	: RKP469	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	7.32	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	93	79-118
Bromofluorobenzene	87	86-115
Toluene-d8	92	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP, INC.

CARSWELL AFB / 05G47900

SEMIVOLATILES

SDG#: 96K097

DECEMBER 19, 1996

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP, INC.

PROJECT: CARSWELL AFB / 05G47900

SDG: 96K097

SEMIVOLATILES

Eighteen (18) soil and two (2) water samples were received on 11/19/96 to be analyzed for semivolatile organics by Method 8270B in accordance with USEPA SW846 (1994).

1. Holding Time

   Analytical holding time was met.

2. Surrogate Recovery

   All surrogate recoveries were within QC limits.

3. Matrix Spike/Matrix Spike Duplicate

   All recoveries and RPDs were within QC limits except low recoveries of Benzoic acid in K097-20M and 20S.

4. Lab Control Sample/Lab Control Sample Duplicate

   All recoveries were within QC limits except low recoveries of Benzoic acid in SVK010WL and Hexachlorocyclopentadiene in SVK010WL and SVK010WC.

5. Method Blank

   Method blanks were free of contamination.

6. Tuning and Calibration

   Tuning and calibration were carried out at 12 hour interval. All QC requirements were met.

7. Sample Analysis

   Sample analyses were within QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

12/04/1996 10:16

LAB CHRONICLE
EPA 8270

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K097
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A153602	K097-02	16.9	SVK015S / 11/26/96 / 10:30	RLS107 / 12/07/96 / 13:42	RLS107	RLS117
CR-A153604	K097-04	11.6		RLS087 / 12/06/96 / 23:36	RLS087	RLS096
CR-A153702	K097-06	16.1		RLS107 / 12/07/96 / 12:00	RLS107	RLS115
CR-A153704	K097-08	13.8		RLS087 / 12/07/96 / 00:24	RLS087	RLS097
CR-A153706	K097-10	12.0		RLS107 / 12/07/96 / 12:48	RLS107	RLS116
CR-A153708	K097-12	13.9		RLS087 / 12/07/96 / 01:11	RLS087	RLS098
CR-A153802	K097-14	16.3		RLS107 / 12/07/96 / 14:30	RLS107	RLS118
CR-A153804	K097-16	17.0		RLS107 / 12/07/96 / 15:17		RLS[illegible]
CR-A153902	K097-18	21.5		RLS107 / 12/07/96 / 16:05		RLS[illegible]
CR-A153904	K097-20	13.8		RLS087 / 12/07/96 / 01:58	RLS087	RLS099
CR-A153904MS	K097-20M	13.8		RLS087 / 12/07/96 / 02:46		RLS100
CR-A153904MSD	K097-20S	13.8		RLS087 / 12/07/96 / 03:33		RLS101
CR-A154002	K097-22	17.1		RLS107 / 12/07/96 / 16:53	RLS107	RLS121
CR-A154004	K097-24	10.3		RLS107 / 12/07/96 / 06:29		RLS108
CR-A154102	K097-30	18.6		RLS107 / 12/07/96 / 07:16		RLS109
CR-A154104	K097-32	11.2		RLS107 / 12/07/96 / 08:03		RLS110
CR-A154202	K097-34	19.5		RLS107 / 12/07/96 / 08:50		RLS111
CR-A154204	K097-36	9.2		RLS107 / 12/07/96 / 09:37		RLS112
CR-A154304	K097-38	10.0		RLS107 / 12/07/96 / 10:25		RLS113
CR-A154404	K097-40	12.7		RLS107 / 12/07/96 / 11:12		RLS114
MBLKIS	SVK015SB			RLS087 / 12/06/96 / 21:13	RLS087	RLS093
LCSIS	SVK015SL			RLS087 / 12/06/96 / 22:01		RLS[illegible]
LCDIS	SVK015SC			RLS087 / 12/06/96 / 22:49		RLS[illegible]

12/04/1996 10:16

LAB CHRONICLE
EPA 8270

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K097
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A154006	K097-26	NA	SVK010W / 11/20/96 / 18:00	RLS087 / 12/06/96 / 19:38	RLS087	RLS091
CR-A154406	K097-42	NA		RLS087 / 12/06/96 / 20:26		RLS092
MBLK1W	SVK010WB			RLS087 / 12/06/96 / 17:14		RLS088
LCS1W	SVK010WL			RLS087 / 12/06/96 / 18:03		RLS089
LCD1W	SVK010WC			RLS087 / 12/06/96 / 18:50		RLS090

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153602	DaTime Analyzd :	12/07/96 13:42
Lab Cnt NO.	: K097-02	Dilutn Factor :	1
Lab File ID	: RLS117	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	16.9
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	842	124
1,2-Dichlorobenzene	ND	842	132
1,3-Dichlorobenzene	ND	842	96.3
1,4-Dichlorobenzene	ND	842	117
2,4,5-Trichlorophenol	ND	3970	119
2,4,6-Trichlorophenol	ND	361	138
2,4-Dichlorophenol	ND	361	91.5
2,4-Dimethylphenol	ND	361	107
2,4-Dinitrophenol	ND	3970	67.4
2,4-Dinitrotoluene	ND	842	138
2,6-Dinitrotoluene	ND	842	118
2-Chloronaphthalene	ND	842	112
2-Chlorophenol	ND	361	81.8
2-Methylnaphthalene	ND	842	123
2-Methylphenol	ND	361	116
2-Nitroaniline	ND	3970	[illegible]
2-Nitrophenol	ND	361	[illegible]
3,3'-Dichlorobenzidine	ND	1560	165
3-Nitroaniline	ND	3970	101
4,6-Dinitro-2-methylphenol	ND	3970	87.8
4-Bromophenyl phenyl ether	ND	842	125
4-Chloro-3-methylphenol	ND	1560	141
4-Chloroaniline	ND	1560	74.6
4-Chlorophenyl phenyl ether	ND	842	126
4-Methylphenol (1)	ND	361	81.8
4-Nitroaniline	ND	3970	105
4-Nitrophenol	ND	1930	6.74
Acenaphthene	ND	842	112
Acenaphthylene	ND	842	106
Anthracene	ND	842	124
Benzo(a)anthracene	ND	842	103
Benzo(a)pyrene	ND	842	110
Benzo(b)fluoranthene	ND	842	129
Benzo(k)fluoranthene	ND	842	120
Benzo(g,h,i)perylene	ND	842	112
Benzoic Acid	ND	1930	129
Benzyl alcohol	ND	1560	97.5
bis(2-Chloroethoxy)methane	ND	842	123

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153602	DaTime Analyzd :	12/07/96 13:42
Lab Cnt NO.	: K097-02	Dilutn Factor :	1
Lab File ID	: RLS117	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	16.9
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	842	80.6
bis(2-Chloroisopropyl)ether	ND	842	108
bis(2-Ethylhexyl)phthalate	ND	842	118
Butylbenzylphthalate	ND	842	244
Chrysene	ND	842	120
Di-n-butylphthalate	ND	842	134
Di-n-octylphthalate	ND	842	108
Dibenzo(a,h)anthracene	ND	842	116
Dibenzofuran	ND	842	120
Diethylphthalate	ND	842	117
Dimethylphthalate	ND	842	129
Fluoranthene	ND	842	124
Fluorene	ND	842	105
Hexachlorobenzene	ND	842	135
Hexachlorobutadiene	ND	842	125
Hexachlorocyclopentadiene	ND	842	140
Hexachloroethane	ND	842	106
Indeno(1,2,3-cd)pyrene	ND	842	114
Isophorone	ND	842	112
n-Nitroso-di-n-propylamine	ND	842	137
n-Nitrosodiphenylamine (2)	ND	842	122
Naphthalene	ND	842	117
Nitrobenzene	ND	842	93.9
Pentachlorophenol	ND	3970	36.1
Phenanthrene	ND	842	122
Phenol	ND	361	93.9
Pyrene	ND	842	116

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	91	25-144
2-Fluorobiphenyl	72	34-135
2-Fluorophenol	77	25-135
Nitrobenzene-d5	76	25-135
Phenol-d5	77	25-135
Terphenyl-d14	71	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153604	DaTime Analyzd :	12/06/96 23:36
Lab Cnt NO.	: K097-04	Dilutn Factor :	1
Lab File ID	: RLS096	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	11.6
Calib. Ref.	: RLS087	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	792	117
1,2-Dichlorobenzene	ND	792	124
1,3-Dichlorobenzene	ND	792	90.5
1,4-Dichlorobenzene	ND	792	110
2,4,5-Trichlorophenol	ND	3730	112
2,4,6-Trichlorophenol	ND	339	130
2,4-Dichlorophenol	ND	339	86
2,4-Dimethylphenol	ND	339	101
2,4-Dinitrophenol	ND	3730	63.3
2,4-Dinitrotoluene	ND	792	130
2,6-Dinitrotoluene	ND	792	111
2-Chloronaphthalene	ND	792	105
2-Chlorophenol	ND	339	76.9
2-Methylnaphthalene	ND	792	115
2-Methylphenol	ND	339	10[illegible]
2-Nitroaniline	ND	3730	99[illegible]
2-Nitrophenol	ND	339	1[illegible]
3,3'-Dichlorobenzidine	ND	1470	155
3-Nitroaniline	ND	3730	95
4,6-Dinitro-2-methylphenol	ND	3730	82.6
4-Bromophenyl phenyl ether	ND	792	118
4-Chloro-3-methylphenol	ND	1470	132
4-Chloroaniline	ND	1470	70.1
4-Chlorophenyl phenyl ether	ND	792	119
4-Methylphenol (1)	ND	339	76.9
4-Nitroaniline	ND	3730	98.4
4-Nitrophenol	ND	1810	6.33
Acenaphthene	ND	792	105
Acenaphthylene	ND	792	99.5
Anthracene	ND	792	117
Benzo(a)anthracene	ND	792	97.3
Benzo(a)pyrene	ND	792	103
Benzo(b)fluoranthene	ND	792	121
Benzo(k)fluoranthene	ND	792	113
Benzo(g,h,i)perylene	ND	792	105
Benzoic Acid	ND	1810	121
Benzyl alcohol	ND	1470	91.6
bis(2-Chloroethoxy)methane	ND	792	115

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153604	DaTime Analyzd :	12/06/96 23:36
Lab Cnt NO.	: K097-04	Dilutn Factor :	1
Lab File ID	: RLS096	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	11.6
Calib. Ref.	: RLS087	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	792	75.8
bis(2-Chloroisopropyl)ether	ND	792	102
bis(2-Ethylhexyl)phthalate	ND	792	111
Butylbenzylphthalate	ND	792	230
Chrysene	ND	792	113
Di-n-butylphthalate	ND	792	126
Di-n-octylphthalate	ND	792	102
Dibenzo(a,h)anthracene	ND	792	109
Dibenzofuran	ND	792	113
Diethylphthalate	ND	792	110
Dimethylphthalate	ND	792	121
Fluoranthene	ND	792	117
Fluorene	ND	792	98.4
Hexachlorobenzene	ND	792	127
Hexachlorobutadiene	ND	792	118
Hexachlorocyclopentadiene	ND	792	131
Hexachloroethane	ND	792	99.5
Indeno(1,2,3-cd)pyrene	ND	792	107
Isophorone	ND	792	105
n-Nitroso-di-n-propylamine	ND	792	129
n-Nitrosodiphenylamine (2)	ND	792	114
Naphthalene	ND	792	110
Nitrobenzene	ND	792	88.2
Pentachlorophenol	ND	3730	33.9
Phenanthrene	ND	792	114
Phenol	ND	339	88.2
Pyrene	ND	792	109

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	89	25-144
2-Fluorobiphenyl	72	34-135
2-Fluorophenol	69	25-135
Nitrobenzene-d5	74	25-135
Phenol-d5	71	25-135
Terphenyl-d14	70	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153702	DaTime Analyzd :	12/07/96 12:00
Lab Cnt NO.	: K097-06	Dilutn Factor :	1
Lab File ID	: RLS115	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	16.1
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	834	123
1,2-Dichlorobenzene	ND	834	131
1,3-Dichlorobenzene	ND	834	95.4
1,4-Dichlorobenzene	ND	834	116
2,4,5-Trichlorophenol	ND	3930	118
2,4,6-Trichlorophenol	ND	358	137
2,4-Dichlorophenol	ND	358	90.6
2,4-Dimethylphenol	ND	358	106
2,4-Dinitrophenol	ND	3930	66.7
2,4-Dinitrotoluene	ND	834	137
2,6-Dinitrotoluene	ND	834	117
2-Chloronaphthalene	ND	834	111
2-Chlorophenol	ND	358	81
2-Methylnaphthalene	ND	834	122
2-Methylphenol	ND	358	114
2-Nitroaniline	ND	3930	[illegible]
2-Nitrophenol	ND	358	[illegible]
3,3'-Dichlorobenzidine	ND	1550	163
3-Nitroaniline	ND	3930	100
4,6-Dinitro-2-methylphenol	ND	3930	87
4-Bromophenyl phenyl ether	ND	834	124
4-Chloro-3-methylphenol	ND	1550	139
4-Chloroaniline	ND	1550	73.9
4-Chlorophenyl phenyl ether	ND	834	125
4-Methylphenol (1)	ND	358	81
4-Nitroaniline	ND	3930	104
4-Nitrophenol	ND	1910	6.67
Acenaphthene	ND	834	111
Acenaphthylene	ND	834	105
Anthracene	ND	834	123
Benzo(a)anthracene	ND	834	103
Benzo(a)pyrene	ND	834	108
Benzo(b)fluoranthene	ND	834	128
Benzo(k)fluoranthene	ND	834	119
Benzo(g,h,i)perylene	ND	834	111
Benzoic Acid	ND	1910	128
Benzyl alcohol	ND	1550	96.5
bis(2-Chloroethoxy)methane	ND	834	122

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153702	DaTime Analyzd :	12/07/96 12:00
Lab Cnt NO.	: K097-06	Dilutn Factor :	1
Lab File ID	: RLS115	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	16.1
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	834	79.9
bis(2-Chloroisopropyl)ether	ND	834	107
bis(2-Ethylhexyl)phthalate	ND	834	117
Butylbenzylphthalate	ND	834	242
Chrysene	ND	834	119
Di-n-butylphthalate	ND	834	132
Di-n-octylphthalate	ND	834	107
Dibenzo(a,h)anthracene	ND	834	114
Dibenzofuran	ND	834	119
Diethylphthalate	ND	834	116
Dimethylphthalate	ND	834	128
Fluoranthene	ND	834	123
Fluorene	ND	834	104
Hexachlorobenzene	ND	834	133
Hexachlorobutadiene	ND	834	124
Hexachlorocyclopentadiene	ND	834	138
Hexachloroethane	ND	834	105
Indeno(1,2,3-cd)pyrene	ND	834	113
Isophorone	ND	834	111
n-Nitroso-di-n-propylamine	ND	834	136
n-Nitrosodiphenylamine (2)	ND	834	120
Naphthalene	ND	834	116
Nitrobenzene	ND	834	93
Pentachlorophenol	ND	3930	35.8
Phenanthrene	ND	834	120
Phenol	ND	358	93
Pyrene	ND	834	114

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	97	25-144
2-Fluorobiphenyl	70	34-135
2-Fluorophenol	68	25-135
Nitrobenzene-d5	73	25-135
Phenol-d5	74	25-135
Terphenyl-d14	72	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153704	DaTime Analyzd :	12/07/96 00:24
Lab Cnt NO.	: K097-08	Dilutn Factor :	1
Lab File ID	: RLS097	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	13.8
Calib. Ref.	: RLS087	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	812	119
1,2-Dichlorobenzene	ND	812	128
1,3-Dichlorobenzene	ND	812	92.8
1,4-Dichlorobenzene	ND	812	113
2,4,5-Trichlorophenol	ND	3830	115
2,4,6-Trichlorophenol	ND	348	133
2,4-Dichlorophenol	ND	348	88.2
2,4-Dimethylphenol	ND	348	103
2,4-Dinitrophenol	ND	3830	65
2,4-Dinitrotoluene	ND	812	133
2,6-Dinitrotoluene	ND	812	114
2-Chloronaphthalene	ND	812	108
2-Chlorophenol	ND	348	78.9
2-Methylnaphthalene	ND	812	118
2-Methylphenol	ND	348	111
2-Nitroaniline	ND	3830	[illegible]
2-Nitrophenol	ND	348	119
3,3'-Dichlorobenzidine	ND	1510	159
3-Nitroaniline	ND	3830	97.4
4,6-Dinitro-2-methylphenol	ND	3830	84.7
4-Bromophenyl phenyl ether	ND	812	121
4-Chloro-3-methylphenol	ND	1510	136
4-Chloroaniline	ND	1510	71.9
4-Chlorophenyl phenyl ether	ND	812	122
4-Methylphenol (1)	ND	348	78.9
4-Nitroaniline	ND	3830	101
4-Nitrophenol	ND	1860	6.5
Acenaphthene	ND	812	108
Acenaphthylene	ND	812	102
Anthracene	ND	812	119
Benzo(a)anthracene	ND	812	99.8
Benzo(a)pyrene	ND	812	106
Benzo(b)fluoranthene	ND	812	124
Benzo(k)fluoranthene	ND	812	116
Benzo(g,h,i)perylene	ND	812	108
Benzoic Acid	ND	1860	124
Benzyl alcohol	ND	1510	94
bis(2-Chloroethoxy)methane	ND	812	118

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153704	DaTime Analyzd :	12/07/96 00:24
Lab Cnt NO.	: K097-08	Dilutn Factor :	1
Lab File ID	: RLS097	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	13.8
Calib. Ref.	: RLS087	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	812	77.7
bis(2-Chloroisopropyl)ether	ND	812	104
bis(2-Ethylhexyl)phthalate	ND	812	114
Butylbenzylphthalate	ND	812	235
Chrysene	ND	812	116
Di-n-butylphthalate	ND	812	129
Di-n-octylphthalate	ND	812	104
Dibenzo(a,h)anthracene	ND	812	111
Dibenzofuran	ND	812	116
Diethylphthalate	ND	812	113
Dimethylphthalate	ND	812	124
Fluoranthene	ND	812	119
Fluorene	ND	812	101
Hexachlorobenzene	ND	812	130
Hexachlorobutadiene	ND	812	121
Hexachlorocyclopentadiene	ND	812	135
Hexachloroethane	ND	812	102
Indeno(1,2,3-cd)pyrene	ND	812	110
Isophorone	ND	812	108
n-Nitroso-di-n-propylamine	ND	812	132
n-Nitrosodiphenylamine (2)	ND	812	117
Naphthalene	ND	812	113
Nitrobenzene	ND	812	90.5
Pentachlorophenol	ND	3830	34.8
Phenanthrene	ND	812	117
Phenol	ND	348	90.5
Pyrene	ND	812	111

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	94	25-144
2-Fluorobiphenyl	75	34-135
2-Fluorophenol	73	25-135
Nitrobenzene-d5	76	25-135
Phenol-d5	76	25-135
Terphenyl-d14	74	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153706	DaTime Analyzd :	12/07/96 12:48
Lab Cnt NO.	: K097-10	Dilutn Factor :	1
Lab File ID	: RLS116	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	12.0
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	795	117
1,2-Dichlorobenzene	ND	795	125
1,3-Dichlorobenzene	ND	795	90.9
1,4-Dichlorobenzene	ND	795	110
2,4,5-Trichlorophenol	ND	3750	112
2,4,6-Trichlorophenol	ND	341	131
2,4-Dichlorophenol	ND	341	86.4
2,4-Dimethylphenol	ND	341	101
2,4-Dinitrophenol	ND	3750	63.6
2,4-Dinitrotoluene	ND	795	131
2,6-Dinitrotoluene	ND	795	111
2-Chloronaphthalene	ND	795	106
2-Chlorophenol	ND	341	77.3
2-Methylnaphthalene	ND	795	116
2-Methylphenol	ND	341	109
2-Nitroaniline	ND	3750	[illegible]
2-Nitrophenol	ND	341	[illegible]
3,3'-Dichlorobenzidine	ND	1480	156
3-Nitroaniline	ND	3750	95.5
4,6-Dinitro-2-methylphenol	ND	3750	83
4-Bromophenyl phenyl ether	ND	795	118
4-Chloro-3-methylphenol	ND	1480	133
4-Chloroaniline	ND	1480	70.5
4-Chlorophenyl phenyl ether	ND	795	119
4-Methylphenol (1)	ND	341	77.3
4-Nitroaniline	ND	3750	98.9
4-Nitrophenol	ND	1820	6.36
Acenaphthene	ND	795	106
Acenaphthylene	ND	795	100
Anthracene	ND	795	117
Benzo(a)anthracene	ND	795	97.7
Benzo(a)pyrene	ND	795	103
Benzo(b)fluoranthene	ND	795	122
Benzo(k)fluoranthene	ND	795	114
Benzo(g,h,i)perylene	ND	795	106
Benzoic Acid	ND	1820	122
Benzyl alcohol	ND	1480	92
bis(2-Chloroethoxy)methane	ND	795	116

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153706	DaTime Analyzd :	12/07/96 12:48
Lab Cnt NO.	: K097-10	Dilutn Factor :	1
Lab File ID	: RLS116	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	12.0
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	795	76.1
bis(2-Chloroisopropyl)ether	ND	795	102
bis(2-Ethylhexyl)phthalate	ND	795	111
Butylbenzylphthalate	ND	795	231
Chrysene	ND	795	114
Di-n-butylphthalate	ND	795	126
Di-n-octylphthalate	ND	795	102
Dibenzo(a,h)anthracene	ND	795	109
Dibenzofuran	ND	795	114
Diethylphthalate	ND	795	110
Dimethylphthalate	ND	795	122
Fluoranthene	ND	795	117
Fluorene	ND	795	98.9
Hexachlorobenzene	ND	795	127
Hexachlorobutadiene	ND	795	118
Hexachlorocyclopentadiene	ND	795	132
Hexachloroethane	ND	795	100
Indeno(1,2,3-cd)pyrene	ND	795	108
Isophorone	ND	795	106
n-Nitroso-di-n-propylamine	ND	795	130
n-Nitrosodiphenylamine (2)	ND	795	115
Naphthalene	ND	795	110
Nitrobenzene	ND	795	88.6
Pentachlorophenol	ND	3750	34.1
Phenanthrene	ND	795	115
Phenol	ND	341	88.6
Pyrene	ND	795	109

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	93	25-144
2-Fluorobiphenyl	70	34-135
2-Fluorophenol	70	25-135
Nitrobenzene-d5	74	25-135
Phenol-d5	75	25-135
Terphenyl-d14	72	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153708	DaTime Analyzd :	12/07/96 01:11
Lab Cnt NO.	: K097-12	Dilutn Factor :	1
Lab File ID	: RLS098	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	13.9
Calib. Ref.	: RLS087	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	813	120
1,2-Dichlorobenzene	ND	813	128
1,3-Dichlorobenzene	ND	813	92.9
1,4-Dichlorobenzene	ND	813	113
2,4,5-Trichlorophenol	ND	3830	115
2,4,6-Trichlorophenol	ND	348	134
2,4-Dichlorophenol	ND	348	88.3
2,4-Dimethylphenol	ND	348	103
2,4-Dinitrophenol	ND	3830	65
2,4-Dinitrotoluene	ND	813	134
2,6-Dinitrotoluene	ND	813	114
2-Chloronaphthalene	ND	813	108
2-Chlorophenol	ND	348	79
2-Methylnaphthalene	ND	813	118
2-Methylphenol	ND	348	111
2-Nitroaniline	ND	3830	[illegible]
2-Nitrophenol	ND	348	[illegible]
3,3'-Dichlorobenzidine	ND	1510	159
3-Nitroaniline	ND	3830	97.6
4,6-Dinitro-2-methylphenol	ND	3830	84.8
4-Bromophenyl phenyl ether	ND	813	121
4-Chloro-3-methylphenol	ND	1510	136
4-Chloroaniline	ND	1510	72
4-Chlorophenyl phenyl ether	ND	813	122
4-Methylphenol (1)	ND	348	79
4-Nitroaniline	ND	3830	101
4-Nitrophenol	ND	1860	6.5
Acenaphthene	ND	813	108
Acenaphthylene	ND	813	102
Anthracene	ND	813	120
Benzo(a)anthracene	ND	813	99.9
Benzo(a)pyrene	ND	813	106
Benzo(b)fluoranthene	ND	813	124
Benzo(k)fluoranthene	ND	813	116
Benzo(g,h,i)perylene	ND	813	108
Benzoic Acid	ND	1860	124
Benzyl alcohol	ND	1510	94.1
bis(2-Chloroethoxy)methane	ND	813	118

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153708	DaTime Analyzd :	12/07/96 01:11
Lab Cnt NO.	: K097-12	Dilutn Factor :	1
Lab File ID	: RLS098	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	13.9
Calib. Ref.	: RLS087	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	813	77.8
bis(2-Chloroisopropyl)ether	ND	813	105
bis(2-Ethylhexyl)phthalate	ND	813	114
Butylbenzylphthalate	ND	813	236
Chrysene	ND	813	116
Di-n-butylphthalate	ND	813	129
Di-n-octylphthalate	ND	813	105
Dibenzo(a,h)anthracene	ND	813	111
Dibenzofuran	ND	813	116
Diethylphthalate	ND	813	113
Dimethylphthalate	ND	813	124
Fluoranthene	ND	813	120
Fluorene	ND	813	101
Hexachlorobenzene	ND	813	130
Hexachlorobutadiene	ND	813	121
Hexachlorocyclopentadiene	ND	813	135
Hexachloroethane	ND	813	102
Indeno(1,2,3-cd)pyrene	ND	813	110
Isophorone	ND	813	108
n-Nitroso-di-n-propylamine	ND	813	132
n-Nitrosodiphenylamine (2)	ND	813	117
Naphthalene	ND	813	113
Nitrobenzene	ND	813	90.6
Pentachlorophenol	ND	3830	34.8
Phenanthrene	ND	813	117
Phenol	ND	348	90.6
Pyrene	ND	813	111

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	93	25-144
2-Fluorobiphenyl	77	34-135
2-Fluorophenol	81	25-135
Nitrobenzene-d5	84	25-135
Phenol-d5	82	25-135
Terphenyl-d14	72	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153802	DaTime Analyzd :	12/07/96 14:30
Lab Cnt NO.	: K097-14	Dilutn Factor :	1
Lab File ID	: RLS118	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	16.3
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	836	123
1,2-Dichlorobenzene	ND	836	131
1,3-Dichlorobenzene	ND	836	95.6
1,4-Dichlorobenzene	ND	836	116
2,4,5-Trichlorophenol	ND	3940	118
2,4,6-Trichlorophenol	ND	358	137
2,4-Dichlorophenol	ND	358	90.8
2,4-Dimethylphenol	ND	358	106
2,4-Dinitrophenol	ND	3940	66.9
2,4-Dinitrotoluene	ND	836	137
2,6-Dinitrotoluene	ND	836	117
2-Chloronaphthalene	ND	836	111
2-Chlorophenol	ND	358	81.2
2-Methylnaphthalene	ND	836	122
2-Methylphenol	ND	358	115
2-Nitroaniline	ND	3940	[illegible]
2-Nitrophenol	ND	358	[illegible]
3,3'-Dichlorobenzidine	ND	1550	164
3-Nitroaniline	ND	3940	100
4,6-Dinitro-2-methylphenol	ND	3940	87.2
4-Bromophenyl phenyl ether	ND	836	124
4-Chloro-3-methylphenol	ND	1550	140
4-Chloroaniline	ND	1550	74.1
4-Chlorophenyl phenyl ether	ND	836	125
4-Methylphenol (1)	ND	358	81.2
4-Nitroaniline	ND	3940	104
4-Nitrophenol	ND	1910	6.69
Acenaphthene	ND	836	111
Acenaphthylene	ND	836	105
Anthracene	ND	836	123
Benzo(a)anthracene	ND	836	103
Benzo(a)pyrene	ND	836	109
Benzo(b)fluoranthene	ND	836	128
Benzo(k)fluoranthene	ND	836	119
Benzo(g,h,i)perylene	ND	836	111
Benzoic Acid	ND	1910	128
Benzyl alcohol	ND	1550	96.8
bis(2-Chloroethoxy)methane	ND	836	122

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153802	DaTime Analyzd :	12/07/96 14:30
Lab Cnt NO.	: K097-14	Dilutn Factor :	1
Lab File ID	: RLS118	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	16.3
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	836	80
bis(2-Chloroisopropyl)ether	ND	836	108
bis(2-Ethylhexyl)phthalate	ND	836	117
Butylbenzylphthalate	ND	836	243
Chrysene	ND	836	119
Di-n-butylphthalate	ND	836	133
Di-n-octylphthalate	ND	836	108
Dibenzo(a,h)anthracene	ND	836	115
Dibenzofuran	ND	836	119
Diethylphthalate	ND	836	116
Dimethylphthalate	ND	836	128
Fluoranthene	ND	836	123
Fluorene	ND	836	104
Hexachlorobenzene	ND	836	134
Hexachlorobutadiene	ND	836	124
Hexachlorocyclopentadiene	ND	836	139
Hexachloroethane	ND	836	105
Indeno(1,2,3-cd)pyrene	ND	836	114
Isophorone	ND	836	111
n-Nitroso-di-n-propylamine	ND	836	136
n-Nitrosodiphenylamine (2)	ND	836	121
Naphthalene	ND	836	116
Nitrobenzene	ND	836	93.2
Pentachlorophenol	ND	3940	35.8
Phenanthrene	ND	836	121
Phenol	ND	358	93.2
Pyrene	ND	836	115

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	91	25-144
2-Fluorobiphenyl	70	34-135
2-Fluorophenol	67	25-135
Nitrobenzene-d5	75	25-135
Phenol-d5	71	25-135
Terphenyl-d14	70	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153804	DaTime Analyzd :	12/07/96 15:17
Lab Cnt NO.	: K097-16	Dilutn Factor :	1
Lab File ID	: RLS119	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	17.0
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	843	124
1,2-Dichlorobenzene	ND	843	133
1,3-Dichlorobenzene	ND	843	96.4
1,4-Dichlorobenzene	ND	843	117
2,4,5-Trichlorophenol	ND	3980	119
2,4,6-Trichlorophenol	ND	361	139
2,4-Dichlorophenol	ND	361	91.6
2,4-Dimethylphenol	ND	361	107
2,4-Dinitrophenol	ND	3980	67.5
2,4-Dinitrotoluene	ND	843	139
2,6-Dinitrotoluene	ND	843	118
2-Chloronaphthalene	ND	843	112
2-Chlorophenol	ND	361	81.9
2-Methylnaphthalene	ND	843	123
2-Methylphenol	ND	361	11[illegible]
2-Nitroaniline	ND	3980	1[illegible]
2-Nitrophenol	ND	361	1[illegible]
3,3'-Dichlorobenzidine	ND	1570	165
3-Nitroaniline	ND	3980	101
4,6-Dinitro-2-methylphenol	ND	3980	88
4-Bromophenyl phenyl ether	ND	843	125
4-Chloro-3-methylphenol	ND	1570	141
4-Chloroaniline	ND	1570	74.7
4-Chlorophenyl phenyl ether	ND	843	127
4-Methylphenol (1)	ND	361	81.9
4-Nitroaniline	ND	3980	105
4-Nitrophenol	ND	1930	6.75
Acenaphthene	ND	843	112
Acenaphthylene	ND	843	106
Anthracene	ND	843	124
Benzo(a)anthracene	ND	843	104
Benzo(a)pyrene	ND	843	110
Benzo(b)fluoranthene	ND	843	129
Benzo(k)fluoranthene	ND	843	120
Benzo(g,h,i)perylene	ND	843	112
Benzoic Acid	ND	1930	129
Benzyl alcohol	ND	1570	97.6
bis(2-Chloroethoxy)methane	ND	843	123

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153804	DaTime Analyzd :	12/07/96 15:17
Lab Cnt NO.	: K097-16	Dilutn Factor :	1
Lab File ID	: RLS119	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	17.0
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	843	80.7
bis(2-Chloroisopropyl)ether	ND	843	108
bis(2-Ethylhexyl)phthalate	ND	843	118
Butylbenzylphthalate	ND	843	245
Chrysene	ND	843	120
Di-n-butylphthalate	ND	843	134
Di-n-octylphthalate	ND	843	108
Dibenzo(a,h)anthracene	ND	843	116
Dibenzofuran	ND	843	120
Diethylphthalate	ND	843	117
Dimethylphthalate	ND	843	129
Fluoranthene	ND	843	124
Fluorene	ND	843	105
Hexachlorobenzene	ND	843	135
Hexachlorobutadiene	ND	843	125
Hexachlorocyclopentadiene	ND	843	140
Hexachloroethane	ND	843	106
Indeno(1,2,3-cd)pyrene	ND	843	114
Isophorone	ND	843	112
n-Nitroso-di-n-propylamine	ND	843	137
n-Nitrosodiphenylamine (2)	ND	843	122
Naphthalene	ND	843	117
Nitrobenzene	ND	843	94
Pentachlorophenol	ND	3980	36.1
Phenanthrene	ND	843	122
Phenol	ND	361	94
Pyrene	ND	843	116

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	89	25-144
2-Fluorobiphenyl	71	34-135
2-Fluorophenol	71	25-135
Nitrobenzene-d5	77	25-135
Phenol-d5	75	25-135
Terphenyl-d14	68	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153902	DaTime Analyzd :	12/07/96 16:05
Lab Cnt NO.	: K097-18	Dilutn Factor :	1
Lab File ID	: RLS120	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	21.5
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	892	131
1,2-Dichlorobenzene	ND	892	140
1,3-Dichlorobenzene	ND	892	102
1,4-Dichlorobenzene	ND	892	124
2,4,5-Trichlorophenol	ND	4200	126
2,4,6-Trichlorophenol	ND	382	146
2,4-Dichlorophenol	ND	382	96.8
2,4-Dimethylphenol	ND	382	113
2,4-Dinitrophenol	ND	4200	71.3
2,4-Dinitrotoluene	ND	892	146
2,6-Dinitrotoluene	ND	892	125
2-Chloronaphthalene	ND	892	118
2-Chlorophenol	ND	382	86.6
2-Methylnaphthalene	ND	892	130
2-Methylphenol	ND	382	122
2-Nitroaniline	ND	4200	1[illegible]
2-Nitrophenol	ND	382	1[illegible]
3,3'-Dichlorobenzidine	ND	1660	175
3-Nitroaniline	ND	4200	107
4,6-Dinitro-2-methylphenol	ND	4200	93
4-Bromophenyl phenyl ether	ND	892	132
4-Chloro-3-methylphenol	ND	1660	149
4-Chloroaniline	ND	1660	79
4-Chlorophenyl phenyl ether	ND	892	134
4-Methylphenol (1)	ND	382	86.6
4-Nitroaniline	ND	4200	111
4-Nitrophenol	ND	2040	7.13
Acenaphthene	ND	892	118
Acenaphthylene	ND	892	112
Anthracene	ND	892	131
Benzo(a)anthracene	ND	892	110
Benzo(a)pyrene	ND	892	116
Benzo(b)fluoranthene	ND	892	136
Benzo(k)fluoranthene	ND	892	127
Benzo(g,h,i)perylene	ND	892	118
Benzoic Acid	ND	2040	136
Benzyl alcohol	ND	1660	103
bis(2-Chloroethoxy)methane	ND	892	130

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153902	DaTime Analyzd :	12/07/96 16:05
Lab Cnt NO.	: K097-18	Dilutn Factor :	1
Lab File ID	: RLS120	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	21.5
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	892	85.4
bis(2-Chloroisopropyl)ether	ND	892	115
bis(2-Ethylhexyl)phthalate	ND	892	125
Butylbenzylphthalate	ND	892	259
Chrysene	ND	892	127
Di-n-butylphthalate	ND	892	141
Di-n-octylphthalate	ND	892	115
Dibenzo(a,h)anthracene	ND	892	122
Dibenzofuran	ND	892	127
Diethylphthalate	ND	892	124
Dimethylphthalate	ND	892	136
Fluoranthene	ND	892	131
Fluorene	ND	892	111
Hexachlorobenzene	ND	892	143
Hexachlorobutadiene	ND	892	132
Hexachlorocyclopentadiene	ND	892	148
Hexachloroethane	ND	892	112
Indeno(1,2,3-cd)pyrene	ND	892	121
Isophorone	ND	892	118
n-Nitroso-di-n-propylamine	ND	892	145
n-Nitrosodiphenylamine (2)	ND	892	129
Naphthalene	ND	892	124
Nitrobenzene	ND	892	99.4
Pentachlorophenol	ND	4200	38.2
Phenanthrene	ND	892	129
Phenol	ND	382	99.4
Pyrene	ND	892	122

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	86	25-144
2-Fluorobiphenyl	68	34-135
2-Fluorophenol	69	25-135
Nitrobenzene-d5	71	25-135
Phenol-d5	70	25-135
Terphenyl-d14	66	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153904	DaTime Analyzd :	12/07/96 01:58
Lab Cnt NO.	: K097-20	Dilutn Factor :	1
Lab File ID	: RLS099	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	13.8
Calib. Ref.	: RLS087	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	812	119
1,2-Dichlorobenzene	ND	812	128
1,3-Dichlorobenzene	ND	812	92.8
1,4-Dichlorobenzene	ND	812	113
2,4,5-Trichlorophenol	ND	3830	115
2,4,6-Trichlorophenol	ND	348	133
2,4-Dichlorophenol	ND	348	88.2
2,4-Dimethylphenol	ND	348	103
2,4-Dinitrophenol	ND	3830	65
2,4-Dinitrotoluene	ND	812	133
2,6-Dinitrotoluene	ND	812	114
2-Chloronaphthalene	ND	812	108
2-Chlorophenol	ND	348	78.9
2-Methylnaphthalene	ND	812	118
2-Methylphenol	ND	348	[illegible]
2-Nitroaniline	ND	3830	[illegible]
2-Nitrophenol	ND	348	119
3,3'-Dichlorobenzidine	ND	1510	159
3-Nitroaniline	ND	3830	97.4
4,6-Dinitro-2-methylphenol	ND	3830	84.7
4-Bromophenyl phenyl ether	ND	812	121
4-Chloro-3-methylphenol	ND	1510	136
4-Chloroaniline	ND	1510	71.9
4-Chlorophenyl phenyl ether	ND	812	122
4-Methylphenol (1)	ND	348	78.9
4-Nitroaniline	ND	3830	101
4-Nitrophenol	ND	1860	6.5
Acenaphthene	ND	812	108
Acenaphthylene	ND	812	102
Anthracene	ND	812	119
Benzo(a)anthracene	ND	812	99.8
Benzo(a)pyrene	ND	812	106
Benzo(b)fluoranthene	ND	812	124
Benzo(k)fluoranthene	ND	812	116
Benzo(g,h,i)perylene	ND	812	108
Benzoic Acid	ND	1860	124
Benzyl alcohol	ND	1510	94
bis(2-Chloroethoxy)methane	ND	812	118

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A153904	DaTime Analyzd :	12/07/96 01:58
Lab Cnt NO.	: K097-20	Dilutn Factor :	1
Lab File ID	: RLS099	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	13.8
Calib. Ref.	: RLS087	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	812	77.7
bis(2-Chloroisopropyl)ether	ND	812	104
bis(2-Ethylhexyl)phthalate	ND	812	114
Butylbenzylphthalate	ND	812	235
Chrysene	ND	812	116
Di-n-butylphthalate	ND	812	129
Di-n-octylphthalate	ND	812	104
Dibenzo(a,h)anthracene	ND	812	111
Dibenzofuran	ND	812	116
Diethylphthalate	ND	812	113
Dimethylphthalate	ND	812	124
Fluoranthene	ND	812	119
Fluorene	ND	812	101
Hexachlorobenzene	ND	812	130
Hexachlorobutadiene	ND	812	121
Hexachlorocyclopentadiene	ND	812	135
Hexachloroethane	ND	812	102
Indeno(1,2,3-cd)pyrene	ND	812	110
Isophorone	ND	812	108
n-Nitroso-di-n-propylamine	ND	812	132
n-Nitrosodiphenylamine (2)	ND	812	117
Naphthalene	ND	812	113
Nitrobenzene	ND	812	90.5
Pentachlorophenol	ND	3830	34.8
Phenanthrene	ND	812	117
Phenol	ND	348	90.5
Pyrene	ND	812	111

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	86	25-144
2-Fluorobiphenyl	72	34-135
2-Fluorophenol	75	25-135
Nitrobenzene-d5	76	25-135
Phenol-d5	76	25-135
Terphenyl-d14	71	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154002	DaTime Analyzd :	12/07/96 16:53
Lab Cnt NO.	: K097-22	Dilutn Factor :	1
Lab File ID	: RLS121	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	17.1
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	844	124
1,2-Dichlorobenzene	ND	844	133
1,3-Dichlorobenzene	ND	844	96.5
1,4-Dichlorobenzene	ND	844	117
2,4,5-Trichlorophenol	ND	3980	119
2,4,6-Trichlorophenol	ND	362	139
2,4-Dichlorophenol	ND	362	91.7*
2,4-Dimethylphenol	ND	362	107
2,4-Dinitrophenol	ND	3980	67.6
2,4-Dinitrotoluene	ND	844	139
2,6-Dinitrotoluene	ND	844	118
2-Chloronaphthalene	ND	844	112
2-Chlorophenol	ND	362	82
2-Methylnaphthalene	ND	844	123
2-Methylphenol	ND	362	11[illegible]
2-Nitroaniline	ND	3980	1[illegible]
2-Nitrophenol	ND	362	12[illegible]
3,3'-Dichlorobenzidine	ND	1570	165
3-Nitroaniline	ND	3980	101
4,6-Dinitro-2-methylphenol	ND	3980	88.1
4-Bromophenyl phenyl ether	ND	844	125
4-Chloro-3-methylphenol	ND	1570	141
4-Chloroaniline	ND	1570	74.8
4-Chlorophenyl phenyl ether	ND	844	127
4-Methylphenol (1)	ND	362	82
4-Nitroaniline	ND	3980	105
4-Nitrophenol	ND	1930	6.76
Acenaphthene	ND	844	112
Acenaphthylene	ND	844	106
Anthracene	ND	844	124
Benzo(a)anthracene	ND	844	104
Benzo(a)pyrene	ND	844	110
Benzo(b)fluoranthene	ND	844	129
Benzo(k)fluoranthene	ND	844	121
Benzo(g,h,i)perylene	ND	844	112
Benzoic Acid	ND	1930	129
Benzyl alcohol	ND	1570	97.7
bis(2-Chloroethoxy)methane	ND	844	123

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154002	DaTime Analyzd :	12/07/96 16:53
Lab Cnt NO.	: K097-22	Dilutn Factor :	1
Lab File ID	: RLS121	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	17.1
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	844	80.8
bis(2-Chloroisopropyl)ether	ND	844	109
bis(2-Ethylhexyl)phthalate	ND	844	118
Butylbenzylphthalate	ND	844	245
Chrysene	ND	844	121
Di-n-butylphthalate	ND	844	134
Di-n-octylphthalate	ND	844	109
Dibenzo(a,h)anthracene	ND	844	116
Dibenzofuran	ND	844	121
Diethylphthalate	ND	844	117
Dimethylphthalate	ND	844	129
Fluoranthene	ND	844	124
Fluorene	ND	844	105
Hexachlorobenzene	ND	844	135
Hexachlorobutadiene	ND	844	125
Hexachlorocyclopentadiene	ND	844	140
Hexachloroethane	ND	844	106
Indeno(1,2,3-cd)pyrene	ND	844	115
Isophorone	ND	844	112
n-Nitroso-di-n-propylamine	ND	844	138
n-Nitrosodiphenylamine (2)	ND	844	122
Naphthalene	ND	844	117
Nitrobenzene	ND	844	94.1
Pentachlorophenol	ND	3980	36.2
Phenanthrene	ND	844	122
Phenol	ND	362	94.1
Pyrene	ND	844	116

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	93	25-144
2-Fluorobiphenyl	76	34-135
2-Fluorophenol	79	25-135
Nitrobenzene-d5	81	25-135
Phenol-d5	83	25-135
Terphenyl-d14	77	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154004	DaTime Analyzd :	12/07/96 06:29
Lab Cnt NO.	: K097-24	Dilutn Factor :	1
Lab File ID	: RLS108	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	10.3
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	780	115
1,2-Dichlorobenzene	ND	780	123
1,3-Dichlorobenzene	ND	780	89.2
1,4-Dichlorobenzene	ND	780	108
2,4,5-Trichlorophenol	ND	3680	110
2,4,6-Trichlorophenol	ND	334	128
2,4-Dichlorophenol	ND	334	84.7
2,4-Dimethylphenol	ND	334	99.2
2,4-Dinitrophenol	ND	3680	62.4
2,4-Dinitrotoluene	ND	780	128
2,6-Dinitrotoluene	ND	780	109
2-Chloronaphthalene	ND	780	104
2-Chlorophenol	ND	334	75.8
2-Methylnaphthalene	ND	780	114
2-Methylphenol	ND	334	10[illegible]
2-Nitroaniline	ND	3680	98[illegible]
2-Nitrophenol	ND	334	1[illegible]
3,3'-Dichlorobenzidine	ND	1450	153
3-Nitroaniline	ND	3680	93.6
4,6-Dinitro-2-methylphenol	ND	3680	81.4
4-Bromophenyl phenyl ether	ND	780	116
4-Chloro-3-methylphenol	ND	1450	130
4-Chloroaniline	ND	1450	69.1
4-Chlorophenyl phenyl ether	ND	780	117
4-Methylphenol (1)	ND	334	75.8
4-Nitroaniline	ND	3680	97
4-Nitrophenol	ND	1780	6.24
Acenaphthene	ND	780	104
Acenaphthylene	ND	780	98.1
Anthracene	ND	780	115
Benzo(a)anthracene	ND	780	95.9
Benzo(a)pyrene	ND	780	101
Benzo(b)fluoranthene	ND	780	119
Benzo(k)fluoranthene	ND	780	111
Benzo(g,h,i)perylene	ND	780	104
Benzoic Acid	ND	1780	119
Benzyl alcohol	ND	1450	90.3
bis(2-Chloroethoxy)methane	ND	780	114

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154004	DaTime Analyzd :	12/07/96 06:29
Lab Cnt NO.:	K097-24	Dilutn Factor :	1
Lab File ID:	RLS108	Matrix :	SOIL
Ext Btch ID:	SVK015S	% Moisture :	10.3
Calib. Ref.:	RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	780	74.7
bis(2-Chloroisopropyl)ether	ND	780	100
bis(2-Ethylhexyl)phthalate	ND	780	109
Butylbenzylphthalate	ND	780	226
Chrysene	ND	780	111
Di-n-butylphthalate	ND	780	124
Di-n-octylphthalate	ND	780	100
Dibenzo(a,h)anthracene	ND	780	107
Dibenzofuran	ND	780	111
Diethylphthalate	ND	780	108
Dimethylphthalate	ND	780	119
Fluoranthene	ND	780	115
Fluorene	ND	780	97
Hexachlorobenzene	ND	780	125
Hexachlorobutadiene	ND	780	116
Hexachlorocyclopentadiene	ND	780	129
Hexachloroethane	ND	780	98.1
Indeno(1,2,3-cd)pyrene	ND	780	106
Isophorone	ND	780	104
n-Nitroso-di-n-propylamine	ND	780	127
n-Nitrosodiphenylamine (2)	ND	780	113
Naphthalene	ND	780	108
Nitrobenzene	ND	780	87
Pentachlorophenol	ND	3680	33.4
Phenanthrene	ND	780	113
Phenol	ND	334	87
Pyrene	ND	780	107

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	84	25-144
2-Fluorobiphenyl	64	34-135
2-Fluorophenol	66	25-135
Nitrobenzene-d5	70	25-135
Phenol-d5	71	25-135
Terphenyl-d14	67	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/20/96 18:00
Sample ID	: CR-A154006	DaTime Analyzd :	12/06/96 19:38
Lab Cnt NO.	: K097-26	Dilutn Factor :	1
Lab File ID	: RLS091	Matrix :	WATER
Ext Btch ID	: SVK010W	% Moisture :	NA
Calib. Ref.	: RLS087	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3
2-Nitrophenol	ND	10	
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/16/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/20/96 18:00
Sample ID	: CR-A154006	DaTime Analyzd :	12/06/96 19:38
Lab Cnt NO.	: K097-26	Dilutn Factor :	1
Lab File ID	: RLS091	Matrix :	WATER
Ext Btch ID	: SVK010W	% Moisture :	NA
Calib. Ref.	: RLS087	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1.6
Hexachloroethane	ND	10	2
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	100	25-134
2-Fluorobiphenyl	81	43-125
2-Fluorophenol	90	25-125
Nitrobenzene-d5	90	32-125
Phenol-d5	92	25-125
Terphenyl-d14	73	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154102	DaTime Analyzd :	12/07/96 07:16
Lab Cnt NO.	: K097-30	Dilutn Factor :	1
Lab File ID	: RLS109	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	18.6
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	860	127
1,2-Dichlorobenzene	ND	860	135
1,3-Dichlorobenzene	ND	860	98.3
1,4-Dichlorobenzene	ND	860	119
2,4,5-Trichlorophenol	ND	4050	122
2,4,6-Trichlorophenol	ND	369	141
2,4-Dichlorophenol	ND	369	93.4
2,4-Dimethylphenol	ND	369	109
2,4-Dinitrophenol	ND	4050	68.8
2,4-Dinitrotoluene	ND	860	141
2,6-Dinitrotoluene	ND	860	120
2-Chloronaphthalene	ND	860	114
2-Chlorophenol	ND	369	83.5
2-Methylnaphthalene	ND	860	125
2-Methylphenol	ND	369	118
2-Nitroaniline	ND	4050	1[illegible]
2-Nitrophenol	ND	369	12[illegible]
3,3'-Dichlorobenzidine	ND	1600	168
3-Nitroaniline	ND	4050	103
4,6-Dinitro-2-methylphenol	ND	4050	89.7
4-Bromophenyl phenyl ether	ND	860	128
4-Chloro-3-methylphenol	ND	1600	144
4-Chloroaniline	ND	1600	76.2
4-Chlorophenyl phenyl ether	ND	860	129
4-Methylphenol (1)	ND	369	83.5
4-Nitroaniline	ND	4050	107
4-Nitrophenol	ND	1970	6.88
Acenaphthene	ND	860	114
Acenaphthylene	ND	860	108
Anthracene	ND	860	127
Benzo(a)anthracene	ND	860	106
Benzo(a)pyrene	ND	860	112
Benzo(b)fluoranthene	ND	860	131
Benzo(k)fluoranthene	ND	860	123
Benzo(g,h,i)perylene	ND	860	114
Benzoic Acid	ND	1970	131
Benzyl alcohol	ND	1600	99.5
bis(2-Chloroethoxy)methane	ND	860	125

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154102	DaTime Analyzd :	12/07/96 07:16
Lab Cnt NO.	: K097-30	Dilutn Factor :	1
Lab File ID	: RLS109	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	18.6
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	860	82.3
bis(2-Chloroisopropyl)ether	ND	860	111
bis(2-Ethylhexyl)phthalate	ND	860	120
Butylbenzylphthalate	ND	860	249
Chrysene	ND	860	123
Di-n-butylphthalate	ND	860	136
Di-n-octylphthalate	ND	860	111
Dibenzo(a,h)anthracene	ND	860	118
Dibenzofuran	ND	860	123
Diethylphthalate	ND	860	119
Dimethylphthalate	ND	860	131
Fluoranthene	ND	860	127
Fluorene	ND	860	107
Hexachlorobenzene	ND	860	138
Hexachlorobutadiene	ND	860	128
Hexachlorocyclopentadiene	ND	860	143
Hexachloroethane	ND	860	108
Indeno(1,2,3-cd)pyrene	ND	860	117
Isophorone	ND	860	114
n-Nitroso-di-n-propylamine	ND	860	140
n-Nitrosodiphenylamine (2)	ND	860	124
Naphthalene	ND	860	119
Nitrobenzene	ND	860	95.8
Pentachlorophenol	ND	4050	36.9
Phenanthrene	ND	860	124
Phenol	ND	369	95.8
Pyrene	ND	860	118

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	92	25-144
2-Fluorobiphenyl	71	34-135
2-Fluorophenol	75	25-135
Nitrobenzene-d5	81	25-135
Phenol-d5	78	25-135
Terphenyl-d14	67	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154104	DaTime Analyzd :	12/07/96 08:03
Lab Cnt NO.	: K097-32	Dilutn Factor :	1
Lab File ID	: RLS110	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	11.2
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	788	116
1,2-Dichlorobenzene	ND	788	124
1,3-Dichlorobenzene	ND	788	90.1
1,4-Dichlorobenzene	ND	788	109
2,4,5-Trichlorophenol	ND	3720	111
2,4,6-Trichlorophenol	ND	338	130
2,4-Dichlorophenol	ND	338	85.6
2,4-Dimethylphenol	ND	338	100
2,4-Dinitrophenol	ND	3720	63.1
2,4-Dinitrotoluene	ND	788	130
2,6-Dinitrotoluene	ND	788	110
2-Chloronaphthalene	ND	788	105
2-Chlorophenol	ND	338	76.6
2-Methylnaphthalene	ND	788	115
2-Methylphenol	ND	338	108
2-Nitroaniline	ND	3720	99
2-Nitrophenol	ND	338	1
3,3'-Dichlorobenzidine	ND	1460	154
3-Nitroaniline	ND	3720	94.6
4,6-Dinitro-2-methylphenol	ND	3720	82.2
4-Bromophenyl phenyl ether	ND	788	117
4-Chloro-3-methylphenol	ND	1460	132
4-Chloroaniline	ND	1460	69.8
4-Chlorophenyl phenyl ether	ND	788	118
4-Methylphenol (1)	ND	338	76.6
4-Nitroaniline	ND	3720	98
4-Nitrophenol	ND	1800	6.31
Acenaphthene	ND	788	105
Acenaphthylene	ND	788	99.1
Anthracene	ND	788	116
Benzo(a)anthracene	ND	788	96.8
Benzo(a)pyrene	ND	788	102
Benzo(b)fluoranthene	ND	788	120
Benzo(k)fluoranthene	ND	788	113
Benzo(g,h,i)perylene	ND	788	105
Benzoic Acid	ND	1800	120
Benzyl alcohol	ND	1460	91.2
bis(2-Chloroethoxy)methane	ND	788	115

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154104	DaTime Analyzd :	12/07/96 08:03
Lab Cnt NO.	: K097-32	Dilutn Factor :	1
Lab File ID	: RLS110	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	11.2
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	788	75.5
bis(2-Chloroisopropyl)ether	ND	788	101
bis(2-Ethylhexyl)phthalate	ND	788	110
Butylbenzylphthalate	ND	788	229
Chrysene	ND	788	113
Di-n-butylphthalate	ND	788	125
Di-n-octylphthalate	ND	788	101
Dibenzo(a,h)anthracene	ND	788	108
Dibenzofuran	ND	788	113
Diethylphthalate	ND	788	109
Dimethylphthalate	ND	788	120
Fluoranthene	ND	788	116
Fluorene	ND	788	98
Hexachlorobenzene	ND	788	126
Hexachlorobutadiene	ND	788	117
Hexachlorocyclopentadiene	ND	788	131
Hexachloroethane	ND	788	99.1
Indeno(1,2,3-cd)pyrene	ND	788	107
Isophorone	ND	788	105
n-Nitroso-di-n-propylamine	ND	788	128
n-Nitrosodiphenylamine (2)	ND	788	114
Naphthalene	ND	788	109
Nitrobenzene	ND	788	87.8
Pentachlorophenol	ND	3720	33.8
Phenanthrene	ND	788	114
Phenol	ND	338	87.8
Pyrene	ND	788	108

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	94	25-144
2-Fluorobiphenyl	74	34-135
2-Fluorophenol	77	25-135
Nitrobenzene-d5	83	25-135
Phenol-d5	80	25-135
Terphenyl-d14	75	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154202	DaTime Analyzd :	12/07/96 08:50
Lab Cnt NO.	: K097-34	Dilutn Factor :	1
Lab File ID	: RLS111	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	19.5
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	870	128
1,2-Dichlorobenzene	ND	870	137
1,3-Dichlorobenzene	ND	870	99.4
1,4-Dichlorobenzene	ND	870	120
2,4,5-Trichlorophenol	ND	4100	123
2,4,6-Trichlorophenol	ND	373	143
2,4-Dichlorophenol	ND	373	94.4
2,4-Dimethylphenol	ND	373	111
2,4-Dinitrophenol	ND	4100	69.6
2,4-Dinitrotoluene	ND	870	143
2,6-Dinitrotoluene	ND	870	122
2-Chloronaphthalene	ND	870	116
2-Chlorophenol	ND	373	84.5
2-Methylnaphthalene	ND	870	127
2-Methylphenol	ND	373	119
2-Nitroaniline	ND	4100	[illegible]
2-Nitrophenol	ND	373	[illegible]
3,3'-Dichlorobenzidine	ND	1610	170
3-Nitroaniline	ND	4100	104
4,6-Dinitro-2-methylphenol	ND	4100	90.7
4-Bromophenyl phenyl ether	ND	870	129
4-Chloro-3-methylphenol	ND	1610	145
4-Chloroaniline	ND	1610	77
4-Chlorophenyl phenyl ether	ND	870	130
4-Methylphenol (1)	ND	373	84.5
4-Nitroaniline	ND	4100	108
4-Nitrophenol	ND	1990	6.96
Acenaphthene	ND	870	116
Acenaphthylene	ND	870	109
Anthracene	ND	870	128
Benzo(a)anthracene	ND	870	107
Benzo(a)pyrene	ND	870	113
Benzo(b)fluoranthene	ND	870	133
Benzo(k)fluoranthene	ND	870	124
Benzo(g,h,i)perylene	ND	870	116
Benzoic Acid	ND	1990	133
Benzyl alcohol	ND	1610	101
bis(2-Chloroethoxy)methane	ND	870	127

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

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Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154202	DaTime Analyzd :	12/07/96 08:50
Lab Cnt NO.	: K097-34	Dilutn Factor :	1
Lab File ID	: RLS111	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	19.5
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	870	83.2
bis(2-Chloroisopropyl)ether	ND	870	112
bis(2-Ethylhexyl)phthalate	ND	870	122
Butylbenzylphthalate	ND	870	252
Chrysene	ND	870	124
Di-n-butylphthalate	ND	870	138
Di-n-octylphthalate	ND	870	112
Dibenzo(a,h)anthracene	ND	870	119
Dibenzofuran	ND	870	124
Diethylphthalate	ND	870	120
Dimethylphthalate	ND	870	133
Fluoranthene	ND	870	128
Fluorene	ND	870	108
Hexachlorobenzene	ND	870	139
Hexachlorobutadiene	ND	870	129
Hexachlorocyclopentadiene	ND	870	144
Hexachloroethane	ND	870	109
Indeno(1,2,3-cd)pyrene	ND	870	118
Isophorone	ND	870	116
n-Nitroso-di-n-propylamine	ND	870	142
n-Nitrosodiphenylamine (2)	ND	870	125
Naphthalene	ND	870	120
Nitrobenzene	ND	870	96.9
Pentachlorophenol	ND	4100	37.3
Phenanthrene	ND	870	125
Phenol	ND	373	96.9
Pyrene	ND	870	119

