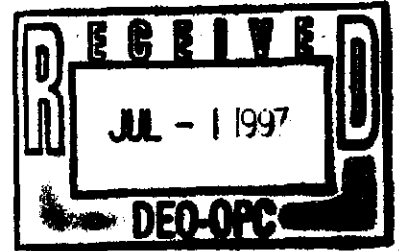


Remedial Investigation Report
Volume 2 of 3
Former Gulf States Creosoting Site
Hattiesburg, Mississippi

June 30, 1997
Project No. 21-02

MICHAEL PISANI & ASSOCIATES, INC.
Environmental Management and Engineering Services

1100 Poydras Street
1430 Energy Centre
New Orleans, Louisiana 70163
(504) 582-2468



FILE COPY

Remedial Investigation Report
Former Gulf States Creosoting Site
Hattiesburg, Mississippi

June 30, 1997

Project No. 21-02

MICHAEL PISANI & ASSOCIATES, INC.

Environmental Management and Engineering Services

**1100 Poydras Street
1430 Energy Centre
New Orleans, Louisiana 70163
(504) 582-2468**

Appendix K

Laboratory Analytical Reports

**Project No. 21-02
Former Gulf States Creosoting Site
Hattiesburg, Mississippi**



LLI Sample No. SW 2677435

Collected: 03/13/97 at 13:20 by DA

Submitted: 03/14/97

SS-11 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
 SS-11 SDG#: HMS01-02

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/20/97 0622	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/20/97 0622	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



Lancaster Laboratories
 2425 New Holland Pike
 PO Box 12425
 Lancaster, PA 17605-2425
 717-656-2300 Fax: 717-656-2681



LLI Sample No. 2677435

SS-II 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
592	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LI Sample No. 2677435
 SS-11 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichloropheno										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichloropheno										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
91	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



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LLI Sample No. 2677435
SS-11 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture										
0.080	% by wt.	Batch: 970760316820002A	1				100	100	0	100	101



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PO Box 12425
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717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.



LLI Sample No. 2677435
SS-11 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846	Semivolatiles Soil			
	Phenol-d6	66	24	113
	2-Flphenol	63	25	121
	2,4,6-TBP	79	19	122
4689 TCL SW846	Semivolatiles/Soil			
	Nitrobz-d5	72	23	120
	2-Fbiphenyl	83	30	115
	Tphenylid14	76	18	137



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LLI Sample No. SW 2677436

Collected: 3/13/97 at 14:25 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-6 0-12" Unspiked Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-06 SDG#: HMS01-03BKG

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT	UNITS
4688	TCL Semivolatiles						See Page 2
4689	TCL Semivolatiles cont'd						See Page 3
0111	Moisture	15.3	0.080	% by wt.			
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
08:36:37 D 0002 14 129915 556869
412 0.00 00033420 ASR000



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2677436

Collected: 3/13/97 at 14:25 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-6 0-12" Unspiked Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-06 SDG#: HMS01-03BKG

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
					DETECTION LIMIT	
TCL SW846 Semivolatiles Soil						
1185	pheno1	N.D.	33.	ug/kg	N.D.	39.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	79.
1186	2-chloropheno1	N.D.	33.	ug/kg	N.D.	39.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
4690	2-methylpheno1	N.D.	67.	ug/kg	N.D.	79.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.
4692	4-methylpheno1	N.D.	100.	ug/kg	N.D.	120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	79.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	79.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	67.	ug/kg	N.D.	79.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	79.
3747	2,4-dimethylpheno1	N.D.	67.	ug/kg	N.D.	79.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	39.
3748	2,4-dichloropheno1	N.D.	33.	ug/kg	N.D.	39.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	39.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	79.
1190	4-chloro-3-methylpheno1	N.D.	67.	ug/kg	N.D.	79.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	39.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.
3749	2,4,6-trichloropheno1	N.D.	67.	ug/kg	N.D.	79.
4695	2,4,5-trichloropheno1	N.D.	67.	ug/kg	N.D.	79.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	39.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	39.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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LLI Sample No. SW 2677436

Collected: 3/13/97 at 14:25 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-6 0-12" Unspiked Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-06 SDG#: HMS01-03BKG

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	79.	
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	39.	
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	200.	
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.	
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	39.	
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.	
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.	
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	79.	
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	79.	
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.	
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	120.	
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.	
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	79.	
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	120.	
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	120.	
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.	
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	39.	
3776	anthracene	N.D.	33.	ug/kg	N.D.	39.	
4702	carbazole	N.D.	33.	ug/kg	N.D.	39.	
3777	di-n-butyl phthalate	N.D.	33.	ug/kg	N.D.	39.	
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	39.	
1195	pyrene	N.D.	67.	ug/kg	N.D.	79.	
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	79.	
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	160.	
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	39.	
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	79.	
3782	chrysene	N.D.	33.	ug/kg	N.D.	39.	
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	79.	
3786	benzo (b) fluoranthene	N.D.	67.	ug/kg	N.D.	79.	
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	160.	
3788	benzo (a) pyrene	N.D.	67.	ug/kg	N.D.	79.	
3789	indeno (1,2,3-cd) pyrene	N.D.	67.	ug/kg	N.D.	79.	
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	79.	
3791	benzo (ghi) perylene	N.D.	67.	ug/kg	N.D.	79.	

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS





LLI Sample No. SW 2677436
Collected: 3/13/97 at 14:25 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-6 0-12" Unspiked Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-06 SDG#: HMS01-03BKG

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	DETECTION	LIMIT	RESULTS	DETECTION	LIMIT
TCL SW846	Semivolatiles/Soil						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. SW 2677436

Collected: 03/13/97 at 14:25 by DA

Submitted: 03/14/97

SS-6 0-12" Unspiked Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-06 SDG#: HMS01-03BKG

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/20/97 0313	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/20/97 0313	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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LLI Sample No. 2677436
SS-6 0-12" Unspiked Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
592	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01.96



LLI Sample No. 2677436
SS-6 0-12" Unspiked Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									
4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
191	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/21/96





LLI Sample No. 2677436
 SS-6 0-12" Unspiked Composite Soil Sample

Gulf States Creosoting; Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture	Batch: 970760316820002A									
0.080	% by wt.		1				100	100	0	100	101



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See reverse side for explanation of symbols and abbreviations.

2016 Rev 5/01/96



LLI Sample No. **2677436**
SS-6 0-12" Unspiked Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	64	24	113
	2-F1phenol	61	25	121
	2,4,6-TBP	81	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	70	23	120
	2-Fbiphenyl	82	30	115
	Tphenylid14	78	18	137



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2216 Rev. 5/01/96



LLI Sample No. SW 2677437

Collected: 3/13/97 at 14:25 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-6 0-12" Matrix Spike Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-06 SDG#: HMS01-03MS

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT	UNITS
4688	TCL Semivolatiles					See Page	2
4689	TCL Semivolatiles cont'd					See Page	3
0118	Moisture	15.3	0.060	% by wt.			

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
08:38:43 D 0002 14 129915 556869
412 0.00 00032700 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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2216 Rev 5/01/96





LLI Sample No. SW 2677437

Collected: 3/13/97 at 14:25 by DA

Submitted: 3/14/97 Reported: 3/28/97

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SS-6 0-12" Matrix Spike Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-06 SDG#: HMS01-03MS

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	phenol	2,200.	33.	ug/kg	2,600.	39.
3753	bis (2-chloroethyl) ether	2,300.	67.	ug/kg	2,700.	79.
1186	2-chlorophenol	2,500.	33.	ug/kg	2,900.	39.
3754	1,3-dichlorobenzene	2,400.	33.	ug/kg	2,900.	39.
1187	1,4-dichlorobenzene	2,500.	33.	ug/kg	2,900.	39.
3755	1,2-dichlorobenzene	2,500.	33.	ug/kg	2,900.	39.
4690	2-methylphenol	2,000.	67.	ug/kg	2,400.	79.
4691	2,2'-oxybis (1-chloropropane)	1,500.	100.	ug/kg	1,800.	120.
4692	4-methylphenol	2,200.	100.	ug/kg	2,500.	120.
1188	N-nitrosodi-n-propylamine	2,300.	67.	ug/kg	2,700.	79.
3757	hexachloroethane	2,200.	67.	ug/kg	2,600.	79.
3758	nitrobenzene	2,300.	33.	ug/kg	2,700.	39.
3759	isophorone	2,400.	67.	ug/kg	2,900.	79.
3746	2-nitrophenol	2,700.	67.	ug/kg	3,200.	79.
3747	2,4-dimethylphenol	680.	67.	ug/kg	800.	79.
3760	bis (2-chloroethoxy) methane	2,300.	33.	ug/kg	2,700.	39.
3748	2,4-dichlorophenol	2,500.	33.	ug/kg	2,900.	39.
1189	1,2,4-trichlorobenzene	2,600.	33.	ug/kg	3,000.	39.
3761	naphthalene	2,300.	33.	ug/kg	2,800.	39.
4693	4-chloroaniline	1,000.	100.	ug/kg	1,200.	120.
3762	hexachlorobutadiene	2,800.	67.	ug/kg	3,300.	79.
1190	4-chloro-3-methylphenol	2,400.	67.	ug/kg	2,900.	79.
4694	2-methylnaphthalene	2,500.	33.	ug/kg	2,900.	39.
3763	hexachlorocyclopentadiene	4,300.	170.	ug/kg	5,100.	200.
3749	2,4,6-trichlorophenol	2,600.	67.	ug/kg	3,100.	79.
4695	2,4,5-trichlorophenol	2,600.	67.	ug/kg	3,100.	79.
3764	2-chloronaphthalene	2,600.	33.	ug/kg	3,100.	39.
4696	2-nitroaniline	2,300.	67.	ug/kg	2,700.	79.
3766	dimethyl phthalate	2,500.	33.	ug/kg	3,000.	39.
3765	acenaphthylene	2,600.	33.	ug/kg	3,100.	39.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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LLI Sample No. SW 2677437

Collected: 3/13/97 at 14:25 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-6 0-12" Matrix Spike Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-06 SDG#: HMS01-03MS

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	1,700.	67.	ug/kg	2,000.	79.	
1191	acenaphthene	2,600.	33.	ug/kg	3,000.	39.	
3750	2,4-dinitrophenol	3,200.	170.	ug/kg	3,800.	200.	
1192	4-nitrophenol	2,800.	170.	ug/kg	3,300.	200.	
4698	dibenzofuran	2,600.	33.	ug/kg	3,100.	39.	
1193	2,4-dinitrotoluene	2,900.	67.	ug/kg	3,500.	79.	
4699	2,6-dinitrotoluene	3,000.	67.	ug/kg	3,500.	79.	
3770	diethyl phthalate	2,500.	67.	ug/kg	2,900.	79.	
3769	4-chlorophenyl phenyl ether	2,500.	67.	ug/kg	3,000.	79.	
3768	fluorene	2,700.	33.	ug/kg	3,200.	39.	
4700	4-nitroaniline	2,300.	100.	ug/kg	2,700.	120.	
4701	4,6-dinitro-2-methylphenol	3,100.	170.	ug/kg	3,700.	200.	
3772	N-nitrosodiphenylamine	2,400.	67.	ug/kg	2,800.	79.	
3773	4-bromophenyl phenyl ether	2,500.	100.	ug/kg	2,900.	120.	
3774	hexachlorobenzene	2,500.	100.	ug/kg	2,900.	120.	
1194	pentachlorophenol	2,800.	170.	ug/kg	3,300.	200.	
3775	phenanthrene	2,500.	33.	ug/kg	3,000.	39.	
3776	anthracene	2,400.	33.	ug/kg	2,800.	39.	
4702	carbazole	2,900.	33.	ug/kg	3,400.	39.	
3777	di-n-butyl phthalate	2,700.	33.	ug/kg	3,100.	39.	
3778	fluoranthene	2,800.	33.	ug/kg	3,300.	39.	
1195	pyrene	2,500.	67.	ug/kg	2,900.	79.	
3780	butyl benzyl phthalate	2,500.	67.	ug/kg	2,900.	79.	
3783	3,3'-dichlorobenzidine	960.	130.	ug/kg	1,100.	160.	
3781	benzo (a) anthracene	2,500.	33.	ug/kg	3,000.	39.	
3784	bis (2-ethylhexyl) phthalate	2,400.	67.	ug/kg	2,900.	79.	
3782	chrysene	2,700.	33.	ug/kg	3,100.	39.	
3785	di-n-octyl phthalate	2,500.	67.	ug/kg	3,000.	79.	
3786	benzo (b) fluoranthene	2,600.	67.	ug/kg	3,100.	79.	
3787	benzo (k) fluoranthene	2,800.	130.	ug/kg	3,300.	160.	
3788	benzo (a) pyrene	2,500.	67.	ug/kg	2,900.	79.	
3789	indeno (1,2,3-cd) pyrene	2,600.	67.	ug/kg	3,100.	79.	
3790	dibenz (a,h) anthracene	2,600.	67.	ug/kg	3,100.	79.	
3791	benzo (ghi) perylene	2,500.	67.	ug/kg	2,900.	79.	

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations

2216 Rev 5/01/96



LLI Sample No. SW 2677437

Collected: 3/13/97 at 14:25 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-6 0-12" Matrix Spike Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-06 SDG#: HMS01-03MS

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
--

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. SW 2677437

Collected: 03/13/97 at 14:25 by DA

Submitted: 03/14/97

SS-6 0-12" Matrix Spike Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-06 SDG#: HMS01-03MS

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/20/97 0416	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/20/97 0416	Lynn Wallace
0118	Moisture	EPA 160.3 modified	1	03/17/97 1733	NeeJay B. Mehta



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LLI Sample No. 2677437
 SS-6 0-12" Matrix Spike Composite Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
192	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01-96



LLI Sample No. **2677437**
 SS-6 0-12" Matrix Spike Composite Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
191	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



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2216 Rev 5/01/96





LLI Sample No. **2677437**
SS-6' 0-12" Matrix Spike Composite Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0118	Moisture										
0.060	% by wt.	Batch: 970760316820002A									



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2216 Rev 5/01/96



LLI Sample No. **2677437**
SS-6 0-12" Matrix Spike Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	64	24	113
	2-Flphenol	62	25	121
	2,4,6-TBP	83	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	70	23	120
	2-Fbiphenyl	81	30	115
	Tphenylid14	77	18	137



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2216 Rev. 5/01/96



LLI Sample No. SW 2677438

Collected: 3/13/97 at 14:25 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-6 0-12" Matrix Spike Duplicate Composite Soil
Sample
Gulf States Creosoting: Hattiesburg, MS
SS-06 SDG#: HMS01-03MSD

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0118	Moisture	15.3	0.060	% by wt.		
0121	Moisture Duplicate	15.1	0.060	% by wt.		

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
08:40:41 D 0002 14 129915 556869
412 0.00 00033900 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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2216 Rev. 5-01-96





Lancaster Laboratories

A division of Thermo Analytical Inc.

LLI Sample No. SW 2677438

Collected: 3/13/97 at 14:25 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
Rel.

SS-6 0-12" Matrix Spike Duplicate Composite Soil
 Sample
 Gulf States Creosoting: Hattiesburg, MS
 SS-06 SDG#: HMS01-03MSD

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	phenol	2,200.	33.	ug/kg	2,600.	39.
3753	bis (2-chloroethyl) ether	2,100.	67.	ug/kg	2,500.	79.
1186	2-chlorophenol	2,500.	33.	ug/kg	2,900.	39.
3754	1,3-dichlorobenzene	2,300.	33.	ug/kg	2,800.	39.
1187	1,4-dichlorobenzene	2,400.	33.	ug/kg	2,800.	39.
3755	1,2-dichlorobenzene	2,400.	33.	ug/kg	2,800.	39.
4690	2-methylphenol	2,000.	67.	ug/kg	2,300.	79.
4691	2,2'-oxybis (1-chloropropane)	1,500.	100.	ug/kg	1,800.	120.
4692	4-methylphenol	2,100.	100.	ug/kg	2,500.	120.
1188	N-nitrosodi-n-propylamine	2,300.	67.	ug/kg	2,700.	79.
3757	hexachloroethane	2,100.	67.	ug/kg	2,500.	79.
3758	nitrobenzene	2,300.	33.	ug/kg	2,700.	39.
3759	isophorone	2,400.	67.	ug/kg	2,900.	79.
3746	2-nitrophenol	2,600.	67.	ug/kg	3,100.	79.
3747	2,4-dimethylphenol	560.	67.	ug/kg	660.	79.
3760	bis (2-chloroethoxy) methane	2,300.	33.	ug/kg	2,700.	39.
3748	2,4-dichlorophenol	2,400.	33.	ug/kg	2,800.	39.
1189	1,2,4-trichlorobenzene	2,500.	33.	ug/kg	2,900.	39.
3761	naphthalene	2,300.	33.	ug/kg	2,700.	39.
4693	4-chloroaniline	1,200.	100.	ug/kg	1,400.	120.
3762	hexachlorobutadiene	2,700.	67.	ug/kg	3,100.	79.
1190	4-chloro-3-methylphenol	2,400.	67.	ug/kg	2,800.	79.
4694	2-methylnaphthalene	2,400.	33.	ug/kg	2,800.	39.
3763	hexachlorocyclopentadiene	4,500.	170.	ug/kg	5,300.	200.
3749	2,4,6-trichlorophenol	2,500.	67.	ug/kg	2,900.	79.
4695	2,4,5-trichlorophenol	2,500.	67.	ug/kg	3,000.	79.
3764	2-chloronaphthalene	2,500.	33.	ug/kg	3,000.	39.
4696	2-nitroaniline	2,200.	67.	ug/kg	2,600.	79.
3766	dimethyl phthalate	2,400.	33.	ug/kg	2,900.	39.
3765	acenaphthylene	2,500.	33.	ug/kg	2,900.	39.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Group Leader, GC/MS



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LLI Sample No. SW 2677438

Collected: 3/13/97 at 14:25 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-6 0-12" Matrix Spike Duplicate Composite Soil
Sample
Gulf States Creosoting: Hattiesburg, MS
SS-06 SDG#: HMS01-03MSD

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	1,800.	67.	ug/kg	2,100.	79.	
1191	acenaphthene	2,400.	33.	ug/kg	2,900.	39.	
3750	2,4-dinitrophenol	3,100.	170.	ug/kg	3,600.	200.	
1192	4-nitrophenol	2,700.	170.	ug/kg	3,200.	200.	
4698	dibenzofuran	2,500.	33.	ug/kg	2,900.	39.	
1193	2,4-dinitrotoluene	2,800.	67.	ug/kg	3,300.	79.	
4699	2,6-dinitrotoluene	2,900.	67.	ug/kg	3,400.	79.	
3770	diethyl phthalate	2,400.	67.	ug/kg	2,800.	79.	
3769	4-chlorophenyl phenyl ether	2,400.	67.	ug/kg	2,900.	79.	
3768	fluorene	2,600.	33.	ug/kg	3,000.	39.	
4700	4-nitroaniline	2,200.	100.	ug/kg	2,600.	120.	
4701	4,6-dinitro-2-methylphenol	3,000.	170.	ug/kg	3,500.	200.	
3772	N-nitrosodiphenylamine	2,300.	67.	ug/kg	2,800.	79.	
3773	4-bromophenyl phenyl ether	2,400.	100.	ug/kg	2,800.	120.	
3774	hexachlorobenzene	2,400.	100.	ug/kg	2,800.	120.	
1194	pentachlorophenol	2,600.	170.	ug/kg	3,100.	200.	
3775	phenanthrene	2,400.	33.	ug/kg	2,900.	39.	
3776	anthracene	2,300.	33.	ug/kg	2,700.	39.	
4702	carbazole	2,800.	33.	ug/kg	3,300.	39.	
3777	di-n-butyl phthalate	2,600.	33.	ug/kg	3,100.	39.	
3778	fluoranthene	2,700.	33.	ug/kg	3,200.	39.	
1195	pyrene	2,400.	67.	ug/kg	2,900.	79.	
3780	butyl benzyl phthalate	2,400.	67.	ug/kg	2,900.	79.	
3783	3,3'-dichlorobenzidine	1,200.	130.	ug/kg	1,400.	160.	
3781	benzo (a) anthracene	2,400.	33.	ug/kg	2,800.	39.	
3784	bis (2-ethylhexyl) phthalate	2,400.	67.	ug/kg	2,800.	79.	
3782	chrysene	2,600.	33.	ug/kg	3,000.	39.	
3785	di-n-octyl phthalate	2,400.	67.	ug/kg	2,800.	79.	
3786	benzo (b) fluoranthene	2,500.	67.	ug/kg	2,900.	79.	
3787	benzo (k) fluoranthene	2,600.	130.	ug/kg	3,100.	160.	
3788	benzo (a) pyrene	2,300.	67.	ug/kg	2,700.	79.	
3789	indeno (1,2,3-cd) pyrene	2,500.	67.	ug/kg	2,900.	79.	
3790	dibenz (a,h) anthracene	2,500.	67.	ug/kg	3,000.	79.	
3791	benzo (ghi) perylene	2,400.	67.	ug/kg	2,800.	79.	