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	90	25-144
2-Fluorobiphenyl	74	34-135
2-Fluorophenol	74	25-135
Nitrobenzene-d5	79	25-135
Phenol-d5	77	25-135
Terphenyl-d14	76	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154204	DaTime Analyzd :	12/07/96 09:37
Lab Cnt NO.	: K097-36	Dilutn Factor :	1
Lab File ID	: RLS112	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	9.2
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	771	113
1,2-Dichlorobenzene	ND	771	121
1,3-Dichlorobenzene	ND	771	88.1
1,4-Dichlorobenzene	ND	771	107
2,4,5-Trichlorophenol	ND	3630	109
2,4,6-Trichlorophenol	ND	330	127
2,4-Dichlorophenol	ND	330	83.7
2,4-Dimethylphenol	ND	330	98
2,4-Dinitrophenol	ND	3630	61.7
2,4-Dinitrotoluene	ND	771	127
2,6-Dinitrotoluene	ND	771	108
2-Chloronaphthalene	ND	771	102
2-Chlorophenol	ND	330	74.9
2-Methylnaphthalene	ND	771	112
2-Methylphenol	ND	330	106
2-Nitroaniline	ND	3630	96
2-Nitrophenol	ND	330	1
3,3'-Dichlorobenzidine	ND	1430	151
3-Nitroaniline	ND	3630	92.5
4,6-Dinitro-2-methylphenol	ND	3630	80.4
4-Bromophenyl phenyl ether	ND	771	115
4-Chloro-3-methylphenol	ND	1430	129
4-Chloroaniline	ND	1430	68.3
4-Chlorophenyl phenyl ether	ND	771	116
4-Methylphenol (1)	ND	330	74.9
4-Nitroaniline	ND	3630	95.8
4-Nitrophenol	ND	1760	6.17
Acenaphthene	ND	771	102
Acenaphthylene	ND	771	96.9
Anthracene	ND	771	113
Benzo(a)anthracene	ND	771	94.7
Benzo(a)pyrene	ND	771	100
Benzo(b)fluoranthene	ND	771	118
Benzo(k)fluoranthene	ND	771	110
Benzo(g,h,i)perylene	ND	771	102
Benzoic Acid	ND	1760	118
Benzyl alcohol	ND	1430	89.2
bis(2-Chloroethoxy)methane	ND	771	112

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted	: 11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received	: 11/19/96
Batch No.	: 96K097	DaTime Extrctd	: 11/26/96 10:30
Sample ID	: CR-A154204	DaTime Analyzd	: 12/07/96 09:37
Lab Cnt NO.	: K097-36	Dilutn Factor	: 1
Lab File ID	: RLS112	Matrix	: SOIL
Ext Btch ID	: SVK015S	% Moisture	: 9.2
Calib. Ref.	: RLS107	Instrument ID	: MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	771	73.8
bis(2-Chloroisopropyl)ether	ND	771	99.1
bis(2-Ethylhexyl)phthalate	ND	771	108
Butylbenzylphthalate	ND	771	224
Chrysene	ND	771	110
Di-n-butylphthalate	ND	771	122
Di-n-octylphthalate	ND	771	99.1
Dibenzo(a,h)anthracene	ND	771	106
Dibenzofuran	ND	771	110
Diethylphthalate	ND	771	107
Dimethylphthalate	ND	771	118
Fluoranthene	ND	771	113
Fluorene	ND	771	95.8
Hexachlorobenzene	ND	771	123
Hexachlorobutadiene	ND	771	115
Hexachlorocyclopentadiene	ND	771	128
Hexachloroethane	ND	771	96.9
Indeno(1,2,3-cd)pyrene	ND	771	105
Isophorone	ND	771	102
n-Nitroso-di-n-propylamine	ND	771	126
n-Nitrosodiphenylamine (2)	ND	771	111
Naphthalene	ND	771	107
Nitrobenzene	ND	771	85.9
Pentachlorophenol	ND	3630	33
Phenanthrene	ND	771	111
Phenol	ND	330	85.9
Pyrene	ND	771	106

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	91	25-144
2-Fluorobiphenyl	72	34-135
2-Fluorophenol	70	25-135
Nitrobenzene-d5	73	25-135
Phenol-d5	74	25-135
Terphenyl-d14	66	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
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SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154304	DaTime Analyzd :	12/07/96 10:25
Lab Cnt NO.	: K097-38	Dilutn Factor :	1
Lab File ID	: RLS113	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	10.0
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	778	114
1,2-Dichlorobenzene	ND	778	122
1,3-Dichlorobenzene	ND	778	88.9
1,4-Dichlorobenzene	ND	778	108
2,4,5-Trichlorophenol	ND	3670	110
2,4,6-Trichlorophenol	ND	333	128
2,4-Dichlorophenol	ND	333	84.4
2,4-Dimethylphenol	ND	333	98.9
2,4-Dinitrophenol	ND	3670	62.2
2,4-Dinitrotoluene	ND	778	128
2,6-Dinitrotoluene	ND	778	109
2-Chloronaphthalene	ND	778	103
2-Chlorophenol	ND	333	75.6
2-Methylnaphthalene	ND	778	113
2-Methylphenol	ND	333	107
2-Nitroaniline	ND	3670	97[illegible]
2-Nitrophenol	ND	333	1[illegible]
3,3'-Dichlorobenzidine	ND	1440	152
3-Nitroaniline	ND	3670	93.3
4,6-Dinitro-2-methylphenol	ND	3670	81.1
4-Bromophenyl phenyl ether	ND	778	116
4-Chloro-3-methylphenol	ND	1440	130
4-Chloroaniline	ND	1440	68.9
4-Chlorophenyl phenyl ether	ND	778	117
4-Methylphenol (1)	ND	333	75.6
4-Nitroaniline	ND	3670	96.7
4-Nitrophenol	ND	1780	6.22
Acenaphthene	ND	778	103
Acenaphthylene	ND	778	97.8
Anthracene	ND	778	114
Benzo(a)anthracene	ND	778	95.6
Benzo(a)pyrene	ND	778	101
Benzo(b)fluoranthene	ND	778	119
Benzo(k)fluoranthene	ND	778	111
Benzo(g,h,i)perylene	ND	778	103
Benzoic Acid	ND	1780	119
Benzyl alcohol	ND	1440	90
bis(2-Chloroethoxy)methane	ND	778	113

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Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154304	DaTime Analyzd :	12/07/96 10:25
Lab Cnt NO.	: K097-38	Dilutn Factor :	1
Lab File ID	: RLS113	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	10.0
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	778	74.4
bis(2-Chloroisopropyl)ether	ND	778	100
bis(2-Ethylhexyl)phthalate	ND	778	109
Butylbenzylphthalate	ND	778	226
Chrysene	ND	778	111
Di-n-butylphthalate	ND	778	123
Di-n-octylphthalate	ND	778	100
Dibenzo(a,h)anthracene	ND	778	107
Dibenzofuran	ND	778	111
Diethylphthalate	ND	778	108
Dimethylphthalate	ND	778	119
Fluoranthene	ND	778	114
Fluorene	ND	778	96.7
Hexachlorobenzene	ND	778	124
Hexachlorobutadiene	ND	778	116
Hexachlorocyclopentadiene	ND	778	129
Hexachloroethane	ND	778	97.8
Indeno(1,2,3-cd)pyrene	ND	778	106
Isophorone	ND	778	103
n-Nitroso-di-n-propylamine	ND	778	127
n-Nitrosodiphenylamine (2)	ND	778	112
Naphthalene	ND	778	108
Nitrobenzene	ND	778	86.7
Pentachlorophenol	ND	3670	33.3
Phenanthrene	ND	778	112
Phenol	ND	333	86.7
Pyrene	ND	778	107

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	88	25-144
2-Fluorobiphenyl	73	34-135
2-Fluorophenol	68	25-135
Nitrobenzene-d5	77	25-135
Phenol-d5	71	25-135
Terphenyl-d14	66	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
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SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154404	DaTime Analyzd :	12/07/96 11:12
Lab Cnt NO.	: K097-40	Dilutn Factor :	1
Lab File ID	: RLS114	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	12.7
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	802	118
1,2-Dichlorobenzene	ND	802	126
1,3-Dichlorobenzene	ND	802	91.6
1,4-Dichlorobenzene	ND	802	111
2,4,5-Trichlorophenol	ND	3780	113
2,4,6-Trichlorophenol	ND	344	132
2,4-Dichlorophenol	ND	344	87.1
2,4-Dimethylphenol	ND	344	102
2,4-Dinitrophenol	ND	3780	64.1
2,4-Dinitrotoluene	ND	802	132
2,6-Dinitrotoluene	ND	802	112
2-Chloronaphthalene	ND	802	107
2-Chlorophenol	ND	344	77.9
2-Methylnaphthalene	ND	802	117
2-Methylphenol	ND	344	110
2-Nitroaniline	ND	3780	[illegible]
2-Nitrophenol	ND	344	[illegible]
3,3'-Dichlorobenzidine	ND	1490	157
3-Nitroaniline	ND	3780	96.2
4,6-Dinitro-2-methylphenol	ND	3780	83.6
4-Bromophenyl phenyl ether	ND	802	119
4-Chloro-3-methylphenol	ND	1490	134
4-Chloroaniline	ND	1490	71
4-Chlorophenyl phenyl ether	ND	802	120
4-Methylphenol (1)	ND	344	77.9
4-Nitroaniline	ND	3780	99.7
4-Nitrophenol	ND	1830	6.41
Acenaphthene	ND	802	107
Acenaphthylene	ND	802	101
Anthracene	ND	802	118
Benzo(a)anthracene	ND	802	98.5
Benzo(a)pyrene	ND	802	104
Benzo(b)fluoranthene	ND	802	123
Benzo(k)fluoranthene	ND	802	115
Benzo(g,h,i)perylene	ND	802	107
Benzoic Acid	ND	1830	123
Benzyl alcohol	ND	1490	92.8
bis(2-Chloroethoxy)methane	ND	802	117

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

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Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/26/96 10:30
Sample ID	: CR-A154404	DaTime Analyzd :	12/07/96 11:12
Lab Cnt NO.	: K097-40	Dilutn Factor :	1
Lab File ID	: RLS114	Matrix :	SOIL
Ext Btch ID	: SVK015S	% Moisture :	12.7
Calib. Ref.	: RLS107	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	802	76.7
bis(2-Chloroisopropyl)ether	ND	802	103
bis(2-Ethylhexyl)phthalate	ND	802	112
Butylbenzylphthalate	ND	802	233
Chrysene	ND	802	115
Di-n-butylphthalate	ND	802	127
Di-n-octylphthalate	ND	802	103
Dibenzo(a,h)anthracene	ND	802	110
Dibenzofuran	ND	802	115
Diethylphthalate	ND	802	111
Dimethylphthalate	ND	802	123
Fluoranthene	ND	802	118
Fluorene	ND	802	99.7
Hexachlorobenzene	ND	802	128
Hexachlorobutadiene	ND	802	119
Hexachlorocyclopentadiene	ND	802	133
Hexachloroethane	ND	802	101
Indeno(1,2,3-cd)pyrene	ND	802	109
Isophorone	ND	802	107
n-Nitroso-di-n-propylamine	ND	802	131
n-Nitrosodiphenylamine (2)	ND	802	116
Naphthalene	ND	802	111
Nitrobenzene	ND	802	89.3
Pentachlorophenol	ND	3780	34.4
Phenanthrene	ND	802	116
Phenol	ND	344	89.3
Pyrene	ND	802	110

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	92	25-144
2-Fluorobiphenyl	72	34-135
2-Fluorophenol	68	25-135
Nitrobenzene-d5	75	25-135
Phenol-d5	72	25-135
Terphenyl-d14	66	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/20/96 18:00
Sample ID	: CR-A154406	DaTime Analyzd :	12/06/96 20:26
Lab Cnt NO.	: K097-42	Dilutn Factor :	1
Lab File ID	: RLS092	Matrix :	WATER
Ext Btch ID	: SVK010W	% Moisture :	NA
Calib. Ref.	: RLS087	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3
2-Nitrophenol	ND	10	
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/18/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/19/96
Batch No.	: 96K097	DaTime Extrctd :	11/20/96 18:00
Sample ID	: CR-A154406	DaTime Analyzd :	12/06/96 20:26
Lab Cnt NO.	: K097-42	Dilutn Factor :	1
Lab File ID	: RLS092	Matrix :	WATER
Ext Btch ID	: SVK010W	% Moisture :	NA
Calib. Ref.	: RLS087	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	12	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1.6
Hexachloroethane	ND	10	2
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	96	25-134
2-Fluorobiphenyl	77	43-125
2-Fluorophenol	86	25-125
Nitrobenzene-d5	85	32-125
Phenol-d5	87	25-125
Terphenyl-d14	72	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

EMAX Batch No. 96K120

EMAX
LABORATORIES, INC.
630 Maple Ave.
Torrance, CA 90503
Telephone: (310) 618-8889
Fax: (310) 618-0818

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Date: 12-31-1996
EMAX Batch No.: 96K120

Attn: Lynn Schuetter

Jacobs Engineering Group
600 17th. Street, Ste. 1100N
Denver CO 80202

Subject: Laboratory Report
Project: Carswell AFB / 05G47900

Enclosed is the Laboratory report for samples received on 11/22/96. The data reported include :

Sample ID	Control #	Col Date	Matrix	Analysis
CR-A159201	K120-01	11/20/96	Water	EPA 8240
CR-A159202	K120-02	11/20/96	Water	EPA 8270
CR-A159203	K120-03	11/20/96	Water	Metals Mercury
CR-A159204	K120-04	11/20/96	Soil	EPA 8240
CR-A159205	K120-05	11/20/96	Soil	Metals Mercury EPA 8270
CR-A159301	K120-06	11/20/96	Water	EPA 8240
CR-A159302	K120-07	11/20/96	Water	EPA 8270
CR-A159303	K120-08	11/20/96	Water	Metals Mercury
CR-A159304	K120-09	11/20/96	Soil	EPA 8240
CR-A159305	K120-10	11/20/96	Soil	Metals Mercury EPA 8270
CR-A159401	K120-11	11/20/96	Water	EPA 8240
CR-A159402	K120-12	11/20/96	Water	EPA 8270
CR-A159403	K120-13	11/20/96	Water	Metals

Sample ID	Control #	Col Date	Matrix	Analysis
				Mercury
CR-A159404	K120-14	11/20/96	Soil	EPA 8240
CR-A159405	K120-15	11/20/96	Soil	Metals
				Mercury
				EPA 8270
CR-A159406	K120-16	11/20/96	Water	EPA 8240
CR-A159407	K120-17	11/20/96	Water	EPA 8270
CR-A159408	K120-18	11/20/96	Water	Metals
				Mercury
CR-A159501	K120-19	11/20/96	Water	EPA 8240
CR-A159502	K120-20	11/20/96	Water	EPA 8270
CR-A159503	K120-21	11/20/96	Water	Metals
				Mercury
CR-A159504	K120-22	11/20/96	Soil	EPA 8240
CR-A159505	K120-23	11/20/96	Soil	Metals
				Mercury
				EPA 8270
CR-A159506	K120-24	11/20/96	Soil	EPA 8240
CR-A159507	K120-25	11/20/96	Soil	Metals
				Mercury
				EPA 8270
CR-A159601	K120-26	11/20/96	Water	EPA 8240
CR-A159602	K120-27	11/20/96	Water	EPA 8270
CR-A159603	K120-28	11/20/96	Water	Metals
				Mercury
CR-A159604	K120-29	11/20/96	Soil	EPA 8240
CR-A159605	K120-30	11/20/96	Soil	Metals
				Mercury
				EPA 8270
CR-A159701	K120-31	11/20/96	Water	EPA 8240
CR-A159702	K120-32	11/20/96	Water	EPA 8270
CR-A159703	K120-33	11/20/96	Water	Metals
				Mercury
CR-A159704	K120-34	11/20/96	Soil	EPA 8240
CR-A159705	K120-35	11/20/96	Soil	Metals
				Mercury
				EPA 8270
CR-A159801	K120-36	11/20/96	Water	EPA 8240
CR-A159802	K120-37	11/20/96	Water	EPA 8270
CR-A159803	K120-38	11/20/96	Water	Metals
				Mercury

Sample ID	Control #	Col Date	Matrix	Analysis
CR-A159804	K120-39	11/20/96	Soil	EPA 8240
CR-A159805	K120-40	11/20/96	Soil	Metals
				Mercury
				EPA 8270
CR-A159901	K120-41	11/20/96	Water	EPA 8240
CR-A159901MS	K120-41M	11/20/96	Water	EPA 8240
CR-A159901MSD	K120-41S	11/20/96	Water	EPA 8240
CR-A159902	K120-42	11/20/96	Water	EPA 8270
CR-A159902MS	K120-42M	11/20/96	Water	EPA 8270
CR-A159902MSD	K120-42S	11/20/96	Water	EPA 8270
CR-A159903	K120-43	11/20/96	Water	Metals
				Mercury
CR-A159903MS	K120-43M	11/20/96	Water	Metals
				Mercury
CR-A159903DUP	K120-43D	11/20/96	Water	Metals
				Mercury
CR-A159904	K120-44	11/20/96	Soil	EPA 8240
CR-A159904MS	K120-44M	11/20/96	Soil	EPA 8240
CR-A159904MSD	K120-44S	11/20/96	Soil	EPA 8240
CR-A159905	K120-45	11/20/96	Soil	Metals
				Mercury
				EPA 8270
CR-A159905MS	K120-45M	11/20/96	Soil	Metals
				Mercury
				EPA 8270
CR-A159905MSD	K120-45S	11/20/96	Soil	EPA 8270
CR-A159905DUP	K120-45D	11/20/96	Soil	Metals
				Mercury
CR-A159906	K120-46	11/20/96	Water	EPA 8240
CR-A159907	K120-47	11/20/96	Water	EPA 8270
CR-A159908	K120-48	11/20/96	Water	Metals
				Mercury
CR-A159909	K120-49	11/21/96	Water	EPA 8240

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Kam Pang

Kam Y. Pang, Ph.D.
Laboratory Director

P.S. - All analyses requested for the above referenced project have been completed. Therefore, unless instructed, the remaining portions of the samples will be disposed after fifteen (15) days from the date of this report.

SAMPLE RECEIPT FORM

CONTROL NO.	96K 120
CLIENT	JACOBS ENG
PROJECT	CARSWELL AFB D021

DATE	11-22-96
TIME	9:45 AM
RECIPIENT	I. PATEL

SAMPLE TRANSPORTATION TO EMAX LABORATORY:		BY	ON(DATE)	AT(TIME)	FROM(SITE/CO.)	COMMENTS
PICKED-UP BY EMAX COURIER						
DELIVERED BY CLIENT ✓						
SHIPPED/AIRBILL NO:	FEDEX APTN:					

SAMPLE BATCH PACKAGING/SEALING UPON RECEIPT:			✓ INTACT	___ DAMAGED	✓ SEALED	___ NOT SEALED	___ NO CONTAINER
CONTAINER:	INSIDE TEMPERATURE (4°C ± 2°C) 3° °C			CUSTODY SEAL		LOCATION	NUMBER
✓ COOLER	PACKAGING	TYPE	SUFFICIENCY	✓ INTACT	___ DAMAGED	FRONT CLOSURE	1
___ BOX	INSULATION:		OK	NAME:	SEE COC	REAR CLOSURE	1
___ OTHER:	ICE/COOLANT:	REGULAR		DATE:			
	PACKING MATERIAL:	STYRO.		TIME:			

SAMPLE DOCUMENTATION/CHAIN-OF-CUSTODY(COC)	___ SEALED	✓ ENCLOSED	___ HANDCARRIED	___ FAXED	___ MAILED

SAMPLE LOG-IN:	CRITERIA	COMMENTS	DISCREPANCY
SAMPLE CUSTODY SEAL	EVERY SAMPLE	NONE	
CONTAINER TYPE/MATERIAL	APPROPRIATE	OK	
SAMPLE AMOUNT	ENOUGH		
HOLDING TIME	SUFFICENT		
SAMPLE PRESERVATION (For appropriate preservative see GP-0001 Appendix I)	NaOH preserved samples pH ≥ 12 HNO_3 / H_2SO_4 preserved samples pH ≤ 2		
HEADSPACE/BUBBLES	ZERO/NONE		
SAMPLE LABEL INFORMATION	SUFFICIENT		
CHAIN-OF-CUSTODY INFORMATION	SUFFICIENT		

SAMPLE INFO.:	SAMPLE ID ✓	DATE ✓	TIME ✓	SIGNATURE ✓	ANALYSES ✓	PRESERVATIVE ✓	CONTAINER ✓

INDIVIDUAL SAMPLE CONTAINER: ___ NONE ✓ SEALED PLASTIC BAG ___ CAN ___ OTHER(SPECIFY): _____

SAMPLE NUMBER	CLIENT ID	DISCREPANCY	ACTION

CLIENT SERVICES COPY RECEIVED BY	[illegible] 11/25/96	DATE		TIME	

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

METALS

SDG#: 96K120

DECEMBER 31, 1996

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP

PROJECT: CARSWELL

SDG: 96K120

METALS

Nine (9) soil and ten (10) water samples were received on 11/22/96 to be analyzed for metals analysis by ICP method in accordance with USEPA SW846 method 6010A. Antimony, silver, selenium, and nickel were analyzed by GFAA.

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   Trace amount of some elements were found in soil blank: barium, beryllium, copper, iron, manganese, molybdenum, lead, and sodium. All detected levels were below PQL except sodium was slightly above PQL.

   Trace amount of aluminum, iron, lead, and sodium were found in water blank. Iron and aluminum levels were below PQL but sodium was slightly above PQL.

3. **Matrix Spike/Matrix Spike Duplicate**

   MS/MSD recoveries were within QC limits for soil matrix except molybdenum, arsenic, cadmium, and lead recoveries in MS and beryllium, cobalt, molybdenum, thallium, cadmium, arsenic, and lead recoveries in MSD. The QC limit does not apply to aluminum, calcium, and iron since the elements concentration were more than 4 times spiking level.

4. **Lab Control Sample/Lab Control Duplicate**

   All lab control results were within the control limits except thallium recovery in soil LCS but was within the limit in LCSD.

5. **Calibration**

   All initial and continuing calibration results were within QC criteria.

6. Sample Analysis

Arsenic, lead, and cadmium were analyzed by Trace-ICP, all others metals by ICP. Some calibration blanks associated with sodium analysis were slightly above PQL.

Several serial dilution were out of QC limits, post analytical spike of all failed serial dilutions were within QC limits except calcium and lead in soil matrix.

11/29/1996 14:59

LAB CHRONICLE
Metals

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A159205	K120-05	18.0	IPK025S/11/26/96/09.00	107L005/12/17/96	*	
CR-A159305	K120-10	20.8				
CR-A159405	K120-15	30.0				
CR-A159505	K120-23	25.8				
CR-A159507	K120-25	30.5				
CR-A159605	K120-30	29.2				
CR-A159705	K120-35	22.8				
CR-A159805	K120-40	28.9				
CR-A159905	K120-45	25.1				
CR-A159905MS	K120-45M	25.1				
CR-A159905DUP	K120-45D	25.1				
MBLK1S	IPK025SB					
LCS	SL					
LCSD	SC		✓	✓	✓	

* - As, Cd, Pb were analyzed on 12/08/96 File I31L008
- Tl was analyzed on 12/16/96 File I07L002

11/29/1996 14:59

LAB CHRONICLE
Metals

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A159203	K120-03	NA	I PK027W | 11/26/96/10:00	I07L019/12/23/96	*	
CR-A159303	K120-08	NA				
CR-A159403	K120-13	NA				
CR-A159408	K120-18	NA				
CR-A159503	K120-21	NA				
CR-A159603	K120-28	NA				
CR-A159703	K120-33	NA				
CR-A159803	K120-38	NA				
CR-A159903	K120-43	NA				
CR-A159903MS	K120-43M	NA				
CR-A159903DUP	K120-43D	NA				
CR-A159908	K120-48	NA				
MBLK1W	1 PK027WB					
LCS	↓	WL				
LCSD	↓	WC	↓	↓	↓	

* As, Pb, Cd were analyzed on 12/11/96 File I31L013

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159205	DaTime Analyzd :	12/17/96 16:22
Lab Cnt NO.:	K120-05	Dilutn Factor :	1
Lab File ID:	I07L005	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	18.0
Calib. Ref.:	I07L005	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	2300	61	1.23
Barium	35.9	2.44	.0488
Beryllium	.245F	.366	.0122
Calcium	174000	12.2	2.74
Chromium	4.81F	8.54	.671
Cobalt	3.39F	8.54	1.02
Copper	5.78F	7.32	.171
Iron	7930	8.54	.707
Magnesium	1740	36.6	6.74
Manganese	362	2.44	.146
Molybdenum	1.36F	9.76	.744
Potassium	386F	610	63.7
Sodium	ND	36.6	2.44
Thallium*	43.4F	48.8	11.2
Vanadium	23.4	9.76	.476
Zinc	25.2	2.44	.207

* Analyzed on 12/16/96, Cal. Ref. I07L002

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159205	DaTime Analyzd :	12/09/96 18:46
Lab Cnt NO.:	K120-05	Dilutn Factor :	1
Lab File ID:	I31L008	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	18.0
Calib. Ref.:	I31L008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	5.27	.61	.561
Cadmium	.292	.122	.122
Lead	6.26	.61	.171

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Btch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159305	DaTime Analyzd :	12/17/96 16:26
Lab Cnt NO.:	K120-10	Dilutn Factor :	1
Lab File ID:	I07L005	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	20.8
Calib. Ref.:	I07L005	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	4740	63.1	1.28
Barium	31.3	2.53	.0505
Beryllium	.29F	.379	.0126
Calcium	131000	12.6	2.84
Chromium	6.01F	8.84	.694
Cobalt	1.59F	8.84	1.06
Copper	8.58	7.58	.177
Iron	7120	8.84	.732
Magnesium	1800	37.9	6.98
Manganese	143	2.53	.152
Molybdenum	2.68F	10.1	.77
Potassium	760	631	66
Sodium	ND	37.9	2.53
Thallium*	36.2F	50.5	11.6
Vanadium	15.4	10.1	.492
Zinc	24.3	2.53	.215

*Analyzed on 12/16/96, Cal. Ref. I07L002

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159305	DaTime Analyzd :	12/09/96 18:50
Lab Cnt NO.:	K120-10	Dilutn Factor :	1
Lab File ID:	I31L008	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	20.8
Calib. Ref.:	I31L008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	2.85	.631	.581
Cadmium	.152	.126	.126
Lead	7.4	.631	.177

SW3050A/6010A
METALS BY ICP

ent	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
ject	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159405	DaTime Analyzd :	12/17/96 16:30
Lab Cnt NO.:	K120-15	Dilutn Factor :	1
Lab File ID:	I07L005	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	30.0
Calib. Ref.:	I07L005	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	8210	71.4	1.44
Barium	58.9	2.86	.0571
Beryllium	.451	.429	.0143
Calcium	125000	14.3	3.21
Chromium	9.59F	10	.786
Cobalt	2.28F	10	1.2
Copper	11.7	8.57	.2
Iron	8080	10	.829
Magnesium	2140	42.9	7.9
Manganese	164	2.86	.171
Molybdenum	ND	11.4	.871
Potassium	1300	714	74.6
Sodium	ND	42.9	2.86
Thallium*	39.1F	57.1	13.2
nadium	18	11.4	.557
c	53.9	2.86	.243

*: Analyzed on 12/16/96, Cal. Ref. I07L002

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159405	DaTime Analyzd :	12/09/96 18:54
Lab Cnt NO.:	K120-15	Dilutn Factor :	1
Lab File ID:	I31L008	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	30.0
Calib. Ref.:	I31L008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	2.96	.714	.657
Cadmium	.267	.143	.143
Lead	26.9	.714	.2

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159505	DaTime Analyzd :	12/17/96 16:33
Lab Cnt NO.:	K120-23	Dilutn Factor :	1
Lab File ID:	I07L005	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	25.8
Calib. Ref.:	I07L005	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	2280	67.4	1.36
Barium	21.9	2.7	.0539
Beryllium	.194F	.404	.0135
Calcium	189000	13.5	3.03
Chromium	9.02F	9.43	.741
Cobalt	1.97F	9.43	1.13
Copper	4.28F	8.09	.189
Iron	5030	9.43	.782
Magnesium	1890	40.4	7.45
Manganese	228	2.7	.162
Molybdenum	2.04F	10.8	.822
Potassium	392F	674	70.4
Sodium	ND	40.4	2.7
Thallium*	22.2F	53.9	12.4
Vanadium	15.4	10.8	.526
Zinc	17.3	2.7	.229

* Analyzed on 12/16/96, Cal. Ref. I07L002

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159505	DaTime Analyzd :	12/09/96 19:09
Lab Cnt NO.:	K120-23	Dilutn Factor :	1
Lab File ID:	I31L008	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	25.8
Calib. Ref.:	I31L008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	4	.674	.62
Cadmium	.282	.135	.135
Lead	15	.674	.189

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159507	DaTime Analyzd :	12/17/96 16:37
Lab Cnt NO.:	K120-25	Dilutn Factor :	1
Lab File ID:	I07L005	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	30.5
Calib. Ref.:	I07L005	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	8880	71.9	1.45
Barium	66.7	2.88	.0576
Beryllium	.494	.432	.0144
Calcium	119000	14.4	3.24
Chromium	10.6	10.1	.791
Cobalt	2.95F	10.1	1.21
Copper	11.7	8.63	.201
Iron	9190	10.1	.835
Magnesium	2090	43.2	7.96
Manganese	170	2.88	.173
Molybdenum	1.13F	11.5	.878
Potassium	1380	719	75.2
Sodium	ND	43.2	2.88
Thallium*	37.9F	57.6	13.3
Vanadium	20.2	11.5	.561
Zinc	59.8	2.88	.245

*: Analyzed on 12/16/96, Cal. Ref. I07L002

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159507	DaTime Analyzd :	12/09/96 19:13
Lab Cnt NO.:	K120-25	Dilutn Factor :	1
Lab File ID:	I31L008	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	30.5
Calib. Ref.:	I31L008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	3.54	.719	.662
Cadmium	.308	.144	.144
Lead	32.3	.719	.201

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159605	DaTime Analyzd :	12/17/96 16:41
Lab Cnt NO.:	K120-30	Dilutn Factor :	1
Lab File ID:	I07L005	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	29.2
Calib. Ref.:	I07L005	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	7230	70.6	1.43
Barium	76.8	2.82	.0565
Beryllium	.492	.424	.0141
Calcium	75100	14.1	3.18
Chromium	8.3F	9.89	.777
Cobalt	3.29F	9.89	1.19
Copper	10.2	8.47	.198
Iron	7060	9.89	.819
Magnesium	1450	42.4	7.81
Manganese	173	2.82	.169
Molybdenum	1.84F	11.3	.862
Potassium	1130	706	73.8
Sodium	6.07F	42.4	2.82
Thallium*	28.9F	56.5	13
Vanadium	19.3	11.3	.551
Zinc	32.8	2.82	.24

*: Analyzed on 12/16/96, Cal. Ref. I07L002

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159605	DaTime Analyzd :	12/09/96 19:17
Lab Cnt NO.:	K120-30	Dilutn Factor :	1
Lab File ID:	I31L008	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	29.2
Calib. Ref.:	I31L008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	3.19	.706	.65
Cadmium	.212	.141	.141
Lead	9.12	.706	.198

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159705	DaTime Analyzd :	12/17/96 16:44
Lab Cnt NO.:	K120-35	Dilutn Factor :	1
Lab File ID:	I07L005	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	22.8
Calib. Ref.:	I07L005	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	3660	64.8	1.31
Barium	34	2.59	.0518
Beryllium	.291F	.389	.013
Calcium	166000	13	2.91
Chromium	5.49F	9.07	.712
Cobalt	1.62F	9.07	1.09
Copper	4.57F	7.77	.181
Iron	5240	9.07	.751
Magnesium	1870	38.9	7.16
Manganese	189	2.59	.155
Molybdenum	1F	10.4	.79
Potassium	508F	648	67.7
Sodium	ND	38.9	2.59
Thallium*	24.5F	51.8	11.9
Vanadium	19.2	10.4	.505
Zinc	11.3	2.59	.22

*Analyzed on 12/16/96, Cal. Ref. I07L002

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159705	DaTime Analyzd :	12/09/96 19:21
Lab Cnt NO.:	K120-35	Dilutn Factor :	1
Lab File ID:	I31L008	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	22.8
Calib. Ref.:	I31L008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	4.18	.648	.596
Cadmium	.215	.13	.13
Lead	2.21	.648	.181

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Btch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159805	DaTime Analyzd :	12/17/96 16:48
Lab Cnt NO.:	K120-40	Dilutn Factor :	1
Lab File ID:	I07L005	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	28.9
Calib. Ref.:	I07L005	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	9240	70.3	1.42
Barium	64.4	2.81	.0563
Beryllium	.557	.422	.0141
Calcium	127000	14.1	3.16
Chromium	9.12F	9.85	.774
Cobalt	2.51F	9.85	1.18
Copper	7.4F	8.44	.197
Iron	7910	9.85	.816
Magnesium	2080	42.2	7.78
Manganese	149	2.81	.169
Molybdenum	2.56F	11.3	.858
Potassium	921	703	73.5
Sodium	4.06F	42.2	2.81
Thallium*	37.8F	56.3	13
Vanadium	24.1	11.3	.549
Zinc	20.3	2.81	.239

*Analyzed on 12/16/96, Cal. Ref. I07L002

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159805	DaTime Analyzd :	12/09/96 19:25
Lab Cnt NO.:	K120-40	Dilutn Factor :	1
Lab File ID:	I31L008	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	28.9
Calib. Ref.:	I31L008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	3.72	.703	.647
Cadmium	.153	.141	.141
Lead	2.68	.703	.197

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Btch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159905	DaTime Analyzd :	12/17/96 16:52
Lab Cnt NO.:	K120-45	Dilutn Factor :	1
Lab File ID:	I07L005	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	25.1
Calib. Ref.:	I07L005	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	6660	66.8	1.35
Barium	61	2.67	.0534
Beryllium	.467	.401	.0134
Calcium	132000	13.4	3
Chromium	8.03F	9.35	.734
Cobalt	3.43F	9.35	1.12
Copper	6.91F	8.01	.187
Iron	7010	9.35	.774
Magnesium	2040	40.1	7.38
Manganese	179	2.67	.16
Molybdenum	1.36F	10.7	.814
Potassium	910	668	69.7
Sodium	ND	40.1	2.67
Thallium*	35.2F	53.4	12.3
Vanadium	19.3	10.7	.521
Zinc	18.7	2.67	.227

*Analyzed on 12/16/96, Cal. Ref. I07L002

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: CR-A159905	DaTime Analyzd :	12/09/96 19:29
Lab Cnt NO.:	K120-45	Dilutn Factor :	1
Lab File ID:	I31L008	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	25.1
Calib. Ref.:	I31L008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	3.82	.668	.614
Cadmium	.158	.134	.134
Lead	3.23	.668	.187

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	NA
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/26/96
Btch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: MBLK1S	DaTime Analyzd :	12/17/96 15:43
Lab Cnt NO.:	IPK025SB	Dilutn Factor :	1
Lab File ID:	I07L005	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	NA
Calib. Ref.:	I07L005	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	ND	50	1.01
Barium	.151F	2	.04
Beryllium	.135F	.3	.01
Calcium	ND	10	2.25
Chromium	ND	7	.55
Cobalt	ND	7	.84
Copper	.203F	6	.14
Iron	1.83F	7	.58
Magnesium	ND	30	5.53
Manganese	.216F	2	.12
Molybdenum	.615F	8	.61
Potassium	ND	500	52.2
Sodium	33.7	30	2
Thallium*	ND	40	9.22
Vanadium	ND	8	.39
Zinc	ND	2	.17

*: Analyzed on 12/16/96, Cal. Ref. I07L002

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	NA
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/26/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 09:00
Sample ID	: MBLK1S	DaTime Analyzd :	12/09/96 18:17
Lab Cnt NO.:	IPK025SB	Dilutn Factor :	1
Lab File ID:	I31L008	Matrix :	SOIL
Ext Btch ID:	IPK025S	% Moisture :	NA
Calib. Ref.:	I31L008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	ND	.5	.46
Cadmium	ND	.1	.1
Lead	.306F	.5	.14

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159203	DaTime Analyzd :	12/23/96 19:09
Lab Cnt NO.:	K120-03	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0509F	.5	.0122
Barium	.0877	.02	.001
Beryllium	ND	.003	.0003
Calcium	88.7	.1	.0222
Chromium	.00744F	.07	.0053
Cobalt	ND	.07	.0089
Copper	.0101F	.06	.0008
Iron	.223	.07	.0035
Magnesium	3	.3	.0342
Manganese	.0281	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	3.38F	5	.466
Sodium	25.1	.3	.05
Thallium	ND	.4	.0632
Vanadium	ND	.08	.0029
Zinc	.00874F	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159203	DaTime Analyzd :	12/11/96 16:40
Lab Cnt NO.:	K120-03	Dilutn Factor :	1
Lab File ID:	I31L013	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I31L013	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	.000534F	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159303	DaTime Analyzd :	12/23/96 19:13
Lab Cnt NO.:	K120-08	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0677F	.5	.0122
Barium	.0759	.02	.001
Beryllium	ND	.003	.0003
Calcium	84.1	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00461F	.06	.0008
Iron	.0978	.07	.0035
Magnesium	2.58	.3	.0342
Manganese	.0262	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	2.64F	5	.466
Sodium	19.3	.3	.05
Thallium	ND	.4	.0632
Vanadium	.00398F	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159303	DaTime Analyzd :	12/11/96 16:44
Lab Cnt NO.:	K120-08	Dilutn Factor :	1
Lab File ID:	I31L013	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I31L013	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159403	DaTime Analyzd :	12/23/96 19:17
Lab Cnt NO.:	K120-13	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.104F	.5	.0122
Barium	.0941	.02	.001
Beryllium	ND	.003	.0003
Calcium	91.6	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00289F	.06	.0008
Iron	.0773	.07	.0035
Magnesium	3.85	.3	.0342
Manganese	.0193F	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	3.16F	5	.466
Sodium	31.7	.3	.05
Thallium	ND	.4	.0632
Vanadium	.00312F	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159403	DaTime Analyzd :	12/11/96 16:48
Lab Cnt NO.:	K120-13	Dilutn Factor :	1
Lab File ID:	I31L013	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I31L013	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159408	DaTime Analyzd :	12/23/96 19:20
Lab Cnt NO.:	K120-18	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0835F	.5	.0122
Barium	.0963	.02	.001
Beryllium	ND	.003	.0003
Calcium	94	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00288F	.06	.0008
Iron	.0719	.07	.0035
Magnesium	3.93	.3	.0342
Manganese	.0201	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	3.46F	5	.466
Sodium	32	.3	.05
Thallium	ND	.4	.0632
Vanadium	ND	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159408	DaTime Analyzd :	12/11/96 16:52
Lab Cnt NO.:	K120-18	Dilutn Factor :	1
Lab File ID:	I31L013	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I31L013	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159503	DaTime Analyzd :	12/23/96 19:24
Lab Cnt NO.:	K120-21	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0653F	.5	.0122
Barium	.0962	.02	.001
Beryllium	ND	.003	.0003
Calcium	93.1	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	ND	.06	.0008
Iron	.166	.07	.0035
Magnesium	3.7	.3	.0342
Manganese	.0129F	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	2.06F	5	.466
Sodium	27.9	.3	.05
Thallium	ND	.4	.0632
Vanadium	ND	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159503	DaTime Analyzd :	12/11/96 16:56
Lab Cnt NO.:	K120-21	Dilutn Factor :	1
Lab File ID:	I31L013	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I31L013	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159603	DaTime Analyzd :	12/23/96 19:28
Lab Cnt NO.:	K120-28	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0669F	.5	.0122
Barium	.0868	.02	.001
Beryllium	ND	.003	.0003
Calcium	91.9	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00204F	.06	.0008
Iron	.117	.07	.0035
Magnesium	3.28	.3	.0342
Manganese	.0345	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	3.17F	5	.466
Sodium	24.2	.3	.05
Thallium	ND	.4	.0632
Vanadium	.00361F	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159603	DaTime Analyzd :	12/11/96 17:00
Lab Cnt NO.:	K120-28	Dilutn Factor :	1
Lab File ID:	I31L013	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I31L013	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159703	DaTime Analyzd :	12/23/96 19:31
Lab Cnt NO.:	K120-33	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.178F	.5	.0122
Barium	.107	.02	.001
Beryllium	ND	.003	.0003
Calcium	118	.1	.0222
Chromium	.00614F	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00719F	.06	.0008
Iron	.138	.07	.0035
Magnesium	5.52	.3	.0342
Manganese	.0716	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	3.93F	5	.466
Sodium	22.2	.3	.05
Thallium	ND	.4	.0632
Vanadium	.00575F	.08	.0029
Zinc	.0122F	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159703	DaTime Analyzd :	12/11/96 17:13
Lab Cnt NO.:	K120-33	Dilutn Factor :	1
Lab File ID:	I31L013	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I31L013	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159803	DaTime Analyzd :	12/23/96 19:46
Lab Cnt NO.:	K120-38	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0786F	.5	.0122
Barium	.0909	.02	.001
Beryllium	ND	.003	.0003
Calcium	96.7	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	.002F	.06	.0008
Iron	.0221F	.07	.0035
Magnesium	2.07	.3	.0342
Manganese	.00384F	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	2.08F	5	.466
Sodium	22.6	.3	.05
Thallium	ND	.4	.0632
Vanadium	.00499F	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159803	DaTime Analyzd :	12/11/96 17:20
Lab Cnt NO.:	K120-38	Dilutn Factor :	1
Lab File ID:	I31L013	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I31L013	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159903	DaTime Analyzd :	12/23/96 19:49
Lab Cnt NO.:	K120-43	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.062F	.5	.0122
Barium	.124	.02	.001
Beryllium	ND	.003	.0003
Calcium	104	.1	.0222
Chromium	.00775F	.07	.0053
Cobalt	ND	.07	.0089
Copper	ND	.06	.0008
Iron	.0611F	.07	.0035
Magnesium	4.64	.3	.0342
Manganese	.00465F	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	3.59F	5	.466
Sodium	32.9	.3	.05
Thallium	ND	.4	.0632
Vanadium	.00309F	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159903	DaTime Analyzd :	12/11/96 17:24
Lab Cnt NO.:	K120-43	Dilutn Factor :	1
Lab File ID:	I31L013	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I31L013	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159908	DaTime Analyzd :	12/23/96 20:11
Lab Cnt NO.:	K120-48	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0212F	.5	.0122
Barium	ND	.02	.001
Beryllium	ND	.003	.0003
Calcium	ND	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	ND	.06	.0008
Iron	.0101F	.07	.0035
Magnesium	ND	.3	.0342
Manganese	ND	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	.499	.3	.05
Thallium	ND	.4	.0632
Vanadium	ND	.08	.0029
Zinc	.00671F	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: CR-A159908	DaTime Analyzd :	12/11/96 17:47
Lab Cnt NO.:	K120-48	Dilutn Factor :	1
Lab File ID:	I31L013	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I31L013	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	.000676F	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	NA
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/26/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: MBLK1W	DaTime Analyzd :	12/23/96 18:56
Lab Cnt NO.:	IPK027WB	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0474F	.5	.0122
Barium	ND	.02	.001
Beryllium	ND	.003	.0003
Calcium	ND	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	ND	.06	.0008
Iron	.00815F	.07	.0035
Magnesium	ND	.3	.0342
Manganese	ND	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	.499	.3	.05
Thallium	ND	.4	.0632
Vanadium	ND	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	NA
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/26/96
Batch No.	: 96K120	DaTime Extrctd :	11/26/96 10:00
Sample ID	: MBLK1W	DaTime Analyzd :	12/11/96 16:08
Lab Cnt NO.:	IPK027WB	Dilutn Factor :	1
Lab File ID:	I31L013	Matrix :	WATER
Ext Btch ID:	IPK027W	% Moisture :	NA
Calib. Ref.:	I31L013	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	.00177F	.005	.0016

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

EPA 3050A/7041
ANTIMONY BY GFAA

SDG#: 96K120

DECEMBER 31, 1996

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP

PROJECT: CARSWELL AFB / 05G47900

SDG: 96K120

EPA 3050A/7041
ANTIMONY BY GFAA

Nine (9) soil and ten (10) water samples were received on 11/22/96 for Antimony analysis in accordance with USEPA SW846.

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   All preparation blanks were free of contamination.

3. **Matrix Spike/Matrix Spike Duplicate**

   MS/MSD recoveries for water matrix were within QC limit. MS/MSD recoveries for soil matrix were out of QC limit.

4. **Laboratory Control Sample/Laboratory Control Sample Duplicate**

   All lab control results and RPDs were within the control limits.

5. **Sample Analysis**

   All sample analyses were within QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

11/29/1996 14:59

LAB CHRONICLE
Metals (Antimony)

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A159205	K120-05	18.0	IPK025S/11/26/96/09:00	G03L004/12/3/96 20:29	G03L004	10/20
CR-A159305	K120-10	20.8		:33		21
CR-A159405	K120-15	30.0		:44	G03L004-22/24	
CR-A159505	K120-23	25.8		:48		25
CR-A159507	K120-25	30.5		:51		26
CR-A159605	K120-30	29.2		:55		27
CR-A159705	K120-35	22.8		:59		28
CR-A159805	K120-40	28.9		21:02		29
CR-A159905	K120-45	25.1		:06		30
CR-A159905MS	K120-45M	25.1		:10		31
CR-A159905DUP	K120-45D	25.1		:14		32
MBLK1S	IPK025SB			20:00	G03L004-10/12	
LCS1	26SL			:04		13
LCD1	26SC			:08		14

11/29/1996 14:59

LAB CHRONICLE
Metals (Antimony)

CLIENT: --Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A159203	K120-03	NA	IPK027W/11/26/96/10:00	G03L018/12/11/96 15:37	G03L018-10/15	
CR-A159303	K120-08	NA		:47		18
CR-A159403	K120-13	NA		:51		19
CR-A159408	K120-18	NA		:55		20
CR-A159503	K120-21	NA		:58		21
CR-A159603	K120-28	NA		16:09	G03L018-22/24	
CR-A159703	K120-33	NA		:13		25
CR-A159803	K120-38	NA		:16		26
[illegible]A159903	K120-43	NA		:20		27
CR-A159903MS	K120-43M	NA		:24		28
CR-A159903DUP	K120-43D	NA		:28		29
CR-A159908	K120-48	NA		16:31		30
MBLKIW	IPK027WLE			15:25	G03L018-10/12	
LCS1	25WL			:29		13
LCD1	25WC			15:33		14

EPA 3050A/7041
ANTIMONY BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96K120
Matrix : SOIL

Date Collcted : 11/20/96
DaTime Received: 11/22/96
Instrument ID : EMAXT103

SAMPLE ID	CONTROL NO	RESULTS (mg/kg)	DLF	MOIST	PQL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A159205	K120-05	ND	1	18.0	.61	.244	12/03/9620:29	11/26/9609:00	G03L004020	G03L004010	IPK025S
CR-A159305	K120-10	ND	1	20.8	.631	.253	12/03/9620:33	11/26/9609:00	G03L004021	G03L004010	IPK025S
CR-A159405	K120-15	.326F	1	30.0	.714	.286	12/03/9620:44	11/26/9609:00	G03L004024	G03L004022	IPK025S
CR-A159505	K120-23	ND	1	25.8	.674	.27	12/03/9620:48	11/26/9609:00	G03L004025	G03L004022	IPK025S
CR-A159507	K120-25	ND	1	30.5	.719	.288	12/03/9620:51	11/26/9609:00	G03L004026	G03L004022	IPK025S
CR-A159605	K120-30	ND	1	29.2	.706	.282	12/03/9620:55	11/26/9609:00	G03L004027	G03L004022	IPK025S
CR-A159705	K120-35	ND	1	22.8	.648	.259	12/03/9620:59	11/26/9609:00	G03L004028	G03L004022	IPK025S
CR-A159805	K120-40	ND	1	28.9	.703	.281	12/03/9621:02	11/26/9609:00	G03L004029	G03L004022	IPK025S
CR-A159905	K120-45	ND	1	25.1	.668	.267	12/03/9621:06	11/26/9609:00	G03L004030	G03L004022	IPK025S
CR-A159905MS	K120-45M	.709	1	25.1	.668	.267	12/03/9621:10	11/26/9609:00	G03L004031	G03L004022	IPK025S
CR-A159905MSD	K120-45S	.818	1	25.1	.668	.267	12/03/9621:14	11/26/9609:00	G03L004032	G03L004022	IPK025S
MBLK1S	IPK025SB	ND	1	NA	.5	.2	12/03/9620:00	11/26/9609:00	G03L004012	G03L004010	IPK025S
LCS1S	IPK026SL	2.48	1	NA	.5	.2	12/03/9620:04	11/26/9609:00	G03L004013	G03L004010	IPK025S
LCD1S	IPK026SC	2.13	1	NA	.5	.2	12/03/9620:08	11/26/9609:00	G03L004014	G03L004010	IPK025S

PQL: Practical Quantitation Limit

EPA 3005A/7041
ANTIMONY BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96K120
Matrix : WATER

Date Collcted : 11/20/96
DaTime Received: 11/22/96
Instrument ID : EMAXT103

SAMPLE ID	CONTROL NO	RESULTS (mg/L)	DLF	MOIST	PQL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A159203	K120-03	ND	1	NA	.005	.002	12/11/9615:37	11/26/9610:00	G03L018015	G03L018010	IPK027W
CR-A159303	K120-08	.0031F	1	NA	.005	.002	12/11/9615:47	11/26/9610:00	G03L018018	G03L018010	IPK027W
CR-A159403	K120-13	ND	1	NA	.005	.002	12/11/9615:51	11/26/9610:00	G03L018019	G03L018010	IPK027W
CR-A159408	K120-18	ND	1	NA	.005	.002	12/11/9615:55	11/26/9610:00	G03L018020	G03L018010	IPK027W
CR-A159503	K120-21	ND	1	NA	.005	.002	12/11/9615:58	11/26/9610:00	G03L018021	G03L018010	IPK027W
CR-A159603	K120-28	ND	1	NA	.005	.002	12/11/9616:09	11/26/9610:00	G03L018024	G03L018022	IPK027W
CR-A159703	K120-33	ND	1	NA	.005	.002	12/11/9616:13	11/26/9610:00	G03L018025	G03L018022	IPK027W
CR-A159803	K120-38	ND	1	NA	.005	.002	12/11/9616:16	11/26/9610:00	G03L018026	G03L018022	IPK027W
CR-A159903	K120-43	.00212F	1	NA	.005	.002	12/11/9616:20	11/26/9610:00	G03L018027	G03L018022	IPK027W
CR-A159903MS	K120-43M	.0225	1	NA	.005	.002	12/11/9616:24	11/26/9610:00	G03L018028	G03L018022	IPK027W
CR-A159903MSD	K120-43S	.0231	1	NA	.005	.002	12/11/9616:28	11/26/9610:00	G03L018029	G03L018022	IPK027W
CR-A159908	K120-48	ND	1	NA	.005	.002	12/11/9616:31	11/26/9610:00	G03L018030	G03L018022	IPK027W
MBLK1W	IPK027WB	ND	1	NA	.005	.002	12/11/9615:25	11/26/9610:00	G03L018012	G03L018022	IPK027W
LCS1W	IPK028WL	.0239	1	NA	.005	.002	12/11/9615:29	11/26/9610:00	G03L018013	G03L018022	IPK027W
LCD1W	IPK028WC	.0228	1	NA	.005	.002	12/11/9615:33	11/26/9610:00	G03L018014	G03L018022	IPK027W

PQL: Practical Quantitation Limit

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL / 05G47900

MERCURY

SDG# 96K120

DECEMBER 27, 1996

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP

PROJECT: CARSWELL / 05G47900

SDG: 96K120

MERCURY

Nine (9) soil and ten (10) water samples were received on 11/22/96 for Mercury analysis in accordance with SW 846 method.

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   All preparation blanks were free of contamination.

3. **Matrix Spike/Matrix Spike duplicate**

   All MS/MSD recoveries were within QC limit except in soil 96K120-45MS recovery.

4. **Lab Control Sample/Lab Control Sample Duplicate**

   All lab control results and RPDs were within the control limits.

5. **Sample Analyses**

   Analysis was performed within the QC requirements.

11/29/1996 14:59

LAB CHRONICLE
Mercury

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A159205	K120-05	18.0	Hg K020S/11/27/96/11.00	M96K017/11/27/96/-	19:16	M96K017-19/-
CR-A159305	K120-10	20.8			19:19	
CR-A159405	K120-15	30.0			19:22	
CR-A159505	K120-23	25.8			19:25	
CR-A159507	K120-25	30.5			19:28	
CR-A159605	K120-30	29.2			19:31	
CR-A159705	K120-35	22.8			19:44	
CR-A159805	K120-40	28.9			19:47	
CR-A159905	K120-45	25.1			19:50	
CR-A159905MS	K120-45M	25.1			19:53	
CR-A159905DUP	K120-45D	25.1			19:56	
MBLK1S	Hg K020SB				19:06	M96K017-7
LCS		SL			19:10	
LCSD		SC			19:13	

EPA 7471A
MERCURY BY COLD VAPOR

CLIENT:	JACOBS ENGINEERING GROUP	DATE COLLECTED:	11/20/96
PROJECT:	CARSWELL AFB / 05G47900	DATE RECEIVED:	11/22/96
BATCH NO.:	96K120	DATE EXTRACTED:	11/27/96 11:00
MATRIX:	SOIL	INSTRUMENT ID:	I123
CAL REF:	M96K017-7	PREP BATCH:	HGK020S

SAMPLE ID	CONTROL NO	RESULT (mg/kg)	DL FACTOR	MOIST (%)	PQL (mg/kg)	MDL (mg/kg)	ANALYZED DATETIME
CR-A159205	K120-05	0.036F	1	18.0	.12	.035	11/27/96 19:16
CR-A159305	K120-10	ND	1	20.8	.13	.037	11/27/96 19:19
CR-A159405	K120-15	ND	1	30.0	.14	.041	11/27/96 19:22
CR-A159505	K120-23	ND	1	25.8	.13	.039	11/27/96 19:25
CR-A159507	K120-25	0.047F	1	30.5	.14	.042	11/27/96 19:28
CR-A159605	K120-30	ND	1	29.2	.14	.041	11/27/96 19:31
CR-A159705	K120-35	ND	1	22.8	.13	.038	11/27/96 19:44
CR-A159805	K120-40	ND	1	28.9	.14	.041	11/27/96 19:47
CR-A159905	K120-45	ND	1	25.1	.13	.039	11/27/96 19:50
CR-A159905MS	K120-45M	1.98	1	25.1	.13	.039	11/27/96 19:53
CR-A159905MSD	K120-45S	2.66	1	25.1	.13	.039	11/27/96 19:56
MBLK1S	HGK020SB	ND	1	NA	.1	.029	11/27/96 19:06
LCS1S	HGK020SL	1.85	1	NA	.1	.029	11/27/96 19:10
LCD1S	HGK020SC	1.97	1	NA	.1	.029	11/27/96 19:13

PQL: Practical Quantitation Limit
AFCEE Ver. 1.1

F: The QC limit does not apply since analyte contration was more than 4X the spike concentraion.

LAB CHRONICLE
Mercury

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A159203	K120-03	NA	Hg L019W 12/10/96/10:00	M96L009/12/10/96/18:55	M96L009-	7
CR-A159303	K120-08	NA		18.59		
CR-A159403	K120-13	NA		19.02		
CR-A159408	K120-18	NA		19.05		
CR-A159503	K120-21	NA		19.08		
CR-A159603	K120-28	NA		19.11		
CR-A159703	K120-33	NA		19.24	M96L009-	19
CR-A159803	K120-38	NA		19.27		
CR-A159903	K120-43	NA		19.30		
CR-A159903MS	K120-43M	NA		19.33		
CR-A159903DUP	K120-43D	NA		19.36		
CR-A159908	K120-48	NA		19.39		
MBLK1W	Hg L019WB			18.46	M96L009-	7
LCS	WL			18.49		
LCSD	WC			18.52		

EPA 7470A
MERCURY BY COLD VAPOR

CLIENT:	JACOBS ENGINEERING GROUP	DATE COLLECTED:	11/20/96
PROJECT:	CARSWELL AFB / 05G47900	DATE RECEIVED:	11/22/96
BATCH NO.:	96K120	DATE EXTRACTED:	12/10/96 10:00
MATRIX:	WATER	INSTRUMENT ID:	I123
CAL REF:	M96L009-7	PREP BATCH:	HGL019W

SAMPLE ID	CONTROL NO	RESULT (mg/L)	DILUTION FACTOR	PQL (mg/L)	MDL (mg/L)	ANALYZED DATETIME
CR-A159203	K120-03	ND	1	.001	.0001	12/10/96 18:55
CR-A159303	K120-08	ND	1	.001	.0001	12/10/96 18:59
CR-A159403	K120-13	ND	1	.001	.0001	12/10/96 19:02
CR-A159408	K120-18	ND	1	.001	.0001	12/10/96 19:05
CR-A159503	K120-21	0.00012F	1	.001	.0001	12/10/96 19:08
CR-A159603	K120-28	ND	1	.001	.0001	12/10/96 19:11
CR-A159703	K120-33	ND	1	.001	.0001	12/10/96 19:24
CR-A159803	K120-38	ND	1	.001	.0001	12/10/96 19:27
CR-A159903	K120-43	ND	1	.001	.0001	12/10/96 19:30
CR-A159903MS	K120-43M	0.00443	1	.001	.0001	12/10/96 19:33
CR-A159903MSD	K120-43S	0.0043	1	.001	.0001	12/10/96 19:36
CR-A159908	K120-48	ND	1	.001	.0001	12/10/96 19:39
MBLK1W	HGL019WB	ND	1	.001	.0001	12/10/96 18:46
LCS1W	HGL019WL	0.00423	1	.001	.0001	12/10/96 18:49
LCD1W	HGL019WC	0.00429	1	.001	.0001	12/10/96 18:52

PQL: Practical Quantitation Limit
AFCEE Ver. 1.1

F: The QC limit does not apply since analyte concentraion was more than 4X the spike concentration.

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

EPA 3050A/7520
NICKEL BY GFAA

SDG#: 96K120

DECEMBER 31, 1996

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP

PROJECT: CARSWELL AFB / 05G47900

SDG: 96K120

EPA 3050A/7520
NICKEL BY GFAA

Nine (9) soil and ten (10) water samples were received on 11/22/96 for Nickel analysis in accordance with USEPA SW846.

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   All preparation blanks were free of contamination.

3. **Matrix Spike/Matrix Spike Duplicate**

   All MS/MSD recoveries were out of QC limit due to matrix effect.

4. **Laboratory Control Sample/Laboratory Control Sample Duplicate**

   All lab control results and RPDs were within the control limits.

5. **Sample Analysis**

   All sample analyses were within QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

11/29/1996 14:59

LAB CHRONICLE
Metals (Nickel)

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A159205	K120-05	18.0	GFL001S/12/03/96/07:00	GOBL012/12/11/96/16:43	GOBL012-	33/37
CR-A159305	K120-10	20.8	GFL001S/12/03/96/07:00	16:47		34
CR-A159405	K120-15	30.0		16:52		35
CR-A159505	K120-23	25.8		16:56		40
CR-A159507	K120-25	30.5		17:00		41
CR-A159605	K120-30	29.2		17:04		42
CR-A159705	K120-35	22.8		17:09		43
CR-A159805	K120-40	28.9		17:13		[illegible]
CR-A159905	K120-45	25.1		17:17	GOBL012-21/31	
CR-A159905MS	K120-45M	25.1		17:24	GOBL012-33/35	
CR-A159905DUP	K120-45D	25.1		17:34		36
MBLK1S	GFL001SB			[illegible]	GOBL012-21/25	
LCS1S	GFL001SL			[illegible]		29
LCD1S	SC			[illegible]		30

11/29/1996 14:59

LAB CHRONICLE
Metals (Nickel)

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A159203	K120-03	NA	GFK015W/11/29/96/09:00	G06L011/12/10/96 20:11	G06L011	-9/14
CR-A159303	K120-08	NA	↓	20:23	↓	-9/17
CR-A159403	K120-13	NA	GFK016W/11/29/96/09:00	12/11/96 15:27	G06L012	-9/19
CR-A159408	K120-18	NA	|	| 15:31		-9/20
CR-A159503	K120-21	NA	|	| 15:44	G06L012	-21/23
CR-A159603	K120-28	NA	|	| 15:48		/24
CR-A159703	K120-33	NA	|	| 15:52		25
CR-A159803	K120-38	NA	|	| 15:56		26
CR-A159903	K120-43	NA	|	| 15:06	G06L012	-9/14
CR-A159903MS	K120-43M	NA	|	| 15:19		9/17
CR-A159903DUP	K120-43D	NA	|	| 15:23		9/18
CR-A159908	K120-48	NA	|	| 16:00	G06L012	-21/27
MBLK1W	GFK016WB		|	| 14:54	G06L012	-9/11
LCS1W	WL		|	| 14:58		12
LCD1W	WC		↓	↓ 15:02		13
MBLK2W	GFK015WB		GFK015W/11/29/96/09:00	12/10/96 13:55	G06L011	-9/11
LCS2W	WL		|	| 20:02		12
LCD2W	WC		↓	↓ 20:06		13

EPA 3050A/7520
NICKEL BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96K120
Matrix : SOIL

Date Collected : 11/20/96
DaTime Received: 11/22/96
Instrument ID : EMAXTI06

SAMPLE ID	CONTROL NO	RESULTS (mg/kg)	DLF	MOIST	PQL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A159205	K120-05	8.03	4	18.0	4.88	.976	12/11/9616:43	12/03/9607:00	G06L012037	G06L012033	GFL001S
CR-A159305	K120-10	8.01	4	20.8	5.05	1.01	12/11/9616:47	12/03/9607:00	G06L012038	G06L012033	GFL001S
CR-A159405	K120-15	10.9	4	30.0	5.71	1.14	12/11/9616:52	12/03/9607:00	G06L012039	G06L012033	GFL001S
CR-A159505	K120-23	5.55	4	25.8	5.39	1.08	12/11/9616:56	12/03/9607:00	G06L012040	G06L012033	GFL001S
CR-A159507	K120-25	10.9	4	30.5	5.76	1.15	12/11/9617:00	12/03/9607:00	G06L012041	G06L012033	GFL001S
CR-A159605	K120-30	10	4	29.2	5.65	1.13	12/11/9617:04	12/03/9607:00	G06L012042	G06L012033	GFL001S
CR-A159705	K120-35	7.39	4	22.8	5.18	1.04	12/11/9617:09	12/03/9607:00	G06L012043	G06L012033	GFL001S
CR-A159805	K120-40	12	4	28.9	5.63	1.13	12/11/9617:13	12/03/9607:00	G06L012044	G06L012033	GFL001S
CR-A159905	K120-45	10.5F	10	25.1	13.4	2.67	12/11/9616:17	12/03/9607:00	G06L012031	G06L012021	GFL001S
CR-A159905MS	K120-45M	11.5F	10	25.1	13.4	2.67	12/11/9616:34	12/03/9607:00	G06L012035	G06L012033	GFL001S
CR-A159905MSD	K120-45S	14.2	10	25.1	13.4	2.67	12/11/9616:39	12/03/9607:00	G06L012036	G06L012033	GFL001S
MBLK1S	GFL001SB	ND	1	NA	1	.2	12/11/9616:04	12/03/9607:00	G06L012028	G06L012021	GFL001S
LCS1S	GFL001SL	1.16	1	NA	1	.2	12/11/9616:09	12/03/9607:00	G06L012029	G06L012021	GFL001S
LCD1S	GFL001SC	1.12	1	NA	1	.2	12/11/9616:13	12/03/9607:00	G06L012030	G06L012021	GFL001S

PQL: Practical Quantitation Limit

EPA 3020A/7520
NICKEL BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96K120
Matrix : WATER

Date Collected : 11/20/96
DaTime Received: 11/22/96
Instrument ID : EMAXTI06

SAMPLE ID	CONTROL NO	RESULTS (mg/L)	DLF	MOIST	PQL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A159203	K120-03	ND	1	NA	.01	.002	12/10/9620:11	11/29/9609:00	G06L011014	G06L011009	GFK015W
CR-A159303	K120-08	.002F	1	NA	.01	.002	12/10/9620:23	11/29/9609:00	G06L011017	G06L011009	GFK015W
CR-A159403	K120-13	ND	1	NA	.01	.002	12/11/9615:27	11/29/9609:00	G06L012019	G06L012009	GFK016W
CR-A159408	K120-18	ND	1	NA	.01	.002	12/11/9615:31	11/29/9609:00	G06L012020	G06L012009	GFK016W
CR-A159503	K120-21	ND	1	NA	.01	.002	12/11/9615:44	11/29/9609:00	G06L012023	G06L012021	GFK016W
CR-A159603	K120-28	ND	1	NA	.01	.002	12/11/9615:48	11/29/9609:00	G06L012024	G06L012021	GFK016W
CR-A159703	K120-33	ND	1	NA	.01	.002	12/11/9615:52	11/29/9609:00	G06L012025	G06L012021	GFK016W
CR-A159803	K120-38	ND	1	NA	.01	.002	12/11/9615:56	11/29/9609:00	G06L012026	G06L012021	GFK016W
CR-A159903	K120-43	ND	1	NA	.01	.002	12/11/9615:06	11/29/9609:00	G06L012014	G06L012009	GFK016W
CR-A159903MS	K120-43M	.0133	1	NA	.01	.002	12/11/9615:19	11/29/9609:00	G06L012017	G06L012009	GFK016W
CR-A159903MSD	K120-43S	.0135	1	NA	.01	.002	12/11/9615:23	11/29/9609:00	G06L012018	G06L012009	GFK016W
CR-A159908	K120-48	ND	1	NA	.01	.002	12/11/9616:00	11/29/9609:00	G06L012027	G06L012021	GFK016W
MBLK1W	GFK016WB	ND	1	NA	.01	.002	12/11/9614:54	11/29/9609:00	G06L012011	G06L012009	GFK016W
LCS1W	GFK016WL	.0111	1	NA	.01	.002	12/11/9614:58	11/29/9609:00	G06L012012	G06L012009	GFK016W
LCD1W	GFK016WC	.0103	1	NA	.01	.002	12/11/9615:02	11/29/9609:00	G06L012013	G06L012009	GFK016W
MBLK2W	GFK015WB	ND	1	NA	.01	.002	12/10/9619:58	11/29/9609:00	G06L011011	G06L011009	GFK015W
LCS2W	GFK015WL	.00926F	1	NA	.01	.002	12/10/9620:02	11/29/9609:00	G06L011012	G06L011009	GFK015W
LCD2W	GFK015WC	.01	1	NA	.01	.002	12/10/9620:06	11/29/9609:00	G06L011013	G06L011009	GFK015W

PQL: Practical Quantitation Limit

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

EPA 3050A/7740
SELENIUM BY GFAA

SDG#: 96K120

DECEMBER 31, 1996

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP

PROJECT: CARSWELL AFB / 05G47900

SDG: 96K120

EPA 3050A/7740
SELENIUM BY GFAA

Nine (9) soil and ten (10) water samples were received on 11/22/96 for Selenium analysis in accordance with USEPA SW846.

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   All preparation blanks were free of contamination.

3. **Matrix Spike/Matrix Spike Duplicate**

   All MS recoveries were within QC limits.

4. **Laboratory Control Sample/Laboratory Control Sample Duplicate**

   All lab control results and RPDs were within the control limits.

5. **Sample Analysis**

   All samples were analyzed by MSA method due to failed analytical spike recovery.

11/29/1996 14:59

LAB CHRONICLE
Metals (Selenium)

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A159205	K120-05	18.0	GFL001S/12/03/96/07.00	G03L021/12/17/96/16:12	G03L021-010	/12
CR-A159305	K120-10	20.8		:20	↓	16
CR-A159405	K120-15	30.0		:31	G03L021-020	/22
CR-A159505	K120-23	25.8		:39	↓	26
CR-A159507	K120-25	30.5		20:10	G03L022-10	/14
CR-A159605	K120-30	29.2		20:18	↓	/16
CR-A159705	K120-35	22.8		:29	G03L022-20	/22
CR-A159805	K120-40	28.9		17:18	G03L021-40	/4[illegible]
CR-A159905	K120-45	25.1		:30	G03L021-50	/52
CR-A159905MS	K120-45M	25.1		:37	↓	56
CR-A159905DUP	K120-45D	25.1		:49	G03L021-60	/62
MBLK1	GFL001SB			18:30	G03L019-10	/12
LCS	↓	SL		:34	↓	13
LCSD	↓	SC	↓	20:02	↓	36

EPA 3050A/7740
SELENIUM BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96K120
Matrix : SOIL

Date Collcted : 11/20/96
DaTime Received: 11/22/96
Instrument ID : EMAXTI03

SAMPLE ID	CONTROL NO	RESULTS (mg/kg)	DLF	MOIST	PQL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A159205	K120-05	ND	1	18.0	.61	.134	12/17/9616:12	12/03/9607:00	G03L021012	G03L021010	GFL001S
CR-A159305	K120-10	ND	1	20.8	.631	.139	12/17/9616:20	12/03/9607:00	G03L021016	G03L021010	GFL001S
CR-A159405	K120-15	ND	1	30.0	.714	.157	12/17/9616:31	12/03/9607:00	G03L021022	G03L021020	GFL001S
CR-A159505	K120-23	ND	1	25.8	.674	.148	12/17/9616:39	12/03/9607:00	G03L021026	G03L021020	GFL001S
CR-A159507	K120-25	ND	1	30.5	.719	.158	12/17/9620:10	12/03/9607:00	G03L022012	G03L022010	GFL001S
CR-A159605	K120-30	0.214F	1	29.2	.706	.155	12/17/9620:18	12/03/9607:00	G03L022016	G03L022010	GFL001S
CR-A159705	K120-35	ND	1	22.8	.648	.142	12/17/9620:29	12/03/9607:00	G03L022022	G03L022020	GFL001S
CR-A159805	K120-40	ND	1	28.9	.703	.155	12/17/9617:18	12/03/9607:00	G03L021046	G03L021040	GFL001S
CR-A159905	K120-45	ND	1	25.1	.668	.147	12/17/9617:30	12/03/9607:00	G03L021052	G03L021050	GFL001S
CR-A159905MS	K120-45M	2.17	1	25.1	.668	.147	12/17/9617:37	12/03/9607:00	G03L021050	G03L021050	GFL001S
CR-A159905MSD	K120-45S	2.43	1	25.1	.668	.147	12/17/9617:49	12/03/9607:00	G03L021062	G03L021050	GFL001S
MBLK1S	GFL001SB	ND	1	NA	.5	.11	12/11/9618:30	12/03/9607:00	G03L019012	G03L019010	GFL001S
LCS1S	GFL001SL	2.24	1	NA	.5	.11	12/11/9618:34	12/03/9607:00	G03L019013	G03L019010	GFL001S
LCD1S	GFL001SC	2.16	1	NA	.5	.11	12/11/9620:02	12/03/9607:00	G03L019036	G03L019034	GFL001S

PQL: Practical Quantitation Limit
Note: Samples were analyzed by MSA due to failed analytical spike

11/29/1996 14:59

LAB CHRONICLE
Metals (Selenium)

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A159203	K120-03	NA	GFK015W/12/29/96/09.00	G03L013/12/7/96/20:34	G03L013-34	/39
CR-A159303	K120-08	NA	↓	↓ :45	↓	42
CR-A159403	K120-13	NA	GFK016W/12/29/96/09:00	G03L020/12/16/96/18:40	G03L020-10	/20
CR-A159408	K120-18	NA		:43	↓	21
CR-A159503	K120-21	NA		:55	G03L020-22	/24
CR-A159603	K120-28	NA		:58		/25
CR-A159703	K120-33	NA		19:02		/26
CR-A159803	K120-38	NA		:06	↓	/27
CR-A159903	K120-43	NA		18:21	G03L020-10	/15
CR-A159903MS	K120-43M	NA		:32		/18
CR-A159903DUP	K120-43D	NA		:36	↓	/19
CR-A159908	K120-48	NA		19:10	G03L020-22	/28
MBLK1W	GFK016WB			18:10		/12
LCS1	↓	WL		14		/13
LCS1D	↓	WC	↓	17	↓	/14
MBLK2W	GFK015WB		GFK015W/12/29/96/09.00	G03L013/12/7/96/20:22	G03L013-34	/36
LCS2	↓	WL	↓	26	↓	/37
LCS2D	↓	WC	↓	30	↓	/38

EPA 3020A/7740
SELENIUM BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96K120
Matrix : WATER

Date Collcted : 11/20/96
DaTime Received: 11/22/96
Instrument ID : EMAXTI03

SAMPLE ID	CONTROL NO	RESULTS (mg/L)	DLF	MOIST	PQL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A159203	K120-03	.002F	1	NA	.005	.0011	12/07/9620:34	11/29/9609:00	G03L013039	G03L013034	GFK015W
CR-A159303	K120-08	.0023F	1	NA	.005	.0011	12/07/9620:45	11/29/9609:00	G03L013042	G03L013034	GFK015W
CR-A159403	K120-13	.0019F	1	NA	.005	.0011	12/16/9618:40	11/29/9609:00	G03L020020	G03L020010	GFK016W
CR-A159408	K120-18	ND	1	NA	.005	.0011	12/16/9618:43	11/29/9609:00	G03L020021	G03L020010	GFK016W
CR-A159503	K120-21	ND	1	NA	.005	.0011	12/16/9618:55	11/29/9609:00	G03L020024	G03L020022	GFK016W
CR-A159603	K120-28	.0025F	1	NA	.005	.0011	12/16/9618:58	11/29/9609:00	G03L020025	G03L020022	GFK016W
CR-A159703	K120-33	.0022F	1	NA	.005	.0011	12/16/9619:02	11/29/9609:00	G03L020026	G03L020022	GFK016W
CR-A159803	K120-38	.002F	1	NA	.005	.0011	12/16/9619:06	11/29/9609:00	G03L020027	G03L020022	GFK016W
CR-A159903	K120-43	ND	1	NA	.005	.0011	12/16/9618:21	11/29/9609:00	G03L020015	G03L020010	GFK016W
CR-A159903MS	K120-43M	.0213	1	NA	.005	.0011	12/16/9618:32	11/29/9609:00	G03L020018	G03L020010	GFK016W
CR-A159903MSD	K120-43S	.0219	1	NA	.005	.0011	12/16/9618:36	11/29/9609:00	G03L020019	G03L020010	GFK016W
CR-A159908	K120-48	.0022F	1	NA	.005	.0011	12/16/9619:10	11/29/9609:00	G03L020028	G03L020022	GFK016W
MBLK1W	GFK016WB	.0019F	1	NA	.005	.0011	12/16/9618:10	11/29/9609:00	G03L020012	G03L020022	GFK016W
LCS1W	GFK016WL	.022	1	NA	.005	.0011	12/16/9618:14	11/29/9609:00	G03L020013	G03L020022	GFK016W
LCD1W	GFK016WC	.021	1	NA	.005	.0011	12/16/9618:17	11/29/9609:00	G03L020014	G03L020022	GFK016W
MBLK2W	GFK015WB	.0014F	1	NA	.005	.0011	12/07/9620:22	11/29/9609:00	G03L013036	G03L013034	GFK015W
LCS2W	GFK015WL	.0244	1	NA	.005	.0011	12/07/9620:26	11/29/9609:00	G03L013037	G03L013034	GFK015W
LCD2W	GFK015WC	.0216	1	NA	.005	.0011	12/07/9620:30	11/29/9609:00	G03L013038	G03L013034	GFK015W

PQL: Practical Quantitation Limit

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

EPA 3050A/7760
SILVER BY GFAA

SDG#: 96K120

DECEMBER 31, 1996

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP

PROJECT: CARSWELL AFB / 05G47900

SDG: 96K120

EPA 3050A/7760
SILVER BY GFAA

Nine (9) soil and ten (10) water samples were received on 11/22/96 for Silver analysis in accordance with USEPA SW846.

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   A preparation blank was free of contamination.

3. **Matrix Spike/Matrix Spike Duplicate**

   All MS/MSD recoveries were within QC limits.

4. **Laboratory Control Sample/Laboratory Control Sample Duplicate**

   All lab control results and RPDs were within the control limits.

5. **Sample Analysis**

   All sample analyses were within QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

11/29/1996 14:59

LAB CHRONICLE
Metals

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A159203	K120-03	NA	GFK015W/11/29/96h.00	G03L011/12/6/96	G03L011-45/	51
CR-A159303	K120-08	NA				54
CR-A159403	K120-13	NA	GFK01W/11/29/96/09.00		G03L011-33/	39
CR-A159408	K120-18	NA				40
CR-A159503	K120-21	NA				41
CR-A159603	K120-28	NA				42
CR-A159703	K120-33	NA				43
CR-A159803	K120-38	NA				[illegible]
CR-A159903	K120-43	NA			G03L011-21/	-3
CR-A159903MS	K120-43M	NA			G03L011-32/	37
CR-A159903DUP	K120-43D	NA				38
CR-A159908	K120-48	NA			G03L011-45/	4
MBLK1W	GFK016WB				G03L011-21/	-2
LCS1		WL				30
LCS1D		WC				31
MBLK2W	GFK015WB		GFK015W/11/29/96/09.00		G03L011-45/	48
LCS2		WL				49
LCS2D		WC				50

11/29/1996 14:59

LAB CHRONICLE
Metals (Silver)

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A159205	K120-05	18.0	GFL001F/12/3/96/07.00	G03L011/12/6/96	G03L011-	9/-19
CR-A159305	K120-10	20.8				20
CR-A159405	K120-15	30.0			G03L011-	21/-23
CR-A159505	K120-23	25.8				24
CR-A159507	K120-25	30.5				25
CR-A159605	K120-30	29.2				26
CR-A159705	K120-35	22.8				27
CR-A159805	K120-40	28.9				28
CR-A159905	K120-45	25.1			G03L011-	9/-14
CR-A159905MS	K120-45M	25.1				17
CR-A159905DUP	K120-45D	25.1				18
MBLK13	GFL001SB					11
LCS		SL				12
LCSD		SC				13

EPA 3050A/7760
SILVER BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96K120
Matrix : SOIL

Date Collcted : 11/20/96
DaTime Received: 11/22/96
Instrument ID : EMAXTI03

SAMPLE ID	CONTROL NO	RESULTS (mg/kg)	DLF	MOIST	PQL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A159205	K120-05	.0598F	1	18.0	.122	.0244	12/06/9620:54	12/03/9607:00	G03L011019	G03L011009	GFL001S
CR-A159305	K120-10	.0593F	1	20.8	.126	.0253	12/06/9620:57	12/03/9607:00	G03L011020	G03L011009	GFL001S
CR-A159405	K120-15	.0929F	1	30.0	.143	.0286	12/06/9621:07	12/03/9607:00	G03L011023	G03L011021	GFL001S
CR-A159505	K120-23	.0404F	1	25.8	.135	.027	12/06/9621:10	12/03/9607:00	G03L011024	G03L011021	GFL001S
CR-A159507	K120-25	.0691F	1	30.5	.144	.0288	12/06/9621:13	12/03/9607:00	G03L011025	G03L011021	GFL001S
CR-A159605	K120-30	.041F	1	29.2	.141	.0282	12/06/9621:16	12/03/9607:00	G03L011026	G03L011021	GFL001S
CR-A159705	K120-35	.0311F	1	22.8	.13	.0259	12/06/9621:19	12/03/9607:00	G03L011027	G03L011021	GFL001S
CR-A159805	K120-40	.0492F	1	28.9	.141	.0281	12/06/9621:23	12/03/9607:00	G03L011028	G03L011021	GFL001S
CR-A159905	K120-45	.0521F	1	25.1	.134	.0267	12/06/9620:38	12/03/9607:00	G03L011014	G03L011009	GFL001S
CR-A159905MS	K120-45M	.351	1	25.1	.134	.0267	12/06/9620:48	12/03/9607:00	G03L011017	G03L011009	GFL001S
CR-A159905MSD	K120-45S	.32	1	25.1	.134	.0267	12/06/9620:51	12/03/9607:00	G03L011018	G03L011009	GFL001S
MBLK1S	GFL001SB	.02F	1	NA	.1	.02	12/06/9620:28	12/03/9607:00	G03L011011	G03L011009	GFL001S
LCS1S	GFL001SL	.227	1	NA	.1	.02	12/06/9620:32	12/03/9607:00	G03L011012	G03L011009	GFL001S
LCD1S	GFL001SC	.222	1	NA	.1	.02	12/06/9620:35	12/03/9607:00	G03L011013	G03L011009	GFL001S

PQL: Practical Quantitation Limit
AFCEE Ver. 1.1

EPA 3020A/7760
SILVER BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96K120
Matrix : WATER

Date Collcted : 11/20/96
DaTime Received: 11/22/96
Instrument ID : EMAXTI03

SAMPLE ID	CONTROL NO	RESULTS (mg/L)	DLF	MOIST	PQL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A159203	K120-03	ND	1	NA	.001	.0002	12/06/9622:37	11/29/9609:00	G03L011051	G03L011045	GFK015W
CR-A159303	K120-08	.00026F	1	NA	.001	.0002	12/06/9622:47	11/29/9609:00	G03L011054	G03L011045	GFK015W
CR-A159403	K120-13	.0002F	1	NA	.001	.0002	12/06/9621:59	11/29/9609:00	G03L011039	G03L011033	GFK016W
CR-A159408	K120-18	ND	1	NA	.001	.0002	12/06/9622:02	11/29/9609:00	G03L011040	G03L011033	GFK016W
CR-A159503	K120-21	ND	1	NA	.001	.0002	12/06/9622:06	11/29/9609:00	G03L011041	G03L011033	GFK016W
CR-A159603	K120-28	ND	1	NA	.001	.0002	12/06/9622:09	11/29/9609:00	G03L011042	G03L011033	GFK016W
CR-A159703	K120-33	ND	1	NA	.001	.0002	12/06/9622:12	11/29/9609:00	G03L011043	G03L011033	GFK016W
CR-A159803	K120-38	ND	1	NA	.001	.0002	12/06/9622:15	11/29/9609:00	G03L011044	G03L011033	GFK016W
CR-A159903	K120-43	ND	1	NA	.001	.0002	12/06/9621:36	11/29/9609:00	G03L011032	G03L011021	GFK016W
CR-A159903MS	K120-43M	.00211	1	NA	.001	.0002	12/06/9621:52	11/29/9609:00	G03L011037	G03L011033	GFK016W
CR-A159903MSD	K120-43S	.00199	1	NA	.001	.0002	12/06/9621:56	11/29/9609:00	G03L011038	G03L011033	GFK016W
CR-A159908	K120-48	ND	1	NA	.001	.0002	12/06/9622:25	11/29/9609:00	G03L011047	G03L011045	GFK016W
MBLK1W	GFK016WB	ND	1	NA	.001	.0002	12/06/9621:26	11/29/9609:00	G03L011029	G03L011021	GFK016W
LCS1W	GFK016WL	.00179	1	NA	.001	.0002	12/06/9621:29	11/29/9609:00	G03L011030	G03L011021	GFK016W
LCD1W	GFK016WC	.00176	1	NA	.001	.0002	12/06/9621:32	11/29/9609:00	G03L011031	G03L011021	GFK016W
MBLK2W	GFK015WB	ND	1	NA	.001	.0002	12/06/9622:28	11/29/9609:00	G03L011048	G03L011045	GFK015W
LCS2W	GFK015WL	.00174	1	NA	.001	.0002	12/06/9622:31	11/29/9609:00	G03L011049	G03L011045	GFK015W
LCD2W	GFK015WC	.00196	1	NA	.001	.0002	12/06/9622:34	11/29/9609:00	G03L011050	G03L011045	GFK015W

PQL: Practical Quantitation Limit
AFCEE Ver. 1.1

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP, INC.

CARSWELL AFB / 05G47900

VOLATILES

SDG#: 96K120

DECEMBER 26, 1996

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP, INC.

PROJECT: CARSWELL AFB / 05G47900

SDG: 96K120

VOLATILES

Nine (9) soil and eleven (11) water samples were received on 11/22/96 to be analyzed for volatile organics by EPA Method 8240B in accordance with SW846.

1. Holding Time

   Analytical holding time was met.

2. Surrogate Recovery

   All surrogate recoveries were within the QC limits.

3. Matrix Spike/Matrix Spike Duplicate

   All recoveries were within the QC limits. The recovery for Vinyl Acetate was out of QC limit. On the water QC, no 2-Chloroethyl Vinyl Ether was found due to the sample being acid preserved.

4. Lab Control Sample/Lab Control Sample Duplicate

   All recoveries and RPDs were within the QC limits.

5. Method Blanks

   Method blanks were free of contamination.

6. Tuning and Calibration

   Tuning and calibration were carried out at 12 hour interval. All QC requirements were met.

7. Sample Analysis

   All sample analyses were done within QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

11/29/1996 14:59

LAB CHRONICLE
EPA 8240

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME		CALIB REF	FILE ID
CR-A159204	K120-04	20.3					
			VOK2502	11/29/96	16.14	KP486	KP496
CR-A159304	K120-09	26.7			16.42		KP497
CR-A159404	K120-14	28.6			17.11		KP498
CR-A159504	K120-22	20.2			17.39		KP499
CR-A159506	K120-24	32.6	VOL0302	12/3/96	19.46	LP054	LP058
CR-A159604	K120-29	22.8					
			VOK2502	11/29/96	18.36	KP488	KP501
CR-A159704	K120-34	22.0			19.03		KP502
CR-A159804	K120-39	26.4			19.32		[illegible]
CR-A159904	K120-44	23.5			20.00		KP504
CR-A159904MS	K120-44M	23.5			20.28		KP505
CR-A159904MSD	K120-44S	23.5			20.55		KP506
VBLK01	VOK2502B				17.29		KP488
LCS01	VOK2502L				12.57		KP489
LCS001	VOK2502C				13.25		KP490
VBLK02	VOL0302B		VOL0302	12/3/96	13.22	LP054	LP055
LCS02	VOL0302L				13.50		LP056
LCS002	VOL0302C				14.12		LP057

LAB CHRONICLE
EPA 8240

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME		CALIB REF	FILE ID
CR-A159201	K120-01	NA	V0L0402	12/3/96	20.24	LP063	LP070
CR-A159301	K120-06	NA			20.52		LP071
CR-A159401	K120-11	NA	V0L0502	12/4/96	12.04	LP490	LP095
CR-A159406	K120-16	NA	V0L0402	12/3/96	21.48	LP063	LP073
CR-A159501	K120-19	NA			22.16		LP074
CR-A159601	K120-26	NA			22.45		LP075
CR-A159701	K120-31	NA			23.13		LP076
CR-A159801	K120-36	NA			23.40		LP077
CR-A159901	K120-41	NA	V0L0502	12/4/96	12.32	LP490	LP096
CR-A159901MS	K120-41M	NA	V0L0402	12/3/96	19.29		LP068
CR-A159901MSD	K120-41S	NA			19.52		LP069
CR-A159906	K120-46	NA			00.08		LP078
CR-A159909	K120-49	NA			00.37		LP079
VBLK01	V0L0402B				17.34		LP064
LCS01	V0L0402C				18.02		LP065
LCS001	V0L0402C				18.32		LP066
VBLK02	V0L0502B		V0L0502	12/4/96	9.55	LP490	LP491
LCS02	V0L0502C				10.35		LP492
LCS002	V0L0502C				11.35		LP494

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/03/96 20:24
Sample ID	: CR-A159201	DaTime Analyzd :	12/03/96 20:24
Lab Cnt NO.	: K120-01	Dilutn Factor :	1
Lab File ID	: RLP070	Matrix :	WATER
Ext Btch ID	: VOL0402	% Moisture :	NA
Calib. Ref.	: RLP063	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.2[illegible]
Bromomethane	ND	10	.[illegible]
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	1.89F	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	92	79-118
Bromofluorobenzene	89	86-115
Toluene-d8	93	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/03/96 20:52
Sample ID	: CR-A159301	DaTime Analyzd :	12/03/96 20:52
Lab Cnt NO.	: K120-06	Dilutn Factor :	1
Lab File ID	: RLP071	Matrix :	WATER
Ext Btch ID	: VOL0402	% Moisture :	NA
Calib. Ref.	: RLP063	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	ND	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	96	79-118
Bromofluorobenzene	98	86-115
Toluene-d8	90	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/04/96 12:04
Sample ID	: CR-A159401	DaTime Analyzd :	12/04/96 12:04
Lab Cnt NO.:	K120-11	Dilutn Factor :	1
Lab File ID:	RLP095	Matrix :	WATER
Ext Btch ID:	VOL0502	% Moisture :	NA
Calib. Ref.:	RLP090	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.2
Bromomethane	ND	10	.7
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	3.29F	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	90	79-118
Bromofluorobenzene	93	86-115
Toluene-d8	97	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/03/96 21:48
Sample ID	: CR-A159406	DaTime Analyzd :	12/03/96 21:48
Lab Cnt NO.	: K120-16	Dilutn Factor :	1
Lab File ID	: RLP073	Matrix :	WATER
Ext Btch ID	: VOL0402	% Moisture :	NA
Calib. Ref.	: RLP063	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	ND	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	92	79-118
Bromofluorobenzene	93	86-115
Toluene-d8	94	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/03/96 22:16
Sample ID	: CR-A159501	DaTime Analyzd :	12/03/96 22:16
Lab Cnt NO.	: K120-19	Dilutn Factor :	1
Lab File ID	: RLP074	Matrix :	WATER
Ext Btch ID	: VOL0402	% Moisture :	NA
Calib. Ref.	: RLP063	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	[illegible]
Bromomethane	ND	10	[illegible]
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	ND	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	95	79-118
Bromofluorobenzene	99	86-115
Toluene-d8	90	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/03/96 22:45
Sample ID	: CR-A159601	DaTime Analyzd :	12/03/96 22:45
Lab Cnt NO.:	K120-26	Dilutn Factor :	1
Lab File ID:	RLP075	Matrix :	WATER
Ext Btch ID:	VOL0402	% Moisture :	NA
Calib. Ref.:	RLP063	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	ND	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	93	79-118
Bromofluorobenzene	90	86-115
Toluene-d8	91	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/03/96 23:13
Sample ID	: CR-A159701	DaTime Analyzd :	12/03/96 23:13
Lab Cnt NO.:	K120-31	Dilutn Factor :	1
Lab File ID:	RLP076	Matrix :	WATER
Ext Btch ID:	VOL0402	% Moisture :	NA
Calib. Ref.:	RLP063	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.2
Bromomethane	ND	10	.7
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	ND	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	94	79-118
Bromofluorobenzene	91	86-115
Toluene-d8	89	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/03/96 23:40
Sample ID	: CR-A159801	DaTime Analyzd :	12/03/96 23:40
Lab Cnt NO.:	K120-36	Dilutn Factor :	1
Lab File ID:	RLP077	Matrix :	WATER
Ext Btch ID:	VOL0402	% Moisture :	NA
Calib. Ref.:	RLP063	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	2.2F	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	91	79-118
Bromofluorobenzene	92	86-115
Toluene-d8	90	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/04/96 12:32
Sample ID	: CR-A159901	DaTime Analyzd :	12/04/96 12:32
Lab Cnt NO.	: K120-41	Dilutn Factor :	1
Lab File ID	: RLP096	Matrix :	WATER
Ext Btch ID	: VOL0502	% Moisture :	NA
Calib. Ref.	: RLP090	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.29
Bromomethane	ND	10	.7
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	3.06F	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	94	79-118
Bromofluorobenzene	96	86-115
Toluene-d8	97	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/04/96 00:08
Sample ID	: CR-A159906	DaTime Analyzd :	12/04/96 00:08
Lab Cnt NO.:	K120-46	Dilutn Factor :	1
Lab File ID:	RLP078	Matrix :	WATER
Ext Btch ID:	VOL0402	% Moisture :	NA
Calib. Ref.:	RLP063	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	5.13	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	93	79-118
Bromofluorobenzene	98	86-115
Toluene-d8	91	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/21/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/04/96 00:37
Sample ID	: CR-A159909	DaTime Analyzd :	12/04/96 00:37
Lab Cnt NO.:	K120-49	Dilutn Factor :	1
Lab File ID:	RLP079	Matrix :	WATER
Ext Btch ID:	VOL0402	% Moisture :	NA
Calib. Ref.:	RLP063	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.2
Bromomethane	ND	10	.7
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	2.09F	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	92	79-118
Bromofluorobenzene	98	86-115
Toluene-d8	91	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/29/96 16:14
Sample ID	: CR-A159204	DaTime Analyzd :	11/29/96 16:14
Lab Cnt NO.	: K120-04	Dilutn Factor :	1
Lab File ID	: RKP496	Matrix :	SOIL
Ext Btch ID	: VOK2502	% Moisture :	20.3
Calib. Ref.	: RKP487	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	6.27	.669
1,1,2,2-Tetrachloroethane	ND	6.27	1.04
1,1,2-Trichloroethane	ND	6.27	1.06
1,1-Dichloroethane	ND	6.27	.532
1,1-Dichloroethene	ND	6.27	.655
1,2,3-Trichloropropane	ND	62.7	1.91
1,2-Dichloroethane	ND	6.27	.373
1,2-Dichloropropane	ND	6.27	1.2
2-Butanone	ND	125	2.84
2-Chloroethyl Vinyl Ether	ND	12.5	1.25
2-Hexanone	ND	62.7	1.66
4-Methyl-2-Pentanone	ND	62.7	1.96
Acetone	ND	125	5.62
Benzene	ND	6.27	.509
Bromodichloromethane	ND	6.27	.482
Bromoform	ND	6.27	.719
Bromomethane	ND	12.5	1.54
Carbon Disulfide	ND	6.27	.617
Carbon Tetrachloride	ND	6.27	.494
Chlorobenzene	ND	6.27	.55
Chloroethane	ND	12.5	1.15
Chloroform	ND	6.27	.57
Chloromethane	ND	12.5	1.17
Cis-1,2-Dichloroethene	ND	6.27	.586
Cis-1,3-Dichloropropene	ND	6.27	.502
Dibromochloromethane	ND	6.27	.484
Ethylbenzene	ND	6.27	.678
Methylene Chloride	ND	6.27	3.12
m/p-Xylenes	ND	12.5	.866
o-Xylene	ND	6.27	.478
Styrene	ND	6.27	.598
Tetrachloroethylene	ND	6.27	.393
Toluene	ND	6.27	.507
Trans-1,2-Dichloroethene	ND	6.27	.478
Trans-1,3-Dichloropropene	ND	6.27	.438
Trichloroethene	ND	6.27	.59
Vinyl Acetate	ND	62.7	1.03
Vinyl Chloride	ND	12.5	1.58

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	105	79-118
Bromofluorobenzene	97	86-115
Toluene-d8	105	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/29/96 16:42
Sample ID	: CR-A159304	DaTime Analyzd :	11/29/96 16:42
Lab Cnt NO.	: K120-09	Dilutn Factor :	1
Lab File ID	: RKP497	Matrix :	SOIL
Ext Btch ID	: VOK2502	% Moisture :	26.7
Calib. Ref.	: RKP487	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	6.82	.727
1,1,2,2-Tetrachloroethane	ND	6.82	1.13
1,1,2-Trichloroethane	ND	6.82	1.15
1,1-Dichloroethane	ND	6.82	.578
1,1-Dichloroethene	ND	6.82	.712
1,2,3-Trichloropropane	ND	68.2	2.08
1,2-Dichloroethane	ND	6.82	.405
1,2-Dichloropropane	ND	6.82	1.31
2-Butanone	ND	136	3.09
2-Chloroethyl Vinyl Ether	ND	13.6	1.36
2-Hexanone	ND	68.2	1.8
4-Methyl-2-Pentanone	ND	68.2	2.13
Acetone	ND	136	6.12
Benzene	ND	6.82	.554
Bromodichloromethane	ND	6.82	.524
Bromoform	ND	6.82	.7[illegible]
Bromomethane	ND	13.6	1.[illegible]
Carbon Disulfide	ND	6.82	.671
Carbon Tetrachloride	ND	6.82	.538
Chlorobenzene	ND	6.82	.598
Chloroethane	ND	13.6	1.25
Chloroform	ND	6.82	.619
Chloromethane	ND	13.6	1.27
Cis-1,2-Dichloroethene	ND	6.82	.637
Cis-1,3-Dichloropropene	ND	6.82	.546
Dibromochloromethane	ND	6.82	.527
Ethylbenzene	ND	6.82	.737
Methylene Chloride	ND	6.82	3.4
m/p-Xylenes	ND	13.6	.941
o-Xylene	ND	6.82	.52
Styrene	ND	6.82	.651
Tetrachloroethylene	ND	6.82	.427
Toluene	ND	6.82	.551
Trans-1,2-Dichloroethene	ND	6.82	.52
Trans-1,3-Dichloropropene	ND	6.82	.476
Trichloroethene	ND	6.82	.641
Vinyl Acetate	ND	68.2	1.11
Vinyl Chloride	ND	13.6	1.72

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	103	79-118
Bromofluorobenzene	95	86-115
Toluene-d8	106	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/29/96 17:11
Sample ID	: CR-A159404	DaTime Analyzd :	11/29/96 17:11
Lab Cnt NO.	: K120-14	Dilutn Factor :	1
Lab File ID	: RKP498	Matrix :	SOIL
Ext Btch ID	: VOK2502	% Moisture :	28.6
Calib. Ref.	: RKP487	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	7	.746
1,1,2,2-Tetrachloroethane	ND	7	1.16
1,1,2-Trichloroethane	ND	7	1.18
1,1-Dichloroethane	ND	7	.594
1,1-Dichloroethene	ND	7	.731
1,2,3-Trichloropropane	ND	70	2.13
1,2-Dichloroethane	ND	7	.416
1,2-Dichloropropane	ND	7	1.34
2-Butanone	ND	140	3.17
2-Chloroethyl Vinyl Ether	ND	14	1.39
2-Hexanone	ND	70	1.85
4-Methyl-2-Pentanone	ND	70	2.19
Acetone	ND	140	6.28
Benzene	ND	7	.569
Bromodichloromethane	ND	7	.538
Bromoform	ND	7	.803
Bromomethane	ND	14	1.72
Carbon Disulfide	ND	7	.689
Carbon Tetrachloride	ND	7	.552
Chlorobenzene	ND	7	.613
Chloroethane	ND	14	1.29
Chloroform	ND	7	.636
Chloromethane	ND	14	1.31
Cis-1,2-Dichloroethene	ND	7	.654
Cis-1,3-Dichloropropene	ND	7	.56
Dibromochloromethane	ND	7	.541
Ethylbenzene	ND	7	.756
Methylene Chloride	ND	7	3.49
m/p-Xylenes	ND	14	.966
o-Xylene	ND	7	.534
Styrene	ND	7	.668
Tetrachloroethylene	ND	7	.438
Toluene	ND	7	.566
Trans-1,2-Dichloroethene	ND	7	.534
Trans-1,3-Dichloropropene	ND	7	.489
Trichloroethene	ND	7	.658
Vinyl Acetate	ND	70	1.14
Vinyl Chloride	ND	14	1.77

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	103	79-118
Bromofluorobenzene	89	86-115
Toluene-d8	104	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/29/96 17:39
Sample ID	: CR-A159504	DaTime Analyzd :	11/29/96 17:39
Lab Cnt NO.	: K120-22	Dilutn Factor :	1
Lab File ID	: RKP499	Matrix :	SOIL
Ext Btch ID	: VOK2502	% Moisture :	20.2
Calib. Ref.	: RKP487	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	6.27	.668
1,1,2,2-Tetrachloroethane	ND	6.27	1.04
1,1,2-Trichloroethane	ND	6.27	1.06
1,1-Dichloroethane	ND	6.27	.531
1,1-Dichloroethene	ND	6.27	.654
1,2,3-Trichloropropane	ND	62.7	1.91
1,2-Dichloroethane	ND	6.27	.372
1,2-Dichloropropane	ND	6.27	1.2
2-Butanone	ND	125	2.83
2-Chloroethyl Vinyl Ether	ND	12.5	1.25
2-Hexanone	ND	62.7	1.66
4-Methyl-2-Pentanone	ND	62.7	1.96
Acetone	ND	125	5.62
Benzene	ND	6.27	.509
Bromodichloromethane	ND	6.27	.481
Bromoform	ND	6.27	.7[illegible]
Bromomethane	ND	12.5	1[illegible]
Carbon Disulfide	ND	6.27	.617
Carbon Tetrachloride	ND	6.27	.494
Chlorobenzene	ND	6.27	.549
Chloroethane	ND	12.5	1.15
Chloroform	ND	6.27	.569
Chloromethane	ND	12.5	1.17
Cis-1,2-Dichloroethene	ND	6.27	.585
Cis-1,3-Dichloropropene	ND	6.27	.501
Dibromochloromethane	ND	6.27	.484
Ethylbenzene	ND	6.27	.677
Methylene Chloride	ND	6.27	3.12
m/p-Xylenes	ND	12.5	.865
o-Xylene	ND	6.27	.477
Styrene	ND	6.27	.598
Tetrachloroethylene	ND	6.27	.392
Toluene	ND	6.27	.506
Trans-1,2-Dichloroethene	ND	6.27	.477
Trans-1,3-Dichloropropene	ND	6.27	.437
Trichloroethene	ND	6.27	.589
Vinyl Acetate	ND	62.7	1.02
Vinyl Chloride	ND	12.5	1.58

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	104	79-118
Bromofluorobenzene	95	86-115
Toluene-d8	101	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/03/96 14:46
Sample ID	: CR-A159506	DaTime Analyzd :	12/03/96 14:46
Lab Cnt NO.:	K120-24	Dilutn Factor :	1
Lab File ID:	RLP058	Matrix :	SOIL
Ext Btch ID:	VOL0302	% Moisture :	32.6
Calib. Ref.:	RLP054	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	7.42	.791
1,1,2,2-Tetrachloroethane	ND	7.42	1.23
1,1,2-Trichloroethane	ND	7.42	1.25
1,1-Dichloroethane	ND	7.42	.629
1,1-Dichloroethene	ND	7.42	.774
1,2,3-Trichloropropane	ND	74.2	2.26
1,2-Dichloroethane	ND	7.42	.441
1,2-Dichloropropane	ND	7.42	1.42
2-Butanone	ND	148	3.36
2-Chloroethyl Vinyl Ether	ND	14.8	1.47
2-Hexanone	ND	74.2	1.96
4-Methyl-2-Pentanone	ND	74.2	2.32
Acetone	ND	148	6.65
Benzene	ND	7.42	.602
Bromodichloromethane	ND	7.42	.57
Bromoform	ND	7.42	.85
Bromomethane	ND	14.8	1.82
Carbon Disulfide	ND	7.42	.73
Carbon Tetrachloride	ND	7.42	.585
Chlorobenzene	ND	7.42	.65
Chloroethane	ND	14.8	1.36
Chloroform	ND	7.42	.674
Chloromethane	ND	14.8	1.38
Cis-1,2-Dichloroethene	ND	7.42	.693
Cis-1,3-Dichloropropene	ND	7.42	.593
Dibromochloromethane	ND	7.42	.573
Ethylbenzene	ND	7.42	.801
Methylene Chloride	ND	7.42	3.69
m/p-Xylenes	ND	14.8	1.02
o-Xylene	ND	7.42	.565
Styrene	ND	7.42	.708
Tetrachloroethylene	ND	7.42	.464
Toluene	ND	7.42	.599
Trans-1,2-Dichloroethene	ND	7.42	.565
Trans-1,3-Dichloropropene	ND	7.42	.518
Trichloroethene	ND	7.42	.697
Vinyl Acetate	ND	74.2	1.21
Vinyl Chloride	ND	14.8	1.87

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	103	79-118
Bromofluorobenzene	91	86-115
Toluene-d8	107	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/29/96 18:36
Sample ID	: CR-A159604	DaTime Analyzd :	11/29/96 18:36
Lab Cnt NO.	: K120-29	Dilutn Factor :	1
Lab File ID	: RKP501	Matrix :	SOIL
Ext Btch ID	: VOK2502	% Moisture :	22.8
Calib. Ref.	: RKP487	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	6.48	.69
1,1,2,2-Tetrachloroethane	ND	6.48	1.08
1,1,2-Trichloroethane	ND	6.48	1.09
1,1-Dichloroethane	ND	6.48	.549
1,1-Dichloroethene	ND	6.48	.676
1,2,3-Trichloropropane	ND	64.8	1.97
1,2-Dichloroethane	ND	6.48	.385
1,2-Dichloropropane	ND	6.48	1.24
2-Butanone	ND	130	2.93
2-Chloroethyl Vinyl Ether	ND	13	1.29
2-Hexanone	ND	64.8	1.71
4-Methyl-2-Pentanone	ND	64.8	2.02
Acetone	ND	130	5.81
Benzene	ND	6.48	.526
Bromodichloromethane	ND	6.48	.497
Bromoform	ND	6.48	.7[illegible]
Bromomethane	ND	13	1[illegible]
Carbon Disulfide	ND	6.48	.63[illegible]
Carbon Tetrachloride	ND	6.48	.51
Chlorobenzene	ND	6.48	.567
Chloroethane	ND	13	1.19
Chloroform	ND	6.48	.588
Chloromethane	ND	13	1.21
Cis-1,2-Dichloroethene	ND	6.48	.605
Cis-1,3-Dichloropropene	ND	6.48	.518
Dibromochloromethane	ND	6.48	.5
Ethylbenzene	ND	6.48	.699
Methylene Chloride	ND	6.48	3.23
m/p-Xylenes	ND	13	.894
o-Xylene	ND	6.48	.494
Styrene	ND	6.48	.618
Tetrachloroethylene	ND	6.48	.405
Toluene	ND	6.48	.523
Trans-1,2-Dichloroethene	ND	6.48	.494
Trans-1,3-Dichloropropene	ND	6.48	.452
Trichloroethene	ND	6.48	.609
Vinyl Acetate	ND	64.8	1.06
Vinyl Chloride	ND	13	1.64

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	105	79-118
Bromofluorobenzene	94	86-115
Toluene-d8	100	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/29/96 19:03
Sample ID	: CR-A159704	DaTime Analyzd :	11/29/96 19:03
Lab Cnt NO.	: K120-34	Dilutn Factor :	1
Lab File ID	: RKP502	Matrix :	SOIL
Ext Btch ID	: VOK2502	% Moisture :	22.0
Calib. Ref.	: RKP487	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	6.41	.683
1,1,2,2-Tetrachloroethane	ND	6.41	1.06
1,1,2-Trichloroethane	ND	6.41	1.08
1,1-Dichloroethane	ND	6.41	.544
1,1-Dichloroethene	ND	6.41	.669
1,2,3-Trichloropropane	ND	64.1	1.95
1,2-Dichloroethane	ND	6.41	.381
1,2-Dichloropropane	ND	6.41	1.23
2-Butanone	ND	128	2.9
2-Chloroethyl Vinyl Ether	ND	12.8	1.27
2-Hexanone	ND	64.1	1.69
4-Methyl-2-Pentanone	ND	64.1	2
Acetone	ND	128	5.75
Benzene	ND	6.41	.521
Bromodichloromethane	ND	6.41	.492
Bromoform	ND	6.41	.735
Bromomethane	ND	12.8	1.57
Carbon Disulfide	ND	6.41	.631
Carbon Tetrachloride	ND	6.41	.505
Chlorobenzene	ND	6.41	.562
Chloroethane	ND	12.8	1.18
Chloroform	ND	6.41	.582
Chloromethane	ND	12.8	1.2
Cis-1,2-Dichloroethene	ND	6.41	.599
Cis-1,3-Dichloropropene	ND	6.41	.513
Dibromochloromethane	ND	6.41	.495
Ethylbenzene	ND	6.41	.692
Methylene Chloride	ND	6.41	3.19
m/p-Xylenes	ND	12.8	.885
o-Xylene	ND	6.41	.488
Styrene	ND	6.41	.612
Tetrachloroethylene	ND	6.41	.401
Toluene	ND	6.41	.518
Trans-1,2-Dichloroethene	ND	6.41	.488
Trans-1,3-Dichloropropene	ND	6.41	.447
Trichloroethene	ND	6.41	.603
Vinyl Acetate	ND	64.1	1.05
Vinyl Chloride	ND	12.8	1.62

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	103	79-118
Bromofluorobenzene	95	86-115
Toluene-d8	100	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/29/96 19:32
Sample ID	: CR-A159804	DaTime Analyzd :	11/29/96 19:32
Lab Cnt NO.	: K120-39	Dilutn Factor :	1
Lab File ID	: RKP503	Matrix :	SOIL
Ext Btch ID	: VOK2502	% Moisture :	26.4
Calib. Ref.	: RKP487	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	6.79	.724
1,1,2,2-Tetrachloroethane	ND	6.79	1.13
1,1,2-Trichloroethane	ND	6.79	1.15
1,1-Dichloroethane	ND	6.79	.576
1,1-Dichloroethene	ND	6.79	.709
1,2,3-Trichloropropane	ND	67.9	2.07
1,2-Dichloroethane	ND	6.79	.404
1,2-Dichloropropane	ND	6.79	1.1
2-Butanone	ND	136	3.07
2-Chloroethyl Vinyl Ether	ND	13.6	1.35
2-Hexanone	ND	67.9	1.8
4-Methyl-2-Pentanone	ND	67.9	2.12
Acetone	ND	136	6.09
Benzene	ND	6.79	.552
Bromodichloromethane	ND	6.79	.522
Bromoform	ND	6.79	.7
Bromomethane	ND	13.6	1.
Carbon Disulfide	ND	6.79	.668
Carbon Tetrachloride	ND	6.79	.535
Chlorobenzene	ND	6.79	.595
Chloroethane	ND	13.6	1.25
Chloroform	ND	6.79	.617
Chloromethane	ND	13.6	1.27
Cis-1,2-Dichloroethene	ND	6.79	.635
Cis-1,3-Dichloropropene	ND	6.79	.543
Dibromochloromethane	ND	6.79	.524
Ethylbenzene	ND	6.79	.734
Methylene Chloride	ND	6.79	3.38
m/p-Xylenes	ND	13.6	.938
o-Xylene	ND	6.79	.518
Styrene	ND	6.79	.648
Tetrachloroethylene	ND	6.79	.425
Toluene	ND	6.79	.549
Trans-1,2-Dichloroethene	ND	6.79	.518
Trans-1,3-Dichloropropene	ND	6.79	.474
Trichloroethene	ND	6.79	.639
Vinyl Acetate	ND	67.9	1.11
Vinyl Chloride	ND	13.6	1.72

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	106	79-118
Bromofluorobenzene	94	86-115
Toluene-d8	103	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/29/96 20:00
Sample ID	: CR-A159904	DaTime Analyzd :	11/29/96 20:00
Lab Cnt NO.	: K120-44	Dilutn Factor :	1
Lab File ID	: RKP504	Matrix :	SOIL
Ext Btch ID	: VOK2502	% Moisture :	23.5
Calib. Ref.	: RKP487	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	6.54	.697
1,1,2,2-Tetrachloroethane	ND	6.54	1.08
1,1,2-Trichloroethane	ND	6.54	1.1
1,1-Dichloroethane	ND	6.54	.554
1,1-Dichloroethene	ND	6.54	.682
1,2,3-Trichloropropane	ND	65.4	1.99
1,2-Dichloroethane	ND	6.54	.388
1,2-Dichloropropane	ND	6.54	1.25
2-Butanone	ND	131	2.96
2-Chloroethyl Vinyl Ether	ND	13.1	1.3
2-Hexanone	ND	65.4	1.73
4-Methyl-2-Pentanone	ND	65.4	2.04
Acetone	ND	131	5.86
Benzene	ND	6.54	.531
Bromodichloromethane	ND	6.54	.502
Bromoform	ND	6.54	.749
Bromomethane	ND	13.1	1.6
Carbon Disulfide	ND	6.54	.643
Carbon Tetrachloride	ND	6.54	.515
Chlorobenzene	ND	6.54	.573
Chloroethane	ND	13.1	1.2
Chloroform	ND	6.54	.593
Chloromethane	ND	13.1	1.22
Cis-1,2-Dichloroethene	ND	6.54	.61
Cis-1,3-Dichloropropene	ND	6.54	.523
Dibromochloromethane	ND	6.54	.505
Ethylbenzene	ND	6.54	.706
Methylene Chloride	ND	6.54	3.25
m/p-Xylenes	ND	13.1	.902
o-Xylene	ND	6.54	.498
Styrene	ND	6.54	.624
Tetrachloroethylene	ND	6.54	.409
Toluene	ND	6.54	.528
Trans-1,2-Dichloroethene	ND	6.54	.498
Trans-1,3-Dichloropropene	ND	6.54	.456
Trichloroethene	ND	6.54	.614
Vinyl Acetate	ND	65.4	1.07
Vinyl Chloride	ND	13.1	1.65

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	105	79-118
Bromofluorobenzene	95	86-115
Toluene-d8	98	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP, INC.

CARSWELL AFB / 05G47900

SEMIVOLATILES

SDG#: 96K120

DECEMBER 23, 1996

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP, INC.

PROJECT: CARSWELL AFB / 05G47900

SDG: 96K120

SEMIVOLATILES

Nine (9) soil and ten (10) water samples were received on 11/22/96 to be analyzed for semivolatile organics by Method 8270B in accordance with USEPA SW846 (1994).

1. Holding Time

   Analytical holding time was met.

2. Surrogate Recovery

   All surrogate recoveries were within QC limits.

3. Matrix Spike/Matrix Spike Duplicate

   One (1) set of MS/MSD was designated for each soil and water samples. Low recoveries of 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 2-Chloronapthalene, 3,3'-Dichlorobenzidine and Naphthalene were found in K120-42M and Hexachlorocyclopentadiene in K120-42M and 42S. Low recovery of Benzoic acid was found in K120-45M and 45S.

4. Lab Control Sample/Lab Control Sample Duplicate

   Low recoveries of Benzoic acid and Hexachlorocyclopentadiene were found in SVK012WL and SVK012WC. Benzoic acid had low recovery in SVL002SL.

5. Method Blank

   Method blanks were free of contamination.

6. Tuning and Calibration

   Tuning and calibration were carried out at 12 hour interval.