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations

2216 Rev. 5/01/95





LLI Sample No. SW 2677438

Collected: 3/13/97 at 14:25 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-6 0-12" Matrix Spike Duplicate Composite Soil
Sample
Gulf States Creosoting: Hattiesburg, MS
SS-06 SDG#: HMS01-03MSD

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD	DETECTION LIMIT
TCL SW846	Semivolatiles/Soil						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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2216 Rev 5/01/96





LLI Sample No. SW 2677438

Collected: 03/13/97 at 14:25 by DA

Submitted: 03/14/97

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

SS-6 0-12" Matrix Spike Duplicate Composite Soil
 Sample
 Gulf States Creosoting: Hattiesburg, MS
 SS-06 SDG#: HMS01-03MSD

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/20/97 0519	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/20/97 0519	Lynn Wallace
0118	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta
0121	Moisture Duplicate	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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2216 Rev 5/01/96





LLI Sample No. 2677438
 SS-6 0-12" Matrix Spike Duplicate Composite Soil
 Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
92	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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See reverse side for explanation of symbols and abbreviations

2216 Rev. 5/01/96



LLI Sample No. 2677438
 SS-6 0-12" Matrix Spike Duplicate Composite Soil
 Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
91	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



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See reverse side for explanation of symbols and abbreviations

2216 Rev 5/01/96





LLI Sample No. **2677438**
 SS-6 0-12" Matrix Spike Duplicate Composite Soil
 Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0118	Moisture	Batch: 970760316820002A									
0.060	% by wt.										
0121	Moisture Duplicate	Batch: 970760316820002A									
0.060	% by wt.										



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5.01/96



LLI Sample No. 2677438
SS-6 0-12" Matrix Spike Duplicate Composite Soil
Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Pheno1-d6	64	24	113
	2-Flpheno1	61	25	121
	2,4,6-TBP	77	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	69	23	120
	2-Fbiphny1	78	30	115
	Tpheny1d14	75	18	137



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2216 Rev 5/01/96





LLI Sample No. SW 2677439

Collected: 3/13/97 at 14:40 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-8 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-08 SDG#: HMS01-04

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	DETECTION	LIMIT	RESULTS	DETECTION	LIMIT
4688	TCL Semivolatiles						See Page 2
4689	TCL Semivolatiles cont'd						See Page 3
0111	Moisture	25.0	0.080	% by wt.			

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO Michael Pisani & Assoc. ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
08:42:38 D 0002 14 129915 556869
412 0.00 00033420 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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LLI Sample No. SW 2677439
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Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-8 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-08 SDG#: HMS01-04

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SWB46 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	44.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	89.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	44.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	44.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	44.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	44.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	89.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	130.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	130.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	89.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	89.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	44.
3759	isophorone	N.D.	67.	ug/kg	N.D.	89.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	89.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	89.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	44.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	44.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	44.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	44.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	130.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	89.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	89.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	44.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	220.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	89.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	89.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	44.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	89.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	44.
3765	acenaphthylene	140.	J	33.	190.	J

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS

MEMBER
ACIL
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LLI Sample No. SW 2677439

Collected: 3/13/97 at 14:40 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-8 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-08 SDG#: HMS01-04

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	N.D.		67. ug/kg	N.D.		89.
1191	acenaphthene	N.D.		33. ug/kg	N.D.		44.
3750	2,4-dinitrophenol	N.D.		170. ug/kg	N.D.		220.
1192	4-nitrophenol	N.D.		170. ug/kg	N.D.		220.
4698	dibenzofuran	N.D.		33. ug/kg	N.D.		44.
1193	2,4-dinitrotoluene	N.D.		67. ug/kg	N.D.		89.
4699	2,6-dinitrotoluene	N.D.		67. ug/kg	N.D.		89.
3770	diethyl phthalate	N.D.		67. ug/kg	N.D.		89.
3769	4-chlorophenyl phenyl ether	N.D.		67. ug/kg	N.D.		89.
3768	fluorene	N.D.		33. ug/kg	N.D.		44.
4700	4-nitroaniline	N.D.		100. ug/kg	N.D.		130.
4701	4,6-dinitro-2-methylphenol	N.D.		170. ug/kg	N.D.		220.
3772	N-nitrosodiphenylamine	N.D.		67. ug/kg	N.D.		89.
3773	4-bromophenyl phenyl ether	N.D.		100. ug/kg	N.D.		130.
3774	hexachlorobenzene	N.D.		100. ug/kg	N.D.		130.
1194	pentachlorophenol	N.D.		170. ug/kg	N.D.		220.
3775	phenanthrene	63.	J	33. ug/kg	84.	J	44.
3776	anthracene	110.	J	33. ug/kg	150.	J	44.
4702	carbazole	43.	J	33. ug/kg	58.	J	44.
3777	di-n-butyl phthalate	N.D.		33. ug/kg	N.D.		44.
3778	fluoranthene	950.		33. ug/kg	1,300.		44.
1195	pyrene	1,100.		67. ug/kg	1,500.		89.
3780	butyl benzyl phthalate	N.D.		67. ug/kg	N.D.		89.
3783	3,3'-dichlorobenzidine	N.D.		130. ug/kg	N.D.		180.
3781	benzo (a) anthracene	640.		33. ug/kg	860.		44.
3784	bis (2-ethylhexyl) phthalate	N.D.		67. ug/kg	N.D.		89.
3782	chrysene	850.		33. ug/kg	1,100.		44.
3785	di-n-octyl phthalate	N.D.		67. ug/kg	N.D.		89.
3786	benzo (b) fluoranthene	1,400.		67. ug/kg	1,900.		89.
3787	benzo (k) fluoranthene	530.		130. ug/kg	710.		180.
3788	benzo (a) pyrene	650.		67. ug/kg	870.		89.
3789	indeno (1,2,3-cd) pyrene	540.		67. ug/kg	720.		89.
3790	dibenz (a,h) anthracene	150.	J	67. ug/kg	200.	J	89.
3791	benzo (ghi) perylene	420.		67. ug/kg	560.		89.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96





LLI Sample No. SW 2677439

Collected: 3/13/97 at 14:40 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-8 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-08 SDG#: HMS01-04

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Ref.

CAT
 NO. ANALYSIS NAME

AS RECEIVED
 METHOD
 RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
 METHOD
 RESULTS DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
 The result reported for N-nitrosodiphenylamine represents the combined
 total of both compounds.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Group Leader, GC/MS



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 717-656-2300 Fax: 717-656-2681



LLI Sample No. SW 2677439

Collected: 03/13/97 at 14:40 by DA

Submitted: 03/14/97

SS-8 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-08 SDG#: HMS01-04

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
--

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/20/97 0725	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/20/97 0725	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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2216 Rev 5/01/96





LLI Sample No. 2677439

SS-8 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
92	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01-95





Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 2677439
SS-8 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
.91	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96



LLI Sample No. 2677439
SS-8 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture										
0.080	% by wt.	Batch: 970760316820002A	1				100	100	0	100	101



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2216 Rev 5/01/96





LLI Sample No. 2677439
SS-8 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	67	24	113
	2-Flphenol	62	25	121
	2,4,6-TBP	71	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	77	23	120
	2-Fbiphenyl	87	30	115
	Tphenyl14	78	18	137



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2216 Rev. 5/01/96



LLI Sample No. SW 2677440

Collected: 3/13/97 at 13:35 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-9 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-09 SDG#: HMS01-05

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
--

P.O.
Ret.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
4688	TCL Semivolatiles			See Page 2			
4689	TCL Semivolatiles cont'd			See Page 3			
0111	Moisture	18.5		0.080 % by wt.			
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

1 COPY TO Michael Pisani & Assoc. ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
08:44:33 D 0002 14 129915 556869
412 0.00 00033420 ASR000



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



LLI Sample No. SW 2677440

Collected: 3/13/97 at 13:35 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-9 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-09 SDG#: HMS01-05

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	41.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	82.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	41.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	41.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	41.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	41.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	82.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	82.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	82.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	41.
3759	isophorone	N.D.	67.	ug/kg	N.D.	82.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	82.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	82.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	41.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	41.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	41.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	41.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	82.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	82.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	41.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	82.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	82.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	41.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	82.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	41.
3765	acenaphthylene	45.	J	33.	55.	J

Questions? Contact your Client Services Representative
 Nancy Borholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Group Leader, GC/MS



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LLI Sample No. SW 2677440

Collected: 3/13/97 at 13:35 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-9 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-09 SDG#: HMS01-05

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	82.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	41.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	200.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	41.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	82.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	82.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	82.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	82.
3768	fluorene	N.D.	33.	ug/kg	N.D.	41.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	120.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	82.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	120.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	120.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	41.
3776	anthracene	60.	J	33.	74.	J
4702	carbazole	N.D.	33.	ug/kg	N.D.	41.
3777	di-n-butyl phthalate	N.D.	33.	ug/kg	N.D.	41.
3778	fluoranthene	260.	J	33.	320.	J
1195	pyrene	400.	J	67.	490.	J
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	82.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	160.
3781	benzo (a) anthracene	220.	J	33.	270.	J
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	82.
3782	chrysene	210.	J	33.	250.	J
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	82.
3786	benzo (b) fluoranthene	700.	J	67.	860.	J
3787	benzo (k) fluoranthene	250.	J	130.	300.	J
3788	benzo (a) pyrene	330.	J	67.	400.	J
3789	indeno (1,2,3-cd) pyrene	230.	J	67.	280.	J
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	82.
3791	benzo (ghi) perylene	170.	J	67.	210.	J

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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PO Box 12425
Lancaster, PA 17605-2425
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LLI Sample No. SW 2677440

Collected: 3/13/97 at 13:35 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-9 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-09 SDG#: HMS01-05

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
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CAT
NO. ANALYSIS NAME

AS RECEIVED
RESULTS METHOD
DETECTION LIMIT UNITS

DRY WEIGHT
RESULTS METHOD
DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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2216 Rev. 5/01/96



LLI Sample No. SW 2677440

Collected: 03/13/97 at 13:35 by DA

Submitted: 03/14/97

SS-9 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-09 SDG#: HMS01-05

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
--

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/20/97 0828	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/20/97 0828	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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2216 Rev 5/01,96





LLI Sample No. 2677440
SS-9 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4688	TCL SWB46 Semivolatiles Soil	Batch: 97076SLD026									
1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
'92	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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2216 Rev. 5/01/96



LLI Sample No. 2677440

SS-9 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
91	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2677440
 SS-9 0-12" Composite Soil Sample

Gulf States Creosoting; Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture	Batch: 970760316820002A									
0.080	% by wt.		1				100	100	0	100	101



Lancaster Laboratories
 2425 New Holland Pike
 PO Box 12425
 Lancaster, PA 17605-2425
 717-556-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. **2677440**
 SS-9 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	64	24	113
	2-F1pheno1	60	25	121
	2,4,6-TBP	72	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	69	23	120
	2-Fbiphnyl	80	30	115
	Tphenyld14	74	18	137





LLI Sample No. SW 2677441

Collected: 3/13/97 at 14:12 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-4 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-04 SDG#: HMS01-06

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		DRY WEIGHT	
		RESULTS	METHOD	RESULTS	METHOD
			DETECTION LIMIT		DETECTION LIMIT
4688	TCL Semivolatiles				See Page 2
4689	TCL Semivolatiles cont'd				See Page 3
0111	Moisture	14.0	0.080	% by wt.	
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
08:47:28 D 0002 14 129915 556869
412 0.00 00033420 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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2216 Rev. 5/01/96



LLI Sample No. SW 2677441

Collected: 3/13/97 at 14:12 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-4 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-04 SDG#: HMS01-06

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	39.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	78.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	39.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	78.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	78.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	78.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	67.	ug/kg	N.D.	78.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	78.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	78.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	39.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	39.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	39.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	78.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	78.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	39.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	78.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	78.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	39.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	78.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	39.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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2216 Rev 5.01.96



LLI Sample No. SW 2677441

Collected: 3/13/97 at 14:12 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-4 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-04 SDG#: HMS01-06

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	N.D.		67. ug/kg	N.D.		78.
1191	acenaphthene	N.D.		33. ug/kg	N.D.		39.
3750	2,4-dinitrophenol	N.D.		170. ug/kg	N.D.		190.
1192	4-nitrophenol	N.D.		170. ug/kg	N.D.		190.
4698	dibenzofuran	N.D.		33. ug/kg	N.D.		39.
1193	2,4-dinitrotoluene	N.D.		67. ug/kg	N.D.		78.
4699	2,6-dinitrotoluene	N.D.		67. ug/kg	N.D.		78.
3770	diethyl phthalate	N.D.		67. ug/kg	N.D.		78.
3769	4-chlorophenyl phenyl ether	N.D.		67. ug/kg	N.D.		78.
3768	fluorene	N.D.		33. ug/kg	N.D.		39.
4700	4-nitroaniline	N.D.		100. ug/kg	N.D.		120.
4701	4,6-dinitro-2-methylphenol	N.D.		170. ug/kg	N.D.		190.
3772	N-nitrosodiphenylamine	N.D.		67. ug/kg	N.D.		78.
3773	4-bromophenyl phenyl ether	N.D.		100. ug/kg	N.D.		120.
3774	hexachlorobenzene	N.D.		100. ug/kg	N.D.		120.
1194	pentachlorophenol	N.D.		170. ug/kg	N.D.		190.
3775	phenanthrene	68.	J	33. ug/kg	79.	J	39.
3776	anthracene	N.D.		33. ug/kg	N.D.		39.
4702	carbazole	N.D.		33. ug/kg	N.D.		39.
3777	di-n-butyl phthalate	49.	J	33. ug/kg	57.	J	39.
3778	fluoranthene	300.	J	33. ug/kg	340.	J	39.
1195	pyrene	540.		67. ug/kg	630.		78.
3780	butyl benzyl phthalate	N.D.		67. ug/kg	N.D.		78.
3783	3,3'-dichlorobenzidine	N.D.		130. ug/kg	N.D.		160.
3781	benzo (a) anthracene	270.	J	33. ug/kg	320.	J	39.
3784	bis (2-ethylhexyl) phthalate	N.D.		67. ug/kg	N.D.		78.
3782	chrysene	360.		33. ug/kg	420.		39.
3785	di-n-octyl phthalate	N.D.		67. ug/kg	N.D.		78.
3786	benzo (b) fluoranthene	930.		67. ug/kg	1,100.		78.
3787	benzo (k) fluoranthene	340.		130. ug/kg	400.		160.
3788	benzo (a) pyrene	210.	J	67. ug/kg	250.	J	78.
3789	indeno (1,2,3-cd) pyrene	300.	J	67. ug/kg	340.	J	78.
3790	dibenz (a,h) anthracene	72.	J	67. ug/kg	84.	J	78.
3791	benzo (ghi) perylene	200.	J	67. ug/kg	240.	J	78.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96



LLI Sample No. SW 2677441

Collected: 3/13/97 at 14:12 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-4 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-04 SDG#: HMS01-06

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
--

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD	DETECTION LIMIT
TCL SW846	Semivolatiles/Soil						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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2216 Rev. 5/01-96



LLI Sample No. SW 2677441

Collected: 03/13/97 at 14:12 by DA

Submitted: 03/14/97

SS-4 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-04 SDG#: HMS01-06

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
--

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0840	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0840	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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LLI Sample No. 2677441

SS-4 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
592	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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See reverse side for explanation of symbols and abbreviations

2216 Rev 5/01/96





LLI Sample No. 2677441
 SS-4 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
91	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



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2216 Rev 5/01 96



LLI Sample No. **2677441**
SS-4 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture	Batch: 970760316820002A									
0.080	% by wt.		1				100	100	0	100	101



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01 96





LLI Sample No. 2677441

SS-4 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	69	24	113
	2-Flpheno1	63	25	121
	2,4,6-TBP	48	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	87	23	120
	2-Fbiphenyl	80	30	115
	Tphenyl14	99	18	137



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See reverse side for explanation of symbols and abbreviations.

2215 Rev. 5/01/96





LLI Sample No. SW 2677442

Collected: 3/13/97 at 14:50 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-10 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-10 SDG#: HMS01-07

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	DETECTION	LIMIT UNITS	RESULTS	DETECTION	LIMIT
4688	TCL Semivolatiles						See Page 2
4689	TCL Semivolatiles cont'd						See Page 3
0111	Moisture	16.7	0.080	% by wt.			
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
08:50:07 D 0002 14 129915 556869
412 0.00 00033420 ASR000

Respectfully Submitted
Duane A. Luckenb111, B.S.
Group Leader, GC/MS Volatiles



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See reverse side for explanation of symbols and abbreviations

2216 Rev. 5/01/96





LLI Sample No. SW 2677442
 Collected: 3/13/97 at 14:50 by DA

Submitted: 3/14/97 Reported: 3/28/97
 Discard: 4/28/97

SS-10 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
 SS-10 SDG#: HMS01-07

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles Soil							
1185	phenol	N.D.	33.	ug/kg	N.D.		40.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.		80.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.		40.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.		40.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.		40.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.		40.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.		80.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.		120.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.		120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.		80.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.		80.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.		40.
3759	isophorone	N.D.	67.	ug/kg	N.D.		80.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.		80.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.		80.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.		40.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.		40.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.		40.
3761	naphthalene	170.	J	33.	ug/kg	200.	J
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.		120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.		80.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.		80.
4694	2-methylnaphthalene	160.	J	33.	ug/kg	200.	J
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.		200.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.		80.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.		80.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.		40.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.		80.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.		40.
3765	acenaphthylene	490.		33.	ug/kg	590.	

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Group Leader, GC/MS



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LLI Sample No. SW 2677442
Collected: 3/13/97 at 14:50 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-10 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-10 SDG#: HMS01-07

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

CAT
NO. ANALYSIS NAME

TCL SW846 Semivolatiles/Soil

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED METHOD DETECTION LIMIT UNITS	DRY WEIGHT RESULTS	DRY WEIGHT METHOD DETECTION LIMIT
4697	3-nitroaniline	N.D.	67. ug/kg	N.D.	80.
1191	acenaphthene	N.D.	33. ug/kg	N.D.	40.
3750	2,4-dinitrophenol	N.D.	170. ug/kg	N.D.	200.
1192	4-nitrophenol	N.D.	170. ug/kg	N.D.	200.
4698	dibenzofuran	98. J	33. ug/kg	120. J	40.
1193	2,4-dinitrotoluene	N.D.	67. ug/kg	N.D.	80.
4699	2,6-dinitrotoluene	N.D.	67. ug/kg	N.D.	80.
3770	diethyl phthalate	N.D.	67. ug/kg	N.D.	80.
3769	4-chlorophenyl phenyl ether	N.D.	67. ug/kg	N.D.	80.
3768	fluorene	45. J	33. ug/kg	54. J	40.
4700	4-nitroaniline	N.D.	100. ug/kg	N.D.	120.
4701	4,6-dinitro-2-methylphenol	N.D.	170. ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	67. ug/kg	N.D.	80.
3777	4-bromophenyl phenyl ether	N.D.	100. ug/kg	N.D.	120.
3778	hexachlorobenzene	N.D.	100. ug/kg	N.D.	120.
1195	pentachlorophenol	N.D.	170. ug/kg	N.D.	200.
3775	phenanthrene	430.	33. ug/kg	520.	40.
3776	anthracene	530.	33. ug/kg	630.	40.
4702	carbazole	260. J	33. ug/kg	310. J	40.
3777	di-n-butyl phthalate	110. J	33. ug/kg	130. J	40.
3778	fluoranthene	3,100.	33. ug/kg	3,800.	40.
1195	pyrene	3,500.	67. ug/kg	4,200.	80.
3780	butyl benzyl phthalate	N.D.	67. ug/kg	N.D.	80.
3783	3,3'-dichlorobenzidine	N.D.	130. ug/kg	N.D.	160.
3781	benzo (a) anthracene	2,300.	33. ug/kg	2,800.	40.
3784	bis (2-ethylhexyl) phthalate	N.D.	67. ug/kg	N.D.	80.
3782	chrysene	3,400.	33. ug/kg	4,100.	40.
3785	di-n-octyl phthalate	N.D.	67. ug/kg	N.D.	80.
3786	benzo (b) fluoranthene	5,200.	67. ug/kg	6,300.	80.
3787	benzo (k) fluoranthene	2,300.	130. ug/kg	2,800.	160.
3788	benzo (a) pyrene	2,400.	67. ug/kg	2,900.	80.
3789	indeno (1,2,3-cd) pyrene	2,100.	67. ug/kg	2,500.	80.
3790	dibenz (a,h) anthracene	640.	67. ug/kg	770.	80.
3791	benzo (ghi) perylene	1,800.	67. ug/kg	2,100.	80.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations

2216 Rev 5/01/96





LLI Sample No. SW 2677442

Collected: 3/13/97 at 14:50 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-10 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-10 SDG#: HMS01-07

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Ref.