7. Sample Analysis

   Sample analyses were within QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

11/29/1996 14:59

LAB CHRONICLE
EPA 8270

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A159205	K120-05	18.0	SVL002S / 12/02/96 / 09:00	RLS151 / 12/8/96 / 00:24	RLS151	RLS161
CR-A159305	K120-10	20.8		03:34		RLS165
CR-A159405	K120-15	30.0		01:11		RLS162
CR-A159505	K120-23	25.8		01:59		RLS163
CR-A159507	K120-25	30.5		02:47		RLS164
CR-A159605	K120-30	29.2		RLS151 / 12/12/96 / 23:36		RLS160
CR-A159705	K120-35	22.8		19:37		RLS155
CR-A159805	K120-40	28.9		20:25		RLS157
CR-A159905	K120-45	25.1		21:12		RLS151
CR-A159905MS	K120-45M	25.1		22:00		RLS158
CR-A159905MSD	K120-45S	25.1		22:48		RLS159
MBLKIS	SVL002SB			17:13		RLS152
LCSIS	SVL002SL			18:01		RLS153
LCDIS	SVL002SC			18:49		RLS154

LAB CHRONICLE
EPA 8270

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96K120
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A159202	K120-02	NA	SVK012W / 11/24/96 / 18:00	RLB072 / 12/11/96 / 18:00	RLB072	RLB076
CR-A159302	K120-07	NA		/ 18:49		RLB077
CR-A159402	K120-12	NA		/ 19:38		RLB078
CR-A159407	K120-17	NA		RLB091 / 12/12/96 / 04:11	RLB091	RLB092
CR-A159502	K120-20	NA		RLB072 / 12/11/96 / 20:26	RLB072	RLB079
CR-A159602	K120-27	NA		/ 21:14		RLB080
CR-A159702	K120-32	NA		/ 22:02		RLB081
CR-A159802	K120-37	NA		/ 22:50		RLB082
CR-A159902	K120-42	NA		/ 23:38		RLB083
CR-A159902MS	K120-42M	NA		RLB072 / 12/12/96 / 00:26		RLB084
CR-A159902MSD	K120-42S	NA		/ 01:14		RLB085
CR-A159907	K120-47	NA		RLB091 / 12/12/96 / 04:59	RLB091	RLB093
MBLKIW	SVK012WB			RLB072 / 12/11/96 / 15:36	RLB072	RLB073
LCSIW	SVK012WL			/ 16:24		RLB074
LCDIW	SVK012WC			/ 17:12		RLB075

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159202	DaTime Analyzd :	12/11/96 18:00
Lab Cnt NO.	: K120-02	Dilutn Factor :	1
Lab File ID	: RLB076	Matrix :	WATER
Ext Btch ID	: SVK012W	% Moisture :	NA
Calib. Ref.	: RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3
2-Nitrophenol	ND	10	
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Btch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159202	DaTime Analyzd :	12/11/96 18:00
Lab Cnt NO.	: K120-02	Dilutn Factor :	1
Lab File ID	: RLB076	Matrix :	WATER
Ext Btch ID	: SVK012W	% Moisture :	NA
Calib. Ref.	: RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	60.1	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1.6
Hexachloroethane	ND	10	2
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	81	25-134
2-Fluorobiphenyl	49	43-125
2-Fluorophenol	44	25-125
Nitrobenzene-d5	45	32-125
Phenol-d5	49	25-125
Terphenyl-d14	78	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159205	DaTime Analyzd :	12/13/96 00:24
Lab Cnt NO.	: K120-05	Dilutn Factor :	1
Lab File ID	: RLS161	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	18.0
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	854	126
1,2-Dichlorobenzene	ND	854	134
1,3-Dichlorobenzene	ND	854	97.6
1,4-Dichlorobenzene	ND	854	118
2,4,5-Trichlorophenol	ND	4020	121
2,4,6-Trichlorophenol	ND	366	140
2,4-Dichlorophenol	ND	366	92.7
2,4-Dimethylphenol	ND	366	109
2,4-Dinitrophenol	ND	4020	68.3
2,4-Dinitrotoluene	ND	854	140
2,6-Dinitrotoluene	ND	854	120
2-Chloronaphthalene	ND	854	113
2-Chlorophenol	ND	366	82.9
2-Methylnaphthalene	ND	854	124
2-Methylphenol	ND	366	11[illegible]
2-Nitroaniline	ND	4020	1[illegible]
2-Nitrophenol	ND	366	126
3,3'-Dichlorobenzidine	ND	1590	167
3-Nitroaniline	ND	4020	102
4,6-Dinitro-2-methylphenol	ND	4020	89
4-Bromophenyl phenyl ether	ND	854	127
4-Chloro-3-methylphenol	ND	1590	143
4-Chloroaniline	ND	1590	75.6
4-Chlorophenyl phenyl ether	ND	854	128
4-Methylphenol (1)	ND	366	82.9
4-Nitroaniline	ND	4020	106
4-Nitrophenol	ND	1950	6.83
Acenaphthene	ND	854	113
Acenaphthylene	ND	854	107
Anthracene	ND	854	126
Benzo(a)anthracene	ND	854	105
Benzo(a)pyrene	ND	854	111
Benzo(b)fluoranthene	ND	854	130
Benzo(k)fluoranthene	ND	854	122
Benzo(g,h,i)perylene	ND	854	113
Benzoic Acid	ND	1950	130
Benzyl alcohol	ND	1590	98.8
bis(2-Chloroethoxy)methane	ND	854	124

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159205	DaTime Analyzd :	12/13/96 00:24
Lab Cnt NO.	: K120-05	Dilutn Factor :	1
Lab File ID	: RLS161	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	18.0
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	854	81.7
bis(2-Chloroisopropyl)ether	ND	854	110
bis(2-Ethylhexyl)phthalate	ND	854	120
Butylbenzylphthalate	ND	854	248
Chrysene	ND	854	122
Di-n-butylphthalate	ND	854	135
Di-n-octylphthalate	ND	854	110
Dibenzo(a,h)anthracene	ND	854	117
Dibenzofuran	ND	854	122
Diethylphthalate	ND	854	118
Dimethylphthalate	ND	854	130
Fluoranthene	207F	854	126
Fluorene	ND	854	106
Hexachlorobenzene	ND	854	137
Hexachlorobutadiene	ND	854	127
Hexachlorocyclopentadiene	ND	854	141
Hexachloroethane	ND	854	107
Indeno(1,2,3-cd)pyrene	ND	854	116
Isophorone	ND	854	113
n-Nitroso-di-n-propylamine	ND	854	139
n-Nitrosodiphenylamine (2)	ND	854	123
Naphthalene	ND	854	118
Nitrobenzene	ND	854	95.1
Pentachlorophenol	ND	4020	36.6
Phenanthrene	ND	854	123
Phenol	ND	366	95.1
Pyrene	131F	854	117

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	73	25-144
2-Fluorobiphenyl	50	34-135
2-Fluorophenol	42	25-135
Nitrobenzene-d5	49	25-135
Phenol-d5	50	25-135
Terphenyl-d14	58	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

QUANT REPORT

Operator ID: SYLVIA
Output File: ^LS161::D0
Data File: >LS161::D0
Name: 96K120-05
Misc: 12-12-96

Quant Rev: 7
Quant Time: 961213 01:04
Injected at: 961213 00:24
Dilution Factor: 1.00000
Instrument ID: MSBNA2
BTL#12

ID File: IDBNA::SC
Title: SVOA by GC/MS
Last Calibration: 961206 10:53
Last Qcal Time: 961203 13:00

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4	7.72	152.0	32460	40.00	ng	88
4)	2-Fluorophenol	5.06	112.0	60564	62.62	ng	77
7)	Phenol-d5	6.95	99.0	99858	75.25	ng	100
9)	2-Chlorophenol-d4	7.21	132.0	77958	78.59	ng	93
14)	1,2-Dichlorobenzene-d4	8.05	152.0	29313	45.99	ng	87
21)	*Naphthalene-d8	10.71	136.0	118696	40.00	ng	87
22)	Nitrobenzene-d5	9.00	82.0	68056	48.50	ng	97
37)	*Acenaphthene-d10	15.17	164.0	83227	40.00	ng	93
41)	2-Fluorobiphenyl	13.48	172.0	112349	50.30	ng	98
59)	2,4,6-Tribromophenol	17.26	329.5	73484	110.09	ng	97
60)	*Phenanthrene-d10	19.46	188.0	139702	40.00	ng	89
67)	Phenanthrene	19.52	178.0	6800	1.97	ng	88
71)	Fluoranthene	23.77	202.0	21102	5.10	ng	95
72)	*Chrysene-d12	27.37	240.0	169266	40.00	ng	98
74)	Pyrene	24.42	202.0	17496	3.23	ng	88
76)	Terphenyl-d14	24.97	244.0	227139	57.63	ng	97
78)	Benzo(a)anthracene	27.33	228.0	8635	2.12	ng	93
80)	Chrysene	27.41	228.0	10396	2.30	ng	94
81)	bis(2-Ethylhexyl)phthalate	27.47	149.0	7035	1.37	ng	85
82)	*Perylene-d12	31.08	264.0	178426	40.00	ng	98
84)	Benzo(b)fluoranthene	29.92	252.0	13508	3.16	ng	99
85)	Benzo(k)fluoranthene	30.00	252.0	3818 MW 12/16/96	1.02	ng	
86)	benzo(a)pyrene	30.90	252.0	7187	1.91	ng	97
87)	Indeno(1,2,3-cd)pyrene	35.28	276.0	4148	1.04	ng	95
89)	Benzo(g,h,i)perylene	36.57	276.0	3301	1.05	ng	83

* Compound is ISTD

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159302	DaTime Analyzd :	12/11/96 18:49
Lab Cnt NO.	: K120-07	Dilutn Factor :	1
Lab File ID	: RLB077	Matrix :	WATER
Ext Btch ID	: SVK012W	% Moisture :	NA
Calib. Ref.	: RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159302	DaTime Analyzd :	12/11/96 18:49
Lab Cnt NO.	: K120-07	Dilutn Factor :	1
Lab File ID	: RLB077	Matrix :	WATER
Ext Btch ID	: SVK012W	% Moisture :	NA
Calib. Ref.	: RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2
Hexachlorocyclopentadiene	ND	10	1
Hexachloroethane	ND	10	2
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	81	25-134
2-Fluorobiphenyl	65	43-125
2-Fluorophenol	62	25-125
Nitrobenzene-d5	64	32-125
Phenol-d5	66	25-125
Terphenyl-d14	73	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159305	DaTime Analyzd :	12/13/96 03:34
Lab Cnt NO.	: K120-10	Dilutn Factor :	1
Lab File ID	: RLS165	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	20.8
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	884	130
1,2-Dichlorobenzene	ND	884	139
1,3-Dichlorobenzene	ND	884	101
1,4-Dichlorobenzene	ND	884	122
2,4,5-Trichlorophenol	ND	4170	125
2,4,6-Trichlorophenol	ND	379	145
2,4-Dichlorophenol	ND	379	96
2,4-Dimethylphenol	ND	379	112
2,4-Dinitrophenol	ND	4170	70.7
2,4-Dinitrotoluene	ND	884	145
2,6-Dinitrotoluene	ND	884	124
2-Chloronaphthalene	ND	884	117
2-Chlorophenol	ND	379	85.9
2-Methylnaphthalene	ND	884	129
2-Methylphenol	ND	379	121
2-Nitroaniline	ND	4170	111
2-Nitrophenol	ND	379	130
3,3'-Dichlorobenzidine	ND	1640	173
3-Nitroaniline	ND	4170	106
4,6-Dinitro-2-methylphenol	ND	4170	92.2
4-Bromophenyl phenyl ether	ND	884	131
4-Chloro-3-methylphenol	ND	1640	148
4-Chloroaniline	ND	1640	78.3
4-Chlorophenyl phenyl ether	ND	884	133
4-Methylphenol (1)	ND	379	85.9
4-Nitroaniline	ND	4170	110
4-Nitrophenol	ND	2020	7.07
Acenaphthene	ND	884	117
Acenaphthylene	ND	884	111
Anthracene	ND	884	130
Benzo(a)anthracene	ND	884	109
Benzo(a)pyrene	ND	884	115
Benzo(b)fluoranthene	ND	884	135
Benzo(k)fluoranthene	ND	884	126
Benzo(g,h,i)perylene	ND	884	117
Benzoic Acid	ND	2020	135
Benzyl alcohol	ND	1640	102
bis(2-Chloroethoxy)methane	ND	884	129

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159305	DaTime Analyzd :	12/13/96 03:34
Lab Cnt NO.	: K120-10	Dilutn Factor :	1
Lab File ID	: RLS165	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	20.8
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	884	84.6
bis(2-Chloroisopropyl)ether	ND	884	114
bis(2-Ethylhexyl)phthalate	207F	884	124
Butylbenzylphthalate	ND	884	256
Chrysene	ND	884	126
Di-n-butylphthalate	ND	884	140
Di-n-octylphthalate	ND	884	114
Dibenzo(a,h)anthracene	ND	884	121
Dibenzofuran	ND	884	126
Diethylphthalate	ND	884	122
Dimethylphthalate	ND	884	135
Fluoranthene	ND	884	130
Fluorene	ND	884	110
Hexachlorobenzene	ND	884	141
Hexachlorobutadiene	ND	884	13[illegible]
Hexachlorocyclopentadiene	ND	884	1[illegible]
Hexachloroethane	ND	884	111
Indeno(1,2,3-cd)pyrene	ND	884	120
Isophorone	ND	884	117
n-Nitroso-di-n-propylamine	ND	884	144
n-Nitrosodiphenylamine (2)	ND	884	128
Naphthalene	ND	884	122
Nitrobenzene	ND	884	98.5
Pentachlorophenol	ND	4170	37.9
Phenanthrene	ND	884	128
Phenol	ND	379	98.5
Pyrene	ND	884	121

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	69	25-144
2-Fluorobiphenyl	39	34-135
2-Fluorophenol	32	25-135
Nitrobenzene-d5	34	25-135
Phenol-d5	36	25-135
Terphenyl-d14	56	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159402	DaTime Analyzd :	12/11/96 19:38
Lab Cnt NO.	: K120-12	Dilutn Factor :	1
Lab File ID	: RLB078	Matrix :	WATER
Ext Btch ID	: SVK012W	% Moisture :	NA
Calib. Ref.	: RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159402	DaTime Analyzd :	12/11/96 19:38
Lab Cnt NO.:	K120-12	Dilutn Factor :	1
Lab File ID:	RLB078	Matrix :	WATER
Ext Btch ID:	SVK012W	% Moisture :	NA
Calib. Ref.:	RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2
Hexachlorocyclopentadiene	ND	10	1
Hexachloroethane	ND	10	2
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	75	25-134
2-Fluorobiphenyl	67	43-125
2-Fluorophenol	68	25-125
Nitrobenzene-d5	69	32-125
Phenol-d5	69	25-125
Terphenyl-d14	69	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159405	DaTime Analyzd :	12/13/96 01:11
Lab Cnt NO.	: K120-15	Dilutn Factor :	1
Lab File ID	: RLS162	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	30.0
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	1000	147
1,2-Dichlorobenzene	ND	1000	157
1,3-Dichlorobenzene	ND	1000	114
1,4-Dichlorobenzene	ND	1000	139
2,4,5-Trichlorophenol	ND	4710	141
2,4,6-Trichlorophenol	ND	429	164
2,4-Dichlorophenol	ND	429	109
2,4-Dimethylphenol	ND	429	127
2,4-Dinitrophenol	ND	4710	80
2,4-Dinitrotoluene	ND	1000	164
2,6-Dinitrotoluene	ND	1000	140
2-Chloronaphthalene	ND	1000	133
2-Chlorophenol	ND	429	97.1
2-Methylnaphthalene	ND	1000	146
2-Methylphenol	ND	429	137
2-Nitroaniline	ND	4710	126
2-Nitrophenol	ND	429	147
3,3'-Dichlorobenzidine	ND	1860	196
3-Nitroaniline	ND	4710	120
4,6-Dinitro-2-methylphenol	ND	4710	104
4-Bromophenyl phenyl ether	ND	1000	149
4-Chloro-3-methylphenol	ND	1860	167
4-Chloroaniline	ND	1860	88.6
4-Chlorophenyl phenyl ether	ND	1000	150
4-Methylphenol (1)	ND	429	97.1
4-Nitroaniline	ND	4710	124
4-Nitrophenol	ND	2290	8
Acenaphthene	ND	1000	133
Acenaphthylene	ND	1000	126
Anthracene	ND	1000	147
Benzo(a)anthracene	ND	1000	123
Benzo(a)pyrene	ND	1000	130
Benzo(b)fluoranthene	ND	1000	153
Benzo(k)fluoranthene	ND	1000	143
Benzo(g,h,i)perylene	ND	1000	133
Benzoic Acid	ND	2290	153
Benzyl alcohol	ND	1860	116
bis(2-Chloroethoxy)methane	ND	1000	146

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159405	DaTime Analyzd :	12/13/96 01:11
Lab Cnt NO.	: K120-15	Dilutn Factor :	1
Lab File ID	: RLS162	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	30.0
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	1000	95.7
bis(2-Chloroisopropyl)ether	ND	1000	129
bis(2-Ethylhexyl)phthalate	175F	1000	140
Butylbenzylphthalate	ND	1000	290
Chrysene	ND	1000	143
Di-n-butylphthalate	ND	1000	159
Di-n-octylphthalate	ND	1000	129
Dibenzo(a,h)anthracene	ND	1000	137
Dibenzofuran	ND	1000	143
Diethylphthalate	ND	1000	139
Dimethylphthalate	ND	1000	153
Fluoranthene	ND	1000	147
Fluorene	ND	1000	124
Hexachlorobenzene	ND	1000	160
Hexachlorobutadiene	ND	1000	14[illegible]
Hexachlorocyclopentadiene	ND	1000	[illegible]
Hexachloroethane	ND	1000	12[illegible]
Indeno(1,2,3-cd)pyrene	ND	1000	136
Isophorone	ND	1000	133
n-Nitroso-di-n-propylamine	ND	1000	163
n-Nitrosodiphenylamine (2)	ND	1000	144
Naphthalene	ND	1000	139
Nitrobenzene	ND	1000	111
Pentachlorophenol	ND	4710	42.9
Phenanthrene	ND	1000	144
Phenol	ND	429	111
Pyrene	ND	1000	137

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	71	25-144
2-Fluorobiphenyl	39	34-135
2-Fluorophenol	29	25-135
Nitrobenzene-d5	31	25-135
Phenol-d5	38	25-135
Terphenyl-d14	60	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159407	DaTime Analyzd :	12/12/96 04:11
Lab Cnt NO.:	K120-17	Dilutn Factor :	1
Lab File ID:	RLB092	Matrix :	WATER
Ext Btch ID:	SVK012W	% Moisture :	NA
Calib. Ref.:	RLB091	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159407	DaTime Analyzd :	12/12/96 04:11
Lab Cnt NO.	: K120-17	Dilutn Factor :	1
Lab File ID	: RLB092	Matrix :	WATER
Ext Btch ID	: SVK012W	% Moisture :	NA
Calib. Ref.	: RLB091	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	[illegible]
Hexachloroethane	ND	10	
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	88	25-134
2-Fluorobiphenyl	69	43-125
2-Fluorophenol	70	25-125
Nitrobenzene-d5	76	32-125
Phenol-d5	73	25-125
Terphenyl-d14	82	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Btch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159502	DaTime Analyzd :	12/11/96 20:26
Lab Cnt NO.:	K120-20	Dilutn Factor :	1
Lab File ID:	RLB079	Matrix :	WATER
Ext Btch ID:	SVK012W	% Moisture :	NA
Calib. Ref.:	RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159502	DaTime Analyzd :	12/11/96 20:26
Lab Cnt NO.:	K120-20	Dilutn Factor :	1
Lab File ID:	RLB079	Matrix :	WATER
Ext Btch ID:	SVK012W	% Moisture :	NA
Calib. Ref.:	RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2
Hexachlorocyclopentadiene	ND	10	1
Hexachloroethane	ND	10	2
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	71	25-134
2-Fluorobiphenyl	55	43-125
2-Fluorophenol	54	25-125
Nitrobenzene-d5	56	32-125
Phenol-d5	56	25-125
Terphenyl-d14	69	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159505	DaTime Analyzd :	12/13/96 01:59
Lab Cnt NO.	: K120-23	Dilutn Factor :	1
Lab File ID	: RLS163	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	25.8
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	943	139
1,2-Dichlorobenzene	ND	943	148
1,3-Dichlorobenzene	ND	943	108
1,4-Dichlorobenzene	ND	943	131
2,4,5-Trichlorophenol	ND	4450	133
2,4,6-Trichlorophenol	ND	404	155
2,4-Dichlorophenol	ND	404	102
2,4-Dimethylphenol	ND	404	120
2,4-Dinitrophenol	ND	4450	75.5
2,4-Dinitrotoluene	ND	943	155
2,6-Dinitrotoluene	ND	943	132
2-Chloronaphthalene	ND	943	125
2-Chlorophenol	ND	404	91.6
2-Methylnaphthalene	ND	943	137
2-Methylphenol	ND	404	129
2-Nitroaniline	ND	4450	119
2-Nitrophenol	ND	404	139
3,3'-Dichlorobenzidine	ND	1750	185
3-Nitroaniline	ND	4450	113
4,6-Dinitro-2-methylphenol	ND	4450	98.4
4-Bromophenyl phenyl ether	ND	943	140
4-Chloro-3-methylphenol	ND	1750	158
4-Chloroaniline	ND	1750	83.6
4-Chlorophenyl phenyl ether	ND	943	142
4-Methylphenol (1)	ND	404	91.6
4-Nitroaniline	ND	4450	117
4-Nitrophenol	ND	2160	7.55
Acenaphthene	ND	943	125
Acenaphthylene	ND	943	119
Anthracene	ND	943	139
Benzo(a)anthracene	ND	943	116
Benzo(a)pyrene	ND	943	123
Benzo(b)fluoranthene	146F	943	144
Benzo(k)fluoranthene	ND	943	135
Benzo(g,h,i)perylene	ND	943	125
Benzoic Acid	ND	2160	144
Benzyl alcohol	ND	1750	109
bis(2-Chloroethoxy)methane	ND	943	137

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159505	DaTime Analyzd :	12/13/96 01:59
Lab Cnt NO.	: K120-23	Dilutn Factor :	1
Lab File ID	: RLS163	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	25.8
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	943	90.3
bis(2-Chloroisopropyl)ether	ND	943	121
bis(2-Ethylhexyl)phthalate	138F	943	132
Butylbenzylphthalate	ND	943	274
Chrysene	ND	943	135
Di-n-butylphthalate	ND	943	150
Di-n-octylphthalate	ND	943	121
Dibenzo(a,h)anthracene	ND	943	129
Dibenzofuran	ND	943	135
Diethylphthalate	ND	943	131
Dimethylphthalate	ND	943	144
Fluoranthene	174F	943	139
Fluorene	ND	943	117
Hexachlorobenzene	ND	943	151
Hexachlorobutadiene	ND	943	140
Hexachlorocyclopentadiene	ND	943	1[illegible]
Hexachloroethane	ND	943	11[illegible]
Indeno(1,2,3-cd)pyrene	ND	943	128
Isophorone	ND	943	125
n-Nitroso-di-n-propylamine	ND	943	154
n-Nitrosodiphenylamine (2)	ND	943	136
Naphthalene	ND	943	131
Nitrobenzene	ND	943	105
Pentachlorophenol	ND	4450	40.4
Phenanthrene	ND	943	136
Phenol	ND	404	105
Pyrene	ND	943	129

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	73	25-144
2-Fluorobiphenyl	50	34-135
2-Fluorophenol	40	25-135
Nitrobenzene-d5	46	25-135
Phenol-d5	48	25-135
Terphenyl-d14	61	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159507	DaTime Analyzd :	12/13/96 02:47
Lab Cnt NO.	: K120-25	Dilutn Factor :	1
Lab File ID	: RLS164	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	30.5
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	1010	148
1,2-Dichlorobenzene	ND	1010	158
1,3-Dichlorobenzene	ND	1010	115
1,4-Dichlorobenzene	ND	1010	140
2,4,5-Trichlorophenol	ND	4750	142
2,4,6-Trichlorophenol	ND	432	165
2,4-Dichlorophenol	ND	432	109
2,4-Dimethylphenol	ND	432	128
2,4-Dinitrophenol	ND	4750	80.6
2,4-Dinitrotoluene	ND	1010	165
2,6-Dinitrotoluene	ND	1010	141
2-Chloronaphthalene	ND	1010	134
2-Chlorophenol	ND	432	97.8
2-Methylnaphthalene	ND	1010	147
2-Methylphenol	ND	432	138
2-Nitroaniline	ND	4750	127
2-Nitrophenol	ND	432	148
3,3'-Dichlorobenzidine	ND	1870	197
3-Nitroaniline	ND	4750	121
4,6-Dinitro-2-methylphenol	ND	4750	105
4-Bromophenyl phenyl ether	ND	1010	150
4-Chloro-3-methylphenol	ND	1870	168
4-Chloroaniline	ND	1870	89.2
4-Chlorophenyl phenyl ether	ND	1010	151
4-Methylphenol (1)	ND	432	97.8
4-Nitroaniline	ND	4750	125
4-Nitrophenol	ND	2300	8.06
Acenaphthene	ND	1010	134
Acenaphthylene	ND	1010	127
Anthracene	ND	1010	148
Benzo(a)anthracene	ND	1010	124
Benzo(a)pyrene	ND	1010	131
Benzo(b)fluoranthene	ND	1010	154
Benzo(k)fluoranthene	ND	1010	144
Benzo(g,h,i)perylene	ND	1010	134
Benzoic Acid	ND	2300	154
Benzyl alcohol	ND	1870	117
bis(2-Chloroethoxy)methane	ND	1010	147

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159507-	DaTime Analyzd :	12/13/96 02:47
Lab Cnt NO.	: K120-25	Dilutn Factor :	1
Lab File ID	: RLS164	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	30.5
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	1010	96.4
bis(2-Chloroisopropyl)ether	ND	1010	129
bis(2-Ethylhexyl)phthalate	302F	1010	141
Butylbenzylphthalate	ND	1010	292
Chrysene	ND	1010	144
Di-n-butylphthalate	ND	1010	160
Di-n-octylphthalate	ND	1010	129
Dibenzo(a,h)anthracene	ND	1010	138
Dibenzofuran	ND	1010	144
Diethylphthalate	ND	1010	140
Dimethylphthalate	ND	1010	154
Fluoranthene	ND	1010	148
Fluorene	ND	1010	125
Hexachlorobenzene	ND	1010	161
Hexachlorobutadiene	ND	1010	150
Hexachlorocyclopentadiene	ND	1010	1[illegible]
Hexachloroethane	ND	1010	12[illegible]
Indeno(1,2,3-cd)pyrene	ND	1010	137
Isophorone	ND	1010	134
n-Nitroso-di-n-propylamine	ND	1010	164
n-Nitrosodiphenylamine (2)	ND	1010	145
Naphthalene	ND	1010	140
Nitrobenzene	ND	1010	112
Pentachlorophenol	ND	4750	43.2
Phenanthrene	ND	1010	145
Phenol	ND	432	112
Pyrene	ND	1010	138

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	82	25-144
2-Fluorobiphenyl	45	34-135
2-Fluorophenol	33	25-135
Nitrobenzene-d5	37	25-135
Phenol-d5	45	25-135
Terphenyl-d14	67	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Btch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159602	DaTime Analyzd :	12/11/96 21:14
Lab Cnt NO.:	K120-27	Dilutn Factor :	1
Lab File ID:	RLB080	Matrix :	WATER
Ext Btch ID:	SVK012W	% Moisture :	NA
Calib. Ref.:	RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159602	DaTime Analyzd :	12/11/96 21:14
Lab Cnt NO.:	K120-27	Dilutn Factor :	1
Lab File ID:	RLB080	Matrix :	WATER
Ext Btch ID:	SVK012W	% Moisture :	NA
Calib. Ref.:	RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2
Hexachlorocyclopentadiene	ND	10	1
Hexachloroethane	ND	10	
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	77	25-134
2-Fluorobiphenyl	61	43-125
2-Fluorophenol	60	25-125
Nitrobenzene-d5	63	32-125
Phenol-d5	62	25-125
Terphenyl-d14	71	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159605	DaTime Analyzd :	12/12/96 23:36
Lab Cnt NO.	: K120-30	Dilutn Factor :	1
Lab File ID	: RLS160	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	29.2
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	989	145
1,2-Dichlorobenzene	ND	989	155
1,3-Dichlorobenzene	ND	989	113
1,4-Dichlorobenzene	ND	989	137
2,4,5-Trichlorophenol	ND	4660	140
2,4,6-Trichlorophenol	ND	424	162
2,4-Dichlorophenol	ND	424	107
2,4-Dimethylphenol	ND	424	126
2,4-Dinitrophenol	ND	4660	79.1
2,4-Dinitrotoluene	ND	989	162
2,6-Dinitrotoluene	ND	989	138
2-Chloronaphthalene	ND	989	131
2-Chlorophenol	ND	424	96
2-Methylnaphthalene	ND	989	144
2-Methylphenol	ND	424	136
2-Nitroaniline	ND	4660	124
2-Nitrophenol	ND	424	145
3,3'-Dichlorobenzidine	ND	1840	194
3-Nitroaniline	ND	4660	119
4,6-Dinitro-2-methylphenol	ND	4660	103
4-Bromophenyl phenyl ether	ND	989	147
4-Chloro-3-methylphenol	ND	1840	165
4-Chloroaniline	ND	1840	87.6
4-Chlorophenyl phenyl ether	ND	989	148
4-Methylphenol (1)	ND	424	96
4-Nitroaniline	ND	4660	123
4-Nitrophenol	ND	2260	7.91
Acenaphthene	ND	989	131
Acenaphthylene	ND	989	124
Anthracene	ND	989	145
Benzo(a)anthracene	ND	989	121
Benzo(a)pyrene	ND	989	129
Benzo(b)fluoranthene	ND	989	151
Benzo(k)fluoranthene	ND	989	141
Benzo(g,h,i)perylene	ND	989	131
Benzoic Acid	ND	2260	151
Benzyl alcohol	ND	1840	114
bis(2-Chloroethoxy)methane	ND	989	144

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159605	DaTime Analyzd :	12/12/96 23:36
Lab Cnt NO.	: K120-30	Dilutn Factor :	1
Lab File ID	: RLS160	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	29.2
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	989	94.6
bis(2-Chloroisopropyl)ether	ND	989	127
bis(2-Ethylhexyl)phthalate	157F	989	138
Butylbenzylphthalate	ND	989	287
Chrysene	ND	989	141
Di-n-butylphthalate	ND	989	157
Di-n-octylphthalate	ND	989	127
Dibenzo(a,h)anthracene	ND	989	136
Dibenzofuran	ND	989	141
Diethylphthalate	ND	989	137
Dimethylphthalate	ND	989	151
Fluoranthene	ND	989	145
Fluorene	ND	989	123
Hexachlorobenzene	ND	989	158
Hexachlorobutadiene	ND	989	[illegible]
Hexachlorocyclopentadiene	ND	989	[illegible]
Hexachloroethane	ND	989	124
Indeno(1,2,3-cd)pyrene	ND	989	134
Isophorone	ND	989	131
n-Nitroso-di-n-propylamine	ND	989	161
n-Nitrosodiphenylamine (2)	ND	989	143
Naphthalene	ND	989	137
Nitrobenzene	ND	989	110
Pentachlorophenol	ND	4660	42.4
Phenanthrene	ND	989	143
Phenol	ND	424	110
Pyrene	ND	989	136

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	70	25-144
2-Fluorobiphenyl	43	34-135
2-Fluorophenol	34	25-135
Nitrobenzene-d5	36	25-135
Phenol-d5	39	25-135
Terphenyl-d14	61	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159702	DaTime Analyzd :	12/11/96 22:02
Lab Cnt NO.:	K120-32	Dilutn Factor :	1
Lab File ID:	RLB081	Matrix :	WATER
Ext Btch ID:	SVK012W	% Moisture :	NA
Calib. Ref.:	RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159702	DaTime Analyzd :	12/11/96 22:02
Lab Cnt NO.	: K120-32	Dilutn Factor :	1
Lab File ID	: RLB081	Matrix :	WATER
Ext Btch ID	: SVK012W	% Moisture :	NA
Calib. Ref.	: RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	38.5	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2
Hexachlorocyclopentadiene	ND	10	1
Hexachloroethane	ND	10	2
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	63	25-134
2-Fluorobiphenyl	48	43-125
2-Fluorophenol	44	25-125
Nitrobenzene-d5	49	32-125
Phenol-d5	47	25-125
Terphenyl-d14	64	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159705	DaTime Analyzd :	12/12/96 19:37
Lab Cnt NO.	: K120-35	Dilutn Factor :	1
Lab File ID	: RLS155	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	22.8
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	907	133
1,2-Dichlorobenzene	ND	907	142
1,3-Dichlorobenzene	ND	907	104
1,4-Dichlorobenzene	ND	907	126
2,4,5-Trichlorophenol	ND	4270	128
2,4,6-Trichlorophenol	ND	389	149
2,4-Dichlorophenol	ND	389	98.4
2,4-Dimethylphenol	ND	389	115
2,4-Dinitrophenol	ND	4270	72.5
2,4-Dinitrotoluene	ND	907	149
2,6-Dinitrotoluene	ND	907	127
2-Chloronaphthalene	ND	907	120
2-Chlorophenol	ND	389	88.1
2-Methylnaphthalene	ND	907	132
2-Methylphenol	ND	389	124
2-Nitroaniline	ND	4270	114
2-Nitrophenol	ND	389	133
3,3'-Dichlorobenzidine	ND	1680	177
3-Nitroaniline	ND	4270	109
4,6-Dinitro-2-methylphenol	ND	4270	94.6
4-Bromophenyl phenyl ether	ND	907	135
4-Chloro-3-methylphenol	ND	1680	152
4-Chloroaniline	ND	1680	80.3
4-Chlorophenyl phenyl ether	ND	907	136
4-Methylphenol (1)	ND	389	88.1
4-Nitroaniline	ND	4270	113
4-Nitrophenol	ND	2070	7.25
Acenaphthene	ND	907	120
Acenaphthylene	ND	907	114
Anthracene	ND	907	133
Benzo(a)anthracene	ND	907	111
Benzo(a)pyrene	ND	907	118
Benzo(b)fluoranthene	ND	907	139
Benzo(k)fluoranthene	ND	907	130
Benzo(g,h,i)perylene	ND	907	120
Benzoic Acid	ND	2070	139
Benzyl alcohol	ND	1680	105
bis(2-Chloroethoxy)methane	ND	907	132

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159705	DaTime Analyzd :	12/12/96 19:37
Lab Cnt NO.	: K120-35	Dilutn Factor :	1
Lab File ID	: RLS155	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	22.8
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	907	86.8
bis(2-Chloroisopropyl)ether	ND	907	117
bis(2-Ethylhexyl)phthalate	ND	907	127
Butylbenzylphthalate	ND	907	263
Chrysene	ND	907	130
Di-n-butylphthalate	ND	907	144
Di-n-octylphthalate	ND	907	117
Dibenzo(a,h)anthracene	ND	907	124
Dibenzofuran	ND	907	130
Diethylphthalate	ND	907	126
Dimethylphthalate	ND	907	139
Fluoranthene	ND	907	133
Fluorene	ND	907	113
Hexachlorobenzene	ND	907	145
Hexachlorobutadiene	ND	907	135
Hexachlorocyclopentadiene	ND	907	[illegible]
Hexachloroethane	ND	907	[illegible]
Indeno(1,2,3-cd)pyrene	ND	907	123
Isophorone	ND	907	120
n-Nitroso-di-n-propylamine	ND	907	148
n-Nitrosodiphenylamine (2)	ND	907	131
Naphthalene	ND	907	126
Nitrobenzene	ND	907	101
Pentachlorophenol	ND	4270	38.9
Phenanthrene	ND	907	131
Phenol	ND	389	101
Pyrene	ND	907	124

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	79	25-144
2-Fluorobiphenyl	69	34-135
2-Fluorophenol	74	25-135
Nitrobenzene-d5	77	25-135
Phenol-d5	77	25-135
Terphenyl-d14	67	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159802	DaTime Analyzd :	12/11/96 22:50
Lab Cnt NO.	: K120-37	Dilutn Factor :	1
Lab File ID	: RLB082	Matrix :	WATER
Ext Btch ID	: SVK012W	% Moisture :	NA
Calib. Ref.	: RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159802	DaTime Analyzd :	12/11/96 22:50
Lab Cnt NO.	: K120-37	Dilutn Factor :	1
Lab File ID	: RLB082	Matrix :	WATER
Ext Btch ID	: SVK012W	% Moisture :	NA
Calib. Ref.	: RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2
Hexachlorocyclopentadiene	ND	10	1
Hexachloroethane	ND	10	2
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	78	25-134
2-Fluorobiphenyl	65	43-125
2-Fluorophenol	61	25-125
Nitrobenzene-d5	65	32-125
Phenol-d5	63	25-125
Terphenyl-d14	76	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted	: 11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received	: 11/22/96
Batch No.	: 96K120	DaTime Extrctd	: 12/02/96 09:00
Sample ID	: CR-A159805	DaTime Analyzd	: 12/12/96 20:25
Lab Cnt NO.	: K120-40	Dilutn Factor	: 1
Lab File ID	: RLS156	Matrix	: SOIL
Ext Btch ID	: SVL002S	% Moisture	: 28.9
Calib. Ref.	: RLS151	Instrument ID	: MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	985	145
1,2-Dichlorobenzene	ND	985	155
1,3-Dichlorobenzene	ND	985	113
1,4-Dichlorobenzene	ND	985	136
2,4,5-Trichlorophenol	ND	4640	139
2,4,6-Trichlorophenol	ND	422	162
2,4-Dichlorophenol	ND	422	107
2,4-Dimethylphenol	ND	422	125
2,4-Dinitrophenol	ND	4640	78.8
2,4-Dinitrotoluene	ND	985	162
2,6-Dinitrotoluene	ND	985	138
2-Chloronaphthalene	ND	985	131
2-Chlorophenol	ND	422	95.6
2-Methylnaphthalene	ND	985	143
2-Methylphenol	ND	422	135
2-Nitroaniline	ND	4640	124
2-Nitrophenol	ND	422	145
3,3'-Dichlorobenzidine	ND	1830	193
3-Nitroaniline	ND	4640	118
4,6-Dinitro-2-methylphenol	ND	4640	103
4-Bromophenyl phenyl ether	ND	985	146
4-Chloro-3-methylphenol	ND	1830	165
4-Chloroaniline	ND	1830	87.2
4-Chlorophenyl phenyl ether	ND	985	148
4-Methylphenol (1)	ND	422	95.6
4-Nitroaniline	ND	4640	122
4-Nitrophenol	ND	2250	7.88
Acenaphthene	ND	985	131
Acenaphthylene	ND	985	124
Anthracene	ND	985	145
Benzo(a)anthracene	ND	985	121
Benzo(a)pyrene	ND	985	128
Benzo(b)fluoranthene	ND	985	150
Benzo(k)fluoranthene	ND	985	141
Benzo(g,h,i)perylene	ND	985	131
Benzoic Acid	ND	2250	150
Benzyl alcohol	ND	1830	114
bis(2-Chloroethoxy)methane	ND	985	143

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159805	DaTime Analyzd :	12/12/96 20:25
Lab Cnt NO.	: K120-40	Dilutn Factor :	1
Lab File ID	: RLS156	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	28.9
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	985	94.2
bis(2-Chloroisopropyl)ether	ND	985	127
bis(2-Ethylhexyl)phthalate	179F	985	138
Butylbenzylphthalate	ND	985	286
Chrysene	ND	985	141
Di-n-butylphthalate	ND	985	156
Di-n-octylphthalate	ND	985	127
Dibenzo(a,h)anthracene	ND	985	135
Dibenzofuran	ND	985	141
Diethylphthalate	ND	985	136
Dimethylphthalate	ND	985	150
Fluoranthene	ND	985	145
Fluorene	ND	985	122
Hexachlorobenzene	ND	985	158
Hexachlorobutadiene	ND	985	1[illegible]
Hexachlorocyclopentadiene	ND	985	1[illegible]
Hexachloroethane	ND	985	124
Indeno(1,2,3-cd)pyrene	ND	985	134
Isophorone	ND	985	131
n-Nitroso-di-n-propylamine	ND	985	160
n-Nitrosodiphenylamine (2)	ND	985	142
Naphthalene	ND	985	136
Nitrobenzene	ND	985	110
Pentachlorophenol	ND	4640	42.2
Phenanthrene	ND	985	142
Phenol	ND	422	110
Pyrene	ND	985	135

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	93	25-144
2-Fluorobiphenyl	74	34-135
2-Fluorophenol	75	25-135
Nitrobenzene-d5	76	25-135
Phenol-d5	78	25-135
Terphenyl-d14	64	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159902	DaTime Analyzd :	12/11/96 23:38
Lab Cnt NO.	: K120-42	Dilutn Factor :	1
Lab File ID	: RLB083	Matrix :	WATER
Ext Btch ID	: SVK012W	% Moisture :	NA
Calib. Ref.	: RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159902	DaTime Analyzd :	12/11/96 23:38
Lab Cnt NO.	: K120-42	Dilutn Factor :	1
Lab File ID	: RLB083	Matrix :	WATER
Ext Btch ID	: SVK012W	% Moisture :	NA
Calib. Ref.	: RLB072	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	2.93F	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	35.3	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2
Hexachlorocyclopentadiene	ND	10	1
Hexachloroethane	ND	10	2
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	77	25-134
2-Fluorobiphenyl	44	43-125
2-Fluorophenol	40	25-125
Nitrobenzene-d5	42	32-125
Phenol-d5	44	25-125
Terphenyl-d14	81	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159905	DaTime Analyzd :	12/12/96 21:12
Lab Cnt NO.	: K120-45	Dilutn Factor :	1
Lab File ID	: RLS157	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	25.1
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	935	138
1,2-Dichlorobenzene	ND	935	147
1,3-Dichlorobenzene	ND	935	107
1,4-Dichlorobenzene	ND	935	130
2,4,5-Trichlorophenol	ND	4410	132
2,4,6-Trichlorophenol	ND	401	154
2,4-Dichlorophenol	ND	401	101
2,4-Dimethylphenol	ND	401	119
2,4-Dinitrophenol	ND	4410	74.8
2,4-Dinitrotoluene	ND	935	154
2,6-Dinitrotoluene	ND	935	131
2-Chloronaphthalene	ND	935	124
2-Chlorophenol	ND	401	90.8
2-Methylnaphthalene	ND	935	136
2-Methylphenol	ND	401	128
2-Nitroaniline	ND	4410	117
2-Nitrophenol	ND	401	138
3,3'-Dichlorobenzidine	ND	1740	183
3-Nitroaniline	ND	4410	112
4,6-Dinitro-2-methylphenol	ND	4410	97.5
4-Bromophenyl phenyl ether	ND	935	139
4-Chloro-3-methylphenol	ND	1740	156
4-Chloroaniline	ND	1740	82.8
4-Chlorophenyl phenyl ether	ND	935	140
4-Methylphenol (1)	ND	401	90.8
4-Nitroaniline	ND	4410	116
4-Nitrophenol	ND	2140	7.48
Acenaphthene	ND	935	124
Acenaphthylene	ND	935	117
Anthracene	ND	935	138
Benzo(a)anthracene	ND	935	115
Benzo(a)pyrene	ND	935	121
Benzo(b)fluoranthene	ND	935	143
Benzo(k)fluoranthene	ND	935	134
Benzo(g,h,i)perylene	ND	935	124
Benzoic Acid	ND	2140	143
Benzyl alcohol	ND	1740	108
bis(2-Chloroethoxy)methane	ND	935	136

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	12/02/96 09:00
Sample ID	: CR-A159905	DaTime Analyzd :	12/12/96 21:12
Lab Cnt NO.	: K120-45	Dilutn Factor :	1
Lab File ID	: RLS157	Matrix :	SOIL
Ext Btch ID	: SVL002S	% Moisture :	25.1
Calib. Ref.	: RLS151	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	935	89.5
bis(2-Chloroisopropyl)ether	ND	935	120
bis(2-Ethylhexyl)phthalate	ND	935	131
Butylbenzylphthalate	ND	935	271
Chrysene	ND	935	134
Di-n-butylphthalate	ND	935	148
Di-n-octylphthalate	ND	935	120
Dibenzo(a,h)anthracene	ND	935	128
Dibenzofuran	ND	935	134
Diethylphthalate	ND	935	130
Dimethylphthalate	ND	935	143
Fluoranthene	ND	935	138
Fluorene	ND	935	116
Hexachlorobenzene	ND	935	150
Hexachlorobutadiene	ND	935	1[illegible]
Hexachlorocyclopentadiene	ND	935	1[illegible]
Hexachloroethane	ND	935	117
Indeno(1,2,3-cd)pyrene	ND	935	127
Isophorone	ND	935	124
n-Nitroso-di-n-propylamine	ND	935	152
n-Nitrosodiphenylamine (2)	ND	935	135
Naphthalene	ND	935	130
Nitrobenzene	ND	935	104
Pentachlorophenol	ND	4410	40.1
Phenanthrene	ND	935	135
Phenol	ND	401	104
Pyrene	ND	935	128

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	84	25-144
2-Fluorobiphenyl	66	34-135
2-Fluorophenol	68	25-135
Nitrobenzene-d5	68	25-135
Phenol-d5	71	25-135
Terphenyl-d14	58	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159907	DaTime Analyzd :	12/12/96 04:59
Lab Cnt NO.	: K120-47	Dilutn Factor :	1
Lab File ID	: RLB093	Matrix :	WATER
Ext Btch ID	: SVK012W	% Moisture :	NA
Calib. Ref.	: RLB091	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	11/20/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	11/22/96
Batch No.	: 96K120	DaTime Extrctd :	11/24/96 18:00
Sample ID	: CR-A159907	DaTime Analyzd :	12/12/96 04:59
Lab Cnt NO.	: K120-47	Dilutn Factor :	1
Lab File ID	: RLB093	Matrix :	WATER
Ext Btch ID	: SVK012W	% Moisture :	NA
Calib. Ref.	: RLB091	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2
Hexachlorocyclopentadiene	ND	10	1
Hexachloroethane	ND	10	2
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	70	25-134
2-Fluorobiphenyl	59	43-125
2-Fluorophenol	59	25-125
Nitrobenzene-d5	63	32-125
Phenol-d5	58	25-125
Terphenyl-d14	69	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

EMAX Batch No. 96L032

EMAX
ANALYTICAL LABORATORIES INC.
630 Maple Ave.
Torrance, CA 90503
Telephone: (310) 618-8889
Fax: (310) 618-0818

RECEIVED
JAN 1 0 1997
JE - Denve

Date: 01-09-1997
EMAX Batch No.: 96L032

Attn: Lynn Schuetter

Jacobs Engineering Group
600 17th. Street, Ste. 1100N
Denver CO 80202

Subject: Laboratory Report
Project: Carswell AFB / 05G47900

Enclosed is the Laboratory report for samples received on 12/10/96. The data reported include :

Sample ID	Control #	Col Date	Matrix	Analysis
CR-A160101	L032-01	12/08/96	Water	EPA 8240
CR-A160102	L032-02	12/08/96	Water	EPA 8270
CR-A160103	L032-03	12/08/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A160104	L032-04	12/08/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A160105	L032-05	12/08/96	Water	EPA 8240
CR-A160106	L032-06	12/08/96	Water	EPA 8270
CR-A160107	L032-07	12/08/96	Water	Metals
				Mercury
				Antimony

Sample ID	Control #	Col Date	Matrix	Analysis
				Nickel
				Silver
				Selenium
CR-A160108	L032-08	12/08/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A160401	L032-09	12/09/96	Water	EPA 8240
CR-A160402	L032-10	12/09/96	Water	EPA 8270
CR-A160403	L032-11	12/09/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A160404	L032-12	12/09/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A160501	L032-13	12/09/96	Water	EPA 8240
CR-A160502	L032-14	12/09/96	Water	EPA 8270
CR-A160503	L032-15	12/09/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A160504	L032-16	12/09/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A160505	L032-17	12/09/96	Water	EPA 8240
CR-A160506	L032-18	12/09/96	Water	EPA 8270
CR-A160507	L032-19	12/09/96	Water	Metals
				Mercury

Sample ID	Control #	Col Date	Matrix	Analysis
				Antimony
				Nickel
				Silver
				Selenium
CR-A160508	L032-20	12/09/96	Water	EPA 8240
CR-A160601	L032-21	12/08/96	Water	EPA 8240
CR-A160601MS	L032-21M	12/08/96	Water	EPA 8240
CR-A160601MSD	L032-21S	12/08/96	Water	EPA 8240
CR-A160602	L032-22	12/08/96	Water	EPA 8270
CR-A160602MS	L032-22M	12/08/96	Water	EPA 8270
CR-A160602MSD	L032-22S	12/08/96	Water	EPA 8270
CR-A160603	L032-23	12/08/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A160603MS	L032-23M	12/08/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A160603DUP	L032-23D	12/08/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A160604	L032-24	12/08/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A160901	L032-25	12/07/96	Water	EPA 8240
CR-A160902	L032-26	12/07/96	Water	EPA 8270
CR-A160903	L032-27	12/07/96	Water	Metals
				Mercury
				Antimony
				Nickel

Sample ID	Control #	Col Date	Matrix	Analysis
				Silver
				Selenium
CR-A160904	L032-28	12/07/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A160905	L032-29	12/07/96	Water	EPA 8240
CR-A160906	L032-30	12/07/96	Water	EPA 8270
CR-A160907	L032-31	12/07/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A161001	L032-32	12/07/96	Water	EPA 8240
CR-A161002	L032-33	12/07/96	Water	EPA 8270
CR-A161003	L032-34	12/07/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A161004	L032-35	12/07/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium
CR-A161005	L032-36	12/08/96	Water	EPA 8240
CR-A161006	L032-37	12/08/96	Water	EPA 8270
CR-A161007	L032-38	12/08/96	Water	Metals
				Mercury
				Antimony
				Nickel
				Silver
				Selenium

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Kam Y. Pang, Ph.D.
Laboratory Director

P.S. - All analyses requested for the above referenced project have been completed. Therefore, unless instructed, the remaining portions of the samples will be disposed after fifteen (15) days from the date of this report.

FedEx USA Airbill — 3 coolers

Tracking Number 2963020841

96L032
12-10-96
10:00 AM

Recipient's Copy

1 From

Date 12/9/96 MPS 989 6954 462

Sender's Name DAN SCHULTZ MPS 989 6954 471 239-1768
Dept./Floor/Suite/Room

Company JACOBS ENGINEERING

Address 6560 WHITE SETTLEMENT ROAD

City FT. WORTH State TX Zip 76114

2 Your Internal Billing Reference Information 05G47900-50501

3 To

Recipient's Name SAMPLE RECEIVING Phone (310) 618-8889
Dept./Floor/Suite/Room

Company EMAX LABORATORIES

Address 630 MAPLE AVE.
(To "HOLD" at FedEx location, print FedEx address here)

City TORRANCE State CA Zip 90503

For HOLD at FedEx Location check here
- [ ] Hold Weekday (Not available with FedEx First Overnight)
- [ ] Hold Saturday (Not available at all locations) (Not available with FedEx First Overnight or FedEx Standard Overnight)

For Saturday Delivery check here
- [ ] (Extra Charge. Not available to all locations) (Not available with FedEx First Overnight or FedEx Standard Overnight)

4a Express Package Service *Packages under 150 lbs.* Delivery commitment may be later in some areas
- [x] FedEx Priority Overnight (Next business morning)
- [ ] FedEx Standard Overnight (Next business afternoon)
- [ ] FedEx 2Day* (Second business day)
- [ ] NEW FedEx First Overnight (Earliest next business morning delivery to select locations) (Higher rates apply)

* FedEx Letter Rate not available. Minimum charge: One pound FedEx 2Day rate.

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas
- [ ] FedEx Overnight Freight (Next business-day service for any distance)
- [ ] FedEx 2Day Freight (Second business day service for any distance)
- [ ] FedEx Express Saver Freight (Up to 3 business-day service based upon distance)

(Call for delivery schedule. See back for detailed descriptions of freight products.)

5 Packaging
- [ ] FedEx Letter
- [ ] FedEx Pak
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other Pkg.

Declared value limit $500

6 Special Handling
Does this shipment contain dangerous goods?
- [ ] Yes (As per attached Shipper's Declaration)
- [ ] Yes (Shipper's Declaration not required)
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ($) _____ x _____ kg. 904 (Dangerous Goods Shipper's Declaration not required)
- CA [ ] Cargo Aircraft Only

7 Payment
Bill to:
- [x] Sender (Account no. in section 1 will be billed)
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

(Enter FedEx account no. or Credit Card no. below)

Obtain Recipient FedEx Account No.

Total Packages	Total Weight	Total Declared Value*	Total Charges
3	194	$ .00	$

* When declaring a value higher than $100 per shipment, you pay an additional charge. See SERVICE CONDITIONS, DECLARED VALUE AND LIMIT OF LIABILITY section for further information.

Credit Card Auth.

8 Release Signature

Your signature authorizes Federal Express to deliver this shipment without obtaining a signature and agrees to indemnify and hold harmless Federal Express from any resulting claims.

272

Questions?
Call 1·800·Go·FedEx
(1·800·463·3339)

OWD - NNW

SAMPLE RECEIPT FORM

CONTROL NO.	96L0 32
CLIENT	JA Cobs. Engineering
PROJECT	Cars Well AFB (P021)

DATE	12- 10 -96
TIME	10:00 Am
RECIPIENT	I. PATEL

SAMPLE TRANSPORTATION TO EMAX LABORATORY:		BY	ON(DATE)	AT(TIME)	FROM(SITE/CO.)	COMMENTS
PICKED-UP BY EMAX COURIER						
DELIVERED BY CLIENT						
SHIPPED/AIRBILL NO:	Fed Ex 2963020841	See the receipt				

SAMPLE BATCH PACKAGING/SEALING UPON RECEIPT:			✓ INTACT	___ DAMAGED	✓ SEALED	___ NOT SEALED	___ NO CONTAINER
CONTAINER:	INSIDE TEMPERATURE (4°C ± 2°C)	2 °C		CUSTODY SEAL		LOCATION	NUMBER
✓ COOLER	PACKAGING	TYPE	SUFFICIENCY	✓ INTACT	___ DAMAGED	Front closure	3
___ BOX	INSULATION:		OK	NAME:	See COC.		
___ OTHER:	ICE/COOLANT:	Regular ice		DATE:			
	PACKING MATERIAL:			TIME:			

SAMPLE DOCUMENTATION/CHAIN-OF-CUSTODY(COC)	___ SEALED	✓ ENCLOSED	___ HANDCARRIED	___ FAXED	___ MAILED

SAMPLE LOG-IN:		CRITERIA	COMMENTS	DISCREPANCY
SAMPLE CUSTODY SEAL		EVERY SAMPLE	none	
CONTAINER TYPE/MATERIAL		APPROPRIATE	OK	
SAMPLE AMOUNT		ENOUGH	↓	
HOLDING TIME		SUFFICENT	↓	
SAMPLE PRESERVATION (For appropriate preservative see GP-0001 Appendix I)		NaOH preserved samples pH ≥ 12 HNO_3 / H_2SO_4 preserved samples pH ≤ 2	↓	
HEADSPACE/BUBBLES		ZERO/NONE	see below	
SAMPLE LABEL INFORMATION		SUFFICIENT	OK	
CHAIN-OF-CUSTODY INFORMATION		SUFFICIENT	↓	
SAMPLE INFO.:	SAMPLE ID	DATE	TIME / SIGNATURE / ANALYSES / PRESERVATIVE / CONTAINER	

INDIVIDUAL SAMPLE CONTAINER: ___ NONE ✓ SEALED PLASTIC BAG ___ CAN ___ OTHER(SPECIFY): _____

SAMPLE NUMBER	CLIENT ID	DISCREPANCY	ACTION
-5	CR-A160105	REC'D (2) VIALS 05/Bubble	
-7, -3	CR-A160103	METAL SAMPLE - PH IS 6, PRES/HNO3	

CLIENT SERVICES COPY RECEIVED BY	[illegible]	DATE		TIME

LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

METALS

SDG#: 96L032

JANUARY 09, 1997

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L032

METALS

Eighteen (18) water samples were received on 12/10/96 to be analyzed for metals analysis by ICP method in accordance with USEPA SW846 method 6010A. Antimony, silver, selenium, and nickel were analyzed by GFAA.

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   Trace amount of some elements Iron, sodium, and sodium were found in water blank but at below PQL.

3. **Matrix Spike/Matrix Spike Duplicate**

   All recoveries were within QC limits except asrsenic, cadmium, and lead in both MS/MSD and calcium in MS.

4. **Lab Control Sample/Lab Control Duplicate**

   All lab control results were within the control limits.

5. **Calibration**

   All initial and continuing calibration results were within QC criteria except absolute value of magnesium CCB3 in file I07L036 (associated with samples L032-3, 4, ,7, 8, 11, and 12) was higher than PQL and recovery of sodium in CCV6 file I07L036 was at 88% recovery (associated with samples L032-24, 27, 28, 31, 34, 35, and 38).

6. **Sample Analysis**

   Arsenic, lead, and cadmium were analyzed by Trace-ICP, antimony, nickel, silver, and selenium by GFAA, and all others metals by ICP. Iron and sodium in serial dilution were out of QC limits but post analytical spike recoveries were within QC limits.