CAT
 NO. ANALYSIS NAME

AS RECEIVED
 RESULTS METHOD
 DETECTION LIMIT UNITS

DRY WEIGHT
 RESULTS METHOD
 DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Group Leader, GC/MS



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2216 Rev. 5-01-96



LLI Sample No. SW 2677442

Collected: 03/13/97 at 14:50 by DA

Submitted: 03/14/97

SS-10 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-10 SDG#: HMS01-07

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 1042	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 1042	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelaj B. Mehta



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2275 Rev. 5-01-96





LLI Sample No. 2677442
 SS-10 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
692	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2677442
SS-10 0-12" Composite Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene	N.D.		64	67	4	74			1	100
170.	ug/kg									37	144
3749	2,4,6-trichlorophenol	N.D.		78	75	4	84			39	151
67.	ug/kg									60	118
4695	2,4,5-trichlorophenol	N.D.		79	76	5	82			60	118
67.	ug/kg									53	143
3764	2-chloronaphthalene	N.D.		79	75	5	84			53	143
33.	ug/kg									1	112
4696	2-nitroaniline	N.D.		70	66	5	74			1	112
67.	ug/kg									33	145
3766	dimethyl phthalate	N.D.		76	73	4	79			33	145
33.	ug/kg										
3765	acenaphthylene	N.D.		78	74	5	83				
33.	ug/kg										

4689	TCL SW846 Semivolatiles/Soil										
Batch: 97076SLD026											
46	4-nitroaniline	N.D.		51	53	5	55			7	143
67.	ug/kg									47	145
1191	acenaphthene	N.D.		77	73	5	83			1	191
33.	ug/kg									1	132
3750	2,4-dinitrophenol	N.D.		96	92	4	97			1	132
170.	ug/kg									28	131
1192	4-nitrophenol	N.D.		85	82	4	88			28	131
170.	ug/kg									39	139
4698	dibenzofuran	N.D.		78	75	3	82			39	139
33.	ug/kg									50	158
1193	2,4-dinitrotoluene	N.D.		88	85	4	94			50	158
67.	ug/kg									1	114
4699	2,6-dinitrotoluene	N.D.		90	86	4	93			1	114
67.	ug/kg									25	158
3770	diethyl phthalate	N.D.		75	72	3	79			25	158
67.	ug/kg									59	121
3769	4-chlorophenyl phenyl ether	N.D.		75	73	3	80			59	121
67.	ug/kg									38	122
3768	fluorene	N.D.		81	77	5	84			38	122
33.	ug/kg									1	181
4700	4-nitroaniline	N.D.		69	66	4	78			1	181
100.	ug/kg									38	147
4701	4,6-dinitro-2-methylphenol	N.D.		94	90	5	95			38	147
170.	ug/kg									53	127
3772	N-nitrosodiphenylamine	N.D.		72	70	3	79			53	127
67.	ug/kg									1	152
3773	4-bromophenyl phenyl ether	N.D.		75	72	4	78			1	152
100.	ug/kg									14	176
3774	hexachlorobenzene	N.D.		75	71	5	78			14	176
100.	ug/kg										
1194	pentachlorophenol	N.D.		83	79	5	80				
170.	ug/kg										



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LLI Sample No. 2677442
SS-10 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture										
0.080	% by wt.	Batch: 970760316820002A	1				100	100	0	100	101



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LLI Sample No. 2677442
 SS-10 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	61	24	113
	2-F1pheno1	60	25	121
	2,4,6-TBP	69	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	73	23	120
	2-Fbiphnyl	83	30	115
	Tphenyld14	94	18	137



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Lancaster Laboratories

A division of Thermo Analytical Inc.

LLI Sample No. SW 2677443
Collected: 3/13/97 at 13:45 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-7 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-07 SDG#: HMS01-08

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	25.7		0.080	% by wt.	
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
08:52:17 D 0002 14 129915 556869
412 0.00 00033420 ASR000

Respectfully Submitted
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Group Leader, GC/MS Volatiles



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LLI Sample No. SW 2677443

Collected: 3/13/97 at 13:45 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-7 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-07 SDG#: HMS01-08

Account No: 07802
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Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	45.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	90.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	45.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	45.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	45.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	45.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	90.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	130.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	130.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	90.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	90.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	45.
3759	isophorone	N.D.	67.	ug/kg	N.D.	90.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	90.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	90.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	45.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	45.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	45.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	45.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	130.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	90.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	90.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	45.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	220.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	90.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	90.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	45.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	90.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	45.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	45.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



Lancaster Laboratories
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PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax 717-656-2681

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. SW 2677443

Collected: 3/13/97 at 13:45 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-7 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-07 SDG#: HMS01-08

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	90.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	45.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	220.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	220.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	45.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	90.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	90.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	90.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	90.
3768	fluorene	N.D.	33.	ug/kg	N.D.	45.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	130.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	220.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	90.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	130.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	130.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	220.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	45.
3776	anthracene	N.D.	33.	ug/kg	N.D.	45.
4702	carbazole	N.D.	33.	ug/kg	N.D.	45.
3777	di-n-butyl phthalate	46.	J	33.	62.	J
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	45.
1195	pyrene	N.D.	67.	ug/kg	N.D.	90.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	90.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	180.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	45.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	90.
3782	chrysene	N.D.	33.	ug/kg	N.D.	45.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	90.
3786	benzo (b) fluoranthene	N.D.	67.	ug/kg	N.D.	90.
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	180.
3788	benzo (a) pyrene	N.D.	67.	ug/kg	N.D.	90.
3789	indeno (1,2,3-cd) pyrene	N.D.	67.	ug/kg	N.D.	90.
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	90.
3791	benzo (ghi) perylene	N.D.	67.	ug/kg	N.D.	90.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2677443

Collected: 3/13/97 at 13:45 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-7 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-07 SDG#: HMS01-08

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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LLI Sample No. SW 2677443

Collected: 03/13/97 at 13:45 by DA

Submitted: 03/14/97

SS-7 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
 SS-07 SDG#: HMS01-08

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0603	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0603	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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LLI Sample No. 2677443
SS-7 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
4692	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2677443

SS-7 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
191	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96





LLI Sample No. 2677443
SS-7 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture	Batch: 970760316820002A									
0.080	% by wt.		1				100	100	0	100	101



Lancaster Laboratories
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Lancaster, PA 17605-2425
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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2677443
SS-7 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	79	24	113
	2-Flphenol	80	25	121
	2,4,6-TBP	82	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	80	23	120
	2-Fbiphenyl	79	30	115
	Tphenylid14	113	18	137



LLI Sample No. SW 2677444

Collected: 3/13/97 at 14:00 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-5 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-05 SDG#: HMS01-09

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
4688	TCL Semivolatiles			See Page	2		
4689	TCL Semivolatiles cont'd			See Page	3		
0111	Moisture	12.0		0.080	% by wt.		
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

1 COPY TO Michael Pisani & Assoc.
 1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300
 08:54:17 D 0002 14 129915 556869
 412 0.00 00033420 ASR000

Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles



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LLI Sample No. SW 2677444
Collected: 3/13/97 at 14:00 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-5 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-05 SDG#: HMS01-09

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	38.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	76.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	38.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	76.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	110.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	110.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	76.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	76.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	67.	ug/kg	N.D.	76.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	76.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	76.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	38.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	38.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	38.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	110.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	76.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	76.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	38.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	76.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	76.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	38.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	38.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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2216 Rev 5/01.96





LLI Sample No. SW 2677444
 Collected: 3/13/97 at 14:00 by DA

Submitted: 3/14/97 Reported: 3/28/97
 Discard: 4/28/97

SS-5 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
 SS-05 SDG#: HMS01-09

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	76.	
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	38.	
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	190.	
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	190.	
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	38.	
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	76.	
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	76.	
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	76.	
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	76.	
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.	
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	110.	
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.	
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	76.	
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	110.	
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	110.	
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.	
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	38.	
3776	anthracene	N.D.	33.	ug/kg	N.D.	38.	
4702	carbazole	N.D.	33.	ug/kg	N.D.	38.	
3777	di-n-butyl phthalate	55.	J	33.	63.	J	38.
3778	fluoranthene	72.	J	33.	82.	J	38.
1195	pyrene	98.	J	67.	110.	J	76.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	76.	
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	150.	
3781	benzo (a) anthracene	44.	J	33.	50.	J	38.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	76.	
3782	chrysene	78.	J	33.	88.	J	38.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	76.	
3786	benzo (b) fluoranthene	130.	J	67.	140.	J	76.
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	150.	
3788	benzo (a) pyrene	N.D.	67.	ug/kg	N.D.	76.	
3789	indeno (1,2,3-cd) pyrene	N.D.	67.	ug/kg	N.D.	76.	
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	76.	
3791	benzo (ghi) perylene	N.D.	67.	ug/kg	N.D.	76.	

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Group Leader, GC/MS



Lancaster Laboratories
 2425 New Holland Pike
 PO Box 12425
 Lancaster, PA 17605-2425
 717-656-2300 Fax: 717-656-2581

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2677444

Collected: 3/13/97 at 14:00 by DA

Submitted: 3/14/97 Reported: 3/28/97
 Discard: 4/28/97

SS-5 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
 SS-05 SDG#: HMS01-09

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT
 NO. ANALYSIS NAME

AS RECEIVED
 METHOD
 RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
 METHOD
 RESULTS DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
 The result reported for N-nitrosodiphenylamine represents the combined
 total of both compounds.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations

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LLI Sample No. SW 2677444
 Collected: 03/13/97 at 14:00 by DA

Submitted: 03/14/97

SS-5 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
 SS-05 SDG#: HMS01-09

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0744	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0744	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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LLI Sample No. 2677444
SS-5 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
692	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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LLI Sample No. 2677444
SS-5 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									
4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
191	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



Lancaster Laboratories
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LLI Sample No. 2677444
SS-5 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture										
0.080	% by wt.	Batch: 970760316820002A	1				100	100	0	100	101



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See reverse side for explanation of symbols and abbreviations

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LLI Sample No. 2677444
SS-5 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

		SURROGATE SUMMARY		SURROGATE LIMITS	
TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH	
4688 TCL SW846	Semivolatiles Soil	Phenol-d6	77	24	113
		2-Flphenol	75	25	121
		2,4,6-TBP	77	19	122
4689 TCL SW846	Semivolatiles/Soil	Nitrobz-d5	84	23	120
		2-Fbiphenyl	80	30	115
		Tphenyl14	114	18	137





LLI Sample No. SW 2677445

Collected: 3/13/97 at 15:05 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-12 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-12 SDG#: HMS01-10

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
4688	TCL Semivolatiles						See Page 2
4689	TCL Semivolatiles cont'd						See Page 3
0111	Moisture	15.0		0.080		% by wt.	
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.							

1 COPY TO Michael Pisani & Assoc.
 1 COPY TO Data Package Group

ATTN: Mr. David Uptegrove

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300
 08:56:06 D 0002 14 129915 556869
 412 0.00 00033420 ASR000

Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles



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LLI Sample No. SW 2677445
Collected: 3/13/97 at 15:05 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-12 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-12 SDG#: HMS01-10

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	pheno1	N.D.	33.	ug/kg	N.D.	39.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	78.
1186	2-chloropheno1	N.D.	33.	ug/kg	N.D.	39.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
4690	2-methylpheno1	N.D.	67.	ug/kg	N.D.	78.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.
4692	4-methylpheno1	N.D.	100.	ug/kg	N.D.	120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	78.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	78.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	67.	ug/kg	N.D.	78.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	78.
3747	2,4-dimethylpheno1	N.D.	67.	ug/kg	N.D.	78.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	39.
3748	2,4-dichloropheno1	N.D.	33.	ug/kg	N.D.	39.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	39.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	78.
1190	4-chloro-3-methylpheno1	N.D.	67.	ug/kg	N.D.	78.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	39.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.
3749	2,4,6-trichloropheno1	N.D.	67.	ug/kg	N.D.	78.
4695	2,4,5-trichloropheno1	N.D.	67.	ug/kg	N.D.	78.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	39.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	78.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	39.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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LLI Sample No. SW 2677445

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Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-12 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-12 SDG#: HMS01-10

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.		67. ug/kg	N.D.	78.
1191	acenaphthene	N.D.		33. ug/kg	N.D.	39.
3750	2,4-dinitrophenol	N.D.		170. ug/kg	N.D.	200.
1192	4-nitrophenol	N.D.		170. ug/kg	N.D.	200.
4698	dibenzofuran	N.D.		33. ug/kg	N.D.	39.
1193	2,4-dinitrotoluene	N.D.		67. ug/kg	N.D.	78.
4699	2,6-dinitrotoluene	N.D.		67. ug/kg	N.D.	78.
3770	diethyl phthalate	N.D.		67. ug/kg	N.D.	78.
3769	4-chlorophenyl phenyl ether	N.D.		67. ug/kg	N.D.	78.
3768	fluorene	N.D.		33. ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.		100. ug/kg	N.D.	120.
4701	4,6-dinitro-2-methylphenol	N.D.		170. ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.		67. ug/kg	N.D.	78.
3773	4-bromophenyl phenyl ether	N.D.		100. ug/kg	N.D.	120.
3774	hexachlorobenzene	N.D.		100. ug/kg	N.D.	120.
1194	pentachlorophenol	N.D.		170. ug/kg	N.D.	200.
3775	phenanthrene	87.	J	33. ug/kg	100.	J 39.
3776	anthracene	N.D.		33. ug/kg	N.D.	39.
4702	carbazole	N.D.		33. ug/kg	N.D.	39.
3777	di-n-butyl phthalate	57.	J	33. ug/kg	67.	J 39.
3778	fluoranthene	390.		33. ug/kg	460.	39.
1195	pyrene	480.		67. ug/kg	560.	78.
3780	butyl benzyl phthalate	N.D.		67. ug/kg	N.D.	78.
3783	3,3'-dichlorobenzidine	N.D.		130. ug/kg	N.D.	160.
3781	benzo (a) anthracene	220.	J	33. ug/kg	260.	J 39.
3784	bis (2-ethylhexyl) phthalate	N.D.		67. ug/kg	N.D.	78.
3782	chrysene	320.	J	33. ug/kg	380.	J 39.
3785	di-n-octyl phthalate	N.D.		67. ug/kg	N.D.	78.
3786	benzo (b) fluoranthene	540.		67. ug/kg	630.	78.
3787	benzo (k) fluoranthene	190.	J	130. ug/kg	220.	J 160.
3788	benzo (a) pyrene	210.	J	67. ug/kg	250.	J 78.
3789	indeno (1,2,3-cd) pyrene	250.	J	67. ug/kg	290.	J 78.
3790	dibenz (a,h) anthracene	N.D.		67. ug/kg	N.D.	78.
3791	benzo (ghi) perylene	200.	J	67. ug/kg	240.	J 78.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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Lancaster Laboratories

A division of Thermo Analytical Inc.

LLI Sample No. SW 2677445

Collected: 3/13/97 at 15:05 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-12 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-12 SDG#: HMS01-10

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

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AS RECEIVED

DRY WEIGHT

CAT
NO. ANALYSIS NAME

RESULTS METHOD
DETECTION LIMIT UNITS

RESULTS METHOD
DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2677445

Collected: 03/13/97 at 15:05 by DA

Submitted: 03/14/97

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

SS-12 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-12 SDG#: HMS01-10

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0142	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0142	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neeley B. Mehta



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LLI Sample No. 2677445
 SS-12 0-12" Composite Soil Sample

Gulf States Creosoting; Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4688	TCL SWB46 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
392	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
88	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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2215 Rev 5/01/96



LLI Sample No. 2677445
SS-12 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									
4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
191	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
50	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



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2216 Rev. 5-01-96





LLI Sample No. 2677445
SS-12 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture	Batch: 970760316820002A									
0.080	% by wt.		1				100	100	0	100	101



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LLI Sample No. 2677445
SS-12 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	69	24	113
	2-F1phenol	66	25	121
	2,4,6-TBP	58	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	75	23	120
	2-Fbiphenyl	77	30	115
	Tphenylid14	90	18	137



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LLI Sample No. SW 2677446

Collected: 3/13/97 at 13:45 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-27 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-27 SDG#: HMS01-11

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
4688	TCL Semivolatiles						See Page 2
4689	TCL Semivolatiles cont'd						See Page 3
0111	Moisture	23.2		0.080		% by wt.	
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.							

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Uptegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
08:58:20 D 0002 14 129915 556869
412 0.00 00033420 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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2216 Rev 5/01/96



LLI Sample No. SW 2677446

Collected: 3/13/97 at 13:45 by DA

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SS-27 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-27 SDG#: HMS01-11

Account No: 07802
Kerr-McGee Corporation
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P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles Soil							
1185	phenol	N.D.	33.	ug/kg	N.D.	43.	
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	87.	
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	43.	
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	43.	
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	43.	
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	43.	
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	87.	
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	130.	
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	130.	
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	87.	
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	87.	
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	43.	
3759	isophorone	N.D.	67.	ug/kg	N.D.	87.	
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	87.	
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	87.	
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	43.	
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	43.	
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	43.	
3761	naphthalene	N.D.	33.	ug/kg	N.D.	43.	
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	130.	
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	87.	
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	87.	
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	43.	
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	220.	
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	87.	
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	87.	
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	43.	
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	87.	
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	43.	
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	43.	

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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2216 Rev. 5.01.06



LLI Sample No. SW 2677446

Collected: 3/13/97 at 13:45 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-27 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-27 SDG#: HMS01-11

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	87.	
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	43.	
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	220.	
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	220.	
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	43.	
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	87.	
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	87.	
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	87.	
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	87.	
3768	fluorene	N.D.	33.	ug/kg	N.D.	43.	
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	130.	
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	220.	
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	87.	
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	130.	
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	130.	
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	220.	
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	43.	
3776	anthracene	N.D.	33.	ug/kg	N.D.	43.	
4702	carbazole	N.D.	33.	ug/kg	N.D.	43.	
3777	di-n-butyl phthalate	44.	J	33.	58.	J	43.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	43.	
1195	pyrene	N.D.	67.	ug/kg	N.D.	87.	
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	87.	
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	170.	
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	43.	
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	87.	
3782	chrysene	N.D.	33.	ug/kg	N.D.	43.	
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	87.	
3786	benzo (b) fluoranthene	N.D.	67.	ug/kg	N.D.	87.	
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	170.	
3788	benzo (a) pyrene	N.D.	67.	ug/kg	N.D.	87.	
3789	indeno (1,2,3-cd) pyrene	N.D.	67.	ug/kg	N.D.	87.	
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	87.	
3791	benzo (ghi) perylene	N.D.	67.	ug/kg	N.D.	87.	

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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2216 Rev 5/01/96



LLI Sample No. SW 2677446

Collected: 3/13/97 at 13:45 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-27 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-27 SDG#: HMS01-11

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
--

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



Lancaster Laboratories
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PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax 717-656-2681

See reverse side for explanation of symbols and abbreviations

2216 Rev 5/01/90





LLI Sample No. SW 2677446

Collected: 03/13/97 at 13:45 by DA

Submitted: 03/14/97

SS-27 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
 SS-27 SDG#: HMS01-11

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Wanda F. Oswald
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0001	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0001	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2677446

SS-27 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
4692	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
4698	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2677446
SS-27 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
91	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2677446
 SS-27 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS LIMITS HIGH
3775	phenanthrene										
	33. ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
	33. ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
	33. ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
	33. ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
	33. ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
	67. ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
	130. ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
	33. ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		73	71	3	81			8	158
782	chrysene										
	33. ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
	67. ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
	130. ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
	67. ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
	67. ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
	67. ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
	67. ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture	Batch: 970760316820002A									
	0.080 % by wt.		1				100	100	0	100	101



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2216 Rev. 5/01 96



LLI Sample No. 2677446
SS-27 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	74	24	113
	2-Flpheno1	71	25	121
	2,4,6-TBP	66	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	86	23	120
	2-Fbiphy1	86	30	115
	Tphenyld14	99	18	137



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221b Rev 5 01 96





Lancaster Laboratories

A division of Thermo Analytical Inc.

LLI Sample No. SW 2677447

Collected: 3/13/97 at 16:08 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-3 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-03 SDG#: HMS01-12

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ret.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	14.0	0.080	% by wt.		
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
09:00:46 D 0002 14 129915 556869
412 0.00 00033420 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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LLI Sample No. SW 2677447
 Collected: 3/13/97 at 16:08 by DA

Submitted: 3/14/97 Reported: 3/28/97
 Discard: 4/28/97

SS-3 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
 SS-03 SDG#: HMS01-12

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
			DETECTION LIMIT	UNITS	DETECTION LIMIT	
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	39.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	78.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	39.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	78.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	78.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	78.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	67.	ug/kg	N.D.	78.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	78.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	78.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	39.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	39.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	39.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	78.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	78.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	39.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	78.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	78.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	39.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	78.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	39.
3765	acenaphthylene	37.	J	33.	43.	J

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Group Leader, GC/MS



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LLI Sample No. SW 2677447

Collected: 3/13/97 at 16:08 by DA

Submitted: 3/14/97 Reported: 3/28/97

Discard: 4/28/97

SS-3 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-03 SDG#: HMS01-12

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.		67. ug/kg	N.D.	78.
1191	acenaphthene	N.D.		33. ug/kg	N.D.	39.
3750	2,4-dinitrophenol	N.D.		170. ug/kg	N.D.	190.
1192	4-nitrophenol	N.D.		170. ug/kg	N.D.	190.
4698	dibenzofuran	N.D.		33. ug/kg	N.D.	39.
1193	2,4-dinitrotoluene	N.D.		67. ug/kg	N.D.	78.
4699	2,6-dinitrotoluene	N.D.		67. ug/kg	N.D.	78.
3770	diethyl phthalate	N.D.		67. ug/kg	N.D.	78.
3769	4-chlorophenyl phenyl ether	N.D.		67. ug/kg	N.D.	78.
3768	fluorene	N.D.		33. ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.		100. ug/kg	N.D.	120.
4701	4,6-dinitro-2-methylphenol	N.D.		170. ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.		67. ug/kg	N.D.	78.
3773	4-bromophenyl phenyl ether	N.D.		100. ug/kg	N.D.	120.
3774	hexachlorobenzene	N.D.		100. ug/kg	N.D.	120.
1194	pentachlorophenol	N.D.		170. ug/kg	N.D.	190.
3775	phenanthrene	91.	J	33. ug/kg	110.	J 39.
3776	anthracene	41.	J	33. ug/kg	48.	J 39.
4702	carbazole	N.D.		33. ug/kg	N.D.	39.
3777	di-n-butyl phthalate	51.	J	33. ug/kg	59.	J 39.
3778	fluoranthene	420.		33. ug/kg	480.	39.
1195	pyrene	640.		67. ug/kg	750.	78.
3780	butyl benzyl phthalate	N.D.		67. ug/kg	N.D.	78.
3783	3,3'-dichlorobenzidine	N.D.		130. ug/kg	N.D.	160.
3781	benzo (a) anthracene	400.		33. ug/kg	470.	39.
3784	bis (2-ethylhexyl) phthalate	N.D.		67. ug/kg	N.D.	78.
3782	chrysene	620.		33. ug/kg	730.	39.
3785	di-n-octyl phthalate	N.D.		67. ug/kg	N.D.	78.
3786	benzo (b) fluoranthene	1,200.		67. ug/kg	1,400.	78.
3787	benzo (k) fluoranthene	430.		130. ug/kg	500.	160.
3788	benzo (a) pyrene	420.		67. ug/kg	490.	78.
3789	indeno (1,2,3-cd) pyrene	470.		67. ug/kg	540.	78.
3790	dibenz (a,h) anthracene	140.	J	67. ug/kg	160.	J 78.
3791	benzo (ghi) perylene	340.		67. ug/kg	400.	78.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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2216 Rev 5.01-96



LLI Sample No. SW 2677447

Collected: 3/13/97 at 16:08 by DA

Submitted: 3/14/97 Reported: 3/28/97
Discard: 4/28/97

SS-3 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-03 SDG#: HMS01-12

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846	Semivolatiles/Soil						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
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Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS

MEMBER
ACIL
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See reverse side for explanation of symbols and abbreviations



LLI Sample No. SW 2677447

Collected: 03/13/97 at 16:08 by DA

Submitted: 03/14/97

SS-3 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-03 SDG#: HMS01-12

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Wanda F. Oswald
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0233	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0233	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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LLI Sample No. 2677447
 SS-3 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									
1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
692	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations

2216 Rev 5/01/96





LLI Sample No. 2677447
SS-3 0-12" Composite Soil Sample

Gulf States Creosoting; Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
191	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



LLI Sample No. 2677447
SS-3 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture										
0.080	% by wt.	Batch: 970760316820002A	1				100	100	0	100	101



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96





LLI Sample No. 2677447
 SS-3 0-12" Composite Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556869
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846	Semivolatiles Soil			
	Phenol-d6	83	24	113
	2-Flphenol	78	25	121
	2,4,6-TBP	65	19	122
4689 TCL SW846	Semivolatiles/Soil			
	Nitrobz-d5	91	23	120
	2-Fbiphenyl	90	30	115
	Tphenylid14	108	18	137



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See reverse side for explanation of symbols and abbreviations





Lancaster Laboratories
A Division of Thermo Analytical, Inc.

For Lancaster Laboratories use only
Acct. # 780 Sample # 0677434-47

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: Kerr McGee Acct. #: _____
 Project Name: Gulf States Cracking PWSID #: _____
 Project Manager: Dave Upmeyer P.O. #: _____
 Sampler: Dave Angle Quote #: _____
 Name of state where samples were collected: Mississippi

FSC: _____
 SCR #: 10946

3

4

Sample ID	Normal	Rush	Relinquished by:	Date	Time	Received by:	Date	Time
SS-12 0-12"	X		<u>[Signature]</u>	9/27	1100	<u>[Signature]</u>	3/19/17	1505
SS-27 0-12"	X		<u>[Signature]</u>	3/13/17	0700	<u>[Signature]</u>	3/13/17	1345
SS-3 0-12"	X		<u>[Signature]</u>	3/13/17	1608	<u>[Signature]</u>	3/13/17	1608

5

6

TCL Samples

7 Turnaround Time Requested (TAT) (please circle): Normal Rush
 (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
 Date results are needed: _____
 Rush results are requested by (please circle): Phone Fax
 Phone #: _____ Fax #: _____

8 Data Package Options (please circle if requested) SDG Complete? Yes No
 Type I (Tier I) Type VI (Raw Data)
 Type I (Tier II) GLP
 Type II (Tier II) Other
 Type III (NJ Red. Del.) Site-specific QC required? Yes No
 (If yes, indicate QC sample and submit triplicate volume.)
 Type IV (CLP) Internal Chain of Custody required? Yes No



LLI Sample No. SW 2678197

Collected: 3/14/97 at 10:17 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-1 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-1- SDG#: HMS01-13

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	12.4		0.080	% by wt.	
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Michael Pisani & Assoc.
 1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300
 09:07:03 D 0002 9 129915 557010
 412 0.00 00033420 ASR000



Lancaster Laboratories
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Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles



LLI Sample No. SW 2678197

Collected: 3/14/97 at 10:17 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-1 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-1- SDG#: HMS01-13

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	38.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	76.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	38.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	76.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	110.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	110.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	76.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	76.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	67.	ug/kg	N.D.	76.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	76.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	76.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	38.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	38.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	38.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	110.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	76.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	76.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	38.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	76.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	76.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	38.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	38.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS





LLI Sample No. SW 2678197
Collected: 3/14/97 at 10:17 by FS

Submitted: 3/15/97 Reported: 3/28/97
Discard: 4/28/97

SS-1 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-1- SDG#: HMS01-13

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.		76.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.		38.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.		190.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.		190.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.		38.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.		76.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.		76.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.		76.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.		76.
3768	fluorene	N.D.	33.	ug/kg	N.D.		38.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.		110.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.		190.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.		76.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.		110.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.		110.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.		190.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.		38.
3776	anthracene	67.	J	33.	77.	J	38.
4702	carbazole	N.D.	33.	ug/kg	N.D.		38.
3777	di-n-butyl phthalate	38.	J	33.	44.	J	38.
3778	fluoranthene	480.		33.	550.		38.
1195	pyrene	830.		67.	950.		76.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.		76.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.		150.
3781	benzo (a) anthracene	540.		33.	620.		38.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.		76.
3782	chrysene	930.		33.	1,100.		38.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.		76.
3786	benzo (b) fluoranthene	2,200.		67.	2,500.		76.
3787	benzo (k) fluoranthene	650.		130.	740.		150.
3788	benzo (a) pyrene	410.		67.	470.		76.
3789	indeno (1,2,3-cd) pyrene	460.		67.	530.		76.
3790	dibenz (a,h) anthracene	160.	J	67.	180.	J	76.
3791	benzo (ghi) perylene	240.	J	67.	270.	J	76.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. SW 2678197

Collected: 3/14/97 at 10:17 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-1 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-1- SDG#: HMS01-13

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2678197

Collected: 03/14/97 at 10:17 by FS

Submitted: 03/15/97

SS-1 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-1- SDG#: HMS01-13

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Wanda F. Oswald
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0416	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0416	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2678197
 SS-1 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
692	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2678197

SS-1 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
191	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2678197
 SS-1 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture	Batch: 970760316820002A	1				100	100	0	100	101
	0.080 % by wt.										



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2678197
SS-1 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846	Semivolatiles Soil			
	Pheno1-d6	85	24	113
	2-F1pheno1	87	25	121
	2,4,6-TBP	68	19	122
4689 TCL SW846	Semivolatiles/Soil			
	Nitrobz-d5	97	23	120
	2-Fbiphenyl	88	30	115
	Tphenylid14	101	18	137



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LLI Sample No. SW 2678198

Collected: 3/14/97 at 09:55 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-15 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-15 SDG#: HMS01-14

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	12.6		0.080	% by wt.	
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
09:09:09 D 0002 9 129915 557010
412 0.00 00033420 ASR000



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





LLI Sample No. SW 2678198

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SS-15 0-12" Grab Soil Sample

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SS-15 SDG#: HMS01-14

Account No: 07802
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 Technology Center
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 Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	38.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	76.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	38.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	76.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	110.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	110.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	76.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	76.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	67.	ug/kg	N.D.	76.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	76.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	76.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	38.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	38.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	38.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	110.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	76.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	76.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	38.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	76.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	76.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	38.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	38.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Group Leader, GC/MS



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LLI Sample No. SW 2678198

Collected: 3/14/97 at 09:55 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-15 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-15 SDG#: HMS01-14

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	38.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	190.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	190.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	38.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	76.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	76.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	76.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	110.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	76.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	110.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	110.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	38.
3776	anthracene	N.D.	33.	ug/kg	N.D.	38.
4702	carbazole	N.D.	33.	ug/kg	N.D.	38.
3777	di-n-butyl phthalate	40.	J	33.	45.	J
3778	fluoranthene	120.	J	33.	140.	J
1195	pyrene	120.	J	67.	140.	J
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	150.
3781	benzo (a) anthracene	56.	J	33.	64.	J
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	76.
3782	chrysene	110.	J	33.	130.	J
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3786	benzo (b) fluoranthene	190.	J	67.	220.	J
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	150.
3788	benzo (a) pyrene	N.D.	67.	ug/kg	N.D.	76.
3789	indeno (1,2,3-cd) pyrene	86.	J	67.	98.	J
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	76.
3791	benzo (ghi) perylene	80.	J	67.	92.	J

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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LLI Sample No. SW 2678198

Collected: 3/14/97 at 09:55 by FS

Submitted: 3/15/97 Reported: 3/28/97
Discard: 4/28/97

SS-15 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-15 SDG#: HMS01-14

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD	DETECTION LIMIT
TCL SW846	Semivolatiles/Soil						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.

Questions? Contact your Client Services Representative
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Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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LLI Sample No. SW 2678198

Collected: 03/14/97 at 09:55 by FS

Submitted: 03/15/97

SS-15 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-15 SDG#: HMS01-14

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Wanda F. Oswald
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0052	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0052	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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2216 Rev. 5/01/96





LLI Sample No. 2678198

SS-15 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									
1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
.92	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96



LLI Sample No. 2678198
SS-15 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
191	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2678198
 SS-15 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture	Batch: 970760316820002A									
0.080	% by wt.		1				100	100	0	100	101



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2678198
SS-15 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	79	24	113
	2-Flphenol	75	25	121
	2,4,6-TBP	64	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	87	23	120
	2-Fbiphenyl	85	30	115
	Tphenylid14	100	18	137



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2678199

Collected: 3/14/97 at 08:55 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-14 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-14 SDG#: HMS01-15

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	16.1	0.080	% by wt.		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
09:12:20 D 0002 9 129915 557010
412 0.00 00033420 ASR000



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



LLI Sample No. SW 2678199

Collected: 3/14/97 at 08:55 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-14 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-14 SDG#: HMS01-15

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	40.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	79.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	40.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	79.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	79.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	79.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	40.
3759	isophorone	N.D.	67.	ug/kg	N.D.	79.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	79.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	79.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	40.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	40.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	40.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	79.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	79.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	40.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	79.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	79.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	40.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	40.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	40.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



LLI Sample No. SW 2678199
Collected: 3/14/97 at 08:55 by FS

Submitted: 3/15/97 Reported: 3/28/97
Discard: 4/28/97

SS-14 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-14 SDG#: HMS01-15

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	40.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	200.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	40.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	79.
3768	fluorene	N.D.	33.	ug/kg	N.D.	40.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	120.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	79.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	120.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	120.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	40.
3776	anthracene	N.D.	33.	ug/kg	N.D.	40.
4702	carbazole	N.D.	33.	ug/kg	N.D.	40.
3777	di-n-butyl phthalate	42.	J	33.	50.	J
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	40.
1195	pyrene	N.D.	67.	ug/kg	N.D.	79.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	160.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	40.
3784	bis (2-ethylhexyl) phthalate	230.	J	67.	270.	J
3782	chrysene	N.D.	33.	ug/kg	N.D.	40.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3786	benzo (b) fluoranthene	N.D.	67.	ug/kg	N.D.	79.
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	160.
3788	benzo (a) pyrene	N.D.	67.	ug/kg	N.D.	79.
3789	indeno (1,2,3-cd) pyrene	N.D.	67.	ug/kg	N.D.	79.
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	79.
3791	benzo (ghi) perylene	N.D.	67.	ug/kg	N.D.	79.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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2216 Rev. 5/01/96





LLI Sample No. SW 2678199
Collected: 3/14/97 at 08:55 by FS
Submitted: 3/15/97 Reported: 3/28/97
Discard: 4/28/97
SS-14 0-12" Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS
SS-14 SDG#: HMS01-15

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846	Semivolatiles/Soil				

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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LLI Sample No. SW 2678199

Collected: 03/14/97 at 08:55 by FS

Submitted: 03/15/97

SS-14 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-14 SDG#: HMS01-15

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Wanda F. Oswald
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0653	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0653	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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LLI Sample No. 2678199

SS-14 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
92	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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See reverse side for explanation of symbols and abbreviations



LLI Sample No. 2678199
SS-14 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenoI										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenoI										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
91	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenoI										
170.	ug/kg	N.D.		83	79	5	80			14	176



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2678199
SS-14 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture	Batch: 970760316820002A									
0.080	% by wt.		1				100	100	0	100	101



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01.96





LLI Sample No. 2678199
 SS-14 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	81	24	113
	2-Flphenol	77	25	121
	2,4,6-TBP	69	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	89	23	120
	2-Fbiphenyl	94	30	115
	Tphenyl14	112	18	137



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2216 Rev 5/01/96



LLI Sample No. SW 2678200

Collected: 3/14/97 at 09:10 by FS

Submitted: 3/15/97 Reported: 3/28/97
Discard: 4/28/97

SS-13 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-13 SDG#: HMS01-16

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
--

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
4688	TCL Semivolatiles						See Page 2
4689	TCL Semivolatiles cont'd						See Page 3
0111	Moisture	16.5		0.080		% by wt.	
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.							

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300
 09:15:06 D 0002 9 129915 557010
 412 0.00 00033420 ASR000



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Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles





LLI Sample No. SW 2678200
Collected: 3/14/97 at 09:10 by FS

Submitted: 3/15/97 Reported: 3/28/97
Discard: 4/28/97

SS-13 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-13 SDG#: HMS01-16

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	40.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	80.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	40.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	80.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	80.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	80.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	40.
3759	isophorone	N.D.	67.	ug/kg	N.D.	80.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	80.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	80.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	40.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	40.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	40.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	80.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	80.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	40.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	80.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	80.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	40.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	80.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	40.
3765	acenaphthylene	88.	J	33.	100.	J 40.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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LLI Sample No. SW 2678200

Collected: 3/14/97 at 09:10 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-13 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-13 SDG#: HMS01-16

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	80.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	40.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	200.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	40.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	80.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	80.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	80.
3768	fluorene	N.D.	33.	ug/kg	N.D.	40.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	120.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	80.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	120.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	120.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.
3775	phenanthrene	170.	J	33.	200.	J
3776	anthracene	120.	J	33.	140.	J
4702	carbazole	61.	J	33.	73.	J
3777	di-n-butyl phthalate	36.	J	33.	43.	J
3778	fluoranthene	1,400.		33.	1,600.	
1195	pyrene	1,800.		67.	2,200.	
3780	butyl benzyl phthalate	N.D.		67.	N.D.	
3783	3,3'-dichlorobenzidine	N.D.		130.	N.D.	
3781	benzo (a) anthracene	1,100.		33.	1,400.	
3784	bis (2-ethylhexyl) phthalate	N.D.		67.	N.D.	
3782	chrysene	1,700.		33.	2,000.	
3785	di-n-octyl phthalate	N.D.		67.	N.D.	
3786	benzo (b) fluoranthene	3,900.		67.	4,600.	
3787	benzo (k) fluoranthene	1,200.		130.	1,500.	
3788	benzo (a) pyrene	1,400.		67.	1,700.	
3789	indeno (1,2,3-cd) pyrene	950.		67.	1,100.	
3790	dibenz (a,h) anthracene	280.	J	67.	330.	J
3791	benzo (ghi) perylene	700.		67.	840.	