12/12/1996 10:50

LAB CHRONICLE
Metals

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L032
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A160103	L032-03	NA	IPL012WB/12/14/96/9.00	IC7L036/12/30/96		*
CR-A160104	L032-04	NA				
CR-A160107	L032-07	NA				
CR-A160108	L032-08	NA				
CR-A160403	L032-11	NA				
CR-A160404	L032-12	NA				
CR-A160503	L032-15	NA				
CR-A160504	L032-16	NA				
CR-A160507	L032-19	NA				
CR-A160603	L032-23	NA				
CR-A160603MS	L032-23M	NA				
CR-A160603DUP	L032-23D	NA				
CR-A160604	L032-24	NA				
CR-A160903	L032-27	NA				
CR-A160904	L032-28	NA				
CR-A160907	L032-31	NA				
CR-A161003	L032-34	NA				
CR-A161004	L032-35	NA				
CR-A161007	L032-38	NA				
MBLKIW	IPL012WB					
LCS	WL					
LCSD	WC					

* As, Pb, Cd were analyzed on I31A011 file I31A011

*

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160103	DaTime Analyzd :	12/30/96 18:57
Lab Cnt NO.:	L032-03	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0942F	.5	.0122
Barium	.187	.02	.001
Beryllium	.00094F	.003	.0003
Calcium	881	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00091F	.06	.0008
Iron	.922	.07	.0035
Magnesium	10.6	.3	.0342
Manganese	.392	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	7.78	.3	.05
Thallium	ND	.4	.0632
Vanadium	.00934F	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160103	DaTime Analyzd :	01/07/97 12:20
Lab Cnt NO.:	L032-03	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	.000499F	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160104	DaTime Analyzd :	12/30/96 19:01
Lab Cnt NO.:	L032-04	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	ND	.5	.0122
Barium	.13	.02	.001
Beryllium	ND	.003	.0003
Calcium	171	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	ND	.06	.0008
Iron	.00493F	.07	.0035
Magnesium	5.39	.3	.0342
Manganese	.00872F	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	8.81	.3	.05
Thallium	ND	.4	.0632
Vanadium	ND	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160104	DaTime Analyzd :	01/07/97 12:23
Lab Cnt NO.:	L032-04	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160107	DaTime Analyzd :	12/30/96 19:04
Lab Cnt No.:	L032-07	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.138F	.5	.0122
Barium	.17	.02	.001
Beryllium	.00041F	.003	.0003
Calcium	816	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00118F	.06	.0008
Iron	.892	.07	.0035
Magnesium	9.53	.3	.0342
Manganese	.365	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	6.58	.3	.05
Thallium	ND	.4	.0632
Vanadium	.0107F	.08	.0029
Zinc	.00601F	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160107	DaTime Analyzd :	01/07/97 12:27
Lab Cnt NO.:	L032-07	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160108	DaTime Analyzd :	12/30/96 19:09
Lab Cnt NO.:	L032-08	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0654F	.5	.0122
Barium	.128	.02	.001
Beryllium	ND	.003	.0003
Calcium	168	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00248F	.06	.0008
Iron	.0124F	.07	.0035
Magnesium	5.39	.3	.0342
Manganese	.00873F	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	8.78	.3	.05
Thallium	ND	.4	.0632
Vanadium	.00426F	.08	.0029
Zinc	.00758F	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160108	DaTime Analyzd :	01/07/97 12:31
Lab Cnt NO.:	L032-08	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Btch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160403	DaTime Analyzd :	12/30/96 19:13
Lab Cnt NO.:	L032-11	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	2.45	.5	.0122
Barium	.367	.02	.001
Beryllium	.00191F	.003	.0003
Calcium	398	.1	.0222
Chromium	ND	.07	.0053
Cobalt	.00997F	.07	.0089
Copper	.00685F	.06	.0008
Iron	1.39	.07	.0035
Magnesium	31.4	.3	.0342
Manganese	1.7	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	3.9F	5	.466
Sodium	23.9	.3	.05
Thallium	ND	.4	.0632
Vanadium	.0247F	.08	.0029
Zinc	.0307	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160403	DaTime Analyzd :	01/07/97 12:35
Lab Cnt NO.:	L032-11	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	.00672	.005	.0049
Cadmium	.0012	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160404	DaTime Analyzd :	12/30/96 19:17
Lab Cnt NO.:	L032-12	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0642F	.5	.0122
Barium	.191	.02	.001
Beryllium	ND	.003	.0003
Calcium	96.5	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	ND	.06	.0008
Iron	.072	.07	.0035
Magnesium	25.7	.3	.0342
Manganese	.175	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	3.36F	5	.466
Sodium	22.8	.3	.05
Thallium	ND	.4	.0632
Vanadium	.00735F	.08	.0029
Zinc	.00608F	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160404	DaTime Analyzd :	01/07/97 12:39
Lab Cnt NO.:	L032-12	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Btch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160503	DaTime Analyzd :	12/30/96 19:31
Lab Cnt NO.:	L032-15	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.285F	.5	.0122
Barium	.513	.02	.001
Beryllium	ND	.003	.0003
Calcium	150	.1	.0222
Chromium	.00589F	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00153F	.06	.0008
Iron	.369	.07	.0035
Magnesium	3.79	.3	.0342
Manganese	2.17	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	1.96	.3	.05
Thallium	ND	.4	.0632
Vanadium	ND	.08	.0029
Zinc	.00725F	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160503	DaTime Analyzd :	01/07/97 13:04
Lab Cnt NO.:	L032-15	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	.00163	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Btch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160504	DaTime Analyzd :	12/30/96 19:38
Lab Cnt NO.:	L032-16	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0183F	.5	.0122
Barium	.472	.02	.001
Beryllium	ND	.003	.0003
Calcium	56.5	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	ND	.06	.0008
Iron	.0293F	.07	.0035
Magnesium	9.47	.3	.0342
Manganese	2.86	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	5.55	5	.466
Sodium	30.3	.3	.05
Thallium	ND	.4	.0632
Vanadium	ND	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160504	DaTime Analyzd :	01/07/97 13:08
Lab Cnt NO.:	L032-16	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160507	DaTime Analyzd :	12/30/96 19:42
Lab Cnt NO.:	L032-19	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0778F	.5	.0122
Barium	ND	.02	.001
Beryllium	ND	.003	.0003
Calcium	ND	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00302F	.06	.0008
Iron	.00765F	.07	.0035
Magnesium	ND	.3	.0342
Manganese	.0057F	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	ND	.3	.05
Thallium	ND	.4	.0632
Vanadium	ND	.08	.0029
[illegible]	.0119F	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160507	DaTime Analyzd :	01/07/97 13:12
Lab Cnt NO.:	L032-19	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Btch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160603	DaTime Analyzd :	12/30/96 19:46
Lab Cnt NO.:	L032-23	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0699F	.5	.0122
Barium	.0358	.02	.001
Beryllium	ND	.003	.0003
Calcium	166	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00086F	.06	.0008
Iron	.0768	.07	.0035
Magnesium	35.6	.3	.0342
Manganese	.682	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	91.5	.3	.05
Thallium	ND	.4	.0632
Vanadium	.00391F	.08	.0029
Zinc	.00789F	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160603	DaTime Analyzd :	01/07/97 13:16
Lab Cnt NO.:	L032-23	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Btch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160604	DaTime Analyzd :	12/30/96 20:17
Lab Cnt NO.:	L032-24	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0406F	.5	.0122
Barium	.052	.02	.001
Beryllium	.0003	.003	.0003
Calcium	193	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00275F	.06	.0008
Iron	.00616F	.07	.0035
Magnesium	37.8	.3	.0342
Manganese	.163	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	1.1F	5	.466
Sodium	144	.3	.05
Thallium	ND	.4	.0632
Vanadium	.00393F	.08	.0029
Zinc	.015F	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160604	DaTime Analyzd :	01/07/97 13:34
Lab Cnt NO.:	L032-24	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Btch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160903	DaTime Analyzd :	12/30/96 20:20
Lab Cnt NO.:	L032-27	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	2.35	.5	.0122
Barium	.291	.02	.001
Beryllium	.00109F	.003	.0003
Calcium	187	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00985F	.06	.0008
Iron	.711	.07	.0035
Magnesium	5.65	.3	.0342
Manganese	1.08	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	25.5	.3	.05
Thallium	ND	.4	.0632
Vanadium	.0169F	.08	.0029
Zinc	.0196F	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160903	DaTime Analyzd :	01/07/97 13:56
Lab Cnt NO.:	L032-27	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160904	DaTime Analyzd :	12/30/96 20:24
Lab Cnt NO.:	L032-28	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	ND	.5	.0122
Barium	.103	.02	.001
Beryllium	ND	.003	.0003
Calcium	128	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	ND	.06	.0008
Iron	.00655F	.07	.0035
Magnesium	5.04	.3	.0342
Manganese	.00393F	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	29.7	.3	.05
Thallium	ND	.4	.0632
Vanadium	.00338F	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160904	DaTime Analyzd :	01/07/97 14:00
Lab Cnt NO.:	L032-28	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160907	DaTime Analyzd :	12/30/96 20:28
Lab Cnt NO.:	L032-31	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	ND	.5	.0122
Barium	ND	.02	.001
Beryllium	ND	.003	.0003
Calcium	ND	.1	.0222
Chromium	.00661F	.07	.0053
Cobalt	ND	.07	.0089
Copper	ND	.06	.0008
Iron	.00571F	.07	.0035
Magnesium	ND	.3	.0342
Manganese	.00222F	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	ND	.3	.05
Thallium	ND	.4	.0632
Vanadium	.00327F	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A160907	DaTime Analyzd :	01/07/97 14:04
Lab Cnt NO.:	L032-31	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A161003	DaTime Analyzd :	12/30/96 20:31
Lab Cnt NO.:	L032-34	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	1.66	.5	.0122
Barium	.12	.02	.001
Beryllium	.00036F	.003	.0003
Calcium	195	.1	.0222
Chromium	.00693F	.07	.0053
Cobalt	ND	.07	.0089
Copper	.0101F	.06	.0008
Iron	2.64	.07	.0035
Magnesium	4.31	.3	.0342
Manganese	.456	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	1F	5	.466
Sodium	5.48	.3	.05
Thallium	ND	.4	.0632
Vanadium	.0114F	.08	.0029
Zinc	.0166F	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A161003	DaTime Analyzd :	01/07/97 14:07
Lab Cnt NO.:	L032-34	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A161004	DaTime Analyzd :	12/30/96 20:35
Lab Cnt NO.:	L032-35	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	ND	.5	.0122
Barium	.0575	.02	.001
Beryllium	ND	.003	.0003
Calcium	78.4	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	ND	.06	.0008
Iron	.00516F	.07	.0035
Magnesium	2.76	.3	.0342
Manganese	.00253F	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	6.17	.3	.05
Thallium	ND	.4	.0632
Vanadium	.00332F	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A161004	DaTime Analyzd :	01/07/97 14:11
Lab Cnt NO.:	L032-35	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A161007	DaTime Analyzd :	12/30/96 20:39
Lab Cnt NO.:	L032-38	Dilutn Factor :	1
Lab File ID:	I07L036	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I07L036	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0552F	.5	.0122
Barium	ND	.02	.001
Beryllium	ND	.003	.0003
Calcium	ND	.1	.0222
Chromium	.00697F	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00275F	.06	.0008
Iron	ND	.07	.0035
Magnesium	ND	.3	.0342
Manganese	.00192F	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	ND	.3	.05
Thallium	ND	.4	.0632
Vanadium	ND	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A161007	DaTime Analyzd :	01/07/97 14:15
Lab Cnt NO.:	L032-38	Dilutn Factor :	1
Lab File ID:	I31A011	Matrix :	WATER
Ext Btch ID:	IPL012W	% Moisture :	NA
Calib. Ref.:	I31A011	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016

LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

ANTIMONY BY GFAA

SDG#: 96L032

JANUARY 09, 1997

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP, INC.

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L032

ANTIMONY BY GFAA

Seventeen (17) water samples were received on 12/10/96 to be analyzed for Antimony by GFAA method 7041 in accordance with USEPA SW846 (1994,9).

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   Preparation blank was free of contamination.

3. **Matrix Spike/Matrix Spike Duplicate**

   MS recovery was within QC limits but was out of QC limit in MSD.

4. **Lab Control Sample/Lab Control Sample Duplicate**

   All lab control results were within the QC limits.

5. **Calibration**

   All initial and continuing calibration results were within QC criteria.

6. **Sample Analyses**

   Sample analyses met QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

12/31/1996 10:57

LAB CHRONICLE
Antimony

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L032
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A160103	L032-03	NA	IPL012/12/14/96/9:00	G06L015/12/17/96/13:30	G06L015-10/20	
CR-A160104	L032-04	NA		:34		21
CR-A160107	L032-07	NA		:45	G06L015-22/24	
CR-A160108	L032-08	NA		:49		25
CR-A160403	L032-11	NA		:52		26
CR-A160404	L032-12	NA		:56		27
CR-A160503	L032-15	NA		14:00		28
CR-A160504	L032-16	NA		:03		29
CR-A160507	L032-19	NA		:07		30
CR-A160603	L032-23	NA		13:12	G06L015-10/15	
CR-A160603MS	L032-23M	NA		:23		18
CR-A160603DUP	L032-23D	NA		:27		19
CR-A160604	L032-24	NA		14:11	G06L015-22/31	
CR-A160903	L032-27	NA		:15		32
CR-A160904	L032-28	NA		:18		33
CR-A160907	L032-31	NA		:30	G06L015-34/36	
CR-A161003	L032-34	NA		:34		37
CR-A161004	L032-35	NA		:37		38
CR-A161007	L032-38	NA		:41		39
MBLK1W	IPL012WB			13:01	G06L015-10/12	
LCS1	IPL013	WL		:05		13
LCD1		WC		:09		

EPA 3005A/7041
ANTIMONY BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96L032
Matrix : WATER

Date Collcted : 12/08/96
DaTime Received: 12/10/96
Instrument ID : EMAXTI06

SAMPLE ID	CONTROL NO	RESULTS (mg/L)	DLF	MOIST	PQL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A160103	L032-03	ND	1	NA	.005	.002	12/17/9613:30	12/14/9609:00	G06L015020	G06L015010	IPL012W
CR-A160104	L032-04	ND	1	NA	.005	.002	12/17/9613:34	12/14/9609:00	G06L015021	G06L015010	IPL012W
CR-A160107	L032-07	ND	1	NA	.005	.002	12/17/9613:45	12/14/9609:00	G06L015024	G06L015022	IPL012W
CR-A160108	L032-08	ND	1	NA	.005	.002	12/17/9613:49	12/14/9609:00	G06L015025	G06L015022	IPL012W
CR-A160403*	L032-11	ND	1	NA	.005	.002	12/17/9613:52	12/14/9609:00	G06L015026	G06L015022	IPL012W
CR-A160404*	L032-12	ND	1	NA	.005	.002	12/17/9613:56	12/14/9609:00	G06L015027	G06L015022	IPL012W
CR-A160503*	L032-15	ND	1	NA	.005	.002	12/17/9614:00	12/14/9609:00	G06L015028	G06L015022	IPL012W
CR-A160504*	L032-16	ND	1	NA	.005	.002	12/17/9614:03	12/14/9609:00	G06L015029	G06L015022	IPL012W
CR-A160507*	L032-19	ND	1	NA	.005	.002	12/17/9614:07	12/14/9609:00	G06L015030	G06L015022	IPL012W
CR-A160603	L032-23	ND	1	NA	.005	.002	12/17/9613:12	12/14/9609:00	G06L015015	G06L015010	IPL012W
CR-A160603MS	L032-23M	.0162	1	NA	.005	.002	12/17/9613:23	12/14/9609:00	G06L015018	G06L015010	IPL012W
CR-A160603MSD	L032-23S	.0148	1	NA	.005	.002	12/17/9613:27	12/14/9609:00	G06L015019	G06L015010	IPL012W
CR-A160604	L032-24	ND	1	NA	.005	.002	12/17/9614:11	12/14/9609:00	G06L015031	G06L015022	IPL012W
CR-A160903**	L032-27	ND	1	NA	.005	.002	12/17/9614:15	12/14/9609:00	G06L015032	G06L015022	IPL012W
CR-A160904**	L032-28	ND	1	NA	.005	.002	12/17/9614:18	12/14/9609:00	G06L015033	G06L015022	IPL012W
CR-A160907**	L032-31	ND	1	NA	.005	.002	12/17/9614:30	12/14/9609:00	G06L015036	G06L015034	IPL012W
CR-A161003**	L032-34	ND	1	NA	.005	.002	12/17/9614:34	12/14/9609:00	G06L015037	G06L015034	IPL012W
CR-A161004**	L032-35	ND	1	NA	.005	.002	12/17/9614:37	12/14/9609:00	G06L015038	G06L015034	IPL012W
CR-A161007	L032-38	ND	1	NA	.005	.002	12/17/9614:41	12/14/9609:00	G06L015039	G06L015034	IPL012W
MBLK1W	IPL012WB	ND	1	NA	.005	.002	12/17/9613:01	12/14/9609:00	G06L015012	G06L015010	IPL012W
LCS1W	IPL013WL	.0224	1	NA	.005	.002	12/17/9613:05	12/14/9609:00	G06L015013	G06L015010	IPL012W
LCD1W	IPL013WC	.0223	1	NA	.005	.002	12/17/9613:09	12/14/9609:00	G06L015014	G06L015010	IPL012W

PQL: Practical Quantitation Limit
* DATE COLLECTED : 12/09/96
** DATE COLLECTED : 12/07/96

LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

MERCURY BY COLD VAPOR

SDG#: 96L032

JANUARY 09, 1997

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L032

EPA 7470A
MERCURY BY COLD VAPOR

Seventeen (17) water samples were received on 12/10/96 for Mercury by Method 7470A in accordance with SW846 (1994).

1. **Holding Time**

   Extraction and analysis met holding time.

2. **Blank**

   A preparation blank was free of contamination.

3. **Matrix Spike/Matrix Spike Duplicate**

   Recoveries were within control limits.

4. **Lab Control Sample/Lab Control Sample Duplicate**

   Lab control sample results and RPD were within the control limits.

5. **Sample Analyses**

   Sample analyses were performed within the QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

12/12/1996 10:50

LAB CHRONICLE
Mercury

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L032
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A160103	L032-03	NA	Hq2L017W/12/18/96/10.00	M96L017/12/18/96/22.07	M96L017-7	/12
CR-A160104	L032-04	NA		10		13
CR-A160107	L032-07	NA		14		14
CR-A160108	L032-08	NA		17		15
CR-A160403	L032-11	NA		20		16
CR-A160404	L032-12	NA		23		17
CR-A160503	L032-15	NA		36	M96L017-19	/21
CR-A160504	L032-16	NA		39		22
CR-A160507	L032-19	NA		42		[illegible]
CR-A160603	L032-23	NA		45		24
CR-A160603MS	L032-23M	NA		48		25
CR-A160603DUP	L032-23D	NA		51		26
CR-A160604	L032-24	NA		54		27
CR-A160903	L032-27	NA		22.57		28
CR-A160904	L032-28	NA		23.01		29
CR-A160907	L032-31	NA		.13	M96L017-31	/33
CR-A161003	L032-34	NA		.16		34
CR-A161004	L032-35	NA		.19		35
CR-A161007	L032-38	NA		.23		36
MBLKIW	Hq2L017WB			21:58	M96L017-7	/9
LCS1	WL			22.01		10
LCD1	WC			22.04		11

EPA 7470A
MERCURY BY COLD VAPOR

CLIENT:	JACOBS ENGINEERING GROUP	DATE COLLECTED:	12/08/96
PROJECT:	CARSWELL AFB / 05G47900	DATE RECEIVED:	12/10/96
BATCH NO.:	96L032	DATE EXTRACTED:	12/18/96 10:00
MATRIX:	WATER	INSTRUMENT ID:	I23
CAL REF:	M96L017-7	PREP BATCH:	HGL017W

SAMPLE ID	CONTROL NO	RESULT (mg/L)	DILUTION FACTOR	PQL (mg/L)	MDL (mg/L)	ANALYZED DATETIME
CR-A160103	L032-03	ND	1	.001	.0001	12/18/96 22:07
CR-A160104	L032-04	ND	1	.001	.0001	12/18/96 22:10
CR-A160107	L032-07	ND	1	.001	.0001	12/18/96 22:14
CR-A160108	L032-08	ND	1	.001	.0001	12/18/96 22:17
CR-A160403	L032-11	ND	1	.001	.0001	12/18/96 22:20
CR-A160404	L032-12	ND	1	.001	.0001	12/18/96 22:23
CR-A160503	L032-15	ND	1	.001	.0001	12/18/96 22:36
CR-A160504	L032-16	ND	1	.001	.0001	12/18/96 22:39
CR-A160507	L032-19	ND	1	.001	.0001	12/18/96 22:42
CR-A160603	L032-23	ND	1	.001	.0001	12/18/96 22:45
CR-A160603MS	L032-23M	.00472	1	.001	.0001	12/18/96 22:48
CR-A160603MSD	L032-23S	.00414	1	.001	.0001	12/18/96 22:51
CR-A160604	L032-24	ND	1	.001	.0001	12/18/96 22:54
CR-A160903	L032-27	ND	1	.001	.0001	12/18/96 22:57
CR-A160904	L032-28	ND	1	.001	.0001	12/18/96 23:01
CR-A160907	L032-31	ND	1	.001	.0001	12/18/96 23:13
CR-A161003	L032-34	ND	1	.001	.0001	12/18/96 23:16
CR-A161004	L032-35	ND	1	.001	.0001	12/18/96 23:19
CR-A161007	L032-38	ND	1	.001	.0001	12/18/96 23:23
MBLK1W	HGL017WB	ND	1	.001	.0001	12/18/96 21:58
LCS1W	HGL017WL	.00498	1	.001	.0001	12/18/96 22:01
LCD1W	HGL017WC	.00501	1	.001	.0001	12/18/96 22:04

PQL: Practical Quantitation Limit
CAL REF: M96L017-19, for L032-15 to 28, 23M and 23S
M96L017-31, for L032-31 to 38
AFCEE Ver. 1.1

LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

NICKEL BY GFAA

SDG#: 96L032

JANUARY 09, 1997

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP, INC.

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L032

NICKEL BY GFAA

Seventeen (17) water samples were received on 12/10/96 to be analyzed for Nickel by GFAA method 7520 in accordance with USEPA SW846 (1994,9).

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   Preparation blank was free of contamination.

3. **Matrix Spike/Matrix Spike Duplicate**

   MS recoveries were within QC limits.

4. **Lab Control Sample/Lab Control Sample Duplicate**

   All lab control results were within the QC limits.

5. **Calibration**

   All initial and continuing calibration results were within QC criteria.

6. **Sample Analyses**

   Sample analyses met QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

12/31/1996 10:57

LAB CHRONICLE
Nickel

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L032
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A160103	L032-03	NA	GFL007/12/14/96/09:00	G03L026/12/20/96/20:37	G06L026-39/44	*
CR-A160104	L032-04	NA		:41		45
CR-A160107	L032-07	NA		:46		46
CR-A160108	L032-08	NA		:50		47
CR-A160403	L032-11	NA		:54		48
CR-A160404	L032-12	NA		:58		49
CR-A160503	L032-15	NA		21:03		50
CR-A160504	L032-16	NA		:15	G06L026-51/3	
CR-A160507	L032-19	NA		:19		
CR-A160603	L032-23	NA		20:07	G06L026-27/34	
CR-A160603MS	L032-23M	NA		:29	G06L026-39/42	
CR-A160603DUP	L032-23D	NA		:33		43
CR-A160604	L032-24	NA		21:23	G06L026-54/5	
CR-A160903	L032-27	NA		:28		56
CR-A160904	L032-28	NA		:32		57
CR-A160907	L032-31	NA		:36		58
CR-A161003	L032-34	NA		21:40		59
CR-A161004	L032-35	NA		:44		60
CR-A161007	L032-38	NA		:48		61
MBLK1W	GFL007	WB		19:54	G06L026-27/34	
LCS1		WL		:59		35
LCD1		WC		20:03		

* See sequence run file

EPA 3020A/7520
NICKEL BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96L032
Matrix : WATER

Date Collcted : 12/08/96
DaTime Received: 12/10/96
Instrument ID : EMAXTI03

SAMPLE ID	CONTROL NO	RESULTS (mg/L)	DLF	MOIST	PQL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A160103	L032-03	.00304F	1	NA	.01	.002	12/20/9620:37	12/14/9609:00	G03L026038	G03L026033	GFL007W
CR-A160104	L032-04	ND	1	NA	.01	.002	12/20/9620:41	12/14/9609:00	G03L026039	G03L026033	GFL007W
CR-A160107	L032-07	.00306F	1	NA	.01	.002	12/20/9620:46	12/14/9609:00	G03L026040	G03L026033	GFL007W
CR-A160108	L032-08	ND	1	NA	.01	.002	12/20/9620:50	12/14/9609:00	G03L026041	G03L026033	GFL007W
CR-A160403*	L032-11	.00869F	1	NA	.01	.002	12/20/9620:54	12/14/9609:00	G03L026042	G03L026033	GFL007W
CR-A160404*	L032-12	ND	1	NA	.01	.002	12/20/9620:58	12/14/9609:00	G03L026043	G03L026033	GFL007W
CR-A160503*	L032-15	.014	1	NA	.01	.002	12/20/9621:03	12/14/9609:00	G03L026044	G03L026033	GFL007W
CR-A160504*	L032-16	.00296F	1	NA	.01	.002	12/20/9621:15	12/14/9609:00	G03L026047	G03L026045	GFL007W
CR-A160507*	L032-19	ND	1	NA	.01	.002	12/20/9621:19	12/14/9609:00	G03L026048	G03L026045	GFL007W
CR-A160603	L032-23	.00989F	1	NA	.01	.002	12/20/9620:07	12/14/9609:00	G03L026031	G03L026021	GFL007W
CR-A160603MS	L032-23M	.0165	1	NA	.01	.002	12/20/9620:29	12/14/9609:00	G03L026036	G03L026033	GFL007W
CR-A160603MSD	L032-23S	.0154	1	NA	.01	.002	12/20/9620:33	12/14/9609:00	G03L026037	G03L026033	GFL007W
CR-A160604	L032-24	.00394F	1	NA	.01	.002	12/20/9621:23	12/14/9609:00	G03L026049	G03L026045	GFL007W
CR-A160903**	L032-27	.0203	1	NA	.01	.002	12/20/9621:28	12/14/9609:00	G03L026050	G03L026045	GFL007W
CR-A160904**	L032-28	ND	1	NA	.01	.002	12/20/9621:32	12/14/9609:00	G03L026051	G03L026045	GFL007W
CR-A160907**	L032-31	ND	1	NA	.01	.002	12/20/9621:36	12/14/9609:00	G03L026052	G03L026045	GFL007W
CR-A161003**	L032-34	.0044F	1	NA	.01	.002	12/20/9621:40	12/14/9609:00	G03L026053	G03L026045	GFL007W
CR-A161004**	L032-35	ND	1	NA	.01	.002	12/20/9621:44	12/14/9609:00	G03L026054	G03L026045	GFL007W
CR-A161007	L032-38	ND	1	NA	.01	.002	12/20/9621:48	12/14/9609:00	G03L026055	G03L026045	GFL007W
MBLK1W	GFL007WB	ND	1	NA	.01	.002	12/20/9619:54	12/14/9609:00	G03L026028	G03L026021	GFL007W
LCS1W	GFL007WL	.0115	1	NA	.01	.002	12/20/9619:59	12/14/9609:00	G03L026029	G03L026021	GFL007W
LCD1W	GFL007WC	.0103	1	NA	.01	.002	12/20/9620:03	12/14/9609:00	G03L026030	G03L026021	GFL007W

PQL: Practical Quantitation Limit
* DATE COLLECTED : 12/09/96
** DATE COLLECTED : 12/07/96

LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

SELENIUM BY GFAA

SDG#: 96L032

JANUARY 09, 1997

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP, INC.

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L032

SELENIUM BY GFAA

Seventeen (17) water samples were received on 12/10/96 to be analyzed for Selenium by GFAA method 7740 in accordance with USEPA SW846 (1994,9).

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   Preparation blank was free of contamination.

3. **Matrix Spike/Matrix Spike Duplicate**

   MS recoveries were within QC limits.

4. **Lab Control Sample/Lab Control Sample Duplicate**

   All lab control results were within the QC limits.

5. **Calibration**

   All initial and continuing calibration results were within QC criteria.

6. **Sample Analyses**

   Sample analyses met QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

EPA 3020A/7740
SELENIUM BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96L032
Matrix : WATER

Date Collcted : 12/08/96
DaTime Received: 12/10/96
Instrument ID : EMAXT103

SAMPLE ID	CONTROL NO	RESULTS (mg/L)	DLF	MOIST	PQL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A160103	L032-03	.0042F	1	NA	.005	.0011	12/18/9619:46	12/14/9609:00	G03L023020	G03L023010	GFL007W
CR-A160104	L032-04	.0046F	1	NA	.005	.0011	12/18/9619:49	12/14/9609:00	G03L023021	G03L023010	GFL007W
CR-A160107	L032-07	.0041F	1	NA	.005	.0011	12/18/9620:01	12/14/9609:00	G03L023024	G03L023022	GFL007W
CR-A160108	L032-08	.0049F	1	NA	.005	.0011	12/18/9620:05	12/14/9609:00	G03L023025	G03L023022	GFL007W
CR-A160403*	L032-11	.0017F	1	NA	.005	.0011	12/18/9620:12	12/14/9609:00	G03L023027	G03L023022	GFL007W
CR-A160404*	L032-12	ND	1	NA	.005	.0011	12/18/9620:08	12/14/9609:00	G03L023026	G03L023022	GFL007W
CR-A160503*	L032-15	.0012F	1	NA	.005	.0011	12/18/9620:16	12/14/9609:00	G03L023028	G03L023022	GFL007W
CR-A160504*	L032-16	.002F	1	NA	.005	.0011	12/18/9620:20	12/14/9609:00	G03L023029	G03L023022	GFL007W
CR-A160507*	L032-19	.0013F	1	NA	.005	.0011	12/18/9620:24	12/14/9609:00	G03L023030	G03L023022	GFL007W
CR-A160603	L032-23	.0017F	1	NA	.005	.0011	12/18/9619:27	12/14/9609:00	G03L023015	G03L023010	GFL007W
CR-A160603MS	L032-23M	.0175	1	NA	.005	.0011	12/18/9619:38	12/14/9609:00	G03L023018	G03L023010	GFL007W
CR-A160603MSD	L032-23S	.017	1	NA	.005	.0011	12/18/9619:42	12/14/9609:00	G03L023019	G03L023010	GFL007W
CR-A160604	L032-24	.0018F	1	NA	.005	.0011	12/18/9620:27	12/14/9609:00	G03L023031	G03L023022	GFL007W
CR-A160903**	L032-27	.0024F	1	NA	.005	.0011	12/18/9620:31	12/14/9609:00	G03L023032	G03L023022	GFL007W
CR-A160904**	L032-28	.0025F	1	NA	.005	.0011	12/18/9620:35	12/14/9609:00	G03L023033	G03L023022	GFL007W
CR-A160907**	L032-31	ND	1	NA	.005	.0011	12/18/9620:47	12/14/9609:00	G03L023036	G03L023034	GFL007W
CR-A161003**	L032-34	.0019F	1	NA	.005	.0011	12/18/9620:51	12/14/9609:00	G03L023037	G03L023034	GFL007W
CR-A161004**	L032-35	.0028F	1	NA	.005	.0011	12/18/9620:55	12/14/9609:00	G03L023038	G03L023034	GFL007W
CR-A161007	L032-38	.0018F	1	NA	.005	.0011	12/18/9620:59	12/14/9609:00	G03L023039	G03L023034	GFL007W
MBLK1W	GFL007WB	.0014F	1	NA	.005	.0011	12/18/9619:16	12/14/9609:00	G03L023012	G03L023010	GFL007W
LCS1W	GFL007WL	.0207	1	NA	.005	.0011	12/18/9619:20	12/14/9609:00	G03L023013	G03L023010	GFL007W
LCD1W	GFL007WC	.0179	1	NA	.005	.0011	12/18/9619:24	12/14/9609:00	G03L023014	G03L023010	GFL007W

PQL: Practical Quantitation Limit
AFCEE Ver. 1.1
* DATE COLLECTED : 12/09/96
** DATE COLLECTED : 12/07/96

LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

SILVER BY GFAA

SDG#: 96L032

JANUARY 09, 1997

12/31/1996 10:57

LAB CHRONICLE
Silver

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L032
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A160103	L032-03	NA	GFL007/12/14/96/9:50	G03L031/12/30/96/21:51	G03L031-	10 39/49
CR-A160104	L032-04	NA		:54		50
CR-A160107	L032-07	NA		22:04	G03L031-	28 51/55
CR-A160108	L032-08	NA		:07		54
CR-A160403	L032-11	NA		:10		55
CR-A160404	L032-12	NA		:13		56
CR-A160503	L032-15	NA		:16		57
CR-A160504	L032-16	NA		:19		58
CR-A160507	L032-19	NA		22:23		59
CR-A160603	L032-23	NA		21:35	G03L031-	18/44
CR-A160603MS	L032-23M	NA		:45		47
CR-A160603DUP	L032-23D	NA		:48		48
CR-A160604	L032-24	NA		22:26	G03L031-	22/60
CR-A160903	L032-27	NA		:29		61
CR-A160904	L032-28	NA		:33		62
CR-A160907	L032-31	NA		:43	G03L031-	34/65
CR-A161003	L032-34	NA		:46		66
CR-A161004	L032-35	NA		:49		67
CR-A161007	L032-38	NA		:53		68
MBLKIW	GFL007WB			21:25	G03L031-	10/41
LCS1	WL			:29		42
LCD1	WC			:32		43

* See sequence file run

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP, INC.

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L032

SILVER BY GFAA

Seventeen (17) water samples were received on 12/10/96 to be analyzed for Silver by GFAA method 7760 in accordance with USEPA SW846 (1994,9).

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   Preparation blank was free of contamination.

3. **Matrix Spike/Matrix Spike Duplicate**

   MS recoveries were within QC limits.

4. **Lab Control Sample/Lab Control Sample Duplicate**

   All lab control results were within the QC limits.

5. **Calibration**

   All initial and continuing calibration results were within QC criteria.

6. **Sample Analyses**

   Sample analyses met QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

EPA 3020A/7760
SILVER BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96L032
Matrix : WATER

Date Collcted : 12/08/96
DaTime Received: 12/10/96
Instrument ID : EMAXTI03

SAMPLE ID	CONTROL NO	RESULTS (mg/L)	DLF	MOIST	PQL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A160103	L032-03	ND	1	NA	.001	.0002	12/30/9621:51	12/14/9609:00	G03L031020	G03L031010	GFL007W
CR-A160104	L032-04	ND	1	NA	.001	.0002	12/30/9621:54	12/14/9609:00	G03L031021	G03L031010	GFL007W
CR-A16D107	L032-07	ND	1	NA	.001	.0002	12/30/9622:04	12/14/9609:00	G03L031024	G03L031022	GFL0D7W
CR-A160108	L032-08	ND	1	NA	.001	.0002	12/30/9622:07	12/14/9609:00	G03L031025	G03L031022	GFL007W
CR-A160403*	L032-11	ND	1	NA	.001	.0002	12/30/9622:10	12/14/9609:00	G03L031026	G03L031022	GFL007W
CR-A160404*	L032-12	ND	1	NA	.001	.0002	12/30/9622:13	12/14/9609:00	G03L031027	G03L031022	GFL007W
CR-A160503*	L032-15	ND	1	NA	.001	.0002	12/30/9622:16	12/14/9609:00	G03L031028	G03L031022	GFL007W
CR-A160504*	L032-16	ND	1	NA	.001	.0002	12/30/9622:19	12/14/9609:00	G03L031029	G03L031022	GFL007W
CR-A16D507*	L032-19	ND	1	NA	.001	.0002	12/30/9622:23	12/14/9609:00	G03L031030	G03L031022	GFL007W
CR-A16D603	L032-23	ND	1	NA	.001	.0002	12/30/9621:35	12/14/9609:00	G03L031015	G03L031010	GFL007W
CR-A160603MS	L032-23M	.00206	1	NA	.001	.0002	12/30/9621:45	12/14/9609:00	G03L031018	G03L031010	GFL007W
CR-A160603MSD	L032-23S	.00194	1	NA	.001	.0002	12/30/9621:48	12/14/9609:00	G03L031019	G03L031010	GFL007W
CR-A160604	L032-24	ND	1	NA	.001	.0002	12/30/9622:26	12/14/9609:00	G03L031031	G03L031022	GFL007W
CR-A160903**	L032-27	ND	1	NA	.001	.0002	12/30/9622:29	12/14/9609:00	G03L031032	G03L031022	GFL007W
CR-A160904**	L032-28	ND	1	NA	.001	.0002	12/30/9622:33	12/14/9609:00	G03L031033	G03L031022	GFL007W
CR-A160907**	L032-31	ND	1	NA	.001	.0002	12/30/9622:43	12/14/9609:00	G03L031036	G03L031034	GFL007W
CR-A161003**	L032-34	ND	1	NA	.001	.0002	12/30/9622:46	12/14/9609:00	G03L031037	G03L031034	GFL007W
CR-A161004**	L032-35	ND	1	NA	.001	.0002	12/30/9622:49	12/14/9609:00	G03L031038	G03L031034	GFL007W
CR-A161007	L032-38	ND	1	NA	.001	.0002	12/30/9622:53	12/14/9609:00	G03L031039	G03L031034	GFL007W
MBLK1W	GFL007WB	ND	1	NA	.001	.0002	12/30/9621:25	12/14/9609:00	G03L031012	G03L031010	GFL007W
LCS1W	GFL007WL	.00219	1	NA	.001	.0002	12/30/9621:29	12/14/9609:00	G03L031013	G03L031010	GFL007W
LCD1W	GFL007WC	.00208	1	NA	.001	.0002	12/30/9621:32	12/14/9609:00	G03L031014	G03L031010	GFL007W

PQL: Practical Quantitation Limit
* DATE COLLECTED : 12/09/96
** DATE COLLECTED : 12/07/96
AFCEE Ver. 1.1

LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

VOLATILES

SDG#: 96L032

JANUARY 09, 1997

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP, INC.

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L032

VOLATILES

Eleven (11) water samples were received on 12/10/96 to be analyzed for volatile organics in accordance with USEPA SW846.

1. Holding Time

   Analytical holding time was met.

2. Surrogate Recovery

   Recoveries were within QC limits.

3. Matrix Spike/Matrix Spike Duplicate

   % Recovery for 2-Chloroethyl vinyl ether was low in MS and was not present in MSD due to the instability of CEVE in acidified sample.

4. Laboratory Control Sample

   Vinyl acetate recovery was low in LCSD.

5. Method Blank

   Method blank was free of contamination.

6. Tuning and Calibration

   Tuning and calibration were carried out at 12 hour interval. All QC requirements were met.

7. Sample Analysis

   All sample analyses met QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

12/12/1996 10:50

LAB CHRONICLE
EPA 8240

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L032
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A160101	L032-01	NA	VOL 2302	12/18/96 10.53 LP	385	389
CR-A160105	L032-05	NA		18.20		404
CR-A160401	L032-09	NA		~~12.44~~ 13.11		393
CR-A160501	L032-13	NA		~~13.11~~ 13.39		394
CR-A160505	L032-17	NA		~~12.35~~ 14.07		395
CR-A160508	L032-20	NA		~~14.07~~ 14.34		396
CR-A160601	L032-21	NA		~~14.34~~ 15.02		397
CR-A160601MS	L032-21M	NA		~~15.30~~ 15.30		3[illegible]
CR-A160601MSD	L032-21S	NA		16.00		399
CR-A160901	L032-25	NA		16.28		400
CR-A160905	L032-29	NA		16.55		401
CR-A161001	L032-32	NA		17.23		402
CR-A161005	L032-36	NA		17.52		403
VBLK01	VOL2302B			9.14		386
LCS01	VOL2302C			9.42		387
LCSD01	VOL2302C			12.05		391

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/18/96 10:53
Sample ID	: CR-A160101	DaTime Analyzd :	12/18/96 10:53
Lab Cnt NO.	: L032-01	Dilutn Factor :	1
Lab File ID	: RLP389	Matrix :	WATER
Ext Btch ID	: VOL2302	% Moisture :	NA
Calib. Ref.	: RLP385	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	3.69F	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	88	79-118
Bromofluorobenzene	97	86-115
Toluene-d8	96	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/18/96 18:20
Sample ID	: CR-A160105	DaTime Analyzd :	12/18/96 18:20
Lab Cnt NO.	: L032-05	Dilutn Factor :	1
Lab File ID	: RLP404	Matrix :	WATER
Ext Btch ID	: VOL2302	% Moisture :	NA
Calib. Ref.	: RLP385	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.34
Chloroethane	ND	10	.7
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	ND	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	90	79-118
Bromofluorobenzene	97	86-115
Toluene-d8	98	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted	: 12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received	: 12/10/96
Batch No.	: 96L032	DaTime Extrctd	: 12/18/96 13:11
Sample ID	: CR-A160401	DaTime Analyzd	: 12/18/96 13:11
Lab Cnt NO.	: L032-09	Dilutn Factor	: 1
Lab File ID	: RLP393	Matrix	: WATER
Ext Btch ID	: VOL2302	% Moisture	: NA
Calib. Ref.	: RLP385	Instrument ID	: MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	1.81F	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	89	79-118
Bromofluorobenzene	89	86-115
Toluene-d8	99	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/18/96 13:39
Sample ID	: CR-A160501	DaTime Analyzd :	12/18/96 13:39
Lab Cnt NO.:	L032-13	Dilutn Factor :	1
Lab File ID:	RLP394	Matrix :	WATER
Ext Btch ID:	VOL2302	% Moisture :	NA
Calib. Ref.:	RLP385	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	POL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl-Vinyl-Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.34
Chloroethane	ND	10	.7
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	ND	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	90	79-118
Bromofluorobenzene	98	86-115
Toluene-d8	100	88-110

POL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/18/96 14:07
Sample ID	: CR-A160505	DaTime Analyzd :	12/18/96 14:07
Lab Cnt NO.	: L032-17	Dilutn Factor :	1
Lab File ID	: RLP395	Matrix :	WATER
Ext Btch ID	: VOL2302	% Moisture :	NA
Calib. Ref.	: RLP385	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl-Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	14F	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	ND	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	89	79-118
Bromofluorobenzene	98	86-115
Toluene-d8	99	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/18/96 14:34
Sample ID	: CR-A160508	DaTime Analyzd :	12/18/96 14:34
Lab Cnt NO.	: L032-20	Dilutn Factor :	1
Lab File ID	: RLP396	Matrix :	WATER
Ext Btch ID	: VOL2302	% Moisture :	NA
Calib. Ref.	: RLP385	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.34
Chloroethane	ND	10	.7
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	1.82F	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	88	79-118
Bromofluorobenzene	99	86-115
Toluene-d8	98	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/18/96 15:02
Sample ID	: CR-A160601	DaTime Analyzd :	12/18/96 15:02
Lab Cnt NO.:	L032-21	Dilutn Factor :	1
Lab File ID:	RLP397	Matrix :	WATER
Ext Btch ID:	VOL2302	% Moisture :	NA
Calib. Ref.:	RLP385	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	1.66F	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	91	79-118
Bromofluorobenzene	97	86-115
Toluene-d8	97	88-110

POL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/18/96 16:28
Sample ID	: CR-A160901	DaTime Analyzd :	12/18/96 16:28
Lab Cnt NO.:	L032-25	Dilutn Factor :	1
Lab File ID:	RLP400	Matrix :	WATER
Ext Btch ID:	VOL2302	% Moisture :	NA
Calib. Ref.:	RLP385	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.34
Chloroethane	ND	10	.7
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	ND	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	89	79-118
Bromofluorobenzene	94	86-115
Toluene-d8	100	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/18/96 16:55
Sample ID	: CR-A160905	DaTime Analyzd :	12/18/96 16:55
Lab Cnt NO.	: L032-29	Dilutn Factor :	1
Lab File ID	: RLP401	Matrix :	WATER
Ext Btch ID	: VOL2302	% Moisture :	NA
Calib. Ref.	: RLP385	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	2.77F	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	90	79-118
Bromofluorobenzene	99	86-115
Toluene-d8	97	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/18/96 17:23
Sample ID	: CR-A161001	DaTime Analyzd :	12/18/96 17:23
Lab Cnt NO.	: L032-32	Dilutn Factor :	1
Lab File ID	: RLP402	Matrix :	WATER
Ext Btch ID	: VOL2302	% Moisture :	NA
Calib. Ref.	: RLP385	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl-Vinyl-Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.34
Chloroethane	ND	10	.7
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	2.26F	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	90	79-118
Bromofluorobenzene	98	86-115
Toluene-d8	93	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/18/96 17:52
Sample ID	: CR-A161005	DaTime Analyzd :	12/18/96 17:52
Lab Cnt NO.	: L032-36	Dilutn Factor :	1
Lab File ID	: RLP403	Matrix :	WATER
Ext Btch ID	: VOL2302	% Moisture :	NA
Calib. Ref.	: RLP385	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	3.39F	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	91	79-118
Bromofluorobenzene	97	86-115
Toluene-d8	95	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	NA
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/18/96
Batch No.	: 96L032	DaTime Extrctd :	12/18/96 09:14
Sample ID	: MBLK1W	DaTime Analyzd :	12/18/96 09:14
Lab Cnt NO.	: VOL2302B	Dilutn Factor :	1
Lab File ID	: RLP386	Matrix :	WATER
Ext Btch ID	: VOL2302	% Moisture :	NA
Calib. Ref.	: RLP385	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.34
Chloroethane	ND	10	.7
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	ND	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	90	79-118
Bromofluorobenzene	93	86-115
Toluene-d8	98	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

SEMIVOLATILES

SDG#: 96L032

JANUARY 09, 1997

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L032

SW 3520B/8270B
SEMIVOLATILES

Ten (10) water samples were received on 12/10/96 to be analyzed for semivolatile organics by Method 8270B in accordance with USEPA SW846 (1994).

1. Holding Time

   Analytical holding time was met.

2. Surrogate Recovery

   All surrogate recoveries were within QC limits.

3. Matrix Spike/Matrix Spike Duplicate

   All recoveries were within QC limits except no recovery of 3,3'-Dichlorobenzidine was found in L032-22M and 22S.

4. Lab Control Sample/Lab Control Sample Duplicate

   All recoveries were within QC limits except low recovery of Benzoic acid in SVL009WL.

5. Method Blank

   Method blank was free of contamination.

6. Tuning and Calibration

   Tuning and calibration were carried out at 12 hour interval. All QC requirements were met.

7. Sample Analysis

   Sample analyses were within QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

LAB CHRONICLE
EPA 8270

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L032
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A160102	L032-02	NA	SVL009W / 12/18/96 / 15:30	RAS 014 / 01/07/97 / 14:46	RAS014	RAS018
CR-A160106	L032-06	NA		/ 15:32		RAS019
CR-A160402	L032-10	NA		/ 16:19		RAS020
CR-A160502	L032-14	NA		/ 17:06		RAS021
CR-A160506	L032-18	NA		/ 17:53		RAS022
CR-A160602	L032-22	NA		/ 18:42		RAS023
CR-A160602MS	L032-22M	NA		/ 19:29		RAS024
CR-A160602MSD	L032-22S	NA		/ 20:16		RAS025
CR-A160902	L032-26	NA		/ 21:02		RAS0[illegible]
CR-A160906	L032-30	NA		/ 21:49		RAS027
CR-A161002	L032-33	NA		/ 22:36		RAS028
CR-A161006	L032-37	NA		RAS046 / 01/08/97 / 12:26	RAS046	RAS047
MBLK1W	SVL009WB			RAS014 / 01/07/97 / 12:26	RAS014	RAS015
LCS1W	SVL009WL			/ 13:13		RAS016
LCD1W	SVL009WC			/ 13:59		RAS017

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Btch No.	: 96L032	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A160102	DaTime Analyzd :	01/07/97 14:46
Lab Cnt NO.	: L032-02	Dilutn Factor :	1
Lab File ID	: RAS018	Matrix :	WATER
Ext Btch ID	: SVL009W	% Moisture :	NA
Calib. Ref.	: RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/13/96 15:3
Sample ID	: CR-A160102	DaTime Analyzd :	01/07/97 14:46
Lab Cnt NO.:	L032-02	Dilutn Factor :	1
Lab File ID:	RAS018	Matrix :	WATER
Ext Btch ID:	SVL009W	% Moisture :	NA
Calib. Ref.:	RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	5.94F	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1.6
Hexachloroethane	ND	10	
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	73	25-134
2-Fluorobiphenyl	59	43-125
2-Fluorophenol	56	25-125
Nitrobenzene-d5	61	32-125
Phenol-d5	58	25-125
Terphenyl-d14	77	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A160106	DaTime Analyzd :	01/07/97 15:32
Lab Cnt NO.:	L032-06	Dilutn Factor :	1
Lab File ID:	RAS019	Matrix :	WATER
Ext Btch ID:	SVL009W	% Moisture :	NA
Calib. Ref.:	RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/13/96 15:3
Sample ID	: CR-A160106	DaTime Analyzd :	01/07/97 15:32
Lab Cnt NO.	: L032-06	Dilutn Factor :	1
Lab File ID	: RAS019	Matrix :	WATER
Ext Btch ID	: SVL009W	% Moisture :	NA
Calib. Ref.	: RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1.6
Hexachloroethane	ND	10	
Indeno(1,2,3-cd)pyrene	ND	10	3.
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	65	25-134
2-Fluorobiphenyl	52	43-125
2-Fluorophenol	54	25-125
Nitrobenzene-d5	55	32-125
Phenol-d5	55	25-125
Terphenyl-d14	67	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Btch No.	: 96L032	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A160402	DaTime Analyzd :	01/07/97 16:19
Lab Cnt NO.:	L032-10	Dilutn Factor :	1
Lab File ID:	RAS020	Matrix :	WATER
Ext Btch ID:	SVL009W	% Moisture :	NA
Calib. Ref.:	RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/13/96 15:3
Sample ID	: CR-A160402	DaTime Analyzd :	01/07/97 16:19
Lab Cnt NO.	: L032-10	Dilutn Factor :	1
Lab File ID	: RAS020	Matrix :	WATER
Ext Btch ID	: SVL009W	% Moisture :	NA
Calib. Ref.	: RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1.6
Hexachloroethane	ND	10	
Indeno(1,2,3-cd)pyrene	ND	10	3.
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	67	25-134
2-Fluorobiphenyl	63	43-125
2-Fluorophenol	52	25-125
Nitrobenzene-d5	71	32-125
Phenol-d5	50	25-125
Terphenyl-d14	73	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A160502	DaTime Analyzd :	01/07/97 17:06
Lab Cnt NO.:	L032-14	Dilutn Factor :	1
Lab File ID:	RAS021	Matrix :	WATER
Ext Btch ID:	SVL009W	% Moisture :	NA
Calib. Ref.:	RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

052

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/13/96 15:3
Sample ID	: CR-A160502	DaTime Analyzd :	01/07/97 17:06
Lab Cnt NO.	: L032-14	Dilutn Factor :	1
Lab File ID	: RAS021	Matrix :	WATER
Ext Btch ID	: SVL009W	% Moisture :	NA
Calib. Ref.	: RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1.6
Hexachloroethane	ND	10	
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	77	25-134
2-Fluorobiphenyl	63	43-125
2-Fluorophenol	59	25-125
Nitrobenzene-d5	74	32-125
Phenol-d5	60	25-125
Terphenyl-d14	76	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Btch No.	: 96L032	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A160506	DaTime Analyzd :	01/07/97 17:53
Lab Cnt NO.:	L032-18	Dilutn Factor :	1
Lab File ID:	RAS022	Matrix :	WATER
Ext Btch ID:	SVL009W	% Moisture :	NA
Calib. Ref.:	RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/09/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/13/96 15:3
Sample ID	: CR-A160506	DaTime Analyzd :	01/07/97 17:53
Lab Cnt NO.	: L032-18	Dilutn Factor :	1
Lab File ID	: RAS022	Matrix :	WATER
Ext Btch ID	: SVL009W	% Moisture :	NA
Calib. Ref.	: RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1.6
Hexachloroethane	ND	10	
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	55	25-134
2-Fluorobiphenyl	47	43-125
2-Fluorophenol	46	25-125
Nitrobenzene-d5	48	32-125
Phenol-d5	48	25-125
Terphenyl-d14	62	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Btch No.	: 96L032	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A160902	DaTime Analyzd :	01/07/97 21:02
Lab Cnt NO.:	L032-26	Dilutn Factor :	1
Lab File ID:	RAS026	Matrix :	WATER
Ext Btch ID:	SVL009W	% Moisture :	NA
Calib. Ref.:	RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/13/96 15:3
Sample ID	: CR-A160902	DaTime Analyzd :	01/07/97 21:02
Lab Cnt NO.:	L032-26	Dilutn Factor :	1
Lab File ID:	RAS026	Matrix :	WATER
Ext Btch ID:	SVL009W	% Moisture :	NA
Calib. Ref.:	RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	16.8	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1.[illegible]
Hexachloroethane	ND	10	[illegible]
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	66	25-134
2-Fluorobiphenyl	62	43-125
2-Fluorophenol	45	25-125
Nitrobenzene-d5	68	32-125
Phenol-d5	44	25-125
Terphenyl-d14	76	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Btch No.	: 96L032	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A160602	DaTime Analyzd :	01/07/97 18:42
Lab Cnt NO.:	L032-22	Dilutn Factor :	1
Lab File ID:	RAS023	Matrix :	WATER
Ext Btch ID:	SVL009W	% Moisture :	NA
Calib. Ref.:	RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/13/96 15:3
Sample ID	: CR-A160602	DaTime Analyzd :	01/07/97 18:42
Lab Cnt NO.	: L032-22	Dilutn Factor :	1
Lab File ID	: RAS023	Matrix :	WATER
Ext Btch ID	: SVL009W	% Moisture :	NA
Calib. Ref.	: RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1.[illegible]
Hexachloroethane	ND	10	[illegible]
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	86	25-134
2-Fluorobiphenyl	74	43-125
2-Fluorophenol	70	25-125
Nitrobenzene-d5	74	32-125
Phenol-d5	76	25-125
Terphenyl-d14	86	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Btch No.	: 96L032	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A160906	DaTime Analyzd :	01/07/97 21:49
Lab Cnt NO.:	L032-30	Dilutn Factor :	1
Lab File ID:	RAS027	Matrix :	WATER
Ext Btch ID:	SVL009W	% Moisture :	NA
Calib. Ref.:	RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/13/96 15:3[illegible]
Sample ID	: CR-A160906	DaTime Analyzd :	01/07/97 21:49
Lab Cnt NO.:	L032-30	Dilutn Factor :	1
Lab File ID:	RAS027	Matrix :	WATER
Ext Btch ID:	SVL009W	% Moisture :	NA
Calib. Ref.:	RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1.[illegible]
Hexachloroethane	ND	10	
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	72	25-134
2-Fluorobiphenyl	59	43-125
2-Fluorophenol	61	25-125
Nitrobenzene-d5	65	32-125
Phenol-d5	64	25-125
Terphenyl-d14	74	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A161002	DaTime Analyzd :	01/07/97 22:36
Lab Cnt NO.:	L032-33	Dilutn Factor :	1
Lab File ID:	RAS028	Matrix :	WATER
Ext Btch ID:	SVL009W	% Moisture :	NA
Calib. Ref.:	RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/07/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/13/96 15:3
Sample ID	: CR-A161002	DaTime Analyzd :	01/07/97 22:36
Lab Cnt NO.:	L032-33	Dilutn Factor :	1
Lab File ID:	RAS028	Matrix :	WATER
Ext Btch ID:	SVL009W	% Moisture :	NA
Calib. Ref.:	RAS014	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1
Hexachloroethane	ND	10	
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	84	25-134
2-Fluorobiphenyl	72	43-125
2-Fluorophenol	70	25-125
Nitrobenzene-d5	77	32-125
Phenol-d5	72	25-125
Terphenyl-d14	89	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Btch No.	: 96L032	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A161006	DaTime Analyzd :	01/08/97 12:26
Lab Cnt NO.:	L032-37	Dilutn Factor :	1
Lab File ID:	RAS047	Matrix :	WATER
Ext Btch ID:	SVL009W	% Moisture :	NA
Calib. Ref.:	RAS046	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3.1
2-Nitroaniline	ND	50	3.1
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/08/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/10/96
Batch No.	: 96L032	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A161006	DaTime Analyzd :	01/08/97 12:26
Lab Cnt NO.	: L032-37	Dilutn Factor :	1
Lab File ID	: RAS047	Matrix :	WATER
Ext Btch ID	: SVL009W	% Moisture :	NA
Calib. Ref.	: RAS046	Instrument ID :	MSBNA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	35.1	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1
Hexachloroethane	ND	10	
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	82	25-134
2-Fluorobiphenyl	71	43-125
2-Fluorophenol	74	25-125
Nitrobenzene-d5	78	32-125
Phenol-d5	79	25-125
Terphenyl-d14	89	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

EMAX Batch No. 96L039

EMAX
LABORATORIES, INC.
630 Maple Ave.
Torrance, CA 90503
Telephone: (310) 618-8889
Fax: (310) 618-0818

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Date: 01-02-1997
EMAX Batch No.: 96L039

Attn: Lynn Schuetter

Jacobs Engineering Group
600 17th. Street, Ste. 1100N
Denver CO 80202

Subject: Laboratory Report
Project: Carswell AFB / 05G47900

Enclosed is the Laboratory report for samples received on 12/12/96. The data reported include :

Sample ID	Control #	Col Date	Matrix	Analysis
CR-A154501	L039-01	12/10/96	Soil	EPA 8240
CR-A154502	L039-02	12/10/96	Soil	Metals
				Mercury
				EPA 8270
CR-A154503	L039-03	12/10/96	Soil	EPA 8240
CR-A154504	L039-04	12/10/96	Soil	Metals
				Mercury
				EPA 8270
CR-A154601	L039-05	12/10/96	Soil	EPA 8240
CR-A154602	L039-06	12/10/96	Soil	Metals
				Mercury
				EPA 8270
CR-A154603	L039-07	12/10/96	Soil	EPA 8240
CR-A154604	L039-08	12/10/96	Soil	Metals
				Mercury
				EPA 8270
CR-A154703	L039-09	12/10/96	Soil	EPA 8240
CR-A154704	L039-10	12/10/96	Soil	Metals
				Mercury

Sample ID	Control #	Col Date	Matrix	Analysis
				EPA 8270
CR-A154801	L039-11	12/10/96	Soil	EPA 8240
CR-A154802	L039-12	12/10/96	Soil	Metals
				Mercury
				EPA 8270
CR-A154803	L039-13	12/10/96	Soil	EPA 8240
CR-A154804	L039-14	12/10/96	Soil	Metals
				Mercury
				EPA 8270
CR-A154901	L039-15	12/10/96	Soil	EPA 8240
CR-A154902	L039-16	12/10/96	Soil	Metals
				Mercury
				EPA 8270
CR-A154903	L039-17	12/10/96	Soil	EPA 8240
CR-A154904	L039-18	12/10/96	Soil	Metals
				Mercury
				EPA 8270
CR-A156201	L039-19	12/10/96	Soil	EPA 8240
CR-A156202	L039-20	12/10/96	Soil	Metals
				Mercury
				EPA 8270
CR-A156203	L039-21	12/10/96	Soil	EPA 8240
CR-A156204	L039-22	12/10/96	Soil	Metals
				Mercury
				EPA 8270
CR-A156205	L039-23	12/10/96	Water	EPA 8240
CR-A156206	L039-24	12/10/96	Water	EPA 8270
CR-A156207	L039-25	12/10/96	Water	Metals
				Mercury
CR-A156301	L039-26	12/11/96	Soil	EPA 8240
CR-A156302	L039-27	12/11/96	Soil	Metals
				Mercury
				EPA 8270
CR-A156401	L039-28	12/11/96	Soil	EPA 8240
CR-A156401MS	L039-28M	12/11/96	Soil	EPA 8240
CR-A156401MSD	L039-28S	12/11/96	Soil	EPA 8240
CR-A156402	L039-29	12/11/96	Soil	Metals
				Mercury
				EPA 8270
CR-A156402MS	L039-29M	12/11/96	Soil	Metals
				Mercury

Sample ID	Control #	Col Date	Matrix	Analysis
				EPA 8270
CR-A156402MSD	L039-29S	12/11/96	Soil	EPA 8270
CR-A156402DUP	L039-29D	12/11/96	Soil	Metals
				Mercury
CR-A156501	L039-30	12/11/96	Soil	EPA 8240
CR-A156502	L039-31	12/11/96	Soil	Metals
				Mercury
				EPA 8270
CR-A161201	L039-32	12/11/96	Soil	EPA 8270
CR-A161202	L039-33	12/11/96	Soil	EPA 8270
CR-A161203	L039-34	12/11/96	Soil	EPA 8240
CR-A161204	L039-35	12/11/96	Soil	EPA 8270
CR-A161205	L039-36	12/11/96	Water	EPA 8240
CR-A161206	L039-37	12/11/96	Water	EPA 8240
CR-A161207	L039-38	12/11/96	Water	EPA 8270
CR-A161208	L039-39	12/11/96	Water	Metals
				Mercury

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Kam Y. Pang, Ph.D.
Laboratory Director

P.S. - All analyses requested for the above referenced project have been completed. Therefore, unless instructed, the remaining portions of the samples will be disposed after fifteen (15) days from the date of this report.

FedEx *USA Airbill* Tracking Number 2963020830

96 L039
12-12-96
10:00 am

Recipient's Copy

1 From

Date 12/11/96 [redacted]

Sender's Name Dan Schultz Phone (817) 239-1768

Dept./Floor/Suite/Room

Company Jacobs Engineering

Address 6560 White Settlement Road

City Ft. Worth State TX Zip 76114

2 Your Internal Billing Reference Information 05G47900-50501

3 To

Recipient's Name Sample Receiving Phone (310) 618-8889

Dept./Floor/Suite/Room

Company EMAX Laboratories

Address 630 Maple Ave.

(To "HOLD" at FedEx location, print FedEx address here)

City Torrance State CA Zip 90503

For HOLD at FedEx Location check here

- [ ] Hold Weekday (Not available with FedEx First Overnight)
- [ ] Hold Saturday (Not available at all locations) (Not available with FedEx First Overnight or FedEx Standard Overnight)

For Saturday Delivery check here

- [ ] (Extra Charge. Not available to all locations) (Not available with FedEx First Overnight or FedEx Standard Overnight)

2 9 6 3 0 2 0 8 3 0

4a Express Package Service *Packages under 150 lbs.* Delivery commitment may be later in some areas.