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2678200

Collected: 3/14/97 at 09:10 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-13 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-13 SDG#: HMS01-16

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT
 NO. ANALYSIS NAME

AS RECEIVED
 METHOD
 RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
 METHOD
 RESULTS DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
 The result reported for N-nitrosodiphenylamine represents the combined
 total of both compounds.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Group Leader, GC/MS



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LLI Sample No. SW 2678200

Collected: 03/14/97 at 09:10 by FS

Submitted: 03/15/97

SS-13 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-13 SDG#: HMS01-16

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
--

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Wanda F. Oswald
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0508	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0508	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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2216 Rev 5/01/96





LLI Sample No. **2678200**
 SS-13 0-12" Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									
1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
692	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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LLI Sample No. 2678200
 SS-13 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
91	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



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See reverse side for explanation of symbols and abbreviations



LLI Sample No. 2678200
SS-13 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture	Batch: 970760316820002A									
0.080	% by wt.		1				100	100	0	100	101



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2678200
SS-13 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	77	24	113
	2-Flphenol	76	25	121
	2,4,6-TBP	65	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	85	23	120
	2-Fbiphenyl	87	30	115
	Tphenyld14	79	18	137



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/95





LLI Sample No. SW 2678201

Collected: 3/14/97 at 10:45 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-18 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-18 SDG#: HMS01-17

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	11.5	0.080	% by wt.		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
09:24:19 D 0002 9 129915 557010
412 0.00 00033420 ASR000



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





LLI Sample No. SW 2678201
Collected: 3/14/97 at 10:45 by FS

Submitted: 3/15/97 Reported: 3/28/97
Discard: 4/28/97

SS-18 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-18 SDG#: HMS01-17

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles Soil							
1185	phenol	N.D.	33.	ug/kg	N.D.	38.	
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	75.	
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	38.	
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.	
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.	
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.	
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	75.	
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	110.	
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	110.	
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	75.	
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	75.	
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.	
3759	isophorone	N.D.	67.	ug/kg	N.D.	75.	
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	75.	
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	75.	
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	38.	
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	38.	
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	38.	
3761	naphthalene	47.	J	33.	53.	J	38.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	110.	
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	75.	
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	75.	
4694	2-methylnaphthalene	50.	J	33.	56.	J	38.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.	
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	75.	
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	75.	
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	38.	
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	75.	
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	38.	
3765	acenaphthylene	230.	J	33.	260.	J	38.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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LLI Sample No. SW 2678201
Collected: 3/14/97 at 10:45 by FS

Submitted: 3/15/97 Reported: 3/28/97
Discard: 4/28/97

SS-18 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-18 SDG#: HMS01-17

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	N.D.		67.	ug/kg	N.D.	75.
1191	acenaphthene	47.	J	33.	ug/kg	53.	J 38.
3750	2,4-dinitrophenol	N.D.		170.	ug/kg	N.D.	190.
1192	4-nitrophenol	N.D.		170.	ug/kg	N.D.	190.
4698	dibenzofuran	75.	J	33.	ug/kg	84.	J 38.
1193	2,4-dinitrotoluene	N.D.		67.	ug/kg	N.D.	75.
4699	2,6-dinitrotoluene	N.D.		67.	ug/kg	N.D.	75.
3770	diethyl phthalate	N.D.		67.	ug/kg	N.D.	75.
3769	4-chlorophenyl phenyl ether	N.D.		67.	ug/kg	N.D.	75.
3768	fluorene	88.	J	33.	ug/kg	99.	J 38.
4700	4-nitroaniline	N.D.		100.	ug/kg	N.D.	110.
4701	4,6-dinitro-2-methylphenol	N.D.		170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	82.	J	67.	ug/kg	93.	J 75.
3773	4-bromophenyl phenyl ether	N.D.		100.	ug/kg	N.D.	110.
3774	hexachlorobenzene	N.D.		100.	ug/kg	N.D.	110.
1194	pentachlorophenol	N.D.		170.	ug/kg	N.D.	190.
3775	phenanthrene	1,300.		33.	ug/kg	1,500.	38.
3776	anthracene	220.	J	33.	ug/kg	250.	J 38.
4702	carbazole	280.	J	33.	ug/kg	320.	J 38.
3777	di-n-butyl phthalate	100.	J	33.	ug/kg	110.	J 38.
3778	fluoranthene	3,200.		33.	ug/kg	3,600.	38.
1195	pyrene	2,400.		67.	ug/kg	2,700.	75.
3780	butyl benzyl phthalate	N.D.		67.	ug/kg	N.D.	75.
3783	3,3'-dichlorobenzidine	N.D.		130.	ug/kg	N.D.	150.
3781	benzo (a) anthracene	1,100.		33.	ug/kg	1,200.	38.
3784	bis (2-ethylhexyl) phthalate	78.	J	67.	ug/kg	88.	J 75.
3782	chrysene	1,700.		33.	ug/kg	1,900.	38.
3785	di-n-octyl phthalate	N.D.		67.	ug/kg	N.D.	75.
3786	benzo (b) fluoranthene	2,100.		67.	ug/kg	2,400.	75.
3787	benzo (k) fluoranthene	800.		130.	ug/kg	910.	150.
3788	benzo (a) pyrene	990.		67.	ug/kg	1,100.	75.
3789	indeno (1,2,3-cd) pyrene	700.		67.	ug/kg	790.	75.
3790	dibenz (a,h) anthracene	210.	J	67.	ug/kg	240.	J 75.
3791	benzo (ghi) perylene	750.		67.	ug/kg	850.	75.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. SW 2678201
Collected: 3/14/97 at 10:45 by FS

Submitted: 3/15/97 Reported: 3/28/97
Discard: 4/28/97

SS-18 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-18 SDG#: HMS01-17

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
RESULTS METHOD DETECTION LIMIT UNITS

DRY WEIGHT
RESULTS METHOD DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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2216 Rev 5/01/96





LLI Sample No. SW 2678201

Collected: 03/14/97 at 10:45 by FS

Submitted: 03/15/97

SS-18 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-18 SDG#: HMS01-17

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Wanda F. Oswald
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0939	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0939	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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LLI Sample No. 2678201
 SS-18 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
692	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96



LLI Sample No. 2678201
SS-18 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
191	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96





LLI Sample No. 2678201
 SS-18 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture	Batch: 970760316820002A									
0.080	% by wt.		1				100	100	0	100	101



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 Lancaster, PA 17605-2425
 717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2678201
SS-18 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

		SURROGATE SUMMARY		SURROGATE LIMITS	
TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH	
4688 TCL SW846	Semivolatiles Soil	Pheno1-d6	68	24	113
		2-F1pheno1	64	25	121
		2,4,6-TBP	74	19	122
4689 TCL SW846	Semivolatiles/Soil	Nitrobz-d5	85	23	120
		2-Fbiphnyl	87	30	115
		Tphenyld14	84	18	137



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LLI Sample No. SW 2678202

Collected: 3/14/97 at 09:43 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-2 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-2. SDG#: HMS01-18

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	9.94	0.080	% by wt.		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
09:29:04 D 0002 9 129915 557010
412 0.00 00033420 ASR000



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



LLI Sample No. SW 2678202

Collected: 3/14/97 at 09:43 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-2 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-2- SDG#: HMS01-18

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	37.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	74.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	37.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	74.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	110.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	110.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	74.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	74.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	37.
3759	isophorone	N.D.	67.	ug/kg	N.D.	74.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	74.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	74.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	37.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	37.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	37.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	110.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	74.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	74.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	37.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	74.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	74.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	37.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	74.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	37.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	37.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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2216 Rev 5/01/96





LLI Sample No. SW 2678202

Collected: 3/14/97 at 09:43 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-2 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-2- SDG#: HMS01-18

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	74.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	37.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	190.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	190.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	37.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	74.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	74.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	74.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	74.
3768	fluorene	N.D.	33.	ug/kg	N.D.	37.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	110.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	74.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	110.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	110.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	37.	J	33.	41.	J
3776	anthracene	N.D.	33.	ug/kg	N.D.	37.
4702	carbazole	N.D.	33.	ug/kg	N.D.	37.
3777	di-n-butyl phthalate	59.	J	33.	66.	J
3778	fluoranthene	66.	J	33.	73.	J
1195	pyrene	200.	J	67.	220.	J
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	74.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	150.
3781	benzo (a) anthracene	41.	J	33.	45.	J
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	74.
3782	chrysene	62.	J	33.	69.	J
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	74.
3786	benzo (b) fluoranthene	110.	J	67.	120.	J
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	150.
3788	benzo (a) pyrene	220.	J	67.	240.	J
3789	indeno (1,2,3-cd) pyrene	96.	J	67.	110.	J
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	74.
3791	benzo (ghi) perylene	740.		67.	820.	74.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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LLI Sample No. SW 2678202

Collected: 3/14/97 at 09:43 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-2 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-2- SDG#: HMS01-18

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
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Respectfully Submitted
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Group Leader, GC/MS



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2216 Rev. 5/01/96



LLI Sample No. SW 2678202

Collected: 03/14/97 at 09:43 by FS

Submitted: 03/15/97

SS-2 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-2- SDG#: HMS01-18

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
--

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Wanda F. Oswald
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0325	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0325	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Nee'ay B. Mehta



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2216 Rev 5/01/96





LLI Sample No. 2678202
 SS-2 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
392	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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2216 Rev 5/01/96





LLI Sample No. 2678202

SS-2 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
191	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



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2216 Rev. 5/01/96



LLI Sample No. 2678202
SS-2 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture	Batch: 970760316820002A									
0.080	% by wt.		1				100	100	0	100	101



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2216 Rev 5/01/96



LLI Sample No. 2678202
SS-2 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	80	24	113
	2-Flpheno1	76	25	121
	2,4,6-TBP	65	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	88	23	120
	2-Fbiphnyl	88	30	115
	Tphenylid14	91	18	137



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2216 Rev 5-01-96



LLI Sample No. SW 2678203

Collected: 3/14/97 at 10:35 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-17 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-17 SDG#: HMS01-19

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
--

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Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	15.6		0.080	% by wt.	
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300
 09:32:15 D 0002 9 129915 557010
 412 0.00 00033420 ASR000



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Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles





LLI Sample No. SW 2678203
Collected: 3/14/97 at 10:35 by FS

Submitted: 3/15/97 Reported: 3/28/97
Discard: 4/28/97

SS-17 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-17 SDG#: HMS01-19

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles Soil							
1185	pheno1	N.D.	33.	ug/kg	N.D.	39.	
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	79.	
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	39.	
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.	
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.	
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.	
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	79.	
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.	
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	120.	
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	79.	
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	79.	
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.	
3759	isophorone	N.D.	67.	ug/kg	N.D.	79.	
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	79.	
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	79.	
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	39.	
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	39.	
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	39.	
3761	naphthalene	N.D.	33.	ug/kg	N.D.	39.	
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.	
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	79.	
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	79.	
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	39.	
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.	
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	79.	
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	79.	
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	39.	
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	79.	
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	39.	
3765	acenaphthylene	120.	J	33.	150.	J	39.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681



LLI Sample No. SW 2678203

Collected: 3/14/97 at 10:35 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-17 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-17 SDG#: HMS01-19

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	39.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	200.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.
4698	dibenzofuran	36.	J	33.	42.	J
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	39.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	79.
3768	fluorene	N.D.	33.	ug/kg	N.D.	79.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	39.
4701	4,6-dinitro-2-methylphenol	N.D.	100.	ug/kg	N.D.	120.
3772	N-nitrosodiphenylamine	N.D.	170.	ug/kg	N.D.	200.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	79.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	120.
1194	pentachlorophenol	N.D.	100.	ug/kg	N.D.	120.
3775	phenanthrene	N.D.	170.	ug/kg	N.D.	200.
3776	anthracene	130.	J	33.	150.	J
4702	carbazole	120.	J	33.	150.	J
3777	di-n-butyl phthalate	46.	J	33.	55.	J
3778	fluoranthene	99.	J	33.	120.	J
1195	pyrene	680.		33.	800.	
3780	butyl benzyl phthalate	1,000.		67.	1,200.	
3783	3,3'-dichlorobenzidine	N.D.		67.	N.D.	
3781	benzo (a) anthracene	N.D.		130.	N.D.	
3784	bis (2-ethylhexyl) phthalate	540.		33.	640.	
3782	chrysene	N.D.		67.	N.D.	
3785	di-n-octyl phthalate	800.		33.	950.	
3786	benzo (b) fluoranthene	N.D.		67.	N.D.	
3787	benzo (k) fluoranthene	1,200.		67.	1,500.	
3788	benzo (a) pyrene	470.		130.	560.	
3789	indeno (1,2,3-cd) pyrene	560.		67.	660.	
3790	dibenz (a,h) anthracene	470.		67.	560.	
3791	benzo (ghi) perylene	140.	J	67.	170.	J
		680.		67.	800.	

Questions? Contact your Client Services Representative
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Respectfully Submitted
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Group Leader, GC/MS



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LLI Sample No. SW 2678203

Collected: 3/14/97 at 10:35 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-17 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-17 SDG#: HMS01-19

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

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CAT
NO. ANALYSIS NAME

AS RECEIVED
RESULTS METHOD
DETECTION LIMIT UNITS

DRY WEIGHT
RESULTS METHOD
DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





Lancaster Laboratories
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LLI Sample No. SW 2678203

Collected: 03/14/97 at 10:35 by FS

Submitted: 03/15/97

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

SS-17 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
 SS-17 SDG#: HMS01-19

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Wanda F. Oswald
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0734	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0734	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	Neelay B. Mehta



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LLI Sample No. 2678203
 SS-17 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									
1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
592	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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LLI Sample No. 2678203
SS-17 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
.91	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96



LLI Sample No. 2678203
SS-17 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture	Batch: 970760316820002A									
0.080	% by wt.		1				100	100	0	100	101



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2216 Rev. 5/01/96





LLI Sample No. 2678203
 SS-17 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

		SURROGATE SUMMARY		SURROGATE LIMITS	
TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH	
4688 TCL SW846	Semivolatiles Soil				
	Phenol-d6	65	24	113	
	2-Flphenol	56	25	121	
	2,4,6-TBP	55	19	122	
4689 TCL SW846	Semivolatiles/Soil				
	Nitrobz-d5	80	23	120	
	2-Fbiphenyl	85	30	115	
	Tphenylid14	80	18	137	



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See reverse side for explanation of symbols and abbreviations.



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A division of Thermo Analytical Inc.

LLI Sample No. SW 2678204
Collected: 3/14/97 at 10:05 by FS
Submitted: 3/15/97 Reported: 3/28/97
Discard: 4/28/97

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Re1.

SS-16 0-12" Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS
SS-16 SDG#: HMS01-20

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	DETECTION	LIMIT	RESULTS	DETECTION	LIMIT
4688	TCL Semivolatiles						See Page 2
4689	TCL Semivolatiles cont'd						See Page 3
0111	Moisture	24.5	0.080	% by wt.			

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO Michael Pisani & Assoc. ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
09:36:43 D 0002 9 129915 557010
412 0.00 00033420 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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LLI Sample No. SW 2678204

Collected: 3/14/97 at 10:05 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-16 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-16 SDG#: HMS01-20

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	44.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	88.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	44.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	44.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	44.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	44.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	88.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	130.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	130.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	88.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	88.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	44.
3759	isophorone	N.D.	67.	ug/kg	N.D.	88.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	88.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	88.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	44.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	44.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	44.
3761	naphthalene	160.	J	33.	210.	J
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	130.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	88.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	88.
4694	2-methylnaphthalene	230.	J	33.	310.	J
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	220.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	88.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	88.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	44.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	88.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	44.
3765	acenaphthylene	170.	J	33.	230.	J

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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2216 Rev 5/01/96





LLI Sample No. SW 2678204

Collected: 3/14/97 at 10:05 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-16 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SS-16 SDG#: HMS01-20

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT			
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT	
TCL SW846 Semivolatiles/Soil								
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.		88.	
1191	acenaphthene	N.D.	33.	ug/kg	N.D.		44.	
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.		220.	
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.		220.	
4698	dibenzofuran	93.	J	33.	ug/kg	120.	J	44.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.O.		88.	
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.		88.	
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.		88.	
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.		88.	
3768	fluorene	N.D.	33.	ug/kg	N.D.		44.	
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.		130.	
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.		220.	
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.		88.	
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.		130.	
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.		130.	
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.		220.	
3775	phenanthrene	250.	J	33.	ug/kg	330.	J	44.
3776	anthracene	170.	J	33.	ug/kg	230.	J	44.
4702	carbazole	110.	J	33.	ug/kg	150.	J	44.
3777	di-n-butyl phthalate	110.	J	33.	ug/kg	140.	J	44.
3778	fluoranthene	780.		33.	ug/kg	1,000.		44.
1195	pyrene	950.		67.	ug/kg	1,300.		88.
3780	butyl benzyl phthalate	N.D.		67.	ug/kg	N.D.		88.
3783	3,3'-dichlorobenzidine	N.D.		130.	ug/kg	N.D.		180.
3781	benzo (a) anthracene	490.		33.	ug/kg	650.		44.
3784	bis (2-ethylhexyl) phthalate	N.D.		67.	ug/kg	N.D.		88.
3782	chrysene	870.		33.	ug/kg	1,200.		44.
3785	di-n-octyl phthalate	N.D.		67.	ug/kg	N.D.		88.
3786	benzo (b) fluoranthene	1,400.		67.	ug/kg	1,800.		88.
3787	benzo (k) fluoranthene	490.		130.	ug/kg	650.		180.
3788	benzo (a) pyrene	710.		67.	ug/kg	940.		88.
3789	indeno (1,2,3-cd) pyrene	600.		67.	ug/kg	800.		88.
3790	dibenz (a,h) anthracene	160.	J	67.	ug/kg	210.	J	88.
3791	benzo (ghi) perylene	1,200.		67.	ug/kg	1,600.		88.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681





LLI Sample No. SW 2678204

Collected: 3/14/97 at 10:05 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

SS-16 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SS-16 SDG#: HMS01-20

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

*N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.*

Questions? Contact your Client Services Representative
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Respectfully Submitted
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LLI Sample No. SW 2678204

Collected: 03/14/97 at 10:05 by FS

Submitted: 03/15/97

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

SS-16 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
 SS-16 SDG#: HMS01-20

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	03/17/97 1650	Wanda F. Oswald
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0837	Lynn Wallace
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0837	Lynn Wallace
0111	Moisture	EPA 160.3 modified	1	03/17/97 1733	NeeJay B. Mehta



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LLI Sample No. 2678204
SS-16 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH

4688	TCL SW846 Semivolatiles Soil	Batch: 97076SLD026									

1185	phenol										
33.	ug/kg	N.D.		67	66	1	71			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		69	64	6	73			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		74	74	0	80			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		73	70	4	78			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		74	71	4	78			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	72	3	78			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		61	59	4	69			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		45	46	2	46			36	166
392	4-methylphenol										
100.	ug/kg	N.D.		65	62	4	73			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		68	68	0	68			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		66	64	4	62			40	113
3758	nitrobenzene										
33.	ug/kg	N.D.		69	68	1	79			35	180
3759	isophorone										
67.	ug/kg	N.D.		73	72	1	81			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		81	78	4	88			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		20	17	20	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		69	68	1	76			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		74	72	3	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		77	75	3	82			44	142
3761	naphthalene										
33.	ug/kg	N.D.		70	69	2	75			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		31	35	13	31			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	80	3	88			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		73	71	3	79			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		74	71	3	79			28	123



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LLI Sample No. 2678204
 SS-16 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		64	67	4	74			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		78	75	4	84			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		79	76	5	82			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		79	75	5	84			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		70	66	5	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		76	73	4	79			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		78	74	5	83			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97076SLD026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	53	5	55			7	143
191	acenaphthene										
33.	ug/kg	N.D.		77	73	5	83			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		96	92	4	97			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		85	82	4	88			1	132
4698	dibenzofuran										
33.	ug/kg	N.D.		78	75	3	82			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		88	85	4	94			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		90	86	4	93			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		75	72	3	79			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		75	73	3	80			25	158
3768	fluorene										
33.	ug/kg	N.D.		81	77	5	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		69	66	4	78			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		94	90	5	95			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		72	70	3	79			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		75	72	4	78			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		75	71	5	78			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		83	79	5	80			14	176



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2678204
 SS-16 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		76	73	4	81			54	120
3776	anthracene										
33.	ug/kg	N.D.		72	69	4	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		88	85	3	93			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		80	78	3	86			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		85	82	3	90			26	137
1195	pyrene										
67.	ug/kg	N.D.		74	72	2	84			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		75	73	3	82			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		29	35	21	67			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		75	72	4	82			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		73	71	3	81			8	158
3782	chrysene										
33.	ug/kg	N.D.		80	77	3	86			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		76	72	6	82			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		78	74	6	80			24	159
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		83	78	6	86			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		74	70	6	79			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		78	74	5	83			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		79	76	4	84			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		75	72	3	79			1	219
0111	Moisture	Batch: 970760316820002A									
0.080	% by wt.		1				100	100	0	100	101



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2216 Rev 5/01/96





LLI Sample No. 2678204
 SS-16 0-12" Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	69	24	113
	2-Flphenol	64	25	121
	2,4,6-TBP	69	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	87	23	120
	2-Fbiphenyl	87	30	115
	Tphenylid14	83	18	137



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2216 Rev. 5/01/96





LLI Sample No. **WW 2678205**

Collected: 3/14/97 at 11:55 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

RB-3 Rinseate Blank Composite Water Sample

Gulf States Creosoting: Hattiesburg, MS

RB-3- SDG#: HMS01-21RB*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
4678	TCL Semivolatiles		See Page 2
4679	TCL Semivolatiles cont'd		See Page 3

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group

ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
09:40:34 D 0002 9 129915 557010
412 0.00 00029700 ASR000

Respectfully Submitted
Ramona V. Layman
Manager, Metals/Leachates



Lancaster Laboratories
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LLI Sample No. WW 2678205

Collected: 3/14/97 at 11:55 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

RB-3 Rinseate Blank Composite Water Sample

Gulf States Creosoting: Mattiesburg, MS

RB-3- SDG#: HMS01-21RB*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL SW846 Semivolatiles/Waters				
3918	phenol	N.D.	1.	ug/l
3867	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3874	2-chlorophenol	N.D.	1.	ug/l
3883	1,3-dichlorobenzene	N.D.	1.	ug/l
3884	1,4-dichlorobenzene	N.D.	1.	ug/l
3882	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	2.	ug/l
4681	2,2'-oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	2.	ug/l
3915	N-nitrosodi-n-propylamine	N.D.	2.	ug/l
3902	hexachloroethane	N.D.	2.	ug/l
3910	nitrobenzene	N.D.	1.	ug/l
3904	isophorone	N.D.	1.	ug/l
3911	2-nitrophenol	N.D.	2.	ug/l
3890	2,4-dimethylphenol	N.D.	1.	ug/l
3866	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3886	2,4-dichlorophenol	N.D.	2.	ug/l
3921	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3906	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	2.	ug/l
3900	hexachlorobutadiene	N.D.	1.	ug/l
3872	4-chloro-3-methylphenol	N.D.	2.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3901	hexachlorocyclopentadiene	N.D.	3.	ug/l
3923	2,4,6-trichlorophenol	N.D.	1.	ug/l
3922	2,4,5-trichlorophenol	N.D.	1.	ug/l
3873	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	1.	ug/l
3891	dimethyl phthalate	N.D.	3.	ug/l
3858	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS





LLI Sample No. WW 2678205

Collected: 3/14/97 at 11:55 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

RB-3 Rinseate Blank Composite Water Sample

Gulf States Creosoting: Hattiesburg, MS

RB-3- SDG#: HMS01-21RB*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION LIMIT	UNITS
TCL SW846 Semivolatiles/Waters				
3908	3-nitroaniline	N.D.	1.	ug/l
3857	acenaphthene	N.D.	1.	ug/l
3893	2,4-dinitrophenol	N.D.	5.	ug/l
3912	4-nitrophenol	N.D.	5.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3894	2,4-dinitrotoluene	N.D.	2.	ug/l
3895	2,6-dinitrotoluene	N.D.	1.	ug/l
3887	diethyl phthalate	N.D.	2.	ug/l
3875	4-chlorophenyl phenyl ether	N.D.	2.	ug/l
3898	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
4683	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3914	N-nitrosodiphenylamine	N.D.	2.	ug/l
3869	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3899	hexachlorobenzene	N.D.	1.	ug/l
3916	pentachlorophenol	N.D.	1.	ug/l
3917	phenanthrene	N.D.	1.	ug/l
3859	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3880	di-n-butyl phthalate	N.D.	1.	ug/l
3897	fluoranthene	N.D.	1.	ug/l
3919	pyrene	N.D.	1.	ug/l
3870	butyl benzyl phthalate	N.D.	2.	ug/l
3885	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3860	benzo (a) anthracene	N.D.	1.	ug/l
3868	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3876	chrysene	N.D.	1.	ug/l
3896	di-n-octyl phthalate	N.D.	2.	ug/l
3861	benzo (b) fluoranthene	N.D.	2.	ug/l
3862	benzo (k) fluoranthene	N.D.	2.	ug/l
3864	benzo (a) pyrene	N.D.	2.	ug/l
3903	indeno (1,2,3-cd) pyrene	N.D.	2.	ug/l
3881	dibenz (a,h) anthracene	N.D.	2.	ug/l
3863	benzo (ghi) perylene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Group Leader, GC/MS



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LLI Sample No. WW 2678205

Collected: 3/14/97 at 11:55 by FS

Submitted: 3/15/97 Reported: 3/28/97

Discard: 4/28/97

RB-3 Rinseate Blank Composite Water Sample

Gulf States Creosoting: Hattiesburg, MS

RB-3- SDG#: HMS01-21RB*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

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Rel.

AS RECEIVED

CAT
NO. ANALYSIS NAME

METHOD
RESULTS DETECTION LIMIT UNITS

TCL SW846 Semivolatiles/Waters

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS



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2216 Rev. 5/01:96





LLI Sample No. WW 2678205

Collected: 03/14/97 at 11:55 by FS

Submitted: 03/15/97

RB-3 Rinseate Blank Composite Water Sample

Gulf States Creosoting: Hattiesburg, MS

RB-3- SDG#: HMS01-21RB*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0813	BNA Water Extraction	SW-846 3510B	1	03/17/97 1640	Sherry Lynn Devlin
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 1554	Deb Gifford
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 1554	Deb Gifford



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations

2216 Rev 5/01/96





LLI Sample No. 2678205
 RB-3 Rinseate Blank Composite Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH

4678	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									

3918	phenol										
1.	ug/l	N.D.		43	41	3	43			5	112
3867	bis (2-chloroethyl) ether										
1.	ug/l	N.D.		88	90	3	89			12	158
3874	2-chlorophenol										
1.	ug/l	N.D.		88	90	3	88			23	134
3883	1,3-dichlorobenzene										
1.	ug/l	N.D.		84	92	9	70			1	172
3884	1,4-dichlorobenzene										
1.	ug/l	N.D.		86	89	3	74			20	124
3882	1,2-dichlorobenzene										
1.	ug/l	N.D.		86	89	4	77			32	129
4680	2-methylphenol										
2.	ug/l	N.D.		78	80	3	80			46	123
4681	2,2'-oxybis (1-chloropropane)										
2.	ug/l	N.D.		69	72	5	71			36	166
382	4-methylphenol										
2.	ug/l	N.D.		76	78	3	77			5	152
3915	N-nitrosodi-n-propylamine										
2.	ug/l	N.D.		94	100	6	99			1	230
3902	hexachloroethane										
2.	ug/l	N.D.		76	80	5	54			40	113
3910	nitrobenzene										
1.	ug/l	N.D.		96	98	2	97			35	180
3904	isophorone										
1.	ug/l	N.D.		94	93	0	94			21	196
3911	2-nitrophenol										
2.	ug/l	N.D.		91	94	3	90			29	182
3890	2,4-dimethylphenol										
1.	ug/l	N.D.		75	71	5	78			32	119
3866	bis (2-chloroethoxy) methane										
1.	ug/l	N.D.		88	90	2	88			33	184
3886	2,4-dichlorophenol										
2.	ug/l	N.D.		85	85	1	83			39	135
3921	1,2,4-trichlorobenzene										
1.	ug/l	N.D.		83	83	1	72			44	142
3906	naphthalene										
1.	ug/l	N.D.		84	86	2	81			21	133
3871	4-chloroaniline										
2.	ug/l	N.D.		47	55	16	43			17	116
3900	hexachlorobutadiene										
1.	ug/l	N.D.		83	85	3	52			24	116
3872	4-chloro-3-methylphenol										
2.	ug/l	N.D.		88	91	4	87			22	147
3905	2-methylnaphthalene										
1.	ug/l	N.D.		86	87	1	80			28	123



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LLI Sample No. **2678205**
RB-3 Rinseate Blank Composite Water Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3901	hexachlorocyclopentadiene										
3.	ug/l	N.D.		71	72	1	54			1	100
3923	2,4,6-trichlorophenol										
1.	ug/l	N.D.		93	95	2	91			37	144
3922	2,4,5-trichlorophenol										
1.	ug/l	N.D.		90	95	6	88			39	151
3873	2-chloronaphthalene										
1.	ug/l	N.D.		90	91	1	86			60	118
3907	2-nitroaniline										
1.	ug/l	N.D.		84	90	7	86			53	143
3891	dimethyl phthalate										
3.	ug/l	N.D.		63	65	3	28			1	112
3858	acenaphthylene										
1.	ug/l	N.D.		88	90	2	86			33	145

4679	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									

3908	3-nitroaniline										
1.	ug/l	N.D.		61	67	9	57			7	143
357	acenaphthene										
1.	ug/l	N.D.		82	84	2	78			47	145
3893	2,4-dinitrophenol										
5.	ug/l	N.D.		82	83	1	87			1	191
3912	4-nitrophenol										
5.	ug/l	N.D.		41	43	6	41			1	132
3879	dibenzofuran										
1.	ug/l	N.D.		85	87	2	83			28	131
3894	2,4-dinitrotoluene										
2.	ug/l	N.D.		88	95	8	89			39	139
3895	2,6-dinitrotoluene										
1.	ug/l	N.D.		90	95	6	92			50	158
3887	diethyl phthalate										
2.	ug/l	N.D.		76	78	2	61			1	114
3875	4-chlorophenyl phenyl ether										
2.	ug/l	N.D.		86	88	2	82			25	158
3898	fluorene										
1.	ug/l	N.D.		85	86	2	80			59	121
3909	4-nitroaniline										
2.	ug/l	N.D.		79	84	6	78			38	122
4683	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		87	91	5	90			1	181
3914	N-nitrosodiphenylamine										
2.	ug/l	N.D.		85	86	2	83			38	147
3869	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		86	88	3	86			53	127
3899	hexachlorobenzene										
1.	ug/l	N.D.		85	86	1	84			1	152
3916	pentachlorophenol										
1.	ug/l	N.D.		86	85	2	89			14	176



LLI Sample No. 2678205
RB-3 Rinseate Blank Composite Water Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3917	phenanthrene										
1.	ug/l	N.D.		86	86	0	83			54	120
3859	anthracene										
1.	ug/l	N.D.		85	85	0	83			27	133
4684	carbazole										
1.	ug/l	N.D.		90	90	1	88			40	137
3880	di-n-butyl phthalate										
1.	ug/l	N.D.		93	92	0	86			1	118
3897	fluoranthene										
1.	ug/l	N.D.		87	88	0	86			26	137
3919	pyrene										
1.	ug/l	N.D.		85	90	6	82			52	115
3870	butyl benzyl phthalate										
2.	ug/l	N.D.		88	85	4	75			1	152
3885	3,3'-dichlorobenzidine										
2.	ug/l	N.D.		60	71	17	61			1	262
3860	benzo (a) anthracene										
1.	ug/l	N.D.		85	91	7	85			33	143
3868	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		93	96	2	90			8	158
3876	chrysene										
1.	ug/l	N.D.		89	89	1	88			17	168
3896	di-n-octyl phthalate										
2.	ug/l	N.D.		87	89	2	87			4	146
3861	benzo (b) fluoranthene										
2.	ug/l	N.D.		79	83	5	80			24	159
3862	benzo (k) fluoranthene										
2.	ug/l	N.D.		87	89	2	86			11	163
3864	benzo (a) pyrene										
2.	ug/l	N.D.		81	83	2	81			17	163
3903	indeno (1,2,3-cd) pyrene										
2.	ug/l	N.D.		87	89	1	90			1	171
3881	dibenz (a,h) anthracene										
2.	ug/l	N.D.		91	93	1	92			1	227
3863	benzo (ghi) perylene										
2.	ug/l	N.D.		88	89	1	89			1	219



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. **2678205**
 RB-3 Rinseate Blank Composite Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557010
 Kerr-McGee Corporation

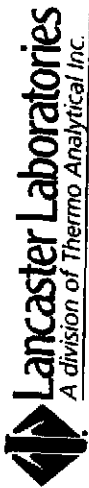
TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL SW846 Semivolatiles/Waters	2-Flpheno1	55	21	100
	Pheno1-d6	39	10	94
	2,4,6-TBP	87	10	123
4679 TCL SW846 Semivolatiles/Waters	Nitrobz-d5	90	35	114
	2-Fbiphenyl	78	43	116
	Tphenylid14	85	33	141



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For Lancaster Laboratories use only
Acct. # 7802 Sample # 2438187-20

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: Kelli McGee Acct. #: _____
 Project Name#: Call States Crossing PWSID #: _____
 Project Manager: Dave Vitzinger P.O.# _____
 Sampler: Dave Angle Quote #: _____
 Name of state where samples were collected: Mississippi

4

5

FSC: 109899
SCR #: _____

For lab use only

3

SS-1	SS-15	SS-14	SS-13	SS-18	SS-2	SS-17	SS-16	P-B-3
3/14/97	3/14/97	3/14/97	3/14/97	3/14/97	3/14/97	3/14/97	3/14/97	3/14/97
0-12"	0-12"	0-12"	0-12"	0-12"	0-12"	0-12"	0-12"	0-12"
1017	455	855	910	1045	0943	1035	1005	455
X	X	X	X	X	X	X	X	X
1	1	1	1	1	1	1	1	2
Y	Y	Y	Y	Y	Y	Y	Y	Y
Relinquished by: _____	Relinquished by: _____	Relinquished by: _____	Relinquished by: _____	Relinquished by: _____	Relinquished by: _____	Relinquished by: _____	Relinquished by: _____	Relinquished by: _____
Date: <u>3-27-97</u>	Date: <u>3-14-97</u>	Date: <u>3-14-97</u>	Date: <u>3-14-97</u>	Date: <u>3-14-97</u>	Date: <u>3-14-97</u>	Date: <u>3-14-97</u>	Date: <u>3-14-97</u>	Date: <u>3-14-97</u>
Time: <u>5:00</u>	Time: <u>07:00</u>	Time: _____	Time: _____	Time: _____	Time: _____	Time: _____	Time: _____	Time: _____
Received by: _____	Received by: _____	Received by: _____	Received by: _____	Received by: _____	Received by: _____	Received by: _____	Received by: _____	Received by: _____
Date: <u>3-14-97</u>	Date: <u>3-14-97</u>	Date: <u>3-14-97</u>	Date: <u>3-14-97</u>	Date: <u>3-14-97</u>	Date: <u>3-14-97</u>	Date: <u>3-14-97</u>	Date: <u>3-14-97</u>	Date: <u>3-14-97</u>
Time: <u>15:5</u>	Time: <u>17:00</u>	Time: <u>12:05</u>	Time: <u>12:05</u>	Time: <u>12:05</u>	Time: <u>12:05</u>	Time: <u>12:05</u>	Time: <u>12:05</u>	Time: <u>12:05</u>
Received by: _____	Received by: _____	Received by: _____	Received by: _____	Received by: _____	Received by: _____	Received by: _____	Received by: _____	Received by: _____

7 Turnaround Time Requested (TAT) (please circle): Normal Rush
 (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
 Date results are needed: _____
 Rush results requested by (please circle): Phone Fax
 Phone #: _____ Fax #: _____

8 Data Package Options (please circle if requested)

QC Summary	Type VI (Raw Data)	SDG Complete?
Type I (Tier I)	GLP	Yes No
Type II (Tier II)	Other	Yes No
Type III (NJ Red. Del.)	Site-specific QC required? (If yes, indicate QC sample and submit triplicate volume.)	Yes No
Type IV (CLP)	Internal Chain of Custody required?	Yes No

Date: 3-15-97 Time: 101
 Received by: _____



LLI Sample No. WW 2677529

Collected: 3/12/97 at 09:12 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW3 SDG#: HMS02-01

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		LIMIT	UNITS
		RESULTS	METHOD		
4592	TCL Volatiles				See Page 2
1743	Aluminum	11.1		0.057	mg/l
1744	Antimony	N.D.		0.015	mg/l
1746	Barium	0.25		0.0022	mg/l
1747	Beryllium	0.0043 J		0.0013	mg/l
1749	Cadmium	N.D.		0.0027	mg/l
1750	Calcium	17.7		0.030	mg/l
1751	Chromium	0.0280 J		0.0043	mg/l
1752	Cobalt	0.0132 J		0.0055	mg/l
1753	Copper	0.0184 J		0.0038	mg/l
1754	Iron	26.3		0.0059	mg/l
1757	Magnesium	4.67		0.024	mg/l
1758	Manganese	0.500		0.0029	mg/l
1761	Nickel	0.0163 J		0.0054	mg/l
1762	Potassium	2.92		0.15	mg/l
1766	Silver	N.D.		0.0036	mg/l
1767	Sodium	19.5		0.20	mg/l
1771	Vanadium	0.047		0.0070	mg/l
1772	Zinc	0.058		0.012	mg/l
7022	Thallium	N.D.		0.0045	mg/l
7035	Arsenic	0.067		0.0027	mg/l
7036	Selenium	N.D.		0.0027	mg/l
7055	Lead	0.0207		0.0020	mg/l
0259	Mercury	0.000189J		0.00004	mg/l
0937	TCL Pesticides				See Page 3
4678	TCL Semivolatiles				See Page 4
4679	TCL Semivolatiles cont'd				See Page 5
0237	Total Cyanide	N.D.		0.0040	mg/l

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:47:18 D 0003 12 129915 556882
560 0.00 00084840 ASR000

Respectfully Submitted
Ramona V. Layman
Manager, Metals/Leachates



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See reverse side for explanation of symbols and abbreviations.





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Page: 2 of 15

LLI Sample No. **WW 2677529**
 Collected: 3/12/97 at 09:12 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
 Discard: 5/ 5/97

MW-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS
 KMMW3 SDG#: HMS02-01

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	N.D.	3.	ug/l
1257	Bromomethane	N.D.	3.	ug/l
3492	Vinyl Chloride	N.D.	2.	ug/l
3494	Chloroethane	N.D.	3.	ug/l
3497	Methylene Chloride	N.D.	2.	ug/l
3498	Acetone	N.D.	6.	ug/l
3499	Carbon Disulfide	23.	3.	ug/l
3500	1,1-Dichloroethene	N.D.	1.	ug/l
3501	1,1-Dichloroethane	N.D.	2.	ug/l
3503	Chloroform	N.D.	1.	ug/l
3504	1,2-Dichloroethane	N.D.	2.	ug/l
0316	2-Butanone	N.D.	3.	ug/l
3505	1,1,1-Trichloroethane	N.D.	1.	ug/l
3506	Carbon Tetrachloride	N.D.	1.	ug/l
3507	Vinyl Acetate	N.D.	2.	ug/l
3508	Bromodichloromethane	N.D.	1.	ug/l
3509	1,2-Dichloropropane	N.D.	1.	ug/l
3516	cis-1,3-Dichloropropene	N.D.	1.	ug/l
3511	Trichloroethene	N.D.	1.	ug/l
3512	Dibromochloromethane	N.D.	2.	ug/l
3513	1,1,2-Trichloroethane	N.D.	2.	ug/l
3515	Benzene	N.D.	1.	ug/l
3510	trans-1,3-Dichloropropene	N.D.	1.	ug/l
3518	Bromoform	N.D.	1.	ug/l
3521	4-Methyl-2-pentanone	N.D.	5.	ug/l
3520	2-Hexanone	N.D.	7.	ug/l
3522	Tetrachloroethene	N.D.	1.	ug/l
3523	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
3524	Toluene	N.D.	2.	ug/l
3525	Chlorobenzene	N.D.	1.	ug/l
3526	Ethylbenzene	N.D.	2.	ug/l
3528	Styrene	N.D.	1.	ug/l
3529	Xylene (total)	N.D.	1.	ug/l
5780	trans-1,2-Dichloroethene	N.D.	2.	ug/l
6268	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles





LLI Sample No. **WW 2677529**
Collected: 3/12/97 at 09:12 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW3 SDG#: HMS02-01

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Pesticides in Waters				
1600	Alpha BHC	N.D.	0.001	ug/l
1601	Beta BHC	N.D.	0.001	ug/l
1603	Delta BHC	N.D.	0.003	ug/l
1602	Gamma BHC - Lindane	N.D.	0.001	ug/l
1604	Heptachlor	N.D.	0.002	ug/l
1605	Aldrin	N.D.	0.006	ug/l
1606	Heptachlor Epoxide	N.D.	0.001	ug/l
1616	Endosulfan I	N.D.	0.002	ug/l
1610	Dieldrin	N.D.	0.001	ug/l
1607	DDE	N.D.	0.001	ug/l
1611	Endrin	N.D.	0.007	ug/l
1615	Endosulfan II	N.D.	0.005	ug/l
1608	DDD	N.D.	0.005	ug/l
1617	Endosulfan Sulfate	N.D.	0.003	ug/l
1609	DDT	N.D.	0.009	ug/l
0938	Endrin Ketone	N.D.	0.004	ug/l
1860	Methoxychlor	N.D.	0.02	ug/l
1361	Alpha Chlordane	N.D.	0.001	ug/l
1362	Gamma Chlordane	N.D.	0.001	ug/l
1613	Toxaphene	N.D.	0.4	ug/l
1618	Endrin Aldehyde	N.D.	0.005	ug/l
1619	PCB-1016	N.D.	0.04	ug/l
1620	PCB-1221	N.D.	0.1	ug/l
1621	PCB-1232	N.D.	0.05	ug/l
1622	PCB-1242	N.D.	0.1	ug/l
1623	PCB-1248	N.D.	0.04	ug/l
1624	PCB-1254	N.D.	0.1	ug/l
1626	PCB-1260	N.D.	0.04	ug/l