- [x] FedEx Priority Overnight (Next business morning)
- [ ] FedEx Standard Overnight (Next business afternoon)
- [ ] FedEx 2Day* (Second business day)
- [ ] NEW FedEx First Overnight (Earliest next business morning delivery to select locations) (Higher rates apply)

* FedEx Letter Rate not available. Minimum charge: One pound FedEx 2Day rate

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- [ ] FedEx Overnight Freight (Next business day service for any distance)
- [ ] FedEx 2Day Freight (Second business day service for any distance)
- [ ] FedEx Express Saver Freight (Up to 3 business day service based upon distance)

(Call for delivery schedule. See back for detailed descriptions of freight products.)

5 Packaging

- [ ] FedEx Letter
- [ ] FedEx Pak
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other Pkg.

Declared value limit $500

6 Special Handling

Does this shipment contain dangerous goods?

- [ ] Yes (As per attached Shipper's Declaration)
- [ ] Yes (Shipper's Declaration not required)
- [ ] Dry Ice (Dry Ice, 9, UN 1845 III) ____ x ____ kg. 904 (Dangerous Goods Shipper's Declaration not required)
- CA [ ] Cargo Aircraft Only

7 Payment

- [ ] Obtain Recipient FedEx Account No.

Bill to:

- [x] Sender (Account no. in section 1 will be billed)
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

(Enter FedEx account no. or Credit Card no. below)

[redacted]

Total Packages	Total Weight	Total Declared Value*	Total Charges
1	71	$ .00	$

* When declaring a value higher than $100 per shipment, you pay an additional charge. See SERVICE CONDITIONS, DECLARED VALUE AND LIMIT OF LIABILITY section for further information.

Credit Card Auth.

8 Release Signature

Your signature authorizes Federal Express to deliver this shipment without obtaining a signature and agrees to indemnify and hold harmless Federal Express from any resulting claims.

272

Questions?
Call 1-800-Go-FedEx
(1-800-463-3339)

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SAMPLE RECEIPT FORM

CONTROL NO.	96L039
CLIENT	Jacobs Engineering
PROJECT	CARWELL AFB(D021)

DATE	12-12-96
TIME	10:00 AM
RECIPIENT	I. PATEL

SAMPLE TRANSPORTATION TO EMAX LABORATORY:		BY	ON(DATE)	AT(TIME)	FROM(SITE/CO.)	COMMENTS
PICKED-UP BY EMAX COURIER						
DELIVERED BY CLIENT						
SHIPPED/AIRBILL NO:	Fed Ex 2963020830	See Airbill				

SAMPLE BATCH PACKAGING/SEALING UPON RECEIPT:			✓ INTACT	___ DAMAGED	✓ SEALED	___ NOT SEALED	___ NO CONTAINER
CONTAINER:	INSIDE TEMPERATURE (4°C ± 2°C)	4 °C		CUSTODY SEAL		LOCATION	NUMBER
___ COOLER	PACKAGING	TYPE	SUFFICIENCY	✓ INTACT	___ DAMAGED	Front closure	1
___ BOX	INSULATION:		OK	see COC NAME:		rear closure	1
___ OTHER:	ICE/COOLANT:	Regular		DATE:			
	PACKING MATERIAL:	plastic bag.		TIME:			

SAMPLE DOCUMENTATION/CHAIN-OF-CUSTODY(COC)	___ SEALED	✓ ENCLOSED	___ HANDCARRIED	___ FAXED	___ MAILED

SAMPLE LOG-IN:		CRITERIA	COMMENTS	DISCREPANCY
SAMPLE CUSTODY SEAL		EVERY SAMPLE	None	
CONTAINER TYPE/MATERIAL		APPROPRIATE	OK	
SAMPLE AMOUNT		ENOUGH	OK	
HOLDING TIME		SUFFICENT		
SAMPLE PRESERVATION (For appropriate preservative see GP-0001 Appendix I)		NaOH preserved samples pH ≥ 12 HNO_3 / H_2SO_4 preserved samples pH ≤ 2		
HEADSPACE/BUBBLES		ZERO/NONE		
SAMPLE LABEL INFORMATION		SUFFICIENT		
CHAIN-OF-CUSTODY INFORMATION		SUFFICIENT		
SAMPLE INFO.:	SAMPLE ID ✓	DATE ✓	TIME ✓ SIGNATURE ✓ ANALYSES ✓	PRESERVATIVE ✓ CONTAINER ✓

INDIVIDUAL SAMPLE CONTAINER: ___ NONE ✓ SEALED PLASTIC BAG ___ CAN ___ OTHER(SPECIFY): _____

SAMPLE NUMBER	CLIENT ID	DISCREPANCY	ACTION

CLIENT SERVICES COPY RECEIVED BY [signature] 12/13/96 DATE TIME

LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

METALS

SDG#: 96L039

DECEMBER 31, 1996

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L039

METALS

Fourteen (14) soil and two (2) water samples were received on 12/12/96 to be analyzed for metals analysis by ICP method in accordance with USEPA SW846 method 6010A. Antimony, silver, selenium, and nickel were analyzed by GFAA.

1. Holding Time

Digestion and analysis met holding time criteria.

2. Blank

Trace amount of some elements were found in soil blank: iron, thallium, and sodium. All detected levels were below PQL except sodium was slightly above PQL.

Trace amount of aluminum, iron, copper, thallium, and sodium were found in water blank. All detected levels were below PQL except sodium was slightly above PQL.

3. Matrix Spike/Matrix Spike Duplicate

MS/MSD recoveries were within QC limits for soil matrix except beryllium, molybdenum, arsenic, cadmium, thallium, sodium, and lead recoveries in MS sample and molybdenum, manganese, thallium, cadmium, and arsenic recoveries in MSD sample. The QC limit does not apply to aluminum, barium, calcium, and iron since the elements concentration were more than 4 times spiking level. There was no MS/MSD sample designated for water matrix.

4. Lab Control Sample/Lab Control Duplicate

All lab control results were within the control limits.

5. Calibration

All initial and continuing calibration results were within QC criteria except sodium in associated ICB and CCBs were slightly above PQL.

6. Sample Analysis

Arsenic, lead, and cadmium were analyzed by Trace-ICP, all others metals by ICP.

Several serial dilution were out of QC limits, post analytical spike of all failed serial dilutions were within QC limits except calcium, thallium, and lead in soil matrix.

12/16/1996 10:15

LAB CHRONICLE
Metals

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A154502	L039-02	19.4	I PL010S/12/13/96/11.30	I07L019/12/23/96	*	
CR-A154504	L039-04	13.9				
CR-A154602	L039-06	12.0				
CR-A154604	L039-08	12.7				
CR-A154704	L039-10	12.6				
CR-A154802	L039-12	7.1				
CR-A154804	L039-14	11.0				
CR-A154902	L039-16	7.8				
CR-A154904	L039-18	11.3				
CR-A156202	L039-20	10.4				
CR-A156204	L039-22	10.1				
CR-A156302	L039-27	12.3				
CR-A156402	L039-29	16.0				
CR-A156402MS	L039-29M	16.0				
CR-A156402DUP	L039-29D	16.0				
CR-A156502	L039-31	16.4				
MBLK 1S	I PL010SB					
LCS	↓	SL				
LCSD	↓	SC	↓	↓	↓	

* As, Cd, Pb, Tl were analyzed on 12/22/96 File I31L033

12/16/1996 10:15

LAB CHRONICLE
Metals

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A156207	L039-25	NA	IPL014W/12/14/96/09.00	I07L019/12/23/96	*	
CR-A161208	L039-39	NA	↓	↓	↓	
MBLK1W	IPL014WB					
LCS	↓	WL				
LCSD	↓	WC	↓	↓	↓	

* As, Cd, Pb were analyzed on 12/22/96 File I31L033

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154502	DaTime Analyzd :	12/23/96 15:27
Lab Cnt NO.:	L039-02	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	19.4
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	16300	62	1.25
Barium	103	2.48	.0496
Beryllium	.863	.372	.0124
Calcium	14800	12.4	2.79
Chromium	13.1	8.68	.682
Cobalt	4.46F	8.68	1.04
Copper	16.7	7.44	.174
Iron	12900	8.68	.72
Magnesium	2740	37.2	6.86
Manganese	335	2.48	.149
Molybdenum	ND	9.93	.757
Potassium	2790	620	64.8
Sodium	40.5	37.2	2.48
Vanadium	19.4	9.93	.484
Zinc	36.9	2.48	.211

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154502	DaTime Analyzd :	12/22/96 13:39
Lab Cnt NO.:	L039-02	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	19.4
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	3.68	.62	.571
Cadmium	.206	.124	.124
Lead	13.4	.62	.174
Thallium	ND	49.6	1.28

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154504	DaTime Analyzd :	12/23/96 15:30
Lab Cnt NO.:	L039-04	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	13.9
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	9210	58.1	1.17
Barium	96.9	2.32	.0465
Beryllium	.435	.348	.0116
Calcium	146000	11.6	2.61
Chromium	7.18F	8.13	.639
Cobalt	1.54F	8.13	.976
Copper	5.97F	6.97	.163
Iron	6860	8.13	.674
Magnesium	1540	34.8	6.42
Manganese	83.9	2.32	.139
Molybdenum	ND	9.29	.708
Potassium	780	581	60.7
Sodium	18.1F	34.8	2.32
Vanadium	12.8	9.29	.453
Zinc	17.6	2.32	.197

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154504	DaTime Analyzd :	12/22/96 13:43
Lab Cnt NO.:	L039-04	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	13.9
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	1.67	.581	.534
Cadmium	.13	.116	.116
Lead	1.59	.581	.163
Thallium	1.28F	46.5	1.2

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154602	DaTime Analyzd :	12/23/96 15:34
Lab Cnt NO.:	L039-06	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	12.0
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	3690	56.8	1.15
Barium	28.6	2.27	.0455
Beryllium	.229F	.341	.0114
Calcium	2370	11.4	2.56
Chromium	5.77F	7.95	.625
Cobalt	2.45F	7.95	.955
Copper	5.68F	6.82	.159
Iron	5020	7.95	.659
Magnesium	202	34.1	6.28
Manganese	132	2.27	.136
Molybdenum	.719F	9.09	.693
Potassium	686	568	59.4
Sodium	41.1	34.1	2.27
Vanadium	8.34F	9.09	.443
Zinc	23.6	2.27	.193

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154602	DaTime Analyzd :	12/22/96 13:47
Lab Cnt NO.:	L039-06	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	12.0
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	3.02	.568	.523
Cadmium	.145	.114	.114
Lead	14.8	.568	.159
Thallium	ND	45.5	1.17

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154604	DaTime Analyzd :	12/23/96 15:38
Lab Cnt NO.:	L039-08	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	12.7
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	5950	57.3	1.16
Barium	22.7	2.29	.0458
Beryllium	.365	.344	.0115
Calcium	843	11.5	2.58
Chromium	7.04F	8.02	.63
Cobalt	2.53F	8.02	.962
Copper	6.29F	6.87	.16
Iron	7350	8.02	.664
Magnesium	493	34.4	6.33
Manganese	47.1	2.29	.137
Molybdenum	ND	9.16	.699
Potassium	626	573	59.8
Sodium	39.4	34.4	2.29
Vanadium	9.7	9.16	.447
Zinc	13	2.29	.195

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154604	DaTime Analyzd :	12/22/96 13:51
Lab Cnt NO.:	L039-08	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	12.7
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	1.45	.573	.527
Cadmium	ND	.115	.115
Lead	4.48	.573	.16
Thallium	ND	45.8	1.18

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154704	DaTime Analyzd :	12/23/96 15:41
Lab Cnt NO.:	L039-10	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	12.6
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	13600	57.2	1.16
Barium	43.4	2.29	.0458
Beryllium	.724	.343	.0114
Calcium	1740	11.4	2.57
Chromium	13.1	8.01	.629
Cobalt	2.9F	8.01	.961
Copper	11.4	6.86	.16
Iron	13700	8.01	.664
Magnesium	550	34.3	6.33
Manganese	85.8	2.29	.137
Molybdenum	ND	9.15	.698
Potassium	1310	572	59.8
Sodium	38.4	34.3	2.29
Vanadium	20	9.15	.446
Zinc	21.9	2.29	.195

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154704	DaTime Analyzd :	12/22/96 13:55
Lab Cnt NO.:	L039-10	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	12.6
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	2.81	.572	.526
Cadmium	ND	.114	.114
Lead	6.38	.572	.16
Thallium	1.28F	45.8	1.18

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154802	DaTime Analyzd :	12/23/96 15:45
Lab Cnt NO.:	L039-12	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	7.1
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	2680	53.8	1.09
Barium	30.4	2.15	.0431
Beryllium	.18F	.323	.0108
Calcium	1720	10.8	2.42
Chromium	5.06F	7.53	.592
Cobalt	2.61F	7.53	.904
Copper	5.51F	6.46	.151
Iron	4130	7.53	.624
Magnesium	140	32.3	5.95
Manganese	217	2.15	.129
Molybdenum	ND	8.61	.657
Potassium	434F	538	56.2
Sodium	41.6	32.3	2.15
Vanadium	7.06F	8.61	.42
Zinc	32.8	2.15	.183

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154802	DaTime Analyzd :	12/22/96 13:59
Lab Cnt NO.:	L039-12	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	7.1
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	1.24	.538	.495
Cadmium	.174	.108	.108
Lead	12.8	.538	.151
Thallium	ND	43.1	1.11

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154804	DaTime Analyzd :	12/23/96 15:49
Lab Cnt NO.:	L039-14	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	11.0
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	7470	56.2	1.13
Barium	46.4	2.25	.0449
Beryllium	.456	.337	.0112
Calcium	1010	11.2	2.53
Chromium	8.27	7.87	.618
Cobalt	2.48F	7.87	.944
Copper	8.79	6.74	.157
Iron	9770	7.87	.652
Magnesium	292	33.7	6.21
Manganese	28.7	2.25	.135
Molybdenum	ND	8.99	.685
Potassium	741	562	58.7
Sodium	44.5	33.7	2.25
Vanadium	15.4	8.99	.438
Zinc	13.6	2.25	.191

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154804	DaTime Analyzd :	12/22/96 14:03
Lab Cnt NO.:	L039-14	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	11.0
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	2.17	.562	.517
Cadmium	ND	.112	.112
Lead	5.22	.562	.157
Thallium	ND	44.9	1.16

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154902	DaTime Analyzd :	12/23/96 15:52
Lab Cnt NO.:	L039-16	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	7.8
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	1790	54.2	1.1
Barium	24.9	2.17	.0434
Beryllium	.164F	.325	.0108
Calcium	418	10.8	2.44
Chromium	5.19F	7.59	.597
Cobalt	2.66F	7.59	.911
Copper	4.44F	6.51	.152
Iron	3460	7.59	.629
Magnesium	112	32.5	6
Manganese	258	2.17	.13
Molybdenum	.812F	8.68	.662
Potassium	452F	542	56.7
Sodium	42.3	32.5	2.17
Vanadium	5.82F	8.68	.423
Zinc	13.3	2.17	.184

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154902	DaTime Analyzd :	12/22/96 14:07
Lab Cnt NO.:	L039-16	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	7.8
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	1.23	.542	.499
Cadmium	ND	.108	.108
Lead	9.85	.542	.152
Thallium	ND	43.4	1.12

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154904	DaTime Analyzd :	12/23/96 15:56
Lab Cnt NO.:	L039-18	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	11.3
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	9290	56.4	1.14
Barium	59.9	2.25	.0451
Beryllium	.539	.338	.0113
Calcium	1000	11.3	2.54
Chromium	9.29	7.89	.62
Cobalt	3.63F	7.89	.947
Copper	10.1	6.76	.158
Iron	12200	7.89	.654
Magnesium	421	33.8	6.23
Manganese	51.2	2.25	.135
Molybdenum	.968F	9.02	.688
Potassium	874	564	58.9
Sodium	41.8	33.8	2.25
Vanadium	17.1	9.02	.44
Zinc	18.7	2.25	.192

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A154904	DaTime Analyzd :	12/22/96 14:11
Lab Cnt NO.:	L039-18	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	11.3
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	2.53	.564	.519
Cadmium	ND	.113	.113
Lead	5.29	.564	.158
Thallium	ND	45.1	1.16

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A156202	DaTime Analyzd :	12/23/96 16:00
Lab Cnt NO.:	L039-20	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	10.4
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	3350	55.8	1.13
Barium	37.8	2.23	.0446
Beryllium	.254F	.335	.0112
Calcium	13800	11.2	2.51
Chromium	6.61F	7.81	.614
Cobalt	2.59F	7.81	.938
Copper	7.12	6.7	.156
Iron	4880	7.81	.647
Magnesium	306	33.5	6.17
Manganese	260	2.23	.134
Molybdenum	.941F	8.93	.681
Potassium	817	558	58.3
Sodium	39.4	33.5	2.23
Vanadium	8.95	8.93	.435
Zinc	18.5	2.23	.19

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A156202	DaTime Analyzd :	12/22/96 14:14
Lab Cnt NO.:	L039-20	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	10.4
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	1.51	.558	.513
Cadmium	.156	.112	.112
Lead	40.5	.558	.156
Thallium	1.15F	44.6	1.15

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A156204	DaTime Analyzd :	12/23/96 16:15
Lab Cnt NO.:	L039-22	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	10.1
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	6720	55.6	1.12
Barium	43.5	2.22	.0445
Beryllium	.394	.334	.0111
Calcium	751	11.1	2.5
Chromium	8.79	7.79	.612
Cobalt	3.45F	7.79	.934
Copper	9.91	6.67	.156
Iron	8910	7.79	.645
Magnesium	325	33.4	6.15
Manganese	118	2.22	.133
Molybdenum	ND	8.9	.679
Potassium	988	556	58.1
Sodium	43.4	33.4	2.22
Vanadium	13.7	8.9	.434
Zinc	16.3	2.22	.189

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A156204	DaTime Analyzd :	12/22/96 14:36
Lab Cnt NO.:	L039-22	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	10.1
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	1.97	.556	.512
Cadmium	ND	.111	.111
Lead	5.7	.556	.156
Thallium	ND	44.5	1.15

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A156302	DaTime Analyzd :	12/23/96 16:19
Lab Cnt NO.:	L039-27	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	12.3
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	4000	57	1.15
Barium	39.8	2.28	.0456
Beryllium	.278F	.342	.0114
Calcium	8460	11.4	2.57
Chromium	6.13F	7.98	.627
Cobalt	2.02F	7.98	.958
Copper	7.43	6.84	.16
Iron	5140	7.98	.661
Magnesium	400	34.2	6.31
Manganese	157	2.28	.137
Molybdenum	ND	9.12	.696
Potassium	674	570	59.6
Sodium	25.4F	34.2	2.28
Vanadium	8.91F	9.12	.445
Zinc	22.9	2.28	.194

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A156302	DaTime Analyzd :	12/22/96 14:40
Lab Cnt NO.:	L039-27	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	12.3
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	2.84	.57	.525
Cadmium	.128	.114	.114
Lead	14	.57	.16
Thallium	ND	45.6	1.17

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A156402	DaTime Analyzd :	12/23/96 16:22
Lab Cnt NO.:	L039-29	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	16.0
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	8610	59.5	1.2
Barium*	1980	2.38	.0476
Beryllium	.562	.357	.0119
Calcium	111000	11.9	2.68
Chromium	9.79	8.33	.655
Cobalt	5.12F	8.33	1.0
Copper	11.9	7.14	.167
Iron	8900	8.33	.69
Magnesium	2190	35.7	6.58
Manganese	235	2.38	.143
Molybdenum	ND	9.52	.726
Potassium	1220	595	62.2
Sodium	10.8F	35.7	2.38
Vanadium	20.3	9.52	.464
Zinc	37.8	2.38	.202

*: Analyzed on 12/23/96 17:44

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A156402	DaTime Analyzd :	12/22/96 14:44
Lab Cnt NO.:	L039-29	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	16.0
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	3.62	.595	.548
Cadmium	.451	.119	.119
Lead	13.5	.595	.167
Thallium	1.4F	47.6	1.23

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A156502	DaTime Analyzd :	12/23/96 16:48
Lab Cnt NO.:	L039-31	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	16.4
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	7180	59.8	1.21
Barium	63.3	2.39	.0478
Beryllium	.52	.359	.012
Calcium	91400	12	2.69
Chromium	7.63F	8.37	.658
Cobalt	4.01F	8.37	1
Copper	8.14	7.18	.167
Iron	7240	8.37	.694
Magnesium	1730	35.9	6.61
Manganese	269	2.39	.144
Molybdenum	ND	9.57	.73
Potassium	1210	598	62.5
Sodium	18.2F	35.9	2.39
Vanadium	16.2	9.57	.467
Zinc	18.9	2.39	.203

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: CR-A156502	DaTime Analyzd :	12/22/96 15:12
Lab Cnt NO.:	L039-31	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	16.4
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	3.43	.598	.55
Cadmium	.3	.12	.12
Lead	6.08	.598	.167
Thallium	2.43F	47.8	1.23

SW3050A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	NA
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/13/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: MBLK1S	DaTime Analyzd :	12/23/96 15:03
Lab Cnt NO.:	IPL010SB	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	NA
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Aluminum	ND	50	1.01
Barium	ND	2	.04
Beryllium	ND	.3	.01
Calcium	ND	10	2.25
Chromium	ND	7	.55
Cobalt	ND	7	.84
Copper	ND	6	.14
Iron	.789F	7	.58
Magnesium	ND	30	5.53
Manganese	ND	2	.12
Molybdenum	ND	8	.61
Potassium	ND	500	52.2
Sodium	49.9	30	2
Vanadium	ND	8	.39
Zinc	ND	2	.17

SW3050A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	NA
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/13/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 11:30
Sample ID	: MBLK1S	DaTime Analyzd :	12/22/96 13:07
Lab Cnt NO.:	IPL010SB	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	SOIL
Ext Btch ID:	IPL010S	% Moisture :	NA
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	PQL (mg/kg)	MDL (mg/kg)
Arsenic	ND	.5	.46
Cadmium	ND	.1	.1
Lead	ND	.5	.14
Thallium	ND	40	1.03

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A156207	DaTime Analyzd :	12/23/96 14:53
Lab Cnt NO.:	L039-25	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	WATER
Ext Btch ID:	IPL014W	% Moisture :	NA
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	.0325F	.5	.0122
Barium	ND	.02	.001
Beryllium	ND	.003	.0003
Calcium	ND	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00257F	.06	.0008
Iron	.0101F	.07	.0035
Magnesium	ND	.3	.0342
Manganese	.0014F	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	.377	.3	.05
Vanadium	ND	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A156207	DaTime Analyzd :	12/22/96 12:57
Lab Cnt NO.:	L039-25	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	WATER
Ext Btch ID:	IPL014W	% Moisture :	NA
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016
Thallium	.0133F	.4	.0081

SW3005A/6010A
METALS BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A161208	DaTime Analyzd :	12/23/96 14:57
Lab Cnt NO.:	L039-39	Dilutn Factor :	1
Lab File ID:	I07L019	Matrix :	WATER
Ext Btch ID:	IPL014W	% Moisture :	NA
Calib. Ref.:	I07L019	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Aluminum	ND	.5	.0122
Barium	ND	.02	.001
Beryllium	ND	.003	.0003
Calcium	ND	.1	.0222
Chromium	ND	.07	.0053
Cobalt	ND	.07	.0089
Copper	.00114F	.06	.0008
Iron	ND	.07	.0035
Magnesium	ND	.3	.0342
Manganese	ND	.02	.0013
Molybdenum	ND	.08	.0144
Potassium	ND	5	.466
Sodium	.419	.3	.05
Vanadium	ND	.08	.0029
Zinc	ND	.02	.0039

SW3005A/6010A
TRACE BY ICP

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/14/96 09:00
Sample ID	: CR-A161208	DaTime Analyzd :	12/22/96 13:01
Lab Cnt NO.:	L039-39	Dilutn Factor :	1
Lab File ID:	I31L033	Matrix :	WATER
Ext Btch ID:	IPL014W	% Moisture :	NA
Calib. Ref.:	I31L033	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/L)	PQL (mg/L)	MDL (mg/L)
Arsenic	ND	.005	.0049
Cadmium	ND	.001	.00046
Lead	ND	.005	.0016
Thallium	.00981F	.4	.0081

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP, INC.

CARSWELL AFB / 05G47900

ANTIMONY BY GFAA

SDG#: 96L039

JANUARY 02, 1997

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP, INC.

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L039

ANTIMONY BY GFAA

Fourteen (14) soil and two (2) water samples were received on 12/12/96 to be analyzed for Antimony by GFAA method 7041 in accordance with USEPA SW846 (1994,9).

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   Preparation blanks were free of contamination.

3. **Matrix Spike/Matrix Spike Duplicate**

   MS/MSD recoveries were out of QC limits for soil matrix. No MS/MSD sample was designated for water matrix.

4. **Lab Control Sample/Lab Control Sample Duplicate**

   All lab control results were within the QC limits.

5. **Calibration**

   All initial and continuing calibration results were within QC criteria.

6. **Sample Analyses**

   Sample analyses met QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

12/16/1996 10:15

LAB CHRONICLE
Metals (Antimony)

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A154502	L039-02	19.4	IPL010S/12/13/96/11:30	G06L016/12/17/96/	G06L016-59/	20
CR-A154504	L039-04	13.9				21
CR-A154602	L039-06	12.0			G06L016-11/	22
CR-A154604	L039-08	12.7				23
CR-A154704	L039-10	12.6				26
CR-A154802	L039-12	7.1				27
CR-A154804	L039-14	11.0				28
CR-A154902	L039-16	7.8				[illegible]
CR-A154904	L039-18	11.3				30
CR-A156202	L039-20	10.4				31
CR-A156204	L039-22	10.1				32
CR-A156302	L039-27	12.3				33
CR-A156402	L039-29	16.0	IPL036S/12/23/96/15:30	G06L026/12/30/96/	G06L026-13/	18
CR-A156402MS	L039-29M	16.0				24
CR-A156402DUP	L039-29D	16.0				25
CR-A156502	L039-31	16.4			G06L016-83/	85
MBLK1S	IPL010SB		IPL010S/12/13/96/11:30	G06L016/12/17/96/	G06L016-59/	12
LCS1	15SL					13
LCS1D	15SC					14
MBLK2S	IPL036SB		IPL036S/12/23/96/15:30	G06L026/12/30/96/	G06L026-13/	15
LCS2	S2				G06L026-26	16
LCD2	SC				G06L026-13	[illegible]

12/16/1996 10:15

LAB CHRONICLE
Metals (Antimony)

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A156207	L039-25	NA	IPL014WB/12/14/96/09:00	G06L016/12/17/96/22:21	G06L016-83	80
CR-A161208	L039-39	NA		:32		92
MBLK1W	IPL014WB			:10		86
LCS	WL			:14		87
LCSD	WC			:17		88

EPA 3050A/7041
ANTIMONY BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96L039
Matrix : SOIL

Date Collected : 12/10/96
DaTime Received: 12/12/96
Instrument ID : EMAXTI06

SAMPLE ID	CONTROL NO	RESULTS (mg/kg)	DLF	MOIST	PQL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A154502	L039-02	ND	1	19.4	.62	.248	12/17/9621:07	12/13/9611:30	G06L016069	G06L016059	IPL010S
CR-A154504	L039-04	ND	1	13.9	.581	.232	12/17/9621:10	12/13/9611:30	G06L016070	G06L016059	IPL010S
CR-A154602	L039-06	ND	1	12.0	.568	.227	12/17/9621:21	12/13/9611:30	G06L016073	G06L016071	IPL010S
CR-A154604	L039-08	ND	1	12.7	.573	.229	12/17/9621:25	12/13/9611:30	G06L016074	G06L016071	IPL010S
CR-A154704	L039-10	ND	1	12.6	.572	.229	12/17/9621:29	12/13/9611:30	G06L016075	G06L016071	IPL010S
CR-A154802	L039-12	ND	1	7.1	.538	.215	12/17/9621:32	12/13/9611:30	G06L016076	G06L016071	IPL010S
CR-A154804	L039-14	ND	1	11.0	.562	.225	12/17/9621:36	12/13/9611:30	G06L016077	G06L016071	IPL010S
CR-A154902	L039-16	ND	1	7.8	.542	.217	12/17/9621:40	12/13/9611:30	G06L016078	G06L016071	IPL010S
CR-A154904	L039-18	ND	1	11.3	.564	.225	12/17/9621:43	12/13/9611:30	G06L016079	G06L016071	IPL010S
CR-A156202	L039-20	ND	1	10.4	.558	.223	12/17/9621:47	12/13/9611:30	G06L016080	G06L016071	IPL010S
CR-A156204	L039-22	ND	1	10.1	.556	.222	12/17/9621:51	12/13/9611:30	G06L016081	G06L016071	IPL010S
CR-A156302*	L039-27	ND	1	12.3	.57	.228	12/17/9621:55	12/13/9611:30	G06L016082	G06L016071	IPL010S
CR-A156402*	L039-29	ND	1	16.0	.595	.238	12/30/9614:25	12/13/9611:30	G06L026018	G06L026013	IPL036S
CR-A156402MS*	L039-29M	1.49	1	16.0	.595	.238	12/30/9614:56	12/13/9611:30	G06L026024	G06L026013	IPL036S
CR-A156402MSD*	L039-29S	.957	1	16.0	.595	.238	12/30/9615:00	12/13/9611:30	G06L026025	G06L026013	IPL036S
CR-A156402*	L039-29A	4.23	1	16.0	.595	.238	12/30/9614:53	12/13/9611:30	G06L026023	G06L026013	IPL036S
CR-A156502*	L039-31	ND	1	16.4	.598	.239	12/17/9622:06	12/13/9611:30	G06L016085	G06L016083	IPL010S
MBLK1S	IPL010SB	ND	1	NA	.5	.2	12/17/9620:38	12/13/9611:30	G06L016061	G06L016059	IPL010S
LCS1S	IPL011SL	2.16	1	NA	.5	.2	12/17/9620:41	12/13/9611:30	G06L016062	G06L016059	IPL010S
LCD1S	IPL011SC	2.25	1	NA	.5	.2	12/17/9620:45	12/13/9611:30	G06L016063	G06L016059	IPL010S
MBLK2S	IPL036SB	ND	1	NA	.5	.2	12/30/9614:14	12/28/9615:30	G06L026015	G06L026013	IPL036S
LCS2S	IPL036SL	2.02	1	NA	.5	.2	12/30/9615:03	12/28/9615:30	G06L026026	G06L026021	IPL036S
LCD2S	IPL036SC	2.24	1	NA	.5	.2	12/30/9614:21	12/28/9615:30	G06L026017	G06L026013	IPL036S

PQL: Practical Quantitation Limit
* DATE COLLECTED : 12/11/96

004

EPA 3005A/7041
ANTIMONY BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96L039
Matrix : WATER

Date Collcted : 12/10/96
DaTime Received: 12/12/96
Instrument ID : EMAXTI06

SAMPLE ID	CONTROL NO	RESULTS (mg/L)	DLF	MOIST	PQL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A156207	L039-25	ND	1	NA	.005	.002	12/17/9622:21	12/14/9609:00	G06L016089	G06L016083	IPL014W
CR-A161208*	L039-39	ND	1	NA	.005	.002	12/17/9622:32	12/14/9609:00	G06L016092	G06L016083	IPL014W
MBLK1W	IPL014WB	ND	1	NA	.005	.002	12/17/9622:10	12/14/9609:00	G06L016086	G06L016083	IPL014W
LCS1W	IPL015WL	.0201	1	NA	.005	.002	12/17/9622:14	12/14/9609:00	G06L016087	G06L016083	IPL014W
LCD1W	IPL015WC	.0208	1	NA	.005	.002	12/17/9622:17	12/14/9609:00	G06L016088	G06L016083	IPL014W

PQL: Practical Quantitation Limit
* DATE COLLECTED : 12/11/96

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

EPA 7471A
MERCURY BY COLD VAPOR

SDG#: 96L039

JANUARY 02, 1997

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L039

EPA 7471A
MERCURY BY COLD VAPOR

Fourteen (14) and two (2) water samples were received on 12/12/96 for Mercury analysis in accordance with SW846 method.

1. Holding Time

   Digestion and anaylsis met holding time criteria.

2. Blank

   All preparation blanks were free of contamination.

3. Matrix Spike/Matrix Spike Duplicate

   All MS/MSD recoveries were within QC limit for soil sample. No MS/MSD sample was designated for water sample.

4. Lab Control Sample/Lab Control Sample Duplicate

   All lab control results and RPDs were within the control limits.

5. Sample Analysis

   All sample analyses were done within QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

12/16/1996 10:15

LAB CHRONICLE
Mercury

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A154502	L039-02	19.4	Hg L026S/12/12/96/18.00	M96L020/12/23/96/18.46	M96L020-7/	8
CR-A154504	L039-04	13.9		18.49		13
CR-A154602	L039-06	12.0		18.52		14
CR-A154604	L039-08	12.7		18.55		15
CR-A154704	L039-10	12.6		18.58		16
CR-A154802	L039-12	7.1		19.02		17
CR-A154804	L039-14	11.0		19.14	M96L020-19/21	
CR-A154902	L039-16	7.8		19.17		
CR-A154904	L039-18	11.3		19.20		23
CR-A156202	L039-20	10.4		19.23		24
CR-A156204	L039-22	10.1		19.27		25
CR-A156302	L039-27	12.3		19.30		26
CR-A156402	L039-29	16.0		19.33		27
CR-A156402MS	L039-29M	16.0		19.36		28
CR-A156402DUP	L039-29D	16.0		19.39		29
CR-A156502	L039-31	16.4		19.42		30
MBLKIS	Hg L026SB			18:36	M96L020-7/9	
LCS		SL		18.40		10
LCSD		SC		18:43		11

12/16/1996 10:15

LAB CHRONICLE
Mercury

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A156207	L039-25	NA	Hg LC15W / 12/16/96 / 0900	M96L015 / 12/16/96 / 2043	M96L015-7 /	5
CR-A161208	L039-39	NA	↓	↓ 2046	↓	14
MBLK1W	Hg LC15WB		↓	↓ 2031	↓	9
LCS	↓ WL		↓	↓ 2034	↓	12
LCSD	↓ WC		↓	↓ 2037	↓	4

EPA 7471A
MERCURY BY COLD VAPOR

CLIENT:	JACOBS ENGINEERING GROUP	DATE COLLECTED:	12/10/96
PROJECT:	CARSWELL AFB / 05G47900	DATE RECEIVED:	12/12/96
BATCH NO.:	96L039	DATE EXTRACTED:	12/22/96 18:00
MATRIX:	SOIL	INSTRUMENT ID:	I23
CAL REF:	M96L020-7	PREP BATCH:	HGL020S

SAMPLE ID	CONTROL NO	RESULT (mg/kg)	DL FACTOR	MOIST (%)	RL (mg/kg)	MDL (mg/kg)	ANALYZED DATETIME
CR-A154502	L039-02	ND	1	19.4	.12	.036	12/23/96 18:46
CR-A154504	L039-04	ND	1	13.9	.12	.034	12/23/96 18:49
CR-A154602	L039-06	ND	1	12.0	.11	.033	12/23/96 18:52
CR-A154604	L039-08	ND	1	12.7	.11	.033	12/23/96 18:55
CR-A154704	L039-10	ND	1	12.6	.11	.033	12/23/96 18:58
CR-A154802	L039-12	ND	1	7.1	.11	.031	12/23/96 19:02
CR-A154804	L039-14	ND	1	11.0	.11	.033	12/23/96 19:14
CR-A154902	L039-16	ND	1	7.8	.11	.031	12/23/96 19:17
CR-A154904	L039-18	ND	1	11.3	.11	.033	12/23/96 19:20
CR-A156202	L039-20	ND	1	10.4	.11	.032	12/23/96 19:23
CR-A156204	L039-22	ND	1	10.1	.11	.032	12/23/96 19:27
CR-A156302	L039-27	ND	1	12.3	.11	.033	12/23/96 19:30
CR-A156402	L039-29	ND	1	16.0	.12	.035	12/23/96 19:33
CR-A156402MS	L039-29M	2.29	1	16.0	.12	.035	12/23/96 19:36
CR-A156402MSD	L039-29S	2.30	1	16.0	.12	.035	12/23/96 19:39
CR-A156502	L039-31	.073F	1	16.4	.12	.035	12/23/96 19:42
MBLK1S	HGL020SB	ND	1	NA	.1	.029	12/23/96 18:36
LCS1S	HGL020SL	1.85	1	NA	.1	.029	12/23/96 18:40
LCD1S	HGL020SC	1.83	1	NA	.1	.029	12/23/96 18:43

POL: Practical Quantitation Limit
AFCEE Ver. 1.1

CAL REF: M96L020-19 for L039-14, 16, 18, 20, 22, 27, 29, 29M, 29S, 31

F: Estimated value

EPA 7470A
MERCURY BY COLD VAPOR

CLIENT:	JACOBS ENGINEERING GROUP	DATE COLLECTED:	12/10/96
PROJECT:	CARSWELL AFB / 05G47900	DATE RECEIVED:	12/12/96
BATCH NO.:	96L039	DATE EXTRACTED:	12/16/96 09:00
MATRIX:	WATER	INSTRUMENT ID:	I23
CAL REF:	M96L015-7	PREP BATCH:	HGL015W

SAMPLE ID	CONTROL NO	RESULT (mg/L)	DILUTION FACTOR	RL (mg/L)	MDL (mg/L)	ANALYZED DATETIME
CR-A156207	L039-25	ND	1	.001	.0001	12/16/96 20:43
CR-A161208	L039-39	ND	1	.001	.0001	12/16/96 20:46
MBLK1W	HGL015WB	ND	1	.001	.0001	12/16/96 20:31
LCS1W	HGL015WL	.00436	1	.001	.0001	12/16/96 20:34
LCD1W	HGL015WC	.00436	1	.001	.0001	12/16/96 20:37

PQL: Practical Quantitation Limit
AFCEE Ver. 1.1

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP, INC.

CARSWELL AFB / 05G47900

NICKEL BY GFAA

SDG#: 96L039

JANUARY 02, 1997

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP, INC.

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L039

NICKEL BY GFAA

Fourteen (14) soil and two (2) water samples were received on 12/12/96 to be analyzed for Nickel by GFAA method 7520 in accordance with USEPA SW846 (1994,9).

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   Preparation blanks were free of contamination.

3. **Matrix Spike/Matrix Spike Duplicate**

   MS/MSD recoveries were out of QC limit in soil matrix. No MS/MSD sample was designated for water matrix.

4. **Lab Control Sample/Lab Control Sample Duplicate**

   All lab control results were within the QC limits.

5. **Calibration**

   All initial and continuing calibration results were within QC criteria.

6. **Sample Analyses**

   Sample analyses met QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

12/16/1996 10:15

LAB CHRONICLE
Metals (Nickel)

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Soil

SAMPLE ID	DF	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A154502	5 X	L039-02	19.4	GFL006S/12/13/96/11:36	G03L029/12/19/96/21:03	G03L029	-33/ -41
CR-A154504		L039-04	13.9		:07		42
CR-A154602		L039-06	12.0		:11		43
CR-A154604		L039-08	12.7		:15		44
CR-A154704		L039-10	12.6		:28	G03L029-45	-47
CR-A154802		L039-12	7.1		:32		48
CR-A154804		L039-14	11.0		:36		49
CR-A154902		L039-16	7.8		:41		[illegible]
CR-A154904		L039-18	11.3		:45		51
CR-A156202		L039-20	10.4		:49		52
CR-A156204		L039-22	10.1		:53		53
CR-A156302		L039-27	12.3		:57		54
CR-A156402	5X	L039-29	16.0		20:24	G03L029-27	/-32
CR-A156402MS	5X	L039-29M	16.0		:54		-39
CR-A156402DUP	5X	L039-29D	16.0		:59		-46
CR-A156502	5X	L039-31	16.4		22:05	G03L029-45	/-55
MBLKIS		GFL006-SB			20:11	G03L029-21	/29
LCS		SL			:16		30
LCSD		SC			22:05	G03L029-45	/-56

12/16/1996 10:15

LAB CHRONICLE
Metals (Nickel)

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A156207	L039-25	NA	GFL008W|12|14|96|09.00	G03L025|12|20|96|01:31	G03L025-21	30
CR-A161208	L039-39	NA	↓	↓ 01:35	↓	31
MBLK1W	GFL008WB			G03L025|12|20|96|00:12	G03L025-9	11
LCS	↓	WL	↓	↓ :16	↓	12
LCSP	↓	WC	↓	↓ :20	↓	13

EPA 3050A/7520
NICKEL BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96L039
Matrix : SOIL

Date Collected : 12/10/96
DaTime Received: 12/12/96
Instrument ID : EMAXTI03

SAMPLE ID	CONTROL NO	RESULTS (mg/kg)	DLF	MOIST	PQL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A154502	L039-02	9.35	5	19.4	6.2	1.24	12/19/9621:03	12/13/9611:30	G03L024041	G03L024033	GFL006S
CR-A154504	L039-04	5.84	5	13.9	5.81	1.16	12/19/9621:07	12/13/9611:30	G03L024042	G03L024033	GFL006S
CR-A154602	L039-06	3.78F	5	12.0	5.68	1.14	12/19/9621:11	12/13/9611:30	G03L024043	G03L024033	GFL006S
CR-A154604	L039-08	5.05F	5	12.7	5.73	1.15	12/19/9621:15	12/13/9611:30	G03L024044	G03L024033	GFL006S
CR-A154704	L039-10	8.48	5	12.6	5.72	1.14	12/19/9621:28	12/13/9611:30	G03L024047	G03L024045	GFL006S
CR-A154802	L039-12	4.24F	5	7.1	5.38	1.08	12/19/9621:32	12/13/9611:30	G03L024048	G03L024045	GFL006S
CR-A154804	L039-14	5.12F	5	11.0	5.62	1.12	12/19/9621:36	12/13/9611:30	G03L024049	G03L024045	GFL006S
CR-A154902	L039-16	3.74F	5	7.8	5.42	1.08	12/19/9621:41	12/13/9611:30	G03L024050	G03L024045	GFL006S
CR-A154904	L039-18	8.43	5	11.3	5.64	1.13	12/19/9621:45	12/13/9611:30	G03L024051	G03L024045	GFL006S
CR-A156202	L039-20	5.21F	5	10.4	5.58	1.12	12/19/9621:49	12/13/9611:30	G03L024052	G03L024045	GFL006S
CR-A156204	L039-22	6.52	5	10.1	5.56	1.11	12/19/9621:53	12/13/9611:30	G03L024053	G03L024045	GFL006S
CR-A156302*	L039-27	4.41F	5	12.3	5.7	1.14	12/19/9621:57	12/13/9611:30	G03L024054	G03L024045	GFL006S
CR-A156402*	L039-29	8.79	5	16.0	5.95	1.19	12/19/9620:24	12/13/9611:30	G03L024032	G03L024021	GFL006S
CR-A156402MS*	L039-29M	8.71	5	16.0	5.95	1.19	12/19/9620:54	12/13/9611:30	G03L024039	G03L024033	GFL006S
CR-A156402MSD*	L039-29S	8.4	5	16.0	5.95	1.19	12/19/9620:59	12/13/9611:30	G03L024040	G03L024033	GFL006S
CR-A156502*	L039-31	7.03	5	16.4	5.98	1.2	12/19/9622:01	12/13/9611:30	G03L024055	G03L024045	GFL006S
MBLK1S	GFL006SB	ND	1	NA	1	.2	12/19/9620:11	12/13/9611:30	G03L024029	G03L024021	GFL006S
LCS1S	GFL006SL	1.22	1	NA	1	.2	12/19/9620:16	12/13/9611:30	G03L024030	G03L024021	GFL006S
LCD1S	GFL006SC	1.08	1	NA	1	.2	12/19/9622:05	12/13/9611:30	G03L024056	G03L024045	GFL006S

* DATE COLLECTED : 12/11/96

EPA 3020A/7520
NICKEL BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96L039
Matrix : WATER

Date Collcted : 12/10/96
DaTime Received: 12/12/96
Instrument ID : EMAXT103

SAMPLE ID	CONTROL NO	RESULTS (mg/L)	DLF	MOIST	PQL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A156207	L039-25	ND	1	NA	.01	.002	12/20/9601:31	12/14/9611:30	G03L025030	G03L025021	GFL008W
CR-A161208*	L039-39	ND	1	NA	.01	.002	12/20/9601:35	12/14/9611:30	G03L025031	G03L025021	GFL008W
MBLK1W	GFL008WB	ND	1	NA	.01	.002	12/20/9600:12	12/14/9611:30	G03L025011	G03L025009	GFL008W
LCS1W	GFL008WL	.0112	1	NA	.01	.002	12/20/9600:16	12/14/9611:30	G03L025012	G03L025009	GFL008W
LCD1W	GFL008WC	.00989F	1	NA	.01	.002	12/20/9600:20	12/14/9611:30	G03L025013	G03L025009	GFL008W

* DATE COLLECTED : 12/11/96

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP, INC.

CARSWELL AFB / 05G47900

SELENIUM BY GFAA

SDG#: 96L039

JANUARY 02, 1997

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP, INC.

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L039

SELENIUM BY GFAA

Fourteen (14) soil and two (2) water samples were received on 12/12/96 to be analyzed for Selenium by GFAA method 7740 in accordance with USEPA SW846 (1994,9).

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   Preparation blanks were free of contamination.

3. **Matrix Spike/Matrix Spike Duplicate**

   Sample L039-29 was spiked for soil, MSD recovery was out of QC limit. No MS/MSD was designated for water matrix.

4. **Lab Control Sample/Lab Control Sample Duplicate**

   All lab control results were within the QC limits except recovery in LCS for soil (GFL006SL) was slightly higher than QC limit.

5. **Calibration**

   All initial and continuing calibration results were within QC criteria.

6. **Sample Analyses**

   Sample analyses met QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

12/16/1996 10:15

LAB CHRONICLE
Metals (Selenium)

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A154502	L039-02	19.4	GFL006S/12/13/96/11:30	G06L019/12/19/96/17:59	G06L019-10	20
CR-A154504	L039-04	13.9		18:03		21
CR-A154602	L039-06	12.0		:14	G06L019-22	24
CR-A154604	L039-08	12.7		:18		25
CR-A154704	L039-10	12.6		:22		26
CR-A154802	L039-12	7.1		:25		27
CR-A154804	L039-14	11.0		:29		28
CR-A154902	L039-16	7.8		:33		
CR-A154904	L039-18	11.3		:37		36
CR-A156202	L039-20	10.4		:41		31
CR-A156204	L039-22	10.1		:44		32
CR-A156302	L039-27	12.3		:48		33
CR-A156402	L039-29	16.0		17:40	G06L019-10	15
CR-A156402MS	L039-29M	16.0		:52		18
CR-A156402DUP	L039-29D	16.0		:55		19
CR-A156502	L039-31	16.4		G06L023/12/23/96/22:11	G06L023-22	33
MBLK1S	GFL006-SB			G06L019/12/19/96/17:29	G06L019-10	12
LCS	SL			:33		13
LCSD	SC			G06L019/12/19/96/:37		14

12/16/1996 10:15

LAB CHRONICLE
Metals (Selenium)

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A156207	L039-25	NA	GFL008W/12/14/96/09:00	G06L023/12/23/96/22:03	G06L023-47	10/34
CR-A161208	L039-39	NA		:07		10/32
MBLK1W	GFL008WB			17:01	G06L023-40	42/13
LCS	WL			:04		43/15
LCSD	WC			:08		44/14

EPA 3050A/7740
SELENIUM BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96L039
Matrix : SOIL

Date Collcted : 12/10/96
DaTime Received: 12/12/96
Instrument ID : EMAXTI06

SAMPLE ID	CONTROL NO	RESULTS (mg/kg)	DLF	MOIST	PQL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A154502	L039-02	.273F	1	19.4	.62	.136	12/19/9617:59	12/13/9611:30	G06L019030	G06L019020	GFL006S
CR-A154504	L039-04	ND	1	13.9	.581	.128	12/19/9618:03	12/13/9611:30	G06L019031	G06L019020	GFL006S
CR-A154602	L039-06	ND	1	12.0	.568	.125	12/19/9618:14	12/13/9611:30	G06L019034	G06L019032	GFL006S
CR-A154604	L039-08	ND	1	12.7	.573	.126	12/19/9618:18	12/13/9611:30	G06L019035	G06L019032	GFL006S
CR-A154704	L039-10	ND	1	12.6	.572	.126	12/19/9618:22	12/13/9611:30	G06L019036	G06L019032	GFL006S
CR-A154802	L039-12	ND	1	7.1	.538	.118	12/19/9618:25	12/13/9611:30	G06L019037	G06L019032	GFL006S
CR-A154804	L039-14	ND	1	11.0	.562	.124	12/19/9618:29	12/13/9611:30	G06L019038	G06L019032	GFL006S
CR-A154902	L039-16	ND	1	7.8	.542	.119	12/19/9618:33	12/13/9611:30	G06L019039	G06L019032	GFL006S
CR-A154904	L039-18	ND	1	11.3	.564	.124	12/19/9618:37	12/13/9611:30	G06L019040	G06L019032	GFL006S
CR-A156202	L039-20	NO	1	10.4	.558	.123	12/19/9618:41	12/13/9611:30	G06L019041	G06L019032	GFL006S
CR-A156204	L039-22	ND	1	10.1	.556	.122	12/19/9618:44	12/13/9611:30	G06L019042	G06L019032	GFL006S
CR-A156302*	L039-27	ND	1	12.3	.57	.125	12/19/9618:48	12/13/9611:30	G06L019043	G06L019032	GFL006S
CR-A156402*	L039-29	ND	1	16.0	.595	.131	12/19/9617:40	12/13/9611:30	G06L019025	G06L019020	GFL006S
CR-A156402MS*	L039-29M	1.82	1	16.0	.595	.131	12/19/9617:52	12/13/9611:30	G06L019028	G06L019020	GFL006S
CR-A156402MSD*	L039-29S	1.61	1	16.0	.595	.131	12/19/9617:55	12/13/9611:30	G06L019029	G06L019020	GFL006S
CR-A156502*	L039-31	ND	1	16.4	.598	.132	12/23/9622:11	12/13/9611:30	G06L023107	G06L023097	GFL006S
MBLK1S	GFL006SB	ND	1	NA	.5	.11	12/19/9617:29	12/13/9611:30	G06L019022	G06L019020	GFL006S
LCS1S	GFL006SL	2.47	1	NA	.5	.11	12/19/9617:33	12/13/9611:30	G06L019023	G06L019020	GFL006S
LCD1S	GFL006SC	2.36	1	NA	.5	.11	12/19/9617:37	12/13/9611:30	G06L019024	G06L019020	GFL006S

PQL: Practical Quantitation Limit

* DATE COLLECTED : 12/11/96

EPA 3020A/7740
SELENIUM BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96L039
Matrix : WATER

Date Collcted : 12/10/96
DaTime Received: 12/12/96
Instrument ID : EMAXTI06

SAMPLE ID	CONTROL NO	RESULTS (mg/L)	DLF	MOIST	PQL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A156207	L039-25	ND	1	NA	.005	.0011	12/23/9622:03	12/14/9609:00	G06L023105	G06L023097	GFL008W
CR-A161208*	L039-39	ND	1	NA	.005	.0011	12/23/9622:07	12/14/9609:00	G06L023106	G06L023097	GFL008W
MBLK1W	GFL008WB	ND	1	NA	.005	.0011	12/23/9617:01	12/14/9609:00	G06L023042	G06L023040	GFL008W
LCS1W	GFL008WL	.0196	1	NA	.005	.0011	12/23/9617:04	12/14/9609:00	G06L023043	G06L023040	GFL008W
LCD1W	GFL008WC	.0189	1	NA	.005	.0011	12/23/9617:08	12/14/9609:00	G06L023044	G06L023040	GFL008W

PQL: Practical Quantitation Limit

* DATE COLLECTED : 12/11/96

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP, INC.

CARSWELL AFB / 05G47900

SILVER BY GFAA

SDG#: 96L039

JANUARY 02, 1997

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP, INC.

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L039

SILVER BY GFAA

Fourteen (14) soil and two (2) water samples were received on 12/12/96 to be analyzed for Silver by GFAA method 7760 in accordance with USEPA SW846 (1994,9).

1. **Holding Time**

   Digestion and analysis met holding time criteria.

2. **Blank**

   Preparation blanks were free of contamination.

3. **Matrix Spike/Matrix Spike Duplicate**

   MS/MSD recoveries were out of QC limit for soil matrix due to matrix effect. No MS/MSD was designated for water matrix.

4. **Lab Control Sample/Lab Control Sample Duplicate**

   All lab control results were within the QC limits.

5. **Calibration**

   All initial and continuing calibration results were within QC criteria.

6. **Sample Analyses**

   Sample analyses met QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

12/16/1996 10:15

LAB CHRONICLE
Metals (Silver)

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A154502	L039-02	19.4	GFL006S/12/13/96/11.30	G032030/12/27/96/16.06	-10	20
CR-A154504	L039-04	13.9			:09	21
CR-A154602	L039-06	12.0			18:30	-22/24
CR-A154604	L039-08	12.7			:33	25
CR-A154704	L039-10	12.6			:36	26
CR-A154802	L039-12	7.1			:39	27
CR-A154804	L039-14	11.0			:42	28
CR-A154902	L039-16	7.8			:46	
CR-A154904	L039-18	11.3			:49	30
CR-A156202	L039-20	10.4			:52	31
CR-A156204	L039-22	10.1			:55	32
CR-A156302	L039-27	12.3			:59	33
CR-A156402	L039-29	16.0			15:50	-10/15
CR-A156402MS	L039-29M	16.0			:59	18
CR-A156402DUP	L039-29D	16.0			16:02	19
CR-A156502	L039-31	16.4			19:09	-66/68
MBLK1S	GFL006-SB				15:40	-10/12
LCS	SL				:44	13
LCSD	SC				:47	14

12/16/1996 10:15

LAB CHRONICLE
Metals (Silver)

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A156207	L039-25	NA	GFL008W/12/14/96/09.00	G06L022/12/20/96/21:04	G06L022-33	-40
CR-A161208	L039-39	NA		:08		-43
MBLKIW	GFL008WB			20:04	G06L022-21	-23
LCS		WL		:07		24
LCSD		WC		:16		25

EPA 3050A/7760
SILVER BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96L039
Matrix : SOIL

Date Collcted : 12/10/96
DaTime Received: 12/12/96
Instrument ID : EMAXT103

SAMPLE ID	CONTROL NO	RESULTS (mg/kg)	DLF	MOIST	PQL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A154502	L039-02	.0782F	1	19.4	.124	.0248	12/26/9616:06	12/13/9611:30	G03L030020	G03L030010	GFL006S
CR-A154504	L039-04	.0325F	1	13.9	.116	.0232	12/26/9616:09	12/13/9611:30	G03L030021	G03L030010	GFL006S
CR-A154602	L039-06	.0261F	1	12.0	.114	.0227	12/26/9616:18	12/13/9611:30	G03L030024	G03L030022	GFL006S
CR-A154604	L039-08	ND	1	12.7	.115	.0229	12/26/9616:21	12/13/9611:30	G03L030025	G03L030022	GFL006S
CR-A154704	L039-10	ND	1	12.6	.114	.0229	12/26/9616:25	12/13/9611:30	G03L030026	G03L030022	GFL006S
CR-A154802	L039-12	.0366F	1	7.1	.108	.0215	12/26/9616:28	12/13/9611:30	G03L030027	G03L030022	GFL006S
CR-A154804	L039-14	.027F	1	11.0	.112	.0225	12/26/9616:31	12/13/9611:30	G03L030028	G03L030022	GFL006S
CR-A154902	L039-16	.0336F	1	7.8	.108	.0217	12/26/9616:34	12/13/9611:30	G03L030029	G03L030022	GFL006S
CR-A154904	L039-18	ND	1	11.3	.113	.0225	12/26/9616:38	12/13/9611:30	G03L030030	G03L030022	GFL006S
CR-A156202	L039-20	.0301F	1	10.4	.112	.0223	12/26/9616:41	12/13/9611:30	G03L030031	G03L030022	GFL006S
CR-A156204	L039-22	ND	1	10.1	.111	.0222	12/26/9616:44	12/13/9611:30	G03L030032	G03L030022	GFL006S
CR-A156302*	L039-27	.0912F	1	12.3	.114	.0228	12/26/9616:47	12/13/9611:30	G03L030033	G03L030022	GFL006S
CR-A156402*	L039-29	.213	1	16.0	.119	.0238	12/26/9615:50	12/13/9611:30	G03L030015	G03L030010	GFL006S
CR-A156402MS*	L039-29M	.369	1	16.0	.119	.0238	12/26/9615:59	12/13/9611:30	G03L030018	G03L030010	GFL006S
CR-A156402MSD*	L039-29S	.339	1	16.0	.119	.0238	12/26/9616:02	12/13/9611:30	G03L030019	G03L030010	GFL006S
CR-A156502*	L039-31	.0526F	1	16.4	.12	.0239	12/26/9619:09	12/13/9611:30	G03L030068	G03L030066	GFL006S
MBLK1S	GFL006SB	ND	1	NA	.1	.02	12/26/9615:40	12/13/9611:30	G03L030012	G03L030010	GFL006S
LCS1S	GFL006SL	.227	1	NA	.1	.02	12/26/9615:44	12/13/9611:30	G03L030013	G03L030010	GFL006S
LCD1S	GFL006SC	.228	1	NA	.1	.02	12/26/9615:47	12/13/9611:30	G03L030014	G03L030010	GFL006S

PQL: Practical Quantitation Limit

* DATE COLLECTED : 12/11/96

EPA 3020A/7760
SILVER BY GFAA

Client : JACOBS ENGINEERING GROUP
Project : CARSWELL AFB / 05G47900
Batch No. : 96L039
Matrix : WATER

Date Collected : 12/10/96
DaTime Received: 12/12/96
Instrument ID : EMAXTI06

SAMPLE ID	CONTROL NO	RESULTS (mg/L)	DLF	MOIST	PQL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH
CR-A156207	L039-25	ND	1	NA	.001	.0002	12/20/9621:04	12/14/9611:30	G06L022042	G06L022033	GFL008W
CR-A161208*	L039-39	ND	1	NA	.001	.0002	12/20/9621:08	12/14/9611:30	G06L022043	G06L022033	GFL008W
MBLK1W	GFL008WB	ND	1	NA	.001	.0002	12/20/9620:04	12/14/9611:30	G06L022023	G06L022021	GFL008W
LCS1W	GFL008WL	.00214	1	NA	.001	.0002	12/20/9620:07	12/14/9611:30	G06L022024	G06L022021	GFL008W
LCD1W	GFL008WC	.00222	1	NA	.001	.0002	12/20/9620:10	12/14/9611:30	G06L022025	G06L022021	GFL008W

PQL: Practical Quantitation Limit

* DATE COLLECTED : 12/11/96

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

SDG#: 96L039

DECEMBER 31, 1996

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L039

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Fifteen (15) soil and three (3) water samples were received on 12/12/96 to be analyzed for volatile organics by EPA Method 5030A/8240B in accordance with SW846.