The LCS results are shown on the QC summary. Since the MS/MSD data are within the QC limits, no action is needed for LCS results outside the QC limits.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. **WW 2677529**
Collected: 3/12/97 at 09:12 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW3 SDG#: HMS02-01

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ret.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters				
3918	phenol	N.D.	1.	ug/l
3867	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3874	2-chlorophenol	N.D.	1.	ug/l
3883	1,3-dichlorobenzene	N.D.	1.	ug/l
3884	1,4-dichlorobenzene	N.D.	1.	ug/l
3882	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	2.	ug/l
4681	2,2'-oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	2.	ug/l
3915	N-nitrosodi-n-propylamine	N.D.	2.	ug/l
3902	hexachloroethane	N.D.	2.	ug/l
3910	nitrobenzene	N.D.	1.	ug/l
3904	isophorone	N.D.	1.	ug/l
3911	2-nitrophenol	N.D.	2.	ug/l
3890	2,4-dimethylphenol	N.D.	1.	ug/l
3866	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3886	2,4-dichlorophenol	N.D.	2.	ug/l
3921	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3906	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	2.	ug/l
3900	hexachlorobutadiene	N.D.	1.	ug/l
3872	4-chloro-3-methylphenol	N.D.	2.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3901	hexachlorocyclopentadiene	N.D.	3.	ug/l
3923	2,4,6-trichlorophenol	N.D.	1.	ug/l
3922	2,4,5-trichlorophenol	N.D.	1.	ug/l
3873	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	1.	ug/l
3891	dimethyl phthalate	N.D.	3.	ug/l
3858	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. **WW 2677529**

Collected: 3/12/97 at 09:12 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS

KMMW3 SDG#: HMS02-01

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
OkTahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters			
3908	3-nitroaniline	N.D.	1. ug/l
3857	acenaphthene	N.D.	1. ug/l
3893	2,4-dinitrophenol	N.D.	5. ug/l
3912	4-nitrophenol	N.D.	5. ug/l
3879	dibenzofuran	N.D.	1. ug/l
3894	2,4-dinitrotoluene	N.D.	2. ug/l
3895	2,6-dinitrotoluene	N.D.	1. ug/l
3887	diethyl phthalate	N.D.	2. ug/l
3875	4-chlorophenyl phenyl ether	N.D.	2. ug/l
3898	fluorene	N.D.	1. ug/l
3909	4-nitroaniline	N.D.	2. ug/l
4683	4,6-dinitro-2-methylphenol	N.D.	5. ug/l
3914	N-nitrosodiphenylamine	N.D.	2. ug/l
3869	4-bromophenyl phenyl ether	N.D.	2. ug/l
3899	hexachlorobenzene	N.D.	1. ug/l
3916	pentachlorophenol	N.D.	1. ug/l
3917	phenanthrene	2.	1. ug/l
3859	anthracene	N.D.	1. ug/l
4684	carbazole	N.D.	1. ug/l
3880	di-n-butyl phthalate	N.D.	1. ug/l
3897	fluoranthene	N.D.	1. ug/l
3919	pyrene	N.D.	1. ug/l
3870	butyl benzyl phthalate	N.D.	2. ug/l
3885	3,3'-dichlorobenzidine	N.D.	2. ug/l
3860	benzo (a) anthracene	N.D.	1. ug/l
3868	bis (2-ethylhexyl) phthalate	N.D.	2. ug/l
3876	chrysene	N.D.	1. ug/l
3896	di-n-octyl phthalate	N.D.	2. ug/l
3861	benzo (b) fluoranthene	N.D.	2. ug/l
3862	benzo (k) fluoranthene	N.D.	2. ug/l
3864	benzo (a) pyrene	N.D.	2. ug/l
3903	indeno (1,2,3-cd) pyrene	N.D.	2. ug/l
3881	dibenz (a,h) anthracene	N.D.	2. ug/l
3863	benzo (ghi) perylene	N.D.	2. ug/l

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2216 Rev. 5/01/96





LLI Sample No. WW 2677529

Collected: 3/12/97 at 09:12 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS

KMM3 SDG#: HMS02-01

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL SW846 Semivolatiles/Waters

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

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Senior Chemist, GC/MS



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2216 Rev. 5/01/96





LLI Sample No. WW 2677529
 Collected: 03/12/97 at 09:12 by DA

Submitted: 03/14/97

MW-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS
 KMM3 SDG#: HMS02-01

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/19/97 1811	Trent S. Sprenkle
1743	Aluminum	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1744	Antimony	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1746	Barium	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1747	Beryllium	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1749	Cadmium	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1750	Calcium	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1751	Chromium	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1752	Cobalt	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1753	Copper	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1754	Iron	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1757	Magnesium	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1758	Manganese	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1761	Nickel	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1762	Potassium	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1766	Silver	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1767	Sodium	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1771	Vanadium	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1772	Zinc	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
1848	MW SW846 ICP Digest (tot rec)	SW-846 3005A	1	03/21/97 1802	Marie D. Kimmel
7022	Thallium TR	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
7035	Arsenic TR	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
7036	Selenium TR	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
7055	Lead TR	SW-846 6010A	1	03/24/97 1128	Nina C. Haller
0259	Mercury	SW-846 7470A	1	03/25/97 1441	Nelli S. Markaryan
5713	WW SW846 Hg Digest	SW-846 7470A	1	03/24/97 2131	Nelli S. Markaryan
0817	Water Sample Pest. Extraction	SW-846 3510B	1	03/18/97 1640	Sherry Lynn Devlin
0937	TCL Pesticides in Waters	SW-846 8081	1	03/26/97 1821	Douglas D. Seitz
0813	BNA Water Extraction	SW-846 3510B	1	03/17/97 1640	Sherry Lynn Devlin
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 0012	Deb Gifford
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 0012	Deb Gifford
0237	Total Cyanide (water)	SW-846 9012	1	03/24/97 1249	John W. Ballard, Jr.
0492	Cyanide Water Distillation	SW-846 9012	1	03/21/97 0530	Dawn M. Kreider



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LLI Sample No. 2677529
MW-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH

4592	TCL Volatiles by 8240 - Water	Batch: K970781AA									

1258	Chloromethane										
	3. ug/l	N.D.		91	87	5					
1257	Bromomethane										
	3. ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
	2. ug/l	N.D.		99	97	1					
3494	Chloroethane										
	3. ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
	2. ug/l	N.D.		95	92	3					
3498	Acetone										
	6. ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
	3. ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
	1. ug/l	N.D.		99	96	4					
501	1,1-Dichloroethane										
	2. ug/l	N.D.		99	96	3					
3503	Chloroform										
	1. ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
	2. ug/l	N.D.		98	97	1					
0316	2-Butanone										
	3. ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
	1. ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
	1. ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
	2. ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
	1. ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
	1. ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
	1. ug/l	N.D.		97	97	0					
3511	Trichloroethene										
	1. ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
	2. ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
	2. ug/l	N.D.		102	104	2					
3515	Benzene										
	1. ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
	1. ug/l	N.D.		92	95	3					



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2677529
MW-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3518	Bromoform										
	1. ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
	5. ug/l	N.D.		85	84	1					
3520	2-Hexanone										
	7. ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
	1. ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
	2. ug/l	N.D.		96	95	1					
3524	Toluene										
	2. ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
	1. ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
	2. ug/l	N.D.		106	101	4					
3528	Styrene										
	1. ug/l	N.D.		107	104	3					
3529	Xylene (total)										
	1. ug/l	N.D.		107	103	5					
780	trans-1,2-Dichloroethene										
	2. ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
	2. ug/l	N.D.		100	98	2					
1743	Aluminum	Batch: 970801848006									
	0.057 mg/l	N.D.	18	1044	972 (2)	4	105			80	120
1744	Antimony	Batch: 970801848006									
	0.015 mg/l	N.D.	0 (1)	72	70	2	108			80	120
1746	Barium	Batch: 970801848006									
	0.0022 mg/l	N.D.	0 (1)	101	97	3	97			80	120
1747	Beryllium	Batch: 970801848006									
	0.0013 mg/l	N.D.	0 (1)	93	91	3	94			80	120
1749	Cadmium	Batch: 970801848006									
	0.0027 mg/l	N.D.	0 (1)	92	90	3	95			80	120
1750	Calcium	Batch: 970801848006									
	0.030 mg/l	0.058 J mg/l	1	187	150 (2)	3	102			80	120
1751	Chromium	Batch: 970801848006									
	0.0043 mg/l	N.D.	0 (1)	112	109	3	105			80	120
1752	Cobalt	Batch: 970801848006									
	0.0055 mg/l	N.D.	0 (1)	97	94	3	96			80	120
1753	Copper	Batch: 970801848006									
	0.0038 mg/l	N.D.	0 (1)	103	99	3	98			80	120
1754	Iron	Batch: 970801848006									
	0.0059 mg/l	0.0082 J mg/l	21	1709	1544 (2)	4	102			80	120
1757	Magnesium	Batch: 970801848006									
	0.024 mg/l	0.041 J mg/l	4	307	264 (2)	3	98			80	120
1758	Manganese	Batch: 970801848006									
	0.0029 mg/l	N.D.	3	148	135	3	97			80	120
1761	Nickel	Batch: 970801848006									
	0.0054 mg/l	N.D.	0 (1)	102	99	3	98			80	120

(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.



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2216 Rev. 5/01/96





LLI Sample No. 2677529
MW-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
1762 Potassium		Batch: 970801848006									
0.15	mg/l	N.D.	7	140	132	3	97			80	120
1766 Silver		Batch: 970801848006									
0.0036	mg/l	N.D.	0 (1)	99	96	3	99			80	120
1767 Sodium		Batch: 970801848006									
0.20	mg/l	N.D.	11	301	299 (2)	0	105			80	120
1771 Vanadium		Batch: 970801848006									
0.0070	mg/l	N.D.	0 (1)	108	104	3	104			80	120
1772 Zinc		Batch: 970801848006									
0.012	mg/l	N.D.	0 (1)	99	95	3	97			80	120
7022 Thallium TR		Batch: 970801848006									
0.0045	mg/l	N.D.	0 (1)	98	95	3	97			80	120
7035 Arsenic TR		Batch: 970801848006									
0.0027	mg/l	N.D.	0 (1)	97	94	3	99			80	120
7036 Selenium TR		Batch: 970801848006									
0.0027	mg/l	N.D.	0 (1)	94	91	2	97			80	120
7055 Lead TR		Batch: 970801848006									
0.0020	mg/l	0.0036 J mg/l	14	98	95	3	98			80	120
7059 Mercury		Batch: 970835713001									
0.000043	mg/l	0.000045J mg/l	0 (1)	96	91	5	115			80	120

7037 TCL Pesticides in Waters		Batch: 970770001A									

1600 Alpha BHC											
0.001	ug/l	N.D.		95	96	1	95			67	122
1601 Beta BHC											
0.001	ug/l	N.D.		100	97	4	98			74	120
1603 Delta BHC											
0.003	ug/l	N.D.		105	106	1	107			69	126
1602 Gamma BHC - Lindane											
0.001	ug/l	N.D.		95	96	1	99			66	120
1604 Heptachlor											
0.002	ug/l	N.D.		87	86	1	81			54	120
1605 Aldrin											
0.006	ug/l	N.D.		82	80	2	76			42	120
1606 Heptachlor Epoxide											
0.001	ug/l	N.D.		92	91	1	93			64	120
1616 Endosulfan I											
0.002	ug/l	N.D.		94	95	1	95			60	120
1610 Dieldrin											
0.001	ug/l	N.D.		83	82	1	82			66	120
1607 DDE											
0.001	ug/l	N.D.		77	75	3	77			60	120
1611 Endrin											
0.007	ug/l	N.D.		111	106	4	109			73	129
1615 Endosulfan II											
0.005	ug/l	N.D.		97	96	1	102			67	120
1608 DDD											
0.005	ug/l	N.D.		98	94	5	95			67	121

(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.



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LLI Sample No. 2677529
MW-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
1617	Endosulfan Sulfate 0.003 ug/l	N.D.		112	114	2	122			53	128
1609	DDT 0.009 ug/l	N.D.		96	94	2	97			71	120
0938	Endrin Ketone 0.004 ug/l	N.D.		99	99	0	106			76	120
1860	Methoxychlor 0.02 ug/l	N.D.		102	101	2	111			57	140
1361	Alpha Chlordane 0.001 ug/l	N.D.		93	94	1	92			75	120
1362	Gamma Chlordane 0.001 ug/l	N.D.		88	86	2	86			75	120
1613	Toxaphene 0.4 ug/l	N.D.									
1618	Endrin Aldehyde 0.005 ug/l	N.D.		120	126	5	133			59	126
1619	PCB-1016 0.04 ug/l	N.D.									
1620	PCB-1221 0.1 ug/l	N.D.									
1621	PCB-1232 0.05 ug/l	N.D.									
1622	PCB-1242 0.1 ug/l	N.D.									
1623	PCB-1248 0.04 ug/l	N.D.									
1624	PCB-1254 0.1 ug/l	N.D.									
1626	PCB-1260 0.04 ug/l	N.D.									

4678	TCL SWB46 Semivolatiles/Waters	Batch: 97076WAE026									

3918	phenol 1. ug/l	N.D.		43	41	3	43			5	112
3867	bis (2-chloroethyl) ether 1. ug/l	N.D.		88	90	3	89			12	158
3874	2-chlorophenol 1. ug/l	N.D.		88	90	3	88			23	134
3883	1,3-dichlorobenzene 1. ug/l	N.D.		84	92	9	70			1	172
3884	1,4-dichlorobenzene 1. ug/l	N.D.		86	89	3	74			20	124
3882	1,2-dichlorobenzene 1. ug/l	N.D.		86	89	4	77			32	129
4680	2-methylphenol 2. ug/l	N.D.		78	80	3	80			46	123
4681	2,2'-oxybis (1-chloropropane) 2. ug/l	N.D.		69	72	5	71			36	166



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2216 Rev. 5/01/96





LLI Sample No. 2677529
MM-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4682	4-methylphenol										
	2. ug/l	N.D.		76	78	3	77			5	152
3915	N-nitrosodi-n-propylamine										
	2. ug/l	N.D.		94	100	6	99			1	230
3902	hexachloroethane										
	2. ug/l	N.D.		76	80	5	54			40	113
3910	nitrobenzene										
	1. ug/l	N.D.		96	98	2	97			35	180
3904	isophorone										
	1. ug/l	N.D.		94	93	0	94			21	196
3911	2-nitrophenol										
	2. ug/l	N.D.		91	94	3	90			29	182
3890	2,4-dimethylphenol										
	1. ug/l	N.D.		75	71	5	78			32	119
3866	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		88	90	2	88			33	184
3886	2,4-dichlorophenol										
	2. ug/l	N.D.		85	85	1	83			39	135
3921	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		83	83	1	72			44	142
3906	naphthalene										
	1. ug/l	N.D.		84	86	2	81			21	133
3871	4-chloroaniline										
	2. ug/l	N.D.		47	55	16	43			17	116
3900	hexachlorobutadiene										
	1. ug/l	N.D.		83	85	3	52			24	116
3872	4-chloro-3-methylphenol										
	2. ug/l	N.D.		88	91	4	87			22	147
3905	2-methylnaphthalene										
	1. ug/l	N.D.		86	87	1	80			28	123
3901	hexachlorocyclopentadiene										
	3. ug/l	N.D.		71	72	1	54			1	100
3923	2,4,6-trichlorophenol										
	1. ug/l	N.D.		93	95	2	91			37	144
3922	2,4,5-trichlorophenol										
	1. ug/l	N.D.		90	95	6	88			39	151
3873	2-chloronaphthalene										
	1. ug/l	N.D.		90	91	1	86			60	118
3907	2-nitroaniline										
	1. ug/l	N.D.		84	90	7	86			53	143
3891	dimethyl phthalate										
	3. ug/l	N.D.		63	65	3	28			1	112
3858	acenaphthylene										
	1. ug/l	N.D.		88	90	2	86			33	145

4679	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									

3908	3-nitroaniline										
	1. ug/l	N.D.		61	67	9	57			7	143



Lancaster Laboratories
2425 New Holland Pike
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LLI Sample No. 2677529
MW-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3857	acenaphthene										
1.	ug/l	N.D.		82	84	2	78			47	145
3893	2,4-dinitrophenol										
5.	ug/l	N.D.		82	83	1	87			1	191
3912	4-nitrophenol										
5.	ug/l	N.D.		41	43	6	41			1	132
3879	dibenzofuran										
1.	ug/l	N.D.		85	87	2	83			28	131
3894	2,4-dinitrotoluene										
2.	ug/l	N.D.		88	95	8	89			39	139
3895	2,6-dinitrotoluene										
1.	ug/l	N.D.		90	95	6	92			50	158
3887	diethyl phthalate										
2.	ug/l	N.D.		76	78	2	61			1	114
3875	4-chlorophenyl phenyl ether										
2.	ug/l	N.D.		86	88	2	82			25	158
3898	fluorene										
1.	ug/l	N.D.		85	86	2	80			59	121
3909	4-nitroaniline										
2.	ug/l	N.D.		79	84	6	78			38	122
3883	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		87	91	5	90			1	181
3914	N-nitrosodiphenylamine										
2.	ug/l	N.D.		85	86	2	83			38	147
3869	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		86	88	3	86			53	127
3899	hexachlorobenzene										
1.	ug/l	N.D.		85	86	1	84			1	152
3916	pentachlorophenol										
1.	ug/l	N.D.		86	85	2	89			14	176
3917	phenanthrene										
1.	ug/l	N.D.		86	86	0	83			54	120
3859	anthracene										
1.	ug/l	N.D.		85	85	0	83			27	133
4684	carbazole										
1.	ug/l	N.D.		90	90	1	88			40	137
3880	di-n-butyl phthalate										
1.	ug/l	N.D.		93	92	0	86			1	118
3897	fluoranthene										
1.	ug/l	N.D.		87	88	0	86			26	137
3919	pyrene										
1.	ug/l	N.D.		85	90	6	82			52	115
3870	butyl benzyl phthalate										
2.	ug/l	N.D.		88	85	4	75			1	152
3885	3,3'-dichlorobenzidine										
2.	ug/l	N.D.		60	71	17	61			1	262
3860	benzo (a) anthracene										
1.	ug/l	N.D.		85	91	7	85			33	143
3868	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		93	96	2	90			8	158



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

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LLI Sample No. 2677529
MW-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3876	chrysene										
1.	ug/l	N.D.		89	89	1	88			17	168
3896	di-n-octyl phthalate										
2.	ug/l	N.D.		87	89	2	87			4	146
3861	benzo (b) fluoranthene										
2.	ug/l	N.D.		79	83	5	80			24	159
3862	benzo (k) fluoranthene										
2.	ug/l	N.D.		87	89	2	86			11	163
3864	benzo (a) pyrene										
2.	ug/l	N.D.		81	83	2	81			17	163
3903	indeno (1,2,3-cd) pyrene										
2.	ug/l	N.D.		87	89	1	90			1	171
3881	dibenz (a,h) anthracene										
2.	ug/l	N.D.		91	93	1	92			1	227
3863	benzo (ghi) perylene										
2.	ug/l	N.D.		88	89	1	89			1	219
0237	Total Cyanide (water)	Batch: 97080102101A									
0.0040	mg/l	N.D.	0 (1)	97	101	4	98	101	4	90	110

(1) The result for one or both determinations was less than five times the LOQ.