1. Holding Time

   Analytical holding time was met.

2. Surrogate Recovery

   All surrogate recoveries were within QC limits.

3. Matrix Spike/Matrix Spike Duplicate

   All recoveries were within QC limit except vinyl acetate.

4. Laboratory Control Sample

   All recoveries were within QC limits except vinyl acetate in VOL2402C.

5. Method Blank

   Method blanks were free of contamination except trace amount of methylene chloride in VOL2402B.

6. Tuning and Calibration

   Tuning and calibration were carried out at 12 hour interval. All QC requirements were met.

7. Sample Analysis

   All sample analyses were performed within QC requirements.

EMAX LABORATORIES, INC., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

12/16/1996 10:15

LAB CHRONICLE
EPA 8240

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Soil

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A154501	L039-01	12.6	12/20	LP438		
CR-A154503	L039-03	14.9	12/19	LP414		
CR-A154601	L039-05	6.6		416		
CR-A154603	L039-07	19.7		417		
CR-A154703	L039-09	12.3		418		
CR-A154801	L039-11	5.9		419		
CR-A154803	L039-13	7.6		420		
CR-A154901	L039-15	6.1		424		
CR-A154903	L039-17	9.3		425		
CR-A156201	L039-19	8.9		426		
CR-A156203	L039-21	10.9		427		
CR-A156301	L039-26	30.3		428		
CR-A156401	L039-28	15.4		421		
CR-A156401MS	L039-28M	15.4		422		
CR-A156401MSD	L039-28S	15.4		423		
CR-A156501	L039-30	28.1		429		
CR-A161203	L039-34	18.1	12/20	LP437		
MBLK1S	VOL2402B		12/19	LP410		
LCS1S	VOL2402L			LP411		
LCD1S	VOL2402C			LP412		
MBLK2S	VOL2502B		12/20	LP434		
LCS2S	VOL2502L			LP435		
LCD2S	VOL2502C			LP436		

12/16/1996 10:15

LAB CHRONICLE
EPA 8240

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A156205	L039-23	NA	12/18	LP406		
CR-A161205	L039-36	NA		406		
CR-A161206	L039-37	NA		407		
MBLK 1W	VOL 2302B			386		
BLCSW1	VOL 2302L			389		
LCSW1	VOL 2302C			391		

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/20/96 11:04
Sample ID	: CR-A154501	DaTime Analyzd :	12/20/96 11:04
Lab Cnt NO.	: L039-01	Dilutn Factor :	1
Lab File ID	: RLP438	Matrix :	SOIL
Ext Btch ID	: VOL2502	% Moisture :	12.6
Calib. Ref.	: RLP433	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.72	.61
1,1,2,2-Tetrachloroethane	ND	5.72	.95
1,1,2-Trichloroethane	ND	5.72	.969
1,1-Dichloroethane	ND	5.72	.485
1,1-Dichloroethene	ND	5.72	.59
1,2,3-Trichloropropane	ND	57.2	1.74
1,2-Dichloroethane	ND	5.72	.31
1,2-Dichloropropane	ND	5.72	1.1
2-Butanone	ND	114	2.59
2-Chloroethyl Vinyl Ether	ND	11.4	1.14
2-Hexanone	ND	57.2	1.51
4-Methyl-2-Pentanone	ND	57.2	1.79
Acetone	ND	114	5.13
Benzene	ND	5.72	.465
Bromodichloromethane	ND	5.72	.4[illegible]
Bromoform	ND	5.72	.6[illegible]
Bromomethane	ND	11.4	1.4
Carbon Disulfide	ND	5.72	.563
Carbon Tetrachloride	ND	5.72	.451
Chlorobenzene	ND	5.72	.501
Chloroethane	ND	11.4	1.05
Chloroform	ND	5.72	.519
Chloromethane	ND	11.4	1.07
Cis-1,2-Dichloroethene	ND	5.72	.534
Cis-1,3-Dichloropropene	ND	5.72	.458
Dibromochloromethane	ND	5.72	.442
Ethylbenzene	ND	5.72	.618
Methylene Chloride	6.49	5.72	2.85
m/p-Xylenes	ND	11.4	.789
o-Xylene	ND	5.72	.436
Styrene	ND	5.72	.546
Tetrachloroethylene	ND	5.72	.358
Toluene	ND	5.72	.462
Trans-1,2-Dichloroethene	ND	5.72	.436
Trans-1,3-Dichloropropene	ND	5.72	.399
Trichloroethene	ND	5.72	.538
Vinyl Acetate	ND	57.2	.935
Vinyl Chloride	ND	11.4	1.45

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	100	79-118
Bromofluorobenzene	91	86-115
Toluene-d8	109	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/19/96 12:15
Sample ID	: CR-A154503	DaTime Analyzd :	12/19/96 12:15
Lab Cnt NO.	: L039-03 ✓	Dilutn Factor :	1
Lab File ID	: RLP414 ✓	Matrix :	SOIL
Ext Btch ID	: VOL2402	% Moisture :	14.9
Calib. Ref.	: RLP409	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.88	.626
1,1,2,2-Tetrachloroethane	ND	5.88	.975
1,1,2-Trichloroethane	ND	5.88	.993
1,1-Dichloroethane	ND	5.88	.498
1,1-Dichloroethene	ND	5.88	.613
1,2,3-Trichloropropane	ND	58.8	1.79
1,2-Dichloroethane	ND	5.88	.349
1,2-Dichloropropane	ND	5.88	1.13
2-Butanone	ND	118	2.66
2-Chloroethyl Vinyl Ether	ND	11.8	1.17
2-Hexanone	ND	58.8	1.55
4-Methyl-2-Pentanone	ND	58.8	1.83
Acetone	ND	118	5.27
Benzene	ND	5.88	.477
Bromodichloromethane	ND	5.88	.451
Bromoform	ND	5.88	.673
Bromomethane	ND	11.8	1.44
Carbon Disulfide	ND	5.88	.578
Carbon Tetrachloride	ND	5.88	.463
Chlorobenzene	ND	5.88	.515
Chloroethane	ND	11.8	1.08
Chloroform	ND	5.88	.533
Chloromethane	ND	11.8	1.1
Cis-1,2-Dichloroethene	ND	5.88	.549
Cis-1,3-Dichloropropene	ND	5.88	.47
Dibromochloromethane	ND	5.88	.454
Ethylbenzene	ND	5.88	.635
Methylene Chloride	ND	5.88	2.93
m/p-Xylenes	ND	11.8	.811
o-Xylene	ND	5.88	.448
Styrene	ND	5.88	.561
Tetrachloroethylene	ND	5.88	.368
Toluene	ND	5.88	.475
Trans-1,2-Dichloroethene	ND	5.88	.448
Trans-1,3-Dichloropropene	ND	5.88	.41
Trichloroethene	ND	5.88	.552
Vinyl Acetate	ND	58.8	.96
Vinyl Chloride	ND	11.8	1.48

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	101	79-118
Bromofluorobenzene	97	86-115
Toluene-d8	101	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/19/96 13:15
Sample ID	: CR-A154601	DaTime Analyzd :	12/19/96 13:15
Lab Cnt NO.	: L039-05	Dilutn Factor :	1
Lab File ID	: RLP416	Matrix :	SOIL
Ext Btch ID	: VOL2402	% Moisture :	6.6
Calib. Ref.	: RLP409	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.35	.571
1,1,2,2-Tetrachloroethane	ND	5.35	.889
1,1,2-Trichloroethane	ND	5.35	.905
1,1-Dichloroethane	ND	5.35	.454
1,1-Dichloroethene	ND	5.35	.559
1,2,3-Trichloropropane	ND	53.5	1.63
1,2-Dichloroethane	ND	5.35	.318
1,2-Dichloropropane	ND	5.35	1.03
2-Butanone	ND	107	2.42
2-Chloroethyl Vinyl Ether	ND	10.7	1.06
2-Hexanone	ND	53.5	1.42
4-Methyl-2-Pentanone	ND	53.5	1.67
Acetone	ND	107	4.8
Benzene	ND	5.35	.435
Bromodichloromethane	ND	5.35	.4[illegible]
Bromoform	ND	5.35	.6[illegible]
Bromomethane	ND	10.7	1.31
Carbon Disulfide	ND	5.35	.527
Carbon Tetrachloride	ND	5.35	.422
Chlorobenzene	ND	5.35	.469
Chloroethane	ND	10.7	.984
Chloroform	ND	5.35	.486
Chloromethane	ND	10.7	.999
Cis-1,2-Dichloroethene	ND	5.35	.5
Cis-1,3-Dichloropropene	ND	5.35	.428
Dibromochloromethane	ND	5.35	.413
Ethylbenzene	ND	5.35	.578
Methylene Chloride	ND	5.35	2.67
m/p-Xylenes	ND	10.7	.739
o-Xylene	ND	5.35	.408
Styrene	ND	5.35	.511
Tetrachloroethylene	ND	5.35	.335
Toluene	ND	5.35	.433
Trans-1,2-Dichloroethene	ND	5.35	.408
Trans-1,3-Dichloropropene	ND	5.35	.374
Trichloroethene	ND	5.35	.503
Vinyl Acetate	ND	53.5	.875
Vinyl Chloride	ND	10.7	1.35

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	104	79-118
Bromofluorobenzene	93	86-115
Toluene-d8	106	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/19/96 13:43
Sample ID	: CR-A154603	DaTime Analyzd :	12/19/96 13:43
Lab Cnt NO.	: L039-07	Dilutn Factor :	1
Lab File ID	: RLP417	Matrix :	SOIL
Ext Btch ID	: VOL2402	% Moisture :	19.7
Calib. Ref.	: RLP409	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	6.23	.664
1,1,2,2-Tetrachloroethane	ND	6.23	1.03
1,1,2-Trichloroethane	ND	6.23	1.05
1,1-Dichloroethane	ND	6.23	.528
1,1-Dichloroethene	ND	6.23	.65
1,2,3-Trichloropropane	ND	62.3	1.9
1,2-Dichloroethane	ND	6.23	.37
1,2-Dichloropropane	ND	6.23	1.2
2-Butanone	ND	125	2.82
2-Chloroethyl Vinyl Ether	ND	12.5	1.24
2-Hexanone	ND	62.3	1.65
4-Methyl-2-Pentanone	ND	62.3	1.94
Acetone	ND	125	5.58
Benzene	ND	6.23	.506
Bromodichloromethane	ND	6.23	.478
Bromoform	ND	6.23	.714
Bromomethane	ND	12.5	1.53
Carbon Disulfide	ND	6.23	.613
Carbon Tetrachloride	ND	6.23	.491
Chlorobenzene	ND	6.23	.545
Chloroethane	ND	12.5	1.14
Chloroform	ND	6.23	.565
Chloromethane	ND	12.5	1.16
Cis-1,2-Dichloroethene	ND	6.23	.582
Cis-1,3-Dichloropropene	ND	6.23	.498
Dibromochloromethane	ND	6.23	.481
Ethylbenzene	ND	6.23	.672
Methylene Chloride	ND	6.23	3.1
m/p-Xylenes	ND	12.5	.859
o-Xylene	ND	6.23	.474
Styrene	ND	6.23	.594
Tetrachloroethylene	ND	6.23	.39
Toluene	ND	6.23	.503
Trans-1,2-Dichloroethene	ND	6.23	.474
Trans-1,3-Dichloropropene	ND	6.23	.435
Trichloroethene	ND	6.23	.585
Vinyl Acetate	ND	62.3	1.02
Vinyl Chloride	ND	12.5	1.57

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	103	79-118
Bromofluorobenzene	97	86-115
Toluene-d8	101	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/19/96 14:13
Sample ID	: CR-A154703	DaTime Analyzd :	12/19/96 14:13
Lab Cnt NO.	: L039-09	Dilutn Factor :	1
Lab File ID	: RLP418	Matrix :	SOIL
Ext Btch ID	: VOL2402	% Moisture :	12.3
Calib. Ref.	: RLP409	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.7	.608
1,1,2,2-Tetrachloroethane	ND	5.7	.946
1,1,2-Trichloroethane	ND	5.7	.964
1,1-Dichloroethane	ND	5.7	.483
1,1-Dichloroethene	ND	5.7	.595
1,2,3-Trichloropropane	ND	57	1.74
1,2-Dichloroethane	ND	5.7	.339
1,2-Dichloropropane	ND	5.7	1.09
2-Butanone	ND	114	2.58
2-Chloroethyl Vinyl Ether	ND	11.4	1.13
2-Hexanone	ND	57	1.51
4-Methyl-2-Pentanone	ND	57	1.78
Acetone	ND	114	5.11
Benzene	ND	5.7	.463
Bromodichloromethane	ND	5.7	.4[illegible]
Bromoform	ND	5.7	.6[illegible]
Bromomethane	ND	11.4	1.4
Carbon Disulfide	ND	5.7	.561
Carbon Tetrachloride	ND	5.7	.449
Chlorobenzene	ND	5.7	.499
Chloroethane	ND	11.4	1.05
Chloroform	ND	5.7	.518
Chloromethane	ND	11.4	1.06
Cis-1,2-Dichloroethene	ND	5.7	.532
Cis-1,3-Dichloropropene	ND	5.7	.456
Dibromochloromethane	ND	5.7	.44
Ethylbenzene	ND	5.7	.616
Methylene Chloride	ND	5.7	2.84
m/p-Xylenes	ND	11.4	.787
o-Xylene	ND	5.7	.434
Styrene	ND	5.7	.544
Tetrachloroethylene	ND	5.7	.357
Toluene	ND	5.7	.461
Trans-1,2-Dichloroethene	ND	5.7	.434
Trans-1,3-Dichloropropene	ND	5.7	.398
Trichloroethene	ND	5.7	.536
Vinyl Acetate	ND	57	.932
Vinyl Chloride	ND	11.4	1.44

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	101	79-118
Bromofluorobenzene	97	86-115
Toluene-d8	101	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/19/96 14:42
Sample ID	: CR-A154801	DaTime Analyzd :	12/19/96 14:42
Lab Cnt NO.:	L039-11	Dilutn Factor :	1
Lab File ID:	RLP419	Matrix :	SOIL
Ext Btch ID:	VOL2402	% Moisture :	5.9
Calib. Ref.:	RLP409	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.31	.566
1,1,2,2-Tetrachloroethane	ND	5.31	.882
1,1,2-Trichloroethane	ND	5.31	.898
1,1-Dichloroethane	ND	5.31	.451
1,1-Dichloroethene	ND	5.31	.555
1,2,3-Trichloropropane	ND	53.1	1.62
1,2-Dichloroethane	ND	5.31	.316
1,2-Dichloropropane	ND	5.31	1.02
2-Butanone	ND	106	2.4
2-Chloroethyl Vinyl Ether	ND	10.6	1.06
2-Hexanone	ND	53.1	1.4
4-Methyl-2-Pentanone	ND	53.1	1.66
Acetone	ND	106	4.76
Benzene	ND	5.31	.431
Bromodichloromethane	ND	5.31	.408
Bromoform	ND	5.31	.609
Bromomethane	ND	10.6	1.3
Carbon Disulfide	ND	5.31	.523
Carbon Tetrachloride	ND	5.31	.419
Chlorobenzene	ND	5.31	.465
Chloroethane	ND	10.6	.977
Chloroform	ND	5.31	.482
Chloromethane	ND	10.6	.991
Cis-1,2-Dichloroethene	ND	5.31	.496
Cis-1,3-Dichloropropene	ND	5.31	.425
Dibromochloromethane	ND	5.31	.41
Ethylbenzene	ND	5.31	.574
Methylene Chloride	ND	5.31	2.65
m/p-Xylenes	ND	10.6	.733
o-Xylene	ND	5.31	.405
Styrene	ND	5.31	.507
Tetrachloroethylene	ND	5.31	.333
Toluene	ND	5.31	.429
Trans-1,2-Dichloroethene	ND	5.31	.405
Trans-1,3-Dichloropropene	ND	5.31	.371
Trichloroethene	ND	5.31	.499
Vinyl Acetate	ND	53.1	.868
Vinyl Chloride	ND	10.6	1.34

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	101	79-118
Bromofluorobenzene	94	86-115
Toluene-d8	101	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/19/96 15:13
Sample ID	: CR-A154803	DaTime Analyzd :	12/19/96 15:13
Lab Cnt NO.	: L039-13	Dilutn Factor :	1
Lab File ID	: RLP420	Matrix :	SOIL
Ext Btch ID	: VOL2402	% Moisture :	7.6
Calib. Ref.	: RLP409	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.41	.577
1,1,2,2-Tetrachloroethane	ND	5.41	.898
1,1,2-Trichloroethane	ND	5.41	.915
1,1-Dichloroethane	ND	5.41	.459
1,1-Dichloroethene	ND	5.41	.565
1,2,3-Trichloropropane	ND	54.1	1.65
1,2-Dichloroethane	ND	5.41	.321
1,2-Dichloropropane	ND	5.41	1.04
2-Butanone	ND	108	2.45
2-Chloroethyl Vinyl Ether	ND	10.8	1.08
2-Hexanone	ND	54.1	1.43
4-Methyl-2-Pentanone	ND	54.1	1.69
Acetone	ND	108	4.85
Benzene	ND	5.41	.439
Bromodichloromethane	ND	5.41	.4[illegible]
Bromoform	ND	5.41	[illegible]
Bromomethane	ND	10.8	1.33
Carbon Disulfide	ND	5.41	.532
Carbon Tetrachloride	ND	5.41	.426
Chlorobenzene	ND	5.41	.474
Chloroethane	ND	10.8	.995
Chloroform	ND	5.41	.491
Chloromethane	ND	10.8	1.01
Cis-1,2-Dichloroethene	ND	5.41	.505
Cis-1,3-Dichloropropene	ND	5.41	.433
Dibromochloromethane	ND	5.41	.418
Ethylbenzene	ND	5.41	.584
Methylene Chloride	ND	5.41	2.69
m/p-Xylenes	ND	10.8	.747
o-Xylene	ND	5.41	.412
Styrene	ND	5.41	.516
Tetrachloroethylene	ND	5.41	.339
Toluene	ND	5.41	.437
Trans-1,2-Dichloroethene	ND	5.41	.412
Trans-1,3-Dichloropropene	ND	5.41	.378
Trichloroethene	ND	5.41	.509
Vinyl Acetate	ND	54.1	.884
Vinyl Chloride	ND	10.8	1.37

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	100	79-118
Bromofluorobenzene	98	86-115
Toluene-d8	104	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/19/96 17:07
Sample ID	: CR-A154901	DaTime Analyzd :	12/19/96 17:07
Lab Cnt NO.	: L039-15	Dilutn Factor :	1
Lab File ID	: RLP424	Matrix :	SOIL
Ext Btch ID	: VOL2402	% Moisture :	6.1
Calib. Ref.	: RLP409	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.32	.568
1,1,2,2-Tetrachloroethane	ND	5.32	.884
1,1,2-Trichloroethane	ND	5.32	.9
1,1-Dichloroethane	ND	5.32	.452
1,1-Dichloroethene	ND	5.32	.556
1,2,3-Trichloropropane	ND	53.2	1.62
1,2-Dichloroethane	ND	5.32	.316
1,2-Dichloropropane	ND	5.32	1.02
2-Butanone	ND	106	2.41
2-Chloroethyl Vinyl Ether	ND	10.6	1.06
2-Hexanone	ND	53.2	1.41
4-Methyl-2-Pentanone	ND	53.2	1.66
Acetone	ND	106	4.77
Benzene	ND	5.32	.432
Bromodichloromethane	ND	5.32	.409
Bromoform	ND	5.32	.61
Bromomethane	ND	10.6	1.31
Carbon Disulfide	ND	5.32	.524
Carbon Tetrachloride	ND	5.32	.42
Chlorobenzene	ND	5.32	.466
Chloroethane	ND	10.6	.979
Chloroform	ND	5.32	.483
Chloromethane	ND	10.6	.994
Cis-1,2-Dichloroethene	ND	5.32	.497
Cis-1,3-Dichloropropene	ND	5.32	.426
Dibromochloromethane	ND	5.32	.411
Ethylbenzene	ND	5.32	.575
Methylene Chloride	ND	5.32	2.65
m/p-Xylenes	ND	10.6	.735
o-Xylene	ND	5.32	.406
Styrene	ND	5.32	.508
Tetrachloroethylene	ND	5.32	.333
Toluene	ND	5.32	.43
Trans-1,2-Dichloroethene	ND	5.32	.406
Trans-1,3-Dichloropropene	ND	5.32	.372
Trichloroethene	ND	5.32	.501
Vinyl Acetate	ND	53.2	.87
Vinyl Chloride	ND	10.6	1.35

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	98	79-118
Bromofluorobenzene	96	86-115
Toluene-d8	102	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/19/96 17:34
Sample ID	: CR-A154903	DaTime Analyzd :	12/19/96 17:34
Lab Cnt NO.:	L039-17	Dilutn Factor :	1
Lab File ID:	RLP425	Matrix :	SOIL
Ext Btch ID:	VOL2402	% Moisture :	9.3
Calib. Ref.:	RLP409	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.51	.588
1,1,2,2-Tetrachloroethane	ND	5.51	.915
1,1,2-Trichloroethane	ND	5.51	.932
1,1-Dichloroethane	ND	5.51	.467
1,1-Dichloroethene	ND	5.51	.576
1,2,3-Trichloropropane	ND	55.1	1.68
1,2-Dichloroethane	ND	5.51	.327
1,2-Dichloropropane	ND	5.51	1.06
2-Butanone	ND	110	2.49
2-Chloroethyl Vinyl Ether	ND	11	1.1
2-Hexanone	ND	55.1	1.46
4-Methyl-2-Pentanone	ND	55.1	1.72
Acetone	ND	110	4.94
Benzene	ND	5.51	.448
Bromodichloromethane	ND	5.51	.4[illegible]
Bromoform	ND	5.51	.6[illegible]
Bromomethane	ND	11	1.35
Carbon Disulfide	ND	5.51	.542
Carbon Tetrachloride	ND	5.51	.434
Chlorobenzene	ND	5.51	.483
Chloroethane	ND	11	1.01
Chloroform	ND	5.51	.501
Chloromethane	ND	11	1.03
Cis-1,2-Dichloroethene	ND	5.51	.515
Cis-1,3-Dichloropropene	ND	5.51	.441
Dibromochloromethane	ND	5.51	.426
Ethylbenzene	ND	5.51	.595
Methylene Chloride	ND	5.51	2.75
m/p-Xylenes	ND	11	.761
o-Xylene	ND	5.51	.42
Styrene	ND	5.51	.526
Tetrachloroethylene	ND	5.51	.345
Toluene	ND	5.51	.445
Trans-1,2-Dichloroethene	ND	5.51	.42
Trans-1,3-Dichloropropene	ND	5.51	.385
Trichloroethene	ND	5.51	.518
Vinyl Acetate	ND	55.1	.901
Vinyl Chloride	ND	11	1.39

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	104	79-118
Bromofluorobenzene	94	86-115
Toluene-d8	98	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted	: 12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received	: 12/12/96
Batch No.	: 96L039	DaTime Extrctd	: 12/19/96 18:02
Sample ID	: CR-A156201	DaTime Analyzd	: 12/19/96 18:02
Lab Cnt NO.	: L039-19	Dilutn Factor	: 1
Lab File ID	: RLP426	Matrix	: SOIL
Ext Btch ID	: VOL2402	% Moisture	: 8.9
Calib. Ref.	: RLP409	Instrument ID	: MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.49	.585
1,1,2,2-Tetrachloroethane	ND	5.49	.911
1,1,2-Trichloroethane	ND	5.49	.928
1,1-Dichloroethane	ND	5.49	.465
1,1-Dichloroethene	ND	5.49	.573
1,2,3-Trichloropropane	ND	54.9	1.67
1,2-Dichloroethane	ND	5.49	.326
1,2-Dichloropropane	ND	5.49	1.05
2-Butanone	ND	110	2.48
2-Chloroethyl Vinyl Ether	ND	11	1.09
2-Hexanone	ND	54.9	1.45
4-Methyl-2-Pentanone	ND	54.9	1.71
Acetone	ND	110	4.92
Benzene	ND	5.49	.446
Bromodichloromethane	ND	5.49	.422
Bromoform	ND	5.49	.629
Bromomethane	ND	11	1.35
Carbon Disulfide	ND	5.49	.54
Carbon Tetrachloride	ND	5.49	.432
Chlorobenzene	ND	5.49	.481
Chloroethane	ND	11	1.01
Chloroform	ND	5.49	.498
Chloromethane	ND	11	1.02
Cis-1,2-Dichloroethene	ND	5.49	.513
Cis-1,3-Dichloropropene	ND	5.49	.439
Dibromochloromethane	ND	5.49	.424
Ethylbenzene	ND	5.49	.593
Methylene Chloride	ND	5.49	2.73
m/p-Xylenes	ND	11	.757
o-Xylene	ND	5.49	.418
Styrene	ND	5.49	.524
Tetrachloroethylene	ND	5.49	.344
Toluene	ND	5.49	.443
Trans-1,2-Dichloroethene	ND	5.49	.418
Trans-1,3-Dichloropropene	ND	5.49	.383
Trichloroethene	ND	5.49	.516
Vinyl Acetate	ND	54.9	.897
Vinyl Chloride	ND	11	1.39

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	100	79-118
Bromofluorobenzene	94	86-115
Toluene-d8	109	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/19/96 18:29
Sample ID	: CR-A156203	DaTime Analyzd :	12/19/96 18:29
Lab Cnt NO.:	L039-21	Dilutn Factor :	1
Lab File ID:	RLP427	Matrix :	SOIL
Ext Btch ID:	VOL2402	% Moisture :	10.9
Calib. Ref.:	RLP409	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.61	.598
1,1,2,2-Tetrachloroethane	ND	5.61	.932
1,1,2-Trichloroethane	ND	5.61	.948
1,1-Dichloroethane	ND	5.61	.476
1,1-Dichloroethene	ND	5.61	.586
1,2,3-Trichloropropane	ND	56.1	1.71
1,2-Dichloroethane	ND	5.61	.333
1,2-Dichloropropane	ND	5.61	1.08
2-Butanone	ND	112	2.54
2-Chloroethyl Vinyl Ether	ND	11.2	1.12
2-Hexanone	ND	56.1	1.48
4-Methyl-2-Pentanone	ND	56.1	1.75
Acetone	ND	112	5.03
Benzene	ND	5.61	.456
Bromodichloromethane	ND	5.61	.4[illegible]
Bromoform	ND	5.61	.[illegible]
Bromomethane	ND	11.2	1.38
Carbon Disulfide	ND	5.61	.552
Carbon Tetrachloride	ND	5.61	.442
Chlorobenzene	ND	5.61	.492
Chloroethane	ND	11.2	1.03
Chloroform	ND	5.61	.51
Chloromethane	ND	11.2	1.05
Cis-1,2-Dichloroethene	ND	5.61	.524
Cis-1,3-Dichloropropene	ND	5.61	.449
Dibromochloromethane	ND	5.61	.433
Ethylbenzene	ND	5.61	.606
Methylene Chloride	ND	5.61	2.79
m/p-Xylenes	ND	11.2	.774
o-Xylene	ND	5.61	.428
Styrene	ND	5.61	.535
Tetrachloroethylene	ND	5.61	.351
Toluene	ND	5.61	.453
Trans-1,2-Dichloroethene	ND	5.61	.428
Trans-1,3-Dichloropropene	ND	5.61	.392
Trichloroethene	ND	5.61	.527
Vinyl Acetate	ND	56.1	.917
Vinyl Chloride	ND	11.2	1.42

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	100	79-118
Bromofluorobenzene	93	86-115
Toluene-d8	101	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/19/96 18:57
Sample ID	: CR-A156301	DaTime Analyzd :	12/19/96 18:57
Lab Cnt NO.:	L039-26	Dilutn Factor :	1
Lab File ID:	RLP428	Matrix :	SOIL
Ext Btch ID:	VOL2402	% Moisture :	30.3
Calib. Ref.:	RLP409	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	7.17	.765
1,1,2,2-Tetrachloroethane	ND	7.17	1.19
1,1,2-Trichloroethane	ND	7.17	1.21
1,1-Dichloroethane	ND	7.17	.608
1,1-Dichloroethene	ND	7.17	.749
1,2,3-Trichloropropane	ND	71.7	2.18
1,2-Dichloroethane	ND	7.17	.426
1,2-Dichloropropane	ND	7.17	1.38
2-Butanone	ND	143	3.25
2-Chloroethyl Vinyl Ether	ND	14.3	1.43
2-Hexanone	ND	71.7	1.9
4-Methyl-2-Pentanone	ND	71.7	2.24
Acetone	ND	143	6.43
Benzene	ND	7.17	.582
Bromodichloromethane	ND	7.17	.551
Bromoform	ND	7.17	.822
Bromomethane	ND	14.3	1.76
Carbon Disulfide	ND	7.17	.706
Carbon Tetrachloride	ND	7.17	.565
Chlorobenzene	ND	7.17	.628
Chloroethane	ND	14.3	1.32
Chloroform	ND	7.17	.651
Chloromethane	ND	14.3	1.34
Cis-1,2-Dichloroethene	ND	7.17	.67
Cis-1,3-Dichloropropene	ND	7.17	.574
Dibromochloromethane	ND	7.17	.554
Ethylbenzene	ND	7.17	.775
Methylene Chloride	ND	7.17	3.57
m/p-Xylenes	ND	14.3	.99
o-Xylene	ND	7.17	.547
Styrene	ND	7.17	.684
Tetrachloroethylene	ND	7.17	.449
Toluene	ND	7.17	.58
Trans-1,2-Dichloroethene	ND	7.17	.547
Trans-1,3-Dichloropropene	ND	7.17	.501
Trichloroethene	ND	7.17	.674
Vinyl Acetate	ND	71.7	1.17
Vinyl Chloride	ND	14.3	1.81

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	100	79-118
Bromofluorobenzene	88	86-115
Toluene-d8	93	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/19/96 15:42
Sample ID	: CR-A156401	DaTime Analyzd :	12/19/96 15:42
Lab Cnt NO.	: L039-28	Dilutn Factor :	1
Lab File ID	: RLP421	Matrix :	SOIL
Ext Btch ID	: VOL2402	% Moisture :	15.4
Calib. Ref.	: RLP409	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	5.91	.63
1,1,2,2-Tetrachloroethane	ND	5.91	.981
1,1,2-Trichloroethane	ND	5.91	.999
1,1-Dichloroethane	ND	5.91	.501
1,1-Dichloroethene	ND	5.91	.617
1,2,3-Trichloropropane	ND	59.1	1.8
1,2-Dichloroethane	ND	5.91	.351
1,2-Dichloropropane	ND	5.91	1.13
2-Butanone	ND	118	2.67
2-Chloroethyl Vinyl Ether	ND	11.8	1.17
2-Hexanone	ND	59.1	1.56
4-Methyl-2-Pentanone	ND	59.1	1.85
Acetone	ND	118	5.3
Benzene	ND	5.91	.48
Bromodichloromethane	ND	5.91	.4[illegible]
Bromoform	ND	5.91	.[illegible]
Bromomethane	ND	11.8	1.45
Carbon Disulfide	ND	5.91	.582
Carbon Tetrachloride	ND	5.91	.466
Chlorobenzene	ND	5.91	.518
Chloroethane	ND	11.8	1.09
Chloroform	ND	5.91	.537
Chloromethane	ND	11.8	1.1
Cis-1,2-Dichloroethene	ND	5.91	.552
Cis-1,3-Dichloropropene	ND	5.91	.473
Dibromochloromethane	ND	5.91	.456
Ethylbenzene	ND	5.91	.638
Methylene Chloride	ND	5.91	2.94
m/p-Xylenes	ND	11.8	.816
o-Xylene	ND	5.91	.45
Styrene	ND	5.91	.564
Tetrachloroethylene	ND	5.91	.37
Toluene	ND	5.91	.478
Trans-1,2-Dichloroethene	ND	5.91	.45
Trans-1,3-Dichloropropene	ND	5.91	.413
Trichloroethene	ND	5.91	.556
Vinyl Acetate	ND	59.1	.966
Vinyl Chloride	ND	11.8	1.49

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	96	79-118
Bromofluorobenzene	90	86-115
Toluene-d8	108	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/19/96 19:26
Sample ID	: CR-A156501	DaTime Analyzd :	12/19/96 19:26
Lab Cnt NO.	: L039-30	Dilutn Factor :	1
Lab File ID	: RLP429	Matrix :	SOIL
Ext Btch ID	: VOL2402	% Moisture :	28.1
Calib. Ref.	: RLP409	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	6.95	.741
1,1,2,2-Tetrachloroethane	ND	6.95	1.15
1,1,2-Trichloroethane	ND	6.95	1.18
1,1-Dichloroethane	ND	6.95	.59
1,1-Dichloroethene	ND	6.95	.726
1,2,3-Trichloropropane	ND	69.5	2.12
1,2-Dichloroethane	ND	6.95	.413
1,2-Dichloropropane	ND	6.95	1.34
2-Butanone	ND	139	3.15
2-Chloroethyl Vinyl Ether	ND	13.9	1.38
2-Hexanone	ND	69.5	1.84
4-Methyl-2-Pentanone	ND	69.5	2.17
Acetone	ND	139	6.24
Benzene	ND	6.95	.565
Bromodichloromethane	ND	6.95	.534
Bromoform	ND	6.95	.797
Bromomethane	ND	13.9	1.71
Carbon Disulfide	ND	6.95	.684
Carbon Tetrachloride	ND	6.95	.548
Chlorobenzene	ND	6.95	.609
Chloroethane	ND	13.9	1.28
Chloroform	ND	6.95	.631
Chloromethane	ND	13.9	1.3
Cis-1,2-Dichloroethene	ND	6.95	.65
Cis-1,3-Dichloropropene	ND	6.95	.556
Dibromochloromethane	ND	6.95	.537
Ethylbenzene	ND	6.95	.751
Methylene Chloride	ND	6.95	3.46
m/p-Xylenes	ND	13.9	.96
o-Xylene	ND	6.95	.53
Styrene	ND	6.95	.663
Tetrachloroethylene	ND	6.95	.435
Toluene	ND	6.95	.562
Trans-1,2-Dichloroethene	ND	6.95	.53
Trans-1,3-Dichloropropene	ND	6.95	.485
Trichloroethene	ND	6.95	.654
Vinyl Acetate	ND	69.5	1.14
Vinyl Chloride	ND	13.9	1.76

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	102	79-118
Bromofluorobenzene	99	86-115
Toluene-d8	96	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/20/96 10:37
Sample ID	: CR-A161203	DaTime Analyzd :	12/20/96 10:37
Lab Cnt NO.	: L039-34	Dilutn Factor :	1
Lab File ID	: RLP437	Matrix :	SOIL
Ext Btch ID	: VOL2502	% Moisture :	18.1
Calib. Ref.	: RLP433	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,1,1-Trichloroethane	ND	6.11	.651
1,1,2,2-Tetrachloroethane	ND	6.11	1.01
1,1,2-Trichloroethane	ND	6.11	1.03
1,1-Dichloroethane	ND	6.11	.518
1,1-Dichloroethene	ND	6.11	.637
1,2,3-Trichloropropane	ND	61.1	1.86
1,2-Dichloroethane	ND	6.11	.363
1,2-Dichloropropane	ND	6.11	1.17
2-Butanone	ND	122	2.76
2-Chloroethyl Vinyl Ether	ND	12.2	1.21
2-Hexanone	ND	61.1	1.61
4-Methyl-2-Pentanone	ND	61.1	1.91
Acetone	ND	122	5.47
Benzene	ND	6.11	.496
Bromodichloromethane	ND	6.11	.4[illegible]
Bromoform	ND	6.11	[illegible]
Bromomethane	ND	12.2	1.5
Carbon Disulfide	ND	6.11	.601
Carbon Tetrachloride	ND	6.11	.481
Chlorobenzene	ND	6.11	.535
Chloroethane	ND	12.2	1.12
Chloroform	ND	6.11	.554
Chloromethane	ND	12.2	1.14
Cis-1,2-Dichloroethene	ND	6.11	.57
Cis-1,3-Dichloropropene	ND	6.11	.488
Dibromochloromethane	ND	6.11	.471
Ethylbenzene	ND	6.11	.659
Methylene Chloride	6.65	6.11	3.04
m/p-Xylenes	ND	12.2	.842
o-Xylene	ND	6.11	.465
Styrene	ND	6.11	.582
Tetrachloroethylene	ND	6.11	.382
Toluene	ND	6.11	.493
Trans-1,2-Dichloroethene	ND	6.11	.465
Trans-1,3-Dichloropropene	ND	6.11	.426
Trichloroethene	ND	6.11	.574
Vinyl Acetate	ND	61.1	.998
Vinyl Chloride	ND	12.2	1.54

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	103	79-118
Bromofluorobenzene	92	86-115
Toluene-d8	108	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/18/96 18:47
Sample ID	: CR-A156205	DaTime Analyzd :	12/18/96 18:47
Lab Cnt NO.	: L039-23	Dilutn Factor :	1
Lab File ID	: RLP405	Matrix :	WATER
Ext Btch ID	: VOL2302	% Moisture :	NA
Calib. Ref.	: RLP385	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	10.5F	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	ND	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	87	79-118
Bromofluorobenzene	96	86-115
Toluene-d8	95	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/18/96 19:15
Sample ID	: CR-A161205	DaTime Analyzd :	12/18/96 19:15
Lab Cnt NO.:	L039-36	Dilutn Factor :	1
Lab File ID:	RLP406	Matrix :	WATER
Ext Btch ID:	VOL2302	% Moisture :	NA
Calib. Ref.:	RLP385	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.4
Bromoform	ND	5	.2
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	ND	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	91	79-118
Bromofluorobenzene	100	86-115
Toluene-d8	91	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

SW 5030A/8240B
VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/18/96 19:44
Sample ID	: CR-A161206	DaTime Analyzd :	12/18/96 19:44
Lab Cnt NO.:	L039-37	Dilutn Factor :	1
Lab File ID:	RLP407	Matrix :	WATER
Ext Btch ID:	VOL2302	% Moisture :	NA
Calib. Ref.:	RLP385	Instrument ID :	MSVOA2

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,1,1-Trichloroethane	ND	5	.308
1,1,2,2-Tetrachloroethane	ND	5	.326
1,1,2-Trichloroethane	ND	5	.064
1,1-Dichloroethane	ND	5	.55
1,1-Dichloroethene	ND	5	.688
1,2,3-Trichloropropane	ND	5	1.52
1,2-Dichloroethane	ND	5	.327
1,2-Dichloropropane	ND	5	.822
2-Butanone	ND	100	1.3
2-Chloroethyl Vinyl Ether	ND	10	.387
2-Hexanone	ND	50	.962
4-Methyl-2-Pentanone	ND	50	1.88
Acetone	ND	100	2.18
Benzene	ND	5	.7
Bromodichloromethane	ND	5	.406
Bromoform	ND	5	.299
Bromomethane	ND	10	.721
Carbon Disulfide	ND	5	.474
Carbon Tetrachloride	ND	5	.398
Chlorobenzene	ND	5	.345
Chloroethane	ND	10	.71
Chloroform	ND	5	.441
Chloromethane	ND	10	1.16
Cis-1,2-Dichloroethene	ND	5	.402
Cis-1,3-Dichloropropene	ND	5	.327
Dibromochloromethane	ND	5	.317
Ethylbenzene	ND	5	.428
Methylene Chloride	ND	5	.771
m/p-Xylenes	ND	10	.71
o-Xylene	ND	5	.26
Styrene	ND	5	.263
Tetrachloroethylene	ND	5	.32
Toluene	ND	5	.372
Trans-1,2-Dichloroethene	ND	5	.494
Trans-1,3-Dichloropropene	ND	5	.171
Trichloroethene	ND	5	.325
Vinyl Acetate	ND	50	.293
Vinyl Chloride	ND	10	.458

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	92	79-118
Bromofluorobenzene	95	86-115
Toluene-d8	95	88-110

PQL: Practical Quantitation Limit
JACWHTG/JACWHTS: Revision 0, 18-NOV-96

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LABORATORY REPORT FOR

JACOBS ENGINEERING GROUP

CARSWELL AFB / 05G47900

EPA 3520B /8270B
SEMIVOLATILES

SDG#: 96L039

JANUARY 02, 1997

CASE NARRATIVE

CLIENT: JACOBS ENGINEERING GROUP

PROJECT: CARSWELL AFB / 05G47900

SDG: 96L039

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Two (2) water and seventeen (17) soil samples were received on 12/12/96 to be analyzed for semivolatile organic analysis by EPA Method 3520B/8270B in accordance to USEPA SW846.

1. Holding Time

   Analytical holding time was met.

2. Surrogate Recovery

   All surrogate recoveries were within QC limits.

3. Matrix Spike/Matrix Spike Duplicate

   All recoveries and RPDs were within QC limits except low recovery of 2,4-Dinitrophenol in L039-29S and no recovery of Benzoic acid in L039-29M/S.

4. Lab Control Sample

   High recovery of 3-Nitroaniline was found in SVL008SC. Low recovery of Benzoic acid and high recovery of Dibenzo(a,h)anthracene were found in SVL009SL. Also 3-Nitroaniline had high recovery in SVL009SC.

5. Method Blank

   Method blanks were free of contamination.

6. Tuning and Calibration

   Tuning and calibration were carried out at 12 hour interval.

7. Sample Analysis

   Internal standard was out of QC limits in L039-31. Sample was re-analyzed and RT window was out. Sample appeared to be dark brown and viscous. Matrix interference was suspected.

12/16/1996 10:15

LAB CHRONICLE
EPA 8270

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Soil

SAMPLE ID	NO		CONTROL BATCH/DATE/TIME	%H2O PREPARATION BATCH/DATE/TIME	ANALYTICAL REF	ANALYTICAL ID
CR-A154502	L039-02	19.4	SVL008S / 12/12/96 / 15:00	RLB220 / 12/23/96 / 18:31	RLB220	RLB227
CR-A154504	L039-04	13.9		↓ / 19:19	↓	RLB228
CR-A154602	L039-06	12.0		RLB240 / 12/24/96 / 06:58	RLB240	RLB246
CR-A154604	L039-08	12.7		RLB220 / 12/23/96 / 20:07	RLB220	RLB229
CR-A154704	L039-10	12.6		↓ / 20:55	↓	RLB230
CR-A154802	L039-12	7.1		RLB240 / 12/24/96 / 07:45	RLB240	RLB247
CR-A154804	L039-14	11.0		RLB220 / 12/23/96 / 21:43	RLB220	RLB231
CR-A154902	L039-16	7.8		RLB240 / 12/24/96 / 06:10	RLB240	RL[illegible]
CR-A154904	L039-18	11.3		RLB220 / 12/23/96 / 22:31	RLB220	RLB232
CR-A156202	L039-20	10.4		RLB240 / 12/24/96 / 08:32	RLB240	RLB248
CR-A156204	L039-22	10.1		RLB220 / 12/23/96 / 23:18	RLB220	RLB233
CR-A156302	L039-27	12.3		RLB240 / 12/24/96 / 09:20	RLB240	RLB249
CR-A156402	L039-29	16.0		RLB220 / 12/23/96 / 13:42	RLB220	RLB221
CR-A156402MS	L039-29M	16.0		↓ / 14:30	↓	RLB222
CR-A156402MSD	L039-29S	16.0		↓ / 15:18	↓	RLB223
CR-A156502	L039-31	16.4		RLB240 / 12/24/96 / 10:04	RLB240	RLB250
CR-A161201	L039-32	12.6		RLB220 / 12/24/96 / 00:06	RLB220	RLB234
CR-A161202	L039-33	15.3		RLB240 / 12/24/96 / 04:36	RLB240	RLB243
CR-A161204	L039-35	15.7		↓ / 05:23	↓	RLB244
MBLK1S	SVL008SB			RLB220 / 12/23/96 / 16:07	RLB220	RLB224
LCS1S	SVL008SL			↓ / 16:55	↓	RLB225
LCD1S	SVL008SC			↓ / 17:43	↓	RL[illegible]
	L039-31R		↓	RLB332 / 12/30/96 / 00:45	RLB332	RLB336

12/16/1996 10:15

LAB CHRONICLE
EPA 8270

CLIENT: Jacobs Engineering Group
PROJECT: Carswell AFB / 05G47900

SDG/BATCH NO.: 96L039
MATRIX: Water

SAMPLE ID	CONTROL NO	%H2O	PREPARATION BATCH/DATE/TIME	ANALYTICAL BATCH/DATE/TIME	CALIB REF	FILE ID
CR-A156206	L039-24	NA	SVL009W / 12/13/96 / 15:30	RLB129 / 12/19/96 / 20:15	RLB129	RLB140
CR-A161207	L039-38	NA	↓	↓ / 21:03	↓	RLB141
MBLK1W	SVL009WB		↓	↓ / 17:52	↓	RLB137
LCS1W	SVL009WL		↓	↓ / 18:39	↓	RLB138
LCD1W	SVL009WC		↓	↓ / 19:27	↓	RLB139

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154502	DaTime Analyzd :	12/23/96 18:31
Lab Cnt NO.	: L039-02	Dilutn Factor :	1
Lab File ID	: RLB227	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	19.4
Calib. Ref.	: RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	868	128
1,2-Dichlorobenzene	ND	868	136
1,3-Dichlorobenzene	ND	868	99.3
1,4-Dichlorobenzene	ND	868	120
2,4,5-Trichlorophenol	ND	4090	123
2,4,6-Trichlorophenol	ND	372	143
2,4-Dichlorophenol	ND	372	94.3
2,4-Dimethylphenol	ND	372	110
2,4-Dinitrophenol	ND	4090	69.5
2,4-Dinitrotoluene	ND	868	143
2,6-Dinitrotoluene	ND	868	122
2-Chloronaphthalene	ND	868	115
2-Chlorophenol	ND	372	84.4
2-Methylnaphthalene	ND	868	127
2-Methylphenol	ND	372	1[illegible]
2-Nitroaniline	ND	4090	1[illegible]
2-Nitrophenol	ND	372	128
3,3'-Dichlorobenzidine	ND	1610	170
3-Nitroaniline	ND	4090	104
4,6-Dinitro-2-methylphenol	ND	4090	90.6
4-Bromophenyl phenyl ether	ND	868	129
4-Chloro-3-methylphenol	ND	1610	145
4-Chloroaniline	ND	1610	76.9
4-Chlorophenyl phenyl ether	ND	868	130
4-Methylphenol (1)	ND	372	84.4
4-Nitroaniline	ND	4090	108
4-Nitrophenol	ND	1990	6.95
Acenaphthene	ND	868	115
Acenaphthylene	ND	868	109
Anthracene	ND	868	128
Benzo(a)anthracene	ND	868	107
Benzo(a)pyrene	ND	868	113
Benzo(b)fluoranthene	ND	868	133
Benzo(k)fluoranthene	ND	868	124
Benzo(g,h,i)perylene	ND	868	115
Benzoic Acid	ND	1990	133
Benzyl alcohol	ND	1610	100
bis(2-Chloroethoxy)methane	ND	868	127

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154502	DaTime Analyzd :	12/23/96 18:31
Lab Cnt NO.:	L039-02	Dilutn Factor :	1
Lab File ID:	RLB227	Matrix :	SOIL
Ext Btch ID:	SVL008S	% Moisture :	19.4
Calib. Ref.:	RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	868	83.1
bis(2-Chloroisopropyl)ether	ND	868	112
bis(2-Ethylhexyl)phthalate	ND	868	122
Butylbenzylphthalate	ND	868	252
Chrysene	ND	868	124
Di-n-butylphthalate	ND	868	138
Di-n-octylphthalate	ND	868	112
Dibenzo(a,h)anthracene	ND	868	119
Dibenzofuran	ND	868	124
Diethylphthalate	ND	868	120
Dimethylphthalate	ND	868	133
Fluoranthene	ND	868	128
Fluorene	ND	868	108
Hexachlorobenzene	ND	868	139
Hexachlorobutadiene	ND	868	129
Hexachlorocyclopentadiene	ND	868	144
Hexachloroethane	ND	868	109
Indeno(1,2,3-cd)pyrene	ND	868	118
Isophorone	ND	868	115
n-Nitroso-di-n-propylamine	ND	868	141
n-Nitrosodiphenylamine (2)	ND	868	125
Naphthalene	ND	868	120
Nitrobenzene	ND	868	96.8
Pentachlorophenol	ND	4090	37.2
Phenanthrene	ND	868	125
Phenol	ND	372	96.8
Pyrene	ND	868	119

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	86	25-144
2-Fluorobiphenyl	78	34-135
2-Fluorophenol	79	25-135
Nitrobenzene-d5	82	25-135
Phenol-d5	81	25-135
Terphenyl-d14	69	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154504	DaTime Analyzd :	12/23/96 19:19
Lab Cnt NO.	: L039-04	Dilutn Factor :	1
Lab File ID	: RLB228	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	13.9
Calib. Ref.	: RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	813	120
1,2-Dichlorobenzene	ND	813	128
1,3-Dichlorobenzene	ND	813	92.9
1,4-Dichlorobenzene	ND	813	113
2,4,5-Trichlorophenol	ND	3830	115
2,4,6-Trichlorophenol	ND	348	134
2,4-Dichlorophenol	ND	348	88.3
2,4-Dimethylphenol	ND	348	103
2,4-Dinitrophenol	ND	3830	65
2,4-Dinitrotoluene	ND	813	134
2,6-Dinitrotoluene	ND	813	114
2-Chloronaphthalene	ND	813	108
2-Chlorophenol	ND	348	79
2-Methylnaphthalene	ND	813	118
2-Methylphenol	ND	348	1[illegible]
2-Nitroaniline	ND	3830	1[illegible]
2-Nitrophenol	ND	348	120
3,3'-Dichlorobenzidine	ND	1510	159
3-Nitroaniline	ND	3830	97.6
4,6-Dinitro-2-methylphenol	ND	3830	84.8
4-Bromophenyl phenyl ether	ND	813	121
4-Chloro-3-methylphenol	ND	1510	136
4-Chloroaniline	ND	1510	72
4-Chlorophenyl phenyl ether	ND	813	122
4-Methylphenol (1)	ND	348	79
4-Nitroaniline	ND	3830	101
4-Nitrophenol	ND	1860	6.5
Acenaphthene	ND	813	108
Acenaphthylene	ND	813	102
Anthracene	ND	813	120
Benzo(a)anthracene	ND	813	99.9
Benzo(a)pyrene	ND	813	106
Benzo(b)fluoranthene	ND	813	124
Benzo(k)fluoranthene	ND	813	116
Benzo(g,h,i)perylene	ND	813	108
Benzoic Acid	ND	1860	124
Benzyl alcohol	ND	1510	94.1
bis(2-Chloroethoxy)methane	ND	813	118

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154504	DaTime Analyzd :	12/23/96 19:19
Lab Cnt NO.	: L039-04	Dilutn Factor :	1
Lab File ID	: RLB228	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	13.9
Calib. Ref.	: RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	813	77.8
bis(2-Chloroisopropyl)ether	ND	813	105
bis(2-Ethylhexyl)phthalate	ND	813	114
Butylbenzylphthalate	ND	813	236
Chrysene	ND	813	116
Di-n-butylphthalate	ND	813	129
Di-n-octylphthalate	ND	813	105
Dibenzo(a,h)anthracene	ND	813	111
Dibenzofuran	ND	813	116
Diethylphthalate	ND	813	113
Dimethylphthalate	ND	813	124
Fluoranthene	ND	813	120
Fluorene	ND	813	101
Hexachlorobenzene	ND	813	130
Hexachlorobutadiene	ND	813	121
Hexachlorocyclopentadiene	ND	813	135
Hexachloroethane	ND	813	102
Indeno(1,2,3-cd)pyrene	ND	813	110
Isophorone	ND	813	108
n-Nitroso-di-n-propylamine	ND	813	132
n-Nitrosodiphenylamine (2)	ND	813	117
Naphthalene	ND	813	113
Nitrobenzene	ND	813	90.6
Pentachlorophenol	ND	3830	34.8
Phenanthrene	ND	813	117
Phenol	ND	348	90.6
Pyrene	ND	813	111

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	83	25-144
2-Fluorobiphenyl	73	34-135
2-Fluorophenol	79	25-135
Nitrobenzene-d5	78	25-135
Phenol-d5	79	25-135
Terphenyl-d14	63	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154602	DaTime Analyzd :	12/24/96 06:58
Lab Cnt NO.	: L039-06	Dilutn Factor :	1
Lab File ID	: RLB246	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	12.0
Calib. Ref.	: RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	795	117
1,2-Dichlorobenzene	ND	795	125
1,3-Dichlorobenzene	ND	795	90.9
1,4-Dichlorobenzene	ND	795	110
2,4,5-Trichlorophenol	ND	3750	112
2,4,6-Trichlorophenol	ND	341	131
2,4-Dichlorophenol	ND	341	86.4
2,4-Dimethylphenol	ND	341	101
2,4-Dinitrophenol	ND	3750	63.6
2,4-Dinitrotoluene	ND	795	131
2,6-Dinitrotoluene	ND	795	111
2-Chloronaphthalene	ND	795	106
2-Chlorophenol	ND	341	77.3
2-Methylnaphthalene	ND	795	116
2-Methylphenol	ND	341	[illegible]
2-Nitroaniline	ND	3750	[illegible]
2-Nitrophenol	ND	341	117
3,3'-Dichlorobenzidine	ND	1480	156
3-Nitroaniline	ND	3750	95.5
4,6-Dinitro-2-methylphenol	ND	3750	83
4-Bromophenyl phenyl ether	ND	795	118
4-Chloro-3-methylphenol	ND	1480	133
4-Chloroaniline	ND	1480	70.5
4-Chlorophenyl phenyl ether	ND	795	119
4-Methylphenol (1)	ND	341	77.3
4-Nitroaniline	ND	3750	98.9
4-Nitrophenol	ND	1820	6.36
Acenaphthene	ND	795	106
Acenaphthylene	ND	795	100
Anthracene	ND	795	117
Benzo(a)anthracene	ND	795	97.7
Benzo(a)pyrene	ND	795	103
Benzo(b)fluoranthene	ND	795	122
Benzo(k)fluoranthene	ND	795	114
Benzo(g,h,i)perylene	ND	795	106
Benzoic Acid	ND	1820	122
Benzyl alcohol	ND	1480	92
bis(2-Chloroethoxy)methane	ND	795	116

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154602	DaTime Analyzd :	12/24/96 06:58
Lab Cnt NO.:	L039-06	Dilutn Factor :	1
Lab File ID:	RLB246	Matrix :	SOIL
Ext Btch ID:	SVL008S	% Moisture :	12.0
Calib. Ref.:	RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	795	76.1
bis(2-Chloroisopropyl)ether	ND	795	102
bis(2-Ethylhexyl)phthalate	ND	795	111
Butylbenzylphthalate	ND	795	231
Chrysene	ND	795	114
Di-n-butylphthalate	ND	795	126
Di-n-octylphthalate	ND	795	102
Dibenzo(a,h)anthracene	ND	795	109
Dibenzofuran	ND	795	114
Diethylphthalate	ND	795	110
Dimethylphthalate	ND	795	122
Fluoranthene	ND	795	117
Fluorene	ND	795	98.9
Hexachlorobenzene	ND	795	127
Hexachlorobutadiene	ND	795	118
Hexachlorocyclopentadiene	ND	795	132
Hexachloroethane	ND	795	100
Indeno(1,2,3-cd)pyrene	ND	795	108
Isophorone	ND	795	106
n-Nitroso-di-n-propylamine	ND	795	130
n-Nitrosodiphenylamine (2)	ND	795	115
Naphthalene	ND	795	110
Nitrobenzene	ND	795	88.6
Pentachlorophenol	ND	3750	34.1
Phenanthrene	ND	795	115
Phenol	ND	341	88.6
Pyrene	ND	795	109

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	84	25-144
2-Fluorobiphenyl	74	34-135
2-Fluorophenol	67	25-135
Nitrobenzene-d5	69	25-135
Phenol-d5	67	25-135
Terphenyl-d14	75	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154604	DaTime Analyzd :	12/23/96 20:07
Lab Cnt NO.	: L039-08	Dilutn Factor :	1
Lab File ID	: RLB229	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	12.7
Calib. Ref.	: RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	802	118
1,2-Dichlorobenzene	ND	802	126
1,3-Dichlorobenzene	ND	802	91.6
1,4-Dichlorobenzene	ND	802	111
2,4,5-Trichlorophenol	ND	3780	113
2,4,6-Trichlorophenol	ND	344	132
2,4-Dichlorophenol	ND	344	87.1
2,4-Dimethylphenol	ND	344	102
2,4-Dinitrophenol	ND	3780	64.1
2,4-Dinitrotoluene	ND	802	132
2,6-Dinitrotoluene	ND	802	112
2-Chloronaphthalene	ND	802	107
2-Chlorophenol	ND	344	77.9
2-Methylnaphthalene	ND	802	117
2-Methylphenol	ND	344	1[illegible]
2-Nitroaniline	ND	3780	1[illegible]
2-Nitrophenol	ND	344	118
3,3'-Dichlorobenzidine	ND	1490	157
3-Nitroaniline	ND	3780	96.2
4,6-Dinitro-2-methylphenol	ND	3780	83.6
4-Bromophenyl phenyl ether	ND	802	119
4-Chloro-3-methylphenol	ND	1490	134
4-Chloroaniline	ND	1490	71
4-Chlorophenyl phenyl ether	ND	802	120
4-Methylphenol (1)	ND	344	77.9
4-Nitroaniline	ND	3780	99.7
4-Nitrophenol	ND	1830	6.41
Acenaphthene	ND	802	107
Acenaphthylene	ND	802	101
Anthracene	ND	802	118
Benzo(a)anthracene	ND	802	98.5
Benzo(a)pyrene	ND	802	104
Benzo(b)fluoranthene	ND	802	123
Benzo(k)fluoranthene	ND	802	115
Benzo(g,h,i)perylene	ND	802	107
Benzoic Acid	ND	1830	123
Benzyl alcohol	ND	1490	92.8
bis(2-Chloroethoxy)methane	ND	802	117

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154604	DaTime Analyzd :	12/23/96 20:07
Lab Cnt NO.	: L039-08	Dilutn Factor :	1
Lab File ID	: RLB229	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	12.7
Calib. Ref.	: RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	802	76.7
bis(2-Chloroisopropyl)ether	ND	802	103
bis(2-Ethylhexyl)phthalate	ND	802	112
Butylbenzylphthalate	ND	802	233
Chrysene	ND	802	115
Di-n-butylphthalate	ND	802	127
Di-n-octylphthalate	ND	802	103
Dibenzo(a,h)anthracene	ND	802	110
Dibenzofuran	ND	802	115
Diethylphthalate	ND	802	111
Dimethylphthalate	ND	802	123
Fluoranthene	ND	802	118
Fluorene	ND	802	99.7
Hexachlorobenzene	ND	802	128
Hexachlorobutadiene	ND	802	119
Hexachlorocyclopentadiene	ND	802	133
Hexachloroethane	ND	802	101
Indeno(1,2,3-cd)pyrene	ND	802	109
Isophorone	ND	802	107
n-Nitroso-di-n-propylamine	ND	802	131
n-Nitrosodiphenylamine (2)	ND	802	116
Naphthalene	ND	802	111
Nitrobenzene	ND	802	89.3
Pentachlorophenol	ND	3780	34.4
Phenanthrene	ND	802	116
Phenol	ND	344	89.3
Pyrene	ND	802	110

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	86	25-144
2-Fluorobiphenyl	73	34-135
2-Fluorophenol	80	25-135
Nitrobenzene-d5	80	25-135
Phenol-d5	82	25-135
Terphenyl-d14	66	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154704	DaTime Analyzd :	12/23/96 20:55
Lab Cnt NO.	: L039-10	Dilutn Factor :	1
Lab File ID	: RLB230	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	12.6
Calib. Ref.	: RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	801	118
1,2-Dichlorobenzene	ND	801	126
1,3-Dichlorobenzene	ND	801	91.5
1,4-Dichlorobenzene	ND	801	111
2,4,5-Trichlorophenol	ND	3780	113
2,4,6-Trichlorophenol	ND	343	132
2,4-Dichlorophenol	ND	343	87
2,4-Dimethylphenol	ND	343	102
2,4-Dinitrophenol	ND	3780	64.1
2,4-Dinitrotoluene	ND	801	132
2,6-Dinitrotoluene	ND	801	112
2-Chloronaphthalene	ND	801	106
2-Chlorophenol	ND	343	77.8
2-Methylnaphthalene	ND	801	117
2-Methylphenol	ND	343	11[illegible]
2-Nitroaniline	ND	3780	10[illegible]
2-Nitrophenol	ND	343	118
3,3'-Dichlorobenzidine	ND	1490	157
3-Nitroaniline	ND	3780	96.1
4,6-Dinitro-2-methylphenol	ND	3780	83.5
4-Bromophenyl phenyl ether	ND	801	119
4-Chloro-3-methylphenol	ND	1490	134
4-Chloroaniline	ND	1490	70.9
4-Chlorophenyl phenyl ether	ND	801	120
4-Methylphenol (1)	ND	343	77.8
4-Nitroaniline	ND	3780	99.5
4-Nitrophenol	ND	1830	6.41
Acenaphthene	ND	801	106
Acenaphthylene	ND	801	101
Anthracene	ND	801	118
Benzo(a)anthracene	ND	801	98.4
Benzo(a)pyrene	ND	801	104
Benzo(b)fluoranthene	ND	801	122
Benzo(k)fluoranthene	ND	801	114
Benzo(g,h,i)perylene	ND	801	106
Benzoic Acid	ND	1830	122
Benzyl alcohol	ND	1490	92.7
bis(2-Chloroethoxy)methane	ND	801	117

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154704	DaTime Analyzd :	12/23/96 20:55
Lab Cnt NO.	: L039-10	Dilutn Factor :	1
Lab File ID	: RLB230	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	12.6
Calib. Ref.	: RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	801	76.7
bis(2-Chloroisopropyl)ether	ND	801	103
bis(2-Ethylhexyl)phthalate	ND	801	112
Butylbenzylphthalate	ND	801	232
Chrysene	ND	801	114
Di-n-butylphthalate	ND	801	127
Di-n-octylphthalate	ND	801	103
Dibenzo(a,h)anthracene	ND	801	110
Dibenzofuran	ND	801	114
Diethylphthalate	ND	801	111
Dimethylphthalate	ND	801	122
Fluoranthene	ND	801	118
Fluorene	ND	801	99.5
Hexachlorobenzene	ND	801	128
Hexachlorobutadiene	ND	801	119
Hexachlorocyclopentadiene	ND	801	133
Hexachloroethane	ND	801	101
Indeno(1,2,3-cd)pyrene	ND	801	109
Isophorone	ND	801	106
n-Nitroso-di-n-propylamine	ND	801	130
n-Nitrosodiphenylamine (2)	ND	801	116
Naphthalene	ND	801	111
Nitrobenzene	ND	801	89.2
Pentachlorophenol	ND	3780	34.3
Phenanthrene	ND	801	116
Phenol	ND	343	89.2
Pyrene	ND	801	110

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	84	25-144
2-Fluorobiphenyl	73	34-135
2-Fluorophenol	81	25-135
Nitrobenzene-d5	81	25-135
Phenol-d5	80	25-135
Terphenyl-d14	63	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154802	DaTime Analyzd :	12/24/96 07:45
Lab Cnt NO.	: L039-12	Dilutn Factor :	1
Lab File ID	: RLB247	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	7.1
Calib. Ref.	: RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	753	111
1,2-Dichlorobenzene	ND	753	118
1,3-Dichlorobenzene	ND	753	86.1
1,4-Dichlorobenzene	ND	753	104
2,4,5-Trichlorophenol	ND	3550	107
2,4,6-Trichlorophenol	ND	323	124
2,4-Dichlorophenol	ND	323	81.8
2,4-Dimethylphenol	ND	323	95.8
2,4-Dinitrophenol	ND	3550	60.3
2,4-Dinitrotoluene	ND	753	124
2,6-Dinitrotoluene	ND	753	105
2-Chloronaphthalene	ND	753	100
2-Chlorophenol	ND	323	73.2
2-Methylnaphthalene	ND	753	110
2-Methylphenol	ND	323	1[illegible]
2-Nitroaniline	ND	3550	94.[illegible]
2-Nitrophenol	ND	323	111
3,3'-Dichlorobenzidine	ND	1400	147
3-Nitroaniline	ND	3550	90.4
4,6-Dinitro-2-methylphenol	ND	3550	78.6
4-Bromophenyl phenyl ether	ND	753	112
4-Chloro-3-methylphenol	ND	1400	126
4-Chloroaniline	ND	1400	66.7
4-Chlorophenyl phenyl ether	ND	753	113
4-Methylphenol (1)	ND	323	73.2
4-Nitroaniline	ND	3550	93.6
4-Nitrophenol	ND	1720	6.03
Acenaphthene	ND	753	100
Acenaphthylene	ND	753	94.7
Anthracene	ND	753	111
Benzo(a)anthracene	ND	753	92.6
Benzo(a)pyrene	ND	753	98
Benzo(b)fluoranthene	ND	753	115
Benzo(k)fluoranthene	ND	753	108
Benzo(g,h,i)perylene	ND	753	100
Benzoic Acid	ND	1720	115
Benzyl alcohol	ND	1400	87.2
bis(2-Chloroethoxy)methane	ND	753	110

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154802	DaTime Analyzd :	12/24/96 07:45
Lab Cnt NO.:	L039-12	Dilutn Factor :	1
Lab File ID:	RLB247	Matrix :	SOIL
Ext Btch ID:	SVL008S	% Moisture :	7.1
Calib. Ref.:	RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	753	72.1
bis(2-Chloroisopropyl)ether	ND	753	96.9
bis(2-Ethylhexyl)phthalate	219F	753	105
Butylbenzylphthalate	ND	753	219
Chrysene	ND	753	108
Di-n-butylphthalate	175F	753	119
Di-n-octylphthalate	ND	753	96.9
Dibenzo(a,h)anthracene	ND	753	103
Dibenzofuran	ND	753	108
Diethylphthalate	ND	753	104
Dimethylphthalate	ND	753	115
Fluoranthene	ND	753	111
Fluorene	ND	753	93.6
Hexachlorobenzene	ND	753	121
Hexachlorobutadiene	ND	753	112
Hexachlorocyclopentadiene	ND	753	125
Hexachloroethane	ND	753	94.7
Indeno(1,2,3-cd)pyrene	ND	753	102
Isophorone	ND	753	100
n-Nitroso-di-n-propylamine	ND	753	123
n-Nitrosodiphenylamine (2)	ND	753	109
Naphthalene	ND	753	104
Nitrobenzene	ND	753	84
Pentachlorophenol	ND	3550	32.3
Phenanthrene	ND	753	109
Phenol	ND	323	84
Pyrene	ND	753	103

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	86	25-144
2-Fluorobiphenyl	75	34-135
2-Fluorophenol	65	25-135
Nitrobenzene-d5	71	25-135
Phenol-d5	67	25-135
Terphenyl-d14	80	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154804	DaTime Analyzd :	12/23/96 21:43
Lab Cnt NO.	: L039-14	Dilutn Factor :	1
Lab File ID	: RLB231	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	11.0
Calib. Ref.	: RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	787	116
1,2-Dichlorobenzene	ND	787	124
1,3-Dichlorobenzene	ND	787	89.9
1,4-Dichlorobenzene	ND	787	109
2,4,5-Trichlorophenol	ND	3710	111
2,4,6-Trichlorophenol	ND	337	129
2,4-Dichlorophenol	ND	337	85.4
2,4-Dimethylphenol	ND	337	100
2,4-Dinitrophenol	ND	3710	62.9
2,4-Dinitrotoluene	ND	787	129
2,6-Dinitrotoluene	ND	787	110
2-Chloronaphthalene	ND	787	104
2-Chlorophenol	ND	337	76.4
2-Methylnaphthalene	ND	787	115
2-Methylphenol	ND	337	[illegible]
2-Nitroaniline	ND	3710	98.[illegible]
2-Nitrophenol	ND	337	116
3,3'-Dichlorobenzidine	ND	1460	154
3-Nitroaniline	ND	3710	94.4
4,6-Dinitro-2-methylphenol	ND	3710	82
4-Bromophenyl phenyl ether	ND	787	117
4-Chloro-3-methylphenol	ND	1460	131
4-Chloroaniline	ND	1460	69.7
4-Chlorophenyl phenyl ether	ND	787	118
4-Methylphenol (1)	ND	337	76.4
4-Nitroaniline	ND	3710	97.8
4-Nitrophenol	ND	1800	6.29
Acenaphthene	ND	787	104
Acenaphthylene	ND	787	98.9
Anthracene	ND	787	116
Benzo(a)anthracene	ND	787	96.6
Benzo(a)pyrene	ND	787	102
Benzo(b)fluoranthene	ND	787	120
Benzo(k)fluoranthene	ND	787	112
Benzo(g,h,i)perylene	ND	787	104
Benzoic Acid	ND	1800	120
Benzyl alcohol	ND	1460	91
bis(2-Chloroethoxy)methane	ND	787	115

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154804	DaTime Analyzd :	12/23/96 21:43
Lab Cnt NO.	: L039-14	Dilutn Factor :	1
Lab File ID	: RLB231	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	11.0
Calib. Ref.	: RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	787	75.3
bis(2-Chloroisopropyl)ether	ND	787	101
bis(2-Ethylhexyl)phthalate	ND	787	110
Butylbenzylphthalate	ND	787	228
Chrysene	ND	787	112
Di-n-butylphthalate	ND	787	125
Di-n-octylphthalate	ND	787	101
Dibenzo(a,h)anthracene	ND	787	108
Dibenzofuran	ND	787	112
Diethylphthalate	ND	787	109
Dimethylphthalate	ND	787	120
Fluoranthene	ND	787	116
Fluorene	ND	787	97.8
Hexachlorobenzene	ND	787	126
Hexachlorobutadiene	ND	787	117
Hexachlorocyclopentadiene	ND	787	130
Hexachloroethane	ND	787	98.9
Indeno(1,2,3-cd)pyrene	ND	787	107
Isophorone	ND	787	104
n-Nitroso-di-n-propylamine	ND	787	128
n-Nitrosodiphenylamine (2)	ND	787	113
Naphthalene	ND	787	109
Nitrobenzene	ND	787	87.6
Pentachlorophenol	ND	3710	33.7
Phenanthrene	ND	787	113
Phenol	ND	337	87.6
Pyrene	ND	787	108

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	81	25-144
2-Fluorobiphenyl	69	34-135
2-Fluorophenol	74	25-135
Nitrobenzene-d5	76	25-135
Phenol-d5	76	25-135
Terphenyl-d14	60	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154902	DaTime Analyzd :	12/24/96 06:10
Lab Cnt NO.	: L039-16	Dilutn Factor :	1
Lab File ID	: RLB245	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	7.8
Calib. Ref.	: RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	759	112
1,2-Dichlorobenzene	ND	759	119
1,3-Dichlorobenzene	ND	759	86.8
1,4-Dichlorobenzene	ND	759	105
2,4,5-Trichlorophenol	ND	3580	107
2,4,6-Trichlorophenol	ND	325	125
2,4-Dichlorophenol	ND	325	82.4
2,4-Dimethylphenol	ND	325	96.5
2,4-Dinitrophenol	ND	3580	60.7
2,4-Dinitrotoluene	ND	759	125
2,6-Dinitrotoluene	ND	759	106
2-Chloronaphthalene	ND	759	101
2-Chlorophenol	ND	325	73.8
2-Methylnaphthalene	ND	759	111
2-Methylphenol	ND	325	1[illegible]
2-Nitroaniline	ND	3580	95[illegible]
2-Nitrophenol	ND	325	112
3,3'-Dichlorobenzidine	ND	1410	149
3-Nitroaniline	ND	3580	91.1
4,6-Dinitro-2-methylphenol	ND	3580	79.2
4-Bromophenyl phenyl ether	ND	759	113
4-Chloro-3-methylphenol	ND	1410	127
4-Chloroaniline	ND	1410	67.2
4-Chlorophenyl phenyl ether	ND	759	114
4-Methylphenol (1)	ND	325	73.8
4-Nitroaniline	ND	3580	94.4
4-Nitrophenol	ND	1740	6.07
Acenaphthene	ND	759	101
Acenaphthylene	ND	759	95.4
Anthracene	ND	759	112
Benzo(a)anthracene	ND	759	93.3
Benzo(a)pyrene	ND	759	98.7
Benzo(b)fluoranthene	ND	759	116
Benzo(k)fluoranthene	ND	759	108
Benzo(g,h,i)perylene	ND	759	101
Benzoic Acid	ND	1740	116
Benzyl alcohol	ND	1410	87.9
bis(2-Chloroethoxy)methane	ND	759	111

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154902	DaTime Analyzd :	12/24/96 06:10
Lab Cnt NO.:	L039-16	Dilutn Factor :	1
Lab File ID:	RLB245	Matrix :	SOIL
Ext Btch ID:	SVL008S	% Moisture :	7.8
Calib. Ref.:	RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	759	72.7
bis(2-Chloroisopropyl)ether	ND	759	97.6
bis(2-Ethylhexyl)phthalate	ND	759	106
Butylbenzylphthalate	ND	759	220
Chrysene	ND	759	108
Di-n-butylphthalate	ND	759	120
Di-n-octylphthalate	ND	759	97.6
Dibenzo(a,h)anthracene	ND	759	104
Dibenzofuran	ND	759	108
Diethylphthalate	ND	759	105
Dimethylphthalate	ND	759	116
Fluoranthene	ND	759	112
Fluorene	ND	759	94.4
Hexachlorobenzene	ND	759	121
Hexachlorobutadiene	ND	759	113
Hexachlorocyclopentadiene	ND	759	126
Hexachloroethane	ND	759	95.4
Indeno(1,2,3-cd)pyrene	ND	759	103
Isophorone	ND	759	101
n-Nitroso-di-n-propylamine	ND	759	124
n-Nitrosodiphenylamine (2)	ND	759	110
Naphthalene	ND	759	105
Nitrobenzene	ND	759	84.6
Pentachlorophenol	ND	3580	32.5
Phenanthrene	ND	759	110
Phenol	ND	325	84.6
Pyrene	ND	759	104

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	89	25-144
2-Fluorobiphenyl	74	34-135
2-Fluorophenol	65	25-135
Nitrobenzene-d5	71	25-135
Phenol-d5	69	25-135
Terphenyl-d14	81	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154904	DaTime Analyzd :	12/23/96 22:31
Lab Cnt NO.:	L039-18	Dilutn Factor :	1
Lab File ID:	RLB232	Matrix :	SOIL
Ext Btch ID:	SVL008S	% Moisture :	11.3
Calib. Ref.:	RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	789	116
1,2-Dichlorobenzene	ND	789	124
1,3-Dichlorobenzene	ND	789	90.2
1,4-Dichlorobenzene	ND	789	109
2,4,5-Trichlorophenol	ND	3720	112
2,4,6-Trichlorophenol	ND	338	130
2,4-Dichlorophenol	ND	338	85.7
2,4-Dimethylphenol	ND	338	100
2,4-Dinitrophenol	ND	3720	63.1
2,4-Dinitrotoluene	ND	789	130
2,6-Dinitrotoluene	ND	789	110
2-Chloronaphthalene	ND	789	105
2-Chlorophenol	ND	338	76.7
2-Methylnaphthalene	ND	789	115
2-Methylphenol	ND	338	1[illegible]
2-Nitroaniline	ND	3720	99[illegible]
2-Nitrophenol	ND	338	116
3,3'-Dichlorobenzidine	ND	1470	154
3-Nitroaniline	ND	3720	94.7
4,6-Dinitro-2-methylphenol	ND	3720	82.3
4-Bromophenyl phenyl ether	ND	789	117
4-Chloro-3-methylphenol	ND	1470	132
4-Chloroaniline	ND	1470	69.9
4-Chlorophenyl phenyl ether	ND	789	118
4-Methylphenol (1)	ND	338	76.7
4-Nitroaniline	ND	3720	98.1
4-Nitrophenol	ND	1800	6.31
Acenaphthene	ND	789	105
Acenaphthylene	ND	789	99.2
Anthracene	ND	789	116
Benzo(a)anthracene	ND	789	97
Benzo(a)pyrene	ND	789	103
Benzo(b)fluoranthene	ND	789	121
Benzo(k)fluoranthene	ND	789	113
Benzo(g,h,i)perylene	ND	789	105
Benzoic Acid	ND	1800	121
Benzyl alcohol	ND	1470	91.3
bis(2-Chloroethoxy)methane	ND	789	115

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A154904	DaTime Analyzd :	12/23/96 22:31
Lab Cnt NO.	: L039-18	Dilutn Factor :	1
Lab File ID	: RLB232	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	11.3
Calib. Ref.	: RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	789	75.5
bis(2-Chloroisopropyl)ether	ND	789	101
bis(2-Ethylhexyl)phthalate	ND	789	110
Butylbenzylphthalate	ND	789	229
Chrysene	ND	789	113
Di-n-butylphthalate	ND	789	125
Di-n-octylphthalate	ND	789	101
Dibenzo(a,h)anthracene	ND	789	108
Dibenzofuran	ND	789	113
Diethylphthalate	ND	789	109
Dimethylphthalate	ND	789	121
Fluoranthene	ND	789	116
Fluorene	ND	789	98.1
Hexachlorobenzene	ND	789	126
Hexachlorobutadiene	ND	789	117
Hexachlorocyclopentadiene	ND	789	131
Hexachloroethane	ND	789	99.2
Indeno(1,2,3-cd)pyrene	ND	789	107
Isophorone	ND	789	105
n-Nitroso-di-n-propylamine	ND	789	129
n-Nitrosodiphenylamine (2)	ND	789	114
Naphthalene	ND	789	109
Nitrobenzene	ND	789	87.9
Pentachlorophenol	ND	3720	33.8
Phenanthrene	ND	789	114
Phenol	ND	338	87.9
Pyrene	ND	789	108

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	83	25-144
2-Fluorobiphenyl	70	34-135
2-Fluorophenol	68	25-135
Nitrobenzene-d5	69	25-135
Phenol-d5	70	25-135
Terphenyl-d14	66	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A156202	DaTime Analyzd :	12/24/96 08:32
Lab Cnt NO.	: L039-20	Dilutn Factor :	1
Lab File ID	: RLB248	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	10.4
Calib. Ref.	: RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	781	115
1,2-Dichlorobenzene	ND	781	123
1,3-Dichlorobenzene	ND	781	89.3
1,4-Dichlorobenzene	ND	781	108
2,4,5-Trichlorophenol	ND	3680	110
2,4,6-Trichlorophenol	ND	335	128
2,4-Dichlorophenol	ND	335	84.8
2,4-Dimethylphenol	ND	335	99.3
2,4-Dinitrophenol	ND	3680	62.5
2,4-Dinitrotoluene	ND	781	128
2,6-Dinitrotoluene	ND	781	109
2-Chloronaphthalene	ND	781	104
2-Chlorophenol	ND	335	75.9
2-Methylnaphthalene	ND	781	114
2-Methylphenol	ND	335	1[illegible]
2-Nitroaniline	ND	3680	98[illegible]
2-Nitrophenol	ND	335	115
3,3'-Dichlorobenzidine	ND	1450	153
3-Nitroaniline	ND	3680	93.8
4,6-Dinitro-2-methylphenol	ND	3680	81.5
4-Bromophenyl phenyl ether	ND	781	116
4-Chloro-3-methylphenol	ND	1450	131
4-Chloroaniline	ND	1450	69.2
4-Chlorophenyl phenyl ether	ND	781	117
4-Methylphenol (1)	ND	335	75.9
4-Nitroaniline	ND	3680	97.1
4-Nitrophenol	ND	1790	6.25
Acenaphthene	ND	781	104
Acenaphthylene	ND	781	98.2
Anthracene	ND	781	115
Benzo(a)anthracene	ND	781	96
Benzo(a)pyrene	ND	781	102
Benzo(b)fluoranthene	ND	781	119
Benzo(k)fluoranthene	ND	781	112
Benzo(g,h,i)perylene	ND	781	104
Benzoic Acid	ND	1790	119
Benzyl alcohol	ND	1450	90.4
bis(2-Chloroethoxy)methane	ND	781	114

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A156202	DaTime Analyzd :	12/24/96 08:32
Lab Cnt NO.	: L039-20	Dilutn Factor :	1
Lab File ID	: RLB248	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	10.4
Calib. Ref.	: RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	781	74.8
bis(2-Chloroisopropyl)ether	ND	781	100
bis(2-Ethylhexyl)phthalate	ND	781	109
Butylbenzylphthalate	ND	781	227
Chrysene	ND	781	112
Di-n-butylphthalate	ND	781	124
Di-n-octylphthalate	ND	781	100
Dibenzo(a,h)anthracene	ND	781	107
Dibenzofuran	ND	781	112
Diethylphthalate	ND	781	108
Dimethylphthalate	ND	781	119
Fluoranthene	147F	781	115
Fluorene	ND	781	97.1
Hexachlorobenzene	ND	781	125
Hexachlorobutadiene	ND	781	116
Hexachlorocyclopentadiene	ND	781	129
Hexachloroethane	ND	781	98.2
Indeno(1,2,3-cd)pyrene	ND	781	106
Isophorone	ND	781	104
n-Nitroso-di-n-propylamine	ND	781	127
n-Nitrosodiphenylamine (2)	ND	781	113
Naphthalene	ND	781	108
Nitrobenzene	ND	781	87.1
Pentachlorophenol	ND	3680	33.5
Phenanthrene	ND	781	113
Phenol	ND	335	87.1
Pyrene	ND	781	107

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	85	25-144
2-Fluorobiphenyl	74	34-135
2-Fluorophenol	70	25-135
Nitrobenzene-d5	78	25-135
Phenol-d5	69	25-135
Terphenyl-d14	74	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A156204	DaTime Analyzd :	12/23/96 23:18
Lab Cnt NO.	: L039-22	Dilutn Factor :	1
Lab File ID	: RLB233	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	10.1
Calib. Ref.	: RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	779	115
1,2-Dichlorobenzene	ND	779	122
1,3-Dichlorobenzene	ND	779	89
1,4-Dichlorobenzene	ND	779	108
2,4,5-Trichlorophenol	ND	3670	110
2,4,6-Trichlorophenol	ND	334	128
2,4-Dichlorophenol	ND	334	84.5
2,4-Dimethylphenol	ND	334	99
2,4-Dinitrophenol	ND	3670	62.3
2,4-Dinitrotoluene	ND	779	128
2,6-Dinitrotoluene	ND	779	109
2-Chloronaphthalene	ND	779	103
2-Chlorophenol	ND	334	75.6
2-Methylnaphthalene	ND	779	113
2-Methylphenol	ND	334	10[illegible]
2-Nitroaniline	ND	3670	97[illegible]
2-Nitrophenol	ND	334	115
3,3'-Dichlorobenzidine	ND	1450	152
3-Nitroaniline	ND	3670	93.4
4,6-Dinitro-2-methylphenol	ND	3670	81.2
4-Bromophenyl phenyl ether	ND	779	116
4-Chloro-3-methylphenol	ND	1450	130
4-Chloroaniline	ND	1450	69
4-Chlorophenyl phenyl ether	ND	779	117
4-Methylphenol (1)	ND	334	75.6
4-Nitroaniline	ND	3670	96.8
4-Nitrophenol	ND	1780	6.23
Acenaphthene	ND	779	103
Acenaphthylene	ND	779	97.9
Anthracene	ND	779	115
Benzo(a)anthracene	ND	779	95.7
Benzo(a)pyrene	ND	779	101
Benzo(b)fluoranthene	ND	779	119
Benzo(k)fluoranthene	ND	779	111
Benzo(g,h,i)perylene	ND	779	103
Benzoic Acid	ND	1780	119
Benzyl alcohol	ND	1450	90.1
bis(2-Chloroethoxy)methane	ND	779	113

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A156204	DaTime Analyzd :	12/23/96 23:18
Lab Cnt NO.:	L039-22	Dilutn Factor :	1
Lab File ID:	RLB233	Matrix :	SOIL
Ext Btch ID:	SVL008S	% Moisture :	10.1
Calib. Ref.:	RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	779	74.5
bis(2-Chloroisopropyl)ether	ND	779	100
bis(2-Ethylhexyl)phthalate	ND	779	109
Butylbenzylphthalate	ND	779	226
Chrysene	ND	779	111
Di-n-butylphthalate	130F	779	123
Di-n-octylphthalate	ND	779	100
Dibenzo(a,h)anthracene	ND	779	107
Dibenzofuran	ND	779	111
Diethylphthalate	ND	779	108
Dimethylphthalate	ND	779	119
Fluoranthene	ND	779	115
Fluorene	ND	779	96.8
Hexachlorobenzene	ND	779	125
Hexachlorobutadiene	ND	779	116
Hexachlorocyclopentadiene	ND	779	129
Hexachloroethane	ND	779	97.9
Indeno(1,2,3-cd)pyrene	ND	779	106
Isophorone	ND	779	103
n-Nitroso-di-n-propylamine	ND	779	127
n-Nitrosodiphenylamine (2)	ND	779	112
Naphthalene	ND	779	108
Nitrobenzene	ND	779	86.8
Pentachlorophenol	ND	3670	33.4
Phenanthrene	ND	779	112
Phenol	ND	334	86.8
Pyrene	ND	779	107

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	86	25-144
2-Fluorobiphenyl	74	34-135
2-Fluorophenol	75	25-135
Nitrobenzene-d5	76	25-135
Phenol-d5	76	25-135
Terphenyl-d14	65	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A156206	DaTime Analyzd :	12/19/96 20:15
Lab Cnt NO.	: L039-24	Dilutn Factor :	1
Lab File ID	: RLB140	Matrix :	WATER
Ext Btch ID	: SVL009W	% Moisture :	NA
Calib. Ref.	: RLB129	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3
2-Nitroaniline	ND	50	3
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/10/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A156206	DaTime Analyzd :	12/19/96 20:15
Lab Cnt NO.	: L039-24	Dilutn Factor :	1
Lab File ID	: RLB140	Matrix :	WATER
Ext Btch ID	: SVL009W	% Moisture :	NA
Calib. Ref.	: RLB129	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1.6
Hexachloroethane	ND	10	2
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	101	25-134
2-Fluorobiphenyl	85	43-125
2-Fluorophenol	83	25-125
Nitrobenzene-d5	93	32-125
Phenol-d5	83	25-125
Terphenyl-d14	95	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A156302	DaTime Analyzd :	12/24/96 09:20
Lab Cnt NO.	: L039-27	Dilutn Factor :	1
Lab File ID	: RLB249	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	12.3
Calib. Ref.	: RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	798	117
1,2-Dichlorobenzene	ND	798	125
1,3-Dichlorobenzene	ND	798	91.2
1,4-Dichlorobenzene	ND	798	111
2,4,5-Trichlorophenol	ND	3760	113
2,4,6-Trichlorophenol	ND	342	131
2,4-Dichlorophenol	ND	342	86.7
2,4-Dimethylphenol	ND	342	101
2,4-Dinitrophenol	ND	3760	63.9
2,4-Dinitrotoluene	ND	798	131
2,6-Dinitrotoluene	ND	798	112
2-Chloronaphthalene	ND	798	106
2-Chlorophenol	ND	342	77.5
2-Methylnaphthalene	ND	798	116
2-Methylphenol	ND	342	1[illegible]
2-Nitroaniline	ND	3760	10[illegible]
2-Nitrophenol	ND	342	117
3,3'-Dichlorobenzidine	ND	1480	156
3-Nitroaniline	ND	3760	95.8
4,6-Dinitro-2-methylphenol	ND	3760	83.2
4-Bromophenyl phenyl ether	ND	798	119
4-Chloro-3-methylphenol	ND	1480	133
4-Chloroaniline	ND	1480	70.7
4-Chlorophenyl phenyl ether	ND	798	120
4-Methylphenol (1)	ND	342	77.5
4-Nitroaniline	ND	3760	99.2
4-Nitrophenol	ND	1820	6.39
Acenaphthene	ND	798	106
Acenaphthylene	ND	798	100
Anthracene	ND	798	117
Benzo(a)anthracene	ND	798	98.1
Benzo(a)pyrene	ND	798	104
Benzo(b)fluoranthene	ND	798	122
Benzo(k)fluoranthene	ND	798	114
Benzo(g,h,i)perylene	ND	798	106
Benzoic Acid	ND	1820	122
Benzyl alcohol	ND	1480	92.4
bis(2-Chloroethoxy)methane	ND	798	116

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A156302	DaTime Analyzd :	12/24/96 09:20
Lab Cnt NO.	: L039-27	Dilutn Factor :	1
Lab File ID	: RLB249	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	12.3
Calib. Ref.	: RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	798	76.4
bis(2-Chloroisopropyl)ether	ND	798	103
bis(2-Ethylhexyl)phthalate	ND	798	112
Butylbenzylphthalate	ND	798	231
Chrysene	ND	798	114
Di-n-butylphthalate	ND	798	127
Di-n-octylphthalate	ND	798	103
Dibenzo(a,h)anthracene	ND	798	109
Dibenzofuran	ND	798	114
Diethylphthalate	ND	798	111
Dimethylphthalate	ND	798	122
Fluoranthene	ND	798	117
Fluorene	ND	798	99.2
Hexachlorobenzene	ND	798	128
Hexachlorobutadiene	ND	798	119
Hexachlorocyclopentadiene	ND	798	132
Hexachloroethane	ND	798	100
Indeno(1,2,3-cd)pyrene	ND	798	108
Isophorone	ND	798	106
n-Nitroso-di-n-propylamine	ND	798	130
n-Nitrosodiphenylamine (2)	ND	798	115
Naphthalene	ND	798	111
Nitrobenzene	ND	798	88.9
Pentachlorophenol	ND	3760	34.2
Phenanthrene	ND	798	115
Phenol	ND	342	88.9
Pyrene	ND	798	109

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	90	25-144
2-Fluorobiphenyl	69	34-135
2-Fluorophenol	60	25-135
Nitrobenzene-d5	64	25-135
Phenol-d5	63	25-135
Terphenyl-d14	79	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A156402	DaTime Analyzd :	12/23/96 13:42
Lab Cnt NO.	: L039-29	Dilutn Factor :	1
Lab File ID	: RLB221	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	16.0
Calib. Ref.	: RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	833	123
1,2-Dichlorobenzene	ND	833	131
1,3-Dichlorobenzene	ND	833	95.2
1,4-Dichlorobenzene	ND	833	115
2,4,5-Trichlorophenol	ND	3930	118
2,4,6-Trichlorophenol	ND	357	137
2,4-Dichlorophenol	ND	357	90.5
2,4-Dimethylphenol	ND	357	106
2,4-Dinitrophenol	ND	3930	66.7
2,4-Dinitrotoluene	ND	833	137
2,6-Dinitrotoluene	ND	833	117
2-Chloronaphthalene	ND	833	111
2-Chlorophenol	ND	357	81
2-Methylnaphthalene	ND	833	121
2-Methylphenol	ND	357	[illegible]
2-Nitroaniline	ND	3930	105
2-Nitrophenol	ND	357	123
3,3'-Dichlorobenzidine	ND	1550	163
3-Nitroaniline	ND	3930	100
4,6-Dinitro-2-methylphenol	ND	3930	86.9
4-Bromophenyl phenyl ether	ND	833	124
4-Chloro-3-methylphenol	ND	1550	139
4-Chloroaniline	ND	1550	73.8
4-Chlorophenyl phenyl ether	ND	833	125
4-Methylphenol (1)	ND	357	81
4-Nitroaniline	ND	3930	104
4-Nitrophenol	ND	1900	6.67
Acenaphthene	ND	833	111
Acenaphthylene	ND	833	105
Anthracene	ND	833	123
Benzo(a)anthracene	ND	833	102
Benzo(a)pyrene	ND	833	108
Benzo(b)fluoranthene	ND	833	127
Benzo(k)fluoranthene	ND	833	119
Benzo(g,h,i)perylene	ND	833	111
Benzoic Acid	ND	1900	127
Benzyl alcohol	ND	1550	96.4
bis(2-Chloroethoxy)methane	ND	833	121

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A156402	DaTime Analyzd :	12/23/96 13:42
Lab Cnt NO.:	L039-29	Dilutn Factor :	1
Lab File ID:	RLB221	Matrix :	SOIL
Ext Btch ID:	SVL008S	% Moisture :	16.0
Calib. Ref.:	RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	833	79.8
bis(2-Chloroisopropyl)ether	ND	833	107
bis(2-Ethylhexyl)phthalate	ND	833	117
Butylbenzylphthalate	ND	833	242
Chrysene	ND	833	119
Di-n-butylphthalate	161F	833	132
Di-n-octylphthalate	ND	833	107
Dibenzo(a,h)anthracene	ND	833	114
Dibenzofuran	ND	833	119
Diethylphthalate	ND	833	115
Dimethylphthalate	ND	833	127
Fluoranthene	ND	833	123
Fluorene	ND	833	104
Hexachlorobenzene	ND	833	133
Hexachlorobutadiene	ND	833	124
Hexachlorocyclopentadiene	ND	833	138
Hexachloroethane	ND	833	105
Indeno(1,2,3-cd)pyrene	ND	833	113
Isophorone	ND	833	111
n-Nitroso-di-n-propylamine	ND	833	136
n-Nitrosodiphenylamine (2)	ND	833	120
Naphthalene	ND	833	115
Nitrobenzene	ND	833	92.9
Pentachlorophenol	ND	3930	35.7
Phenanthrene	ND	833	120
Phenol	ND	357	92.9
Pyrene	ND	833	114

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	84	25-144
2-Fluorobiphenyl	79	34-135
2-Fluorophenol	73	25-135
Nitrobenzene-d5	81	25-135
Phenol-d5	72	25-135
Terphenyl-d14	71	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A156502	DaTime Analyzd :	12/24/96 10:04
Lab Cnt NO.	: L039-31	Dilutn Factor :	1
Lab File ID	: RLB250	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	16.4
Calib. Ref.	: RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	837	123
1,2-Dichlorobenzene	ND	837	132
1,3-Dichlorobenzene	ND	837	95.7
1,4-Dichlorobenzene	ND	837	116
2,4,5-Trichlorophenol	ND	3950	118
2,4,6-Trichlorophenol	ND	359	138
2,4-Dichlorophenol	ND	359	90.9
2,4-Dimethylphenol	ND	359	106
2,4-Dinitrophenol	ND	3950	67
2,4-Dinitrotoluene	ND	837	138
2,6-Dinitrotoluene	ND	837	117
2-Chloronaphthalene	ND	837	111
2-Chlorophenol	ND	359	81.3
2-Methylnaphthalene	ND	837	122
2-Methylphenol	ND	359	1[illegible]
2-Nitroaniline	ND	3950	1[illegible]
2-Nitrophenol	ND	359	123
3,3'-Dichlorobenzidine	ND	1560	164
3-Nitroaniline	ND	3950	100
4,6-Dinitro-2-methylphenol	ND	3950	87.3
4-Bromophenyl phenyl ether	ND	837	124
4-Chloro-3-methylphenol	ND	1560	140
4-Chloroaniline	ND	1560	74.2
4-Chlorophenyl phenyl ether	ND	837	126
4-Methylphenol (1)	ND	359	81.3
4-Nitroaniline	ND	3950	104
4-Nitrophenol	ND	1910	6.7
Acenaphthene	ND	837	111
Acenaphthylene	ND	837	105
Anthracene	ND	837	123
Benzo(a)anthracene	ND	837	103
Benzo(a)pyrene	ND	837	109
Benzo(b)fluoranthene	ND	837	128
Benzo(k)fluoranthene	ND	837	120
Benzo(g,h,i)perylene	ND	837	111
Benzoic Acid	ND	1910	128
Benzyl alcohol	ND	1560	96.9
bis(2-Chloroethoxy)methane	ND	837	122

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A156502	DaTime Analyzd :	12/24/96 10:04
Lab Cnt NO.:	L039-31	Dilutn Factor :	1
Lab File ID:	RLB250	Matrix :	SOIL
Ext Btch ID:	SVL008S	% Moisture :	16.4
Calib. Ref.:	RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	837	80.1
bis(2-Chloroisopropyl)ether	ND	837	108
bis(2-Ethylhexyl)phthalate	ND	837	117
Butylbenzylphthalate	ND	837	243
Chrysene	ND	837	120
Di-n-butylphthalate	ND	837	133
Di-n-octylphthalate	ND	837	108
Dibenzo(a,h)anthracene	ND	837	115
Dibenzofuran	ND	837	120
Diethylphthalate	ND	837	116
Dimethylphthalate	ND	837	128
Fluoranthene	ND	837	123
Fluorene	ND	837	104
Hexachlorobenzene	ND	837	134
Hexachlorobutadiene	ND	837	124
Hexachlorocyclopentadiene	ND	837	139
Hexachloroethane	ND	837	105
Indeno(1,2,3-cd)pyrene	ND	837	114
Isophorone	ND	837	111
n-Nitroso-di-n-propylamine	ND	837	136
n-Nitrosodiphenylamine (2)	ND	837	121
Naphthalene	ND	837	116
Nitrobenzene	ND	837	93.3
Pentachlorophenol	ND	3950	35.9
Phenanthrene	ND	837	121
Phenol	ND	359	93.3
Pyrene	ND	837	115

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	99	25-144
2-Fluorobiphenyl	87	34-135
2-Fluorophenol	86	25-135
Nitrobenzene-d5	86	25-135
Phenol-d5	85	25-135
Terphenyl-d14	97	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A156502	DaTime Analyzd :	12/30/96 00:45
Lab Cnt NO.	: L039-31R	Dilutn Factor :	1
Lab File ID	: RLB336	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	16.4
Calib. Ref.	: RLB332	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	837	123
1,2-Dichlorobenzene	ND	837	132
1,3-Dichlorobenzene	ND	837	95.7
1,4-Dichlorobenzene	ND	837	116
2,4,5-Trichlorophenol	ND	3950	118
2,4,6-Trichlorophenol	ND	359	138
2,4-Dichlorophenol	ND	359	90.9
2,4-Dimethylphenol	ND	359	106
2,4-Dinitrophenol	ND	3950	67
2,4-Dinitrotoluene	ND	837	138
2,6-Dinitrotoluene	ND	837	117
2-Chloronaphthalene	ND	837	111
2-Chlorophenol	ND	359	81.3
2-Methylnaphthalene	ND	837	12[illegible]
2-Methylphenol	ND	359	1[illegible]
2-Nitroaniline	ND	3950	10[illegible]
2-Nitrophenol	ND	359	123
3,3'-Dichlorobenzidine	ND	1560	164
3-Nitroaniline	ND	3950	100
4,6-Dinitro-2-methylphenol	ND	3950	87.3
4-Bromophenyl phenyl ether	ND	837	124
4-Chloro-3-methylphenol	ND	1560	140
4-Chloroaniline	ND	1560	74.2
4-Chlorophenyl phenyl ether	ND	837	126
4-Methylphenol (1)	ND	359	81.3
4-Nitroaniline	ND	3950	104
4-Nitrophenol	ND	1910	6.7
Acenaphthene	ND	837	111
Acenaphthylene	ND	837	105
Anthracene	ND	837	123
Benzo(a)anthracene	ND	837	103
Benzo(a)pyrene	ND	837	109
Benzo(b)fluoranthene	ND	837	128
Benzo(k)fluoranthene	ND	837	120
Benzo(g,h,i)perylene	ND	837	111
Benzoic Acid	ND	1910	128
Benzyl alcohol	ND	1560	96.9
bis(2-Chloroethoxy)methane	ND	837	122

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A156502	DaTime Analyzd :	12/30/96 00:45
Lab Cnt NO.	: L039-31R	Dilutn Factor :	1
Lab File ID	: RLB336	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	16.4
Calib. Ref.	: RLB332	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	837	80.1
bis(2-Chloroisopropyl)ether	ND	837	108
bis(2-Ethylhexyl)phthalate	ND	837	117
Butylbenzylphthalate	ND	837	243
Chrysene	ND	837	120
Di-n-butylphthalate	ND	837	133
Di-n-octylphthalate	ND	837	108
Dibenzo(a,h)anthracene	ND	837	115
Dibenzofuran	ND	837	120
Diethylphthalate	ND	837	116
Dimethylphthalate	ND	837	128
Fluoranthene	ND	837	123
Fluorene	ND	837	104
Hexachlorobenzene	ND	837	134
Hexachlorobutadiene	ND	837	124
Hexachlorocyclopentadiene	ND	837	139
Hexachloroethane	ND	837	105
Indeno(1,2,3-cd)pyrene	ND	837	114
Isophorone	ND	837	111
n-Nitroso-di-n-propylamine	ND	837	136
n-Nitrosodiphenylamine (2)	ND	837	121
Naphthalene	ND	837	116
Nitrobenzene	ND	837	93.3
Pentachlorophenol	ND	3950	35.9
Phenanthrene	ND	837	121
Phenol	ND	359	93.3
Pyrene	ND	837	115

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	119	25-144
2-Fluorobiphenyl	82	34-135
2-Fluorophenol	77	25-135
Nitrobenzene-d5	85	25-135
Phenol-d5	75	25-135
Terphenyl-d14	83	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A161201	DaTime Analyzd :	12/24/96 00:06
Lab Cnt NO.	: L039-32	Dilutn Factor :	1
Lab File ID	: RLB234	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	12.6
Calib. Ref.	: RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	801	118
1,2-Dichlorobenzene	ND	801	126
1,3-Dichlorobenzene	ND	801	91.5
1,4-Dichlorobenzene	ND	801	111
2,4,5-Trichlorophenol	ND	3780	113
2,4,6-Trichlorophenol	ND	343	132
2,4-Dichlorophenol	ND	343	87
2,4-Dimethylphenol	ND	343	102
2,4-Dinitrophenol	ND	3780	64.1
2,4-Dinitrotoluene	ND	801	132
2,6-Dinitrotoluene	ND	801	112
2-Chloronaphthalene	ND	801	106
2-Chlorophenol	ND	343	77.8
2-Methylnaphthalene	ND	801	117
2-Methylphenol	ND	343	1[illegible]
2-Nitroaniline	ND	3780	1[illegible]
2-Nitrophenol	ND	343	118
3,3'-Dichlorobenzidine	ND	1490	157
3-Nitroaniline	ND	3780	96.1
4,6-Dinitro-2-methylphenol	ND	3780	83.5
4-Bromophenyl phenyl ether	ND	801	119
4-Chloro-3-methylphenol	ND	1490	134
4-Chloroaniline	ND	1490	70.9
4-Chlorophenyl phenyl ether	ND	801	120
4-Methylphenol (1)	ND	343	77.8
4-Nitroaniline	ND	3780	99.5
4-Nitrophenol	ND	1830	6.41
Acenaphthene	ND	801	106
Acenaphthylene	ND	801	101
Anthracene	ND	801	118
Benzo(a)anthracene	ND	801	98.4
Benzo(a)pyrene	ND	801	104
Benzo(b)fluoranthene	ND	801	122
Benzo(k)fluoranthene	ND	801	114
Benzo(g,h,i)perylene	ND	801	106
Benzoic Acid	ND	1830	122
Benzyl alcohol	ND	1490	92.7
bis(2-Chloroethoxy)methane	ND	801	117

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A161201	DaTime Analyzd :	12/24/96 00:06
Lab Cnt NO.:	L039-32	Dilutn Factor :	1
Lab File ID:	RLB234	Matrix :	SOIL
Ext Btch ID:	SVL008S	% Moisture :	12.6
Calib. Ref.:	RLB220	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	801	76.7
bis(2-Chloroisopropyl)ether	ND	801	103
bis(2-Ethylhexyl)phthalate	ND	801	112
Butylbenzylphthalate	ND	801	232
Chrysene	ND	801	114
Di-n-butylphthalate	ND	801	127
Di-n-octylphthalate	ND	801	103
Dibenzo(a,h)anthracene	ND	801	110
Dibenzofuran	ND	801	114
Diethylphthalate	ND	801	111
Dimethylphthalate	ND	801	122
Fluoranthene	ND	801	118
Fluorene	ND	801	99.5
Hexachlorobenzene	ND	801	128
Hexachlorobutadiene	ND	801	119
Hexachlorocyclopentadiene	ND	801	133
Hexachloroethane	ND	801	101
Indeno(1,2,3-cd)pyrene	ND	801	109
Isophorone	ND	801	106
n-Nitroso-di-n-propylamine	ND	801	130
n-Nitrosodiphenylamine (2)	ND	801	116
Naphthalene	ND	801	111
Nitrobenzene	ND	801	89.2
Pentachlorophenol	ND	3780	34.3
Phenanthrene	ND	801	116
Phenol	ND	343	89.2
Pyrene	ND	801	110

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	86	25-144
2-Fluorobiphenyl	72	34-135
2-Fluorophenol	73	25-135
Nitrobenzene-d5	73	25-135
Phenol-d5	73	25-135
Terphenyl-d14	66	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A161202	DaTime Analyzd :	12/24/96 04:36
Lab Cnt NO.	: L039-33	Dilutn Factor :	1
Lab File ID	: RLB243	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	15.3
Calib. Ref.	: RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	826	122
1,2-Dichlorobenzene	ND	826	130
1,3-Dichlorobenzene	ND	826	94.5
1,4-Dichlorobenzene	ND	826	115
2,4,5-Trichlorophenol	ND	3900	117
2,4,6-Trichlorophenol	ND	354	136
2,4-Dichlorophenol	ND	354	89.7
2,4-Dimethylphenol	ND	354	105
2,4-Dinitrophenol	ND	3900	66.1
2,4-Dinitrotoluene	ND	826	136
2,6-Dinitrotoluene	ND	826	116
2-Chloronaphthalene	ND	826	110
2-Chlorophenol	ND	354	80.3
2-Methylnaphthalene	ND	826	120
2-Methylphenol	ND	354	[illegible]
2-Nitroaniline	ND	3900	[illegible]
2-Nitrophenol	ND	354	122
3,3'-Dichlorobenzidine	ND	1530	162
3-Nitroaniline	ND	3900	99.2
4,6-Dinitro-2-methylphenol	ND	3900	86.2
4-Bromophenyl phenyl ether	ND	826	123
4-Chloro-3-methylphenol	ND	1530	138
4-Chloroaniline	ND	1530	73.2
4-Chlorophenyl phenyl ether	ND	826	124
4-Methylphenol (1)	ND	354	80.3
4-Nitroaniline	ND	3900	103
4-Nitrophenol	ND	1890	6.61
Acenaphthene	ND	826	110
Acenaphthylene	ND	826	104
Anthracene	ND	826	122
Benzo(a)anthracene	ND	826	102
Benzo(a)pyrene	ND	826	107
Benzo(b)fluoranthene	ND	826	126
Benzo(k)fluoranthene	ND	826	118
Benzo(g,h,i)perylene	ND	826	110
Benzoic Acid	ND	1890	126
Benzyl alcohol	ND	1530	95.6
bis(2-Chloroethoxy)methane	ND	826	120

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A161202	DaTime Analyzd :	12/24/96 04:36
Lab Cnt NO.	: L039-33	Dilutn Factor :	1
Lab File ID	: RLB243	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	15.3
Calib. Ref.	: RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	826	79.1
bis(2-Chloroisopropyl)ether	ND	826	106
bis(2-Ethylhexyl)phthalate	ND	826	116
Butylbenzylphthalate	ND	826	240
Chrysene	ND	826	118
Di-n-butylphthalate	ND	826	131
Di-n-octylphthalate	ND	826	106
Dibenzo(a,h)anthracene	ND	826	113
Dibenzofuran	ND	826	118
Diethylphthalate	ND	826	115
Dimethylphthalate	ND	826	126
Fluoranthene	ND	826	122
Fluorene	ND	826	103
Hexachlorobenzene	ND	826	132
Hexachlorobutadiene	ND	826	123
Hexachlorocyclopentadiene	ND	826	137
Hexachloroethane	ND	826	104
Indeno(1,2,3-cd)pyrene	ND	826	112
Isophorone	ND	826	110
n-Nitroso-di-n-propylamine	ND	826	135
n-Nitrosodiphenylamine (2)	ND	826	119
Naphthalene	ND	826	115
Nitrobenzene	ND	826	92.1
Pentachlorophenol	ND	3900	35.4
Phenanthrene	ND	826	119
Phenol	ND	354	92.1
Pyrene	ND	826	113

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	87	25-144
2-Fluorobiphenyl	75	34-135
2-Fluorophenol	72	25-135
Nitrobenzene-d5	75	25-135
Phenol-d5	73	25-135
Terphenyl-d14	71	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A161204	DaTime Analyzd :	12/24/96 05:23
Lab Cnt NO.	: L039-35	Dilutn Factor :	1
Lab File ID	: RLB244	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	15.7
Calib. Ref.	: RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
1,2,4-Trichlorobenzene	ND	830	122
1,2-Dichlorobenzene	ND	830	130
1,3-Dichlorobenzene	ND	830	94.9
1,4-Dichlorobenzene	ND	830	115
2,4,5-Trichlorophenol	ND	3910	117
2,4,6-Trichlorophenol	ND	356	136
2,4-Dichlorophenol	ND	356	90.2
2,4-Dimethylphenol	ND	356	106
2,4-Dinitrophenol	ND	3910	66.4
2,4-Dinitrotoluene	ND	830	136
2,6-Dinitrotoluene	ND	830	116
2-Chloronaphthalene	ND	830	110
2-Chlorophenol	ND	356	80.7
2-Methylnaphthalene	ND	830	121
2-Methylphenol	ND	356	[illegible]
2-Nitroaniline	ND	3910	[illegible]
2-Nitrophenol	ND	356	122
3,3'-Dichlorobenzidine	ND	1540	163
3-Nitroaniline	ND	3910	99.6
4,6-Dinitro-2-methylphenol	ND	3910	86.6
4-Bromophenyl phenyl ether	ND	830	123
4-Chloro-3-methylphenol	ND	1540	139
4-Chloroaniline	ND	1540	73.5
4-Chlorophenyl phenyl ether	ND	830	125
4-Methylphenol (1)	ND	356	80.7
4-Nitroaniline	ND	3910	103
4-Nitrophenol	ND	1900	6.64
Acenaphthene	ND	830	110
Acenaphthylene	ND	830	104
Anthracene	ND	830	122
Benzo(a)anthracene	ND	830	102
Benzo(a)pyrene	ND	830	108
Benzo(b)fluoranthene	ND	830	127
Benzo(k)fluoranthene	ND	830	119
Benzo(g,h,i)perylene	ND	830	110
Benzoic Acid	ND	1900	127
Benzyl alcohol	ND	1540	96.1
bis(2-Chloroethoxy)methane	ND	830	121

SW 3550A/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/12/96 15:00
Sample ID	: CR-A161204	DaTime Analyzd :	12/24/96 05:23
Lab Cnt NO.	: L039-35	Dilutn Factor :	1
Lab File ID	: RLB244	Matrix :	SOIL
Ext Btch ID	: SVL008S	% Moisture :	15.7
Calib. Ref.	: RLB240	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/kg)	PQL (ug/kg)	MDL (ug/kg)
bis(2-Chloroethyl)ether	ND	830	79.5
bis(2-Chloroisopropyl)ether	ND	830	107
bis(2-Ethylhexyl)phthalate	ND	830	116
Butylbenzylphthalate	ND	830	241
Chrysene	ND	830	119
Di-n-butylphthalate	ND	830	132
Di-n-octylphthalate	ND	830	107
Dibenzo(a,h)anthracene	ND	830	114
Dibenzofuran	ND	830	119
Diethylphthalate	ND	830	115
Dimethylphthalate	ND	830	127
Fluoranthene	ND	830	122
Fluorene	ND	830	103
Hexachlorobenzene	ND	830	133
Hexachlorobutadiene	ND	830	123
Hexachlorocyclopentadiene	ND	830	138
Hexachloroethane	ND	830	104
Indeno(1,2,3-cd)pyrene	ND	830	113
Isophorone	ND	830	110
n-Nitroso-di-n-propylamine	ND	830	135
n-Nitrosodiphenylamine (2)	ND	830	120
Naphthalene	ND	830	115
Nitrobenzene	ND	830	92.5
Pentachlorophenol	ND	3910	35.6
Phenanthrene	ND	830	120
Phenol	ND	356	92.5
Pyrene	ND	830	114

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	83	25-144
2-Fluorobiphenyl	72	34-135
2-Fluorophenol	66	25-135
Nitrobenzene-d5	68	25-135
Phenol-d5	67	25-135
Terphenyl-d14	70	32-136

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A161207	DaTime Analyzd :	12/19/96 21:03
Lab Cnt NO.	: L039-38	Dilutn Factor :	1
Lab File ID	: RLB141	Matrix :	WATER
Ext Btch ID	: SVL009W	% Moisture :	NA
Calib. Ref.	: RLB129	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
1,2,4-Trichlorobenzene	ND	10	2.8
1,2-Dichlorobenzene	ND	10	2.7
1,3-Dichlorobenzene	ND	10	2.6
1,4-Dichlorobenzene	ND	10	2.5
2,4,5-Trichlorophenol	ND	50	3.4
2,4,6-Trichlorophenol	ND	10	3.5
2,4-Dichlorophenol	ND	10	3
2,4-Dimethylphenol	ND	10	2.2
2,4-Dinitrophenol	ND	50	.86
2,4-Dinitrotoluene	ND	10	4
2,6-Dinitrotoluene	ND	10	3.6
2-Chloronaphthalene	ND	10	2.9
2-Chlorophenol	ND	10	2.9
2-Methylnaphthalene	ND	10	2.9
2-Methylphenol	ND	10	3
2-Nitroaniline	ND	50	3
2-Nitrophenol	ND	10	3
3,3'-Dichlorobenzidine	ND	20	3.5
3-Nitroaniline	ND	50	3
4,6-Dinitro-2-methylphenol	ND	50	1.8
4-Bromophenyl phenyl ether	ND	10	4.2
4-Chloro-3-methylphenol	ND	20	3.1
4-Chloroaniline	ND	20	3.1
4-Chlorophenyl phenyl ether	ND	10	3.8
4-Methylphenol (1)	ND	10	3.2
4-Nitroaniline	ND	50	2.3
4-Nitrophenol	ND	50	.91
Acenaphthene	ND	10	3.2
Acenaphthylene	ND	10	3.3
Anthracene	ND	10	2.8
Benzo(a)anthracene	ND	10	2.4
Benzo(a)pyrene	ND	10	2.8
Benzo(b)fluoranthene	ND	10	2.8
Benzo(k)fluoranthene	ND	10	3.3
Benzo(g,h,i)perylene	ND	10	3.3
Benzoic Acid	ND	50	2.6
Benzyl alcohol	ND	20	2.7
bis(2-Chloroethoxy)methane	ND	10	3

SW 3520B/8270B
SEMI VOLATILE ORGANICS BY GC/MS

Client	: JACOBS ENGINEERING GROUP	DaTime Collcted:	12/11/96
Project	: CARSWELL AFB / 05G47900	DaTime Received:	12/12/96
Batch No.	: 96L039	DaTime Extrctd :	12/13/96 15:30
Sample ID	: CR-A161207	DaTime Analyzd :	12/19/96 21:03
Lab Cnt NO.	: L039-38	Dilutn Factor :	1
Lab File ID	: RLB141	Matrix :	WATER
Ext Btch ID	: SVL009W	% Moisture :	NA
Calib. Ref.	: RLB129	Instrument ID :	MSBNA1

PARAMETERS	RESULTS (ug/L)	PQL (ug/L)	MDL (ug/L)
bis(2-Chloroethyl)ether	ND	10	2.9
bis(2-Chloroisopropyl)ether	ND	10	4.2
bis(2-Ethylhexyl)phthalate	ND	10	4.2
Butylbenzylphthalate	ND	10	2.8
Chrysene	ND	10	3
Di-n-butylphthalate	ND	10	5.4
Di-n-octylphthalate	ND	10	2.6
Dibenzo(a,h)anthracene	ND	10	3.1
Dibenzofuran	ND	10	3.8
Diethylphthalate	ND	10	2.8
Dimethylphthalate	ND	10	3.6
Fluoranthene	ND	10	2.7
Fluorene	ND	10	3.3
Hexachlorobenzene	ND	10	3.6
Hexachlorobutadiene	ND	10	2.2
Hexachlorocyclopentadiene	ND	10	1.6
Hexachloroethane	ND	10	2
Indeno(1,2,3-cd)pyrene	ND	10	3.2
Isophorone	ND	10	3
n-Nitroso-di-n-propylamine	ND	10	3.7
n-Nitrosodiphenylamine (2)	ND	10	3
Naphthalene	ND	10	2.9
Nitrobenzene	ND	10	2.8
Pentachlorophenol	ND	50	2.4
Phenanthrene	ND	10	3
Phenol	ND	10	2.9
Pyrene	ND	10	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-Tribromophenol	86	25-134
2-Fluorobiphenyl	75	43-125
2-Fluorophenol	70	25-125
Nitrobenzene-d5	77	32-125
Phenol-d5	72	25-125
Terphenyl-d14	72	42-126

PQL: Practical Quantitation Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine
JAKWHTG/JAKWHTS: Revision 0 19-NOV-96