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LLI Sample No. 2677529
 MW-03 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
0937 TCL Pesticides in Waters	TCX	92	60	120
	DCB	51	60	120
4592 TCL Volatiles by 8240 - Water	d4-1,2-DCA	101	76	114
	d8-toluene	104	88	110
	4-8FB	108	86	115
4678 TCL SW846 Semivolatiles/Waters	2-Flphenol	58	21	100
	Phenol-d6	38	10	94
	2,4,6-TBP	84	10	123
4679 TCL SW846 Semivolatiles/Waters	Nitrobz-d5	64	35	114
	2-Fbiphenyl	83	43	116
	Tphenylid14	81	33	141



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LLI Sample No. WW 2677530

Collected: 3/12/97 at 11:22 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02BKG

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		UNITS
		RESULTS	METHOD	
4592	TCL Volatiles			See Page 2
1743	Aluminum	16.6	0.057	mg/l
1744	Antimony	N.D.	0.015	mg/l
1746	Barium	0.49	0.0022	mg/l
1747	Beryllium	0.0042 J	0.0013	mg/l
1749	Cadmium	N.D.	0.0027	mg/l
1750	Calcium	42.6	0.030	mg/l
1751	Chromium	0.0185 J	0.0043	mg/l
1752	Cobalt	0.0156 J	0.0055	mg/l
1753	Copper	0.0218 J	0.0038	mg/l
1754	Iron	21.9	0.0059	mg/l
1757	Magnesium	20.6	0.024	mg/l
1758	Manganese	1.22	0.0029	mg/l
1761	Nickel	0.0305 J	0.0054	mg/l
1762	Potassium	5.67	0.15	mg/l
1766	Silver	N.D.	0.0036	mg/l
1767	Sodium	53.4	1.0	mg/l
1771	Vanadium	0.048	0.0070	mg/l
1772	Zinc	0.085	0.012	mg/l
7022	Thallium	N.D.	0.0045	mg/l
7035	Arsenic	0.012	0.0027	mg/l
7036	Selenium	N.D.	0.0027	mg/l
7055	Lead	0.0262	0.0020	mg/l
0259	Mercury	0.000116J	0.00004	mg/l
0937	TCL Pesticides			See Page 3
4678	TCL Semivolatiles			See Page 4
4679	TCL Semivolatiles cont'd			See Page 5
0237	Total Cyanide	N.D.	0.0040	mg/l

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove

ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:48:41 D 0003 12 129915 556882
560 0.00 00084840 ASR000

Respectfully Submitted
Ramona V. Layman
Manager, Metals/Leachates



Lancaster Laboratories
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LLI Sample No. WW 2677530

Collected: 3/12/97 at 11:22 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02BKG

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
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AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	DETECTION LIMIT	UNITS
TCL Volatiles by 8240 - Water					
1258	Chloromethane	N.D.	3.	ug/l	
1257	Bromomethane	N.D.	3.	ug/l	
3492	Vinyl Chloride	N.D.	2.	ug/l	
3494	Chloroethane	N.D.	3.	ug/l	
3497	Methylene Chloride	N.D.	2.	ug/l	
3498	Acetone	N.D.	6.	ug/l	
3499	Carbon Disulfide	27.	3.	ug/l	
3500	1,1-Dichloroethene	N.D.	1.	ug/l	
3501	1,1-Dichloroethane	N.D.	2.	ug/l	
3503	Chloroform	N.D.	1.	ug/l	
3504	1,2-Dichloroethane	N.D.	2.	ug/l	
0316	2-Butanone	N.D.	3.	ug/l	
3505	1,1,1-Trichloroethane	N.D.	1.	ug/l	
3506	Carbon Tetrachloride	N.D.	1.	ug/l	
3507	Vinyl Acetate	N.D.	2.	ug/l	
3508	Bromodichloromethane	N.D.	1.	ug/l	
3509	1,2-Dichloropropane	N.D.	1.	ug/l	
3516	cis-1,3-Dichloropropene	N.D.	1.	ug/l	
3511	Trichloroethene	N.D.	1.	ug/l	
3512	Dibromochloromethane	N.D.	2.	ug/l	
3513	1,1,2-Trichloroethane	N.D.	2.	ug/l	
3515	Benzene	N.D.	1.	ug/l	
3510	trans-1,3-Dichloropropene	N.D.	1.	ug/l	
3518	Bromoform	N.D.	1.	ug/l	
3521	4-Methyl-2-pentanone	N.D.	5.	ug/l	
3520	2-Hexanone	N.D.	7.	ug/l	
3522	Tetrachloroethene	N.D.	1.	ug/l	
3523	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l	
3524	Toluene	N.D.	2.	ug/l	
3525	Chlorobenzene	N.D.	1.	ug/l	
3526	Ethylbenzene	N.D.	2.	ug/l	
3528	Styrene	N.D.	1.	ug/l	
3529	Xylene (total)	N.D.	1.	ug/l	
5780	trans-1,2-Dichloroethene	N.D.	2.	ug/l	
6268	cis-1,2-Dichloroethene	N.D.	2.	ug/l	

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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LLI Sample No. **WW 2677530**
Collected: 3/12/97 at 11:22 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMM4 SDG#: HMS02-02BKG

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Pesticides in Waters				
1600	Alpha BHC	N.D.	0.001	ug/l
1601	Beta BHC	N.D.	0.001	ug/l
1603	Delta BHC	N.D.	0.003	ug/l
1602	Gamma BHC - Lindane	N.D.	0.001	ug/l
1604	Heptachlor	N.D.	0.002	ug/l
1605	Aldrin	N.D.	0.006	ug/l
1606	Heptachlor Epoxide	N.D.	0.001	ug/l
1616	Endosulfan I	N.D.	0.002	ug/l
1610	Dieldrin	N.D.	0.001	ug/l
1607	DDE	N.D.	0.001	ug/l
1611	Endrin	N.D.	0.007	ug/l
1615	Endosulfan II	N.D.	0.005	ug/l
1608	DDD	N.D.	0.005	ug/l
1617	Endosulfan Sulfate	N.D.	0.003	ug/l
1609	DDT	N.D.	0.009	ug/l
0938	Endrin Ketone	N.D.	0.004	ug/l
1860	Methoxychlor	N.D.	0.02	ug/l
1361	Alpha Chlordane	N.D.	0.001	ug/l
1362	Gamma Chlordane	N.D.	0.001	ug/l
1613	Toxaphene	N.D.	0.4	ug/l
1618	Endrin Aldehyde	N.D.	0.005	ug/l
1619	PCB-1016	N.D.	0.04	ug/l
1620	PCB-1221	N.D.	0.1	ug/l
1621	PCB-1232	N.D.	0.05	ug/l
1622	PCB-1242	N.D.	0.1	ug/l
1623	PCB-1248	N.D.	0.04	ug/l
1624	PCB-1254	N.D.	0.1	ug/l
1626	PCB-1260	N.D.	0.04	ug/l

The LCS results are shown on the QC summary. Since the MS/MSD data are within the QC limits, no action is needed for LCS results outside the QC limits.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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LLI Sample No. **WW 2677530**

Collected: 3/12/97 at 11:22 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02BKG

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ret.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters				
3918	phenol	N.D.	1.	ug/l
3867	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3874	2-chlorophenol	N.D.	1.	ug/l
3883	1,3-dichlorobenzene	N.D.	1.	ug/l
3884	1,4-dichlorobenzene	N.D.	1.	ug/l
3882	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	2.	ug/l
4681	2,2'-oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	2.	ug/l
3915	N-nitrosodi-n-propylamine	N.D.	2.	ug/l
3902	hexachloroethane	N.D.	2.	ug/l
3910	nitrobenzene	N.D.	1.	ug/l
3904	isophorone	N.D.	1.	ug/l
3911	2-nitrophenol	N.D.	2.	ug/l
3890	2,4-dimethylphenol	N.D.	1.	ug/l
3866	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3886	2,4-dichlorophenol	N.D.	2.	ug/l
3921	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3906	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	2.	ug/l
3900	hexachlorobutadiene	N.D.	1.	ug/l
3872	4-chloro-3-methylphenol	N.D.	2.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3901	hexachlorocyclopentadiene	N.D.	3.	ug/l
3923	2,4,6-trichlorophenol	N.D.	1.	ug/l
3922	2,4,5-trichlorophenol	N.D.	1.	ug/l
3873	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	1.	ug/l
3891	dimethyl phthalate	N.D.	3.	ug/l
3858	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. WW 2677530

Collected: 3/12/97 at 11:22 by DA

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Discard: 5/ 5/97

MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02BKG

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters				
3908	3-nitroaniline	N.D.	1.	ug/l
3857	acenaphthene	N.D.	1.	ug/l
3893	2,4-dinitrophenol	N.D.	5.	ug/l
3912	4-nitrophenol	N.D.	5.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3894	2,4-dinitrotoluene	N.D.	2.	ug/l
3895	2,6-dinitrotoluene	N.D.	1.	ug/l
3887	diethyl phthalate	N.D.	2.	ug/l
3875	4-chlorophenyl phenyl ether	N.D.	2.	ug/l
3898	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
4683	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3914	N-nitrosodiphenylamine	N.D.	2.	ug/l
3869	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3899	hexachlorobenzene	N.D.	1.	ug/l
3916	pentachlorophenol	N.D.	1.	ug/l
3917	phenanthrene	N.D.	1.	ug/l
3859	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3880	di-n-butyl phthalate	N.D.	1.	ug/l
3897	fluoranthene	N.D.	1.	ug/l
3919	pyrene	N.D.	1.	ug/l
3870	butyl benzyl phthalate	N.D.	2.	ug/l
3885	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3860	benzo (a) anthracene	N.D.	1.	ug/l
3868	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3876	chrysene	N.D.	1.	ug/l
3896	di-n-octyl phthalate	N.D.	2.	ug/l
3861	benzo (b) fluoranthene	N.D.	2.	ug/l
3862	benzo (k) fluoranthene	N.D.	2.	ug/l
3864	benzo (a) pyrene	N.D.	2.	ug/l
3903	indeno (1,2,3-cd) pyrene	N.D.	2.	ug/l
3881	dibenz (a,h) anthracene	N.D.	2.	ug/l
3863	benzo (ghi) perylene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. WW 2677530

Collected: 3/12/97 at 11:22 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS
 KMM4 SDG#: HMS02-02BKG

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

AS RECEIVED

CAT		RESULTS	METHOD	DETECTION LIMIT UNITS
NO.	ANALYSIS NAME			

TCL SW846 Semivolatiles/Waters

*N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
 The result reported for N-nitrosodiphenylamine represents the combined
 total of both compounds.*

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Senior Chemist, GC/MS



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LLI Sample No. WW 2677530
 Collected: 03/12/97 at 11:22 by DA

Submitted: 03/14/97

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS
 KMMW4 SDG#: HMS02-02BKG

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/19/97 1929	Trent S. Sprengle
1743	Aluminum	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1744	Antimony	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1746	Barium	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1747	Beryllium	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1749	Cadmium	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1750	Calcium	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1751	Chromium	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1752	Cobalt	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1753	Copper	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1754	Iron	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1757	Magnesium	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1758	Manganese	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1761	Nickel	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1762	Potassium	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1766	Silver	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1767	Sodium	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1771	Vanadium	SW-846 6010A	1	03/26/97 0758	Nina C. Haller
1772	Zinc	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
1848	MW SW846 ICP Digest (tot rec)	SW-846 3005A	1	03/21/97 1802	Marie D. Kimmel
7022	Thallium TR	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
7035	Arsenic TR	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
7036	Selenium TR	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
7055	Lead TR	SW-846 6010A	1	03/24/97 1101	Nina C. Haller
0259	Mercury	SW-846 7470A	1	03/25/97 1444	Nelli S. Markaryan
5713	MW SW846 Hg Digest	SW-846 7470A	1	03/24/97 2131	Nelli S. Markaryan
0817	Water Sample Pest. Extraction	SW-846 3510B	1	03/18/97 1640	Sherry Lynn Devlin
0937	TCL Pesticides in Waters	SW-846 8081	1	03/26/97 1903	Douglas D. Seitz
0813	BNA Water Extraction	SW-846 3510B	1	03/17/97 1640	Sherry Lynn Devlin
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/18/97 1835	David J. Evans
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/18/97 1835	David J. Evans
0237	Total Cyanide (water)	SW-846 9012	1	03/24/97 1255	John W. Ballard, Jr.
0492	Cyanide Water Distillation	SW-846 9012	1	03/21/97 0530	Dawn M. Kreider



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LLI Sample No. 2677530
 MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH

4592	TCL Volatiles by 8240 - Water	Batch: K970781AA									
1258	Chloromethane										
	3. ug/l	N.D.		91	87	5					
1257	Bromomethane										
	3. ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
	2. ug/l	N.D.		99	97	1					
3494	Chloroethane										
	3. ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
	2. ug/l	N.D.		95	92	3					
3498	Acetone										
	6. ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
	3. ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
	1. ug/l	N.D.		99	96	4					
3501	1,1-Dichloroethane										
	2. ug/l	N.D.		99	96	3					
3503	Chloroform										
	1. ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
	2. ug/l	N.D.		98	97	1					
0316	2-Butanone										
	3. ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
	1. ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
	1. ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
	2. ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
	1. ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
	1. ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
	1. ug/l	N.D.		97	97	0					
3511	Trichloroethene										
	1. ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
	2. ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
	2. ug/l	N.D.		102	104	2					
3515	Benzene										
	1. ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
	1. ug/l	N.D.		92	95	3					



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2216 Rev. 5/01/96





LLI Sample No. 2677530
MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3518	Bromoform										
	1. ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
	5. ug/l	N.D.		85	84	1					
3520	2-Hexanone										
	7. ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
	1. ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
	2. ug/l	N.D.		96	95	1					
3524	Toluene										
	2. ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
	1. ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
	2. ug/l	N.D.		106	101	4					
3528	Styrene										
	1. ug/l	N.D.		107	104	3					
3529	Xylene (total)										
	1. ug/l	N.D.		107	103	5					
780	trans-1,2-Dichloroethene										
	2. ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
	2. ug/l	N.D.		100	98	2					
1743	Aluminum	Batch: 970801848006									
	0.057 mg/l	N.D.	18	1044	972 (2)	4	105			80	120
1744	Antimony	Batch: 970801848006									
	0.015 mg/l	N.D.	0 (1)	72	70	2	108			80	120
1746	Barium	Batch: 970801848006									
	0.0022 mg/l	N.D.	0 (1)	101	97	3	97			80	120
1747	Beryllium	Batch: 970801848006									
	0.0013 mg/l	N.D.	0 (1)	93	91	3	94			80	120
1749	Cadmium	Batch: 970801848006									
	0.0027 mg/l	N.D.	0 (1)	92	90	3	95			80	120
1750	Calcium	Batch: 970801848006									
	0.030 mg/l	0.058 J mg/l	1	187	150 (2)	3	102			80	120
1751	Chromium	Batch: 970801848006									
	0.0043 mg/l	N.D.	0 (1)	112	109	3	105			80	120
1752	Cobalt	Batch: 970801848006									
	0.0055 mg/l	N.D.	0 (1)	97	94	3	96			80	120
1753	Copper	Batch: 970801848006									
	0.0038 mg/l	N.D.	0 (1)	103	99	3	98			80	120
1754	Iron	Batch: 970801848006									
	0.0059 mg/l	0.0082 J mg/l	21	1709	1544 (2)	4	102			80	120
1757	Magnesium	Batch: 970801848006									
	0.024 mg/l	0.041 J mg/l	4	307	264 (2)	3	98			80	120
1758	Manganese	Batch: 970801848006									
	0.0029 mg/l	N.D.	3	148	135	3	97			80	120
1761	Nickel	Batch: 970801848006									
	0.0054 mg/l	N.D.	0 (1)	102	99	3	98			80	120

(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.



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LLI Sample No. 2677530
MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
1762 Potassium		Batch: 970801848006									
0.15	mg/l	N.D.	7	140	132	3	97			80	120
1766 Silver		Batch: 970801848006									
0.0036	mg/l	N.D.	0 (1)	99	96	3	99			80	120
1767 Sodium		Batch: 970801848006									
1.0	mg/l	N.D.	11	301	299 (2)	0	105			80	120
1771 Vanadium		Batch: 970801848006									
0.0070	mg/l	N.D.	0 (1)	108	104	3	104			80	120
1772 Zinc		Batch: 970801848006									
0.012	mg/l	N.D.	0 (1)	99	95	3	97			80	120
7022 Thallium TR		Batch: 970801848006									
0.0045	mg/l	N.D.	0 (1)	98	95	3	97			80	120
7035 Arsenic TR		Batch: 970801848006									
0.0027	mg/l	N.D.	0 (1)	97	94	3	99			80	120
7036 Selenium TR		Batch: 970801848006									
0.0027	mg/l	N.D.	0 (1)	94	91	2	97			80	120
7055 Lead TR		Batch: 970801848006									
0.0020	mg/l	0.0036 J mg/l	14	98	95	3	98			80	120
259 Mercury		Batch: 970835713001									
0.000043	mg/l	0.000045J mg/l	0 (1)	96	91	5	115			80	120
7 TCL Pesticides in Waters		Batch: 970770001A									
1600 Alpha BHC											
0.001	ug/l	N.D.		95	96	1	95			67	122
1601 Beta BHC											
0.001	ug/l	N.D.		100	97	4	98			74	120
1603 Delta BHC											
0.003	ug/l	N.D.		105	106	1	107			69	126
1602 Gamma BHC - Lindane											
0.001	ug/l	N.D.		95	96	1	99			66	120
1604 Heptachlor											
0.002	ug/l	N.D.		87	86	1	81			54	120
1605 Aldrin											
0.006	ug/l	N.D.		82	80	2	76			42	120
1606 Heptachlor Epoxide											
0.001	ug/l	N.D.		92	91	1	93			64	120
1616 Endosulfan I											
0.002	ug/l	N.D.		94	95	1	95			60	120
1610 Dieldrin											
0.001	ug/l	N.D.		83	82	1	82			66	120
1607 DDE											
0.001	ug/l	N.D.		77	75	3	77			60	120
1611 Endrin											
0.007	ug/l	N.D.		111	106	4	109			73	129
1615 Endosulfan II											
0.005	ug/l	N.D.		97	96	1	102			67	120
1608 DDD											
0.005	ug/l	N.D.		98	94	5	95			67	121

(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.



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LLI Sample No. 2677530
 MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
1617	Endosulfan Sulfate 0.003 ug/l	N.D.		112	114	2	122			53	128
1609	DDT 0.009 ug/l	N.D.		96	94	2	97			71	120
0938	Endrin Ketone 0.004 ug/l	N.D.		99	99	0	106			76	120
1860	Methoxychlor 0.02 ug/l	N.D.		102	101	2	111			57	140
1361	Alpha Chlordane 0.001 ug/l	N.D.		93	94	1	92			75	120
1362	Gamma Chlordane 0.001 ug/l	N.D.		88	86	2	86			75	120
1613	Toxaphene 0.4 ug/l	N.D.									
1618	Endrin Aldehyde 0.005 ug/l	N.D.		120	126	5	133			59	126
1619	PCB-1016 0.04 ug/l	N.D.									
1620	PCB-1221 0.1 ug/l	N.D.									
1621	PCB-1232 0.05 ug/l	N.D.									
1622	PCB-1242 0.1 ug/l	N.D.									
1623	PCB-1248 0.04 ug/l	N.D.									
1624	PCB-1254 0.1 ug/l	N.D.									
1626	PCB-1260 0.04 ug/l	N.D.									

4678	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									

3918	phenol 1. ug/l	N.D.		43	41	3	43			5	112
3867	bis (2-chloroethyl) ether 1. ug/l	N.D.		88	90	3	89			12	158
3874	2-chlorophenol 1. ug/l	N.D.		88	90	3	88			23	134
3883	1,3-dichlorobenzene 1. ug/l	N.D.		84	92	9	70			1	172
3884	1,4-dichlorobenzene 1. ug/l	N.D.		86	89	3	74			20	124
3882	1,2-dichlorobenzene 1. ug/l	N.D.		86	89	4	77			32	129
4680	2-methylphenol 2. ug/l	N.D.		78	80	3	80			46	123
4681	2,2'-oxybis (1-chloropropane) 2. ug/l	N.D.		69	72	5	71			36	166



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LLI Sample No. 2677530
MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4682	4-methylphenol										
	2. ug/l	N.D.		76	78	3	77			5	152
3915	N-nitrosodi-n-propylamine										
	2. ug/l	N.D.		94	100	6	99			1	230
3902	hexachloroethane										
	2. ug/l	N.D.		76	80	5	54			40	113
3910	nitrobenzene										
	1. ug/l	N.D.		96	98	2	97			35	180
3904	isophorone										
	1. ug/l	N.D.		94	93	0	94			21	196
3911	2-nitrophenol										
	2. ug/l	N.D.		91	94	3	90			29	182
3890	2,4-dimethylphenol										
	1. ug/l	N.D.		75	71	5	78			32	119
3866	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		88	90	2	88			33	184
3886	2,4-dichlorophenol										
	2. ug/l	N.D.		85	85	1	83			39	135
3921	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		83	83	1	72			44	142
3906	naphthalene										
	1. ug/l	N.D.		84	86	2	81			21	133
3871	4-chloroaniline										
	2. ug/l	N.D.		47	55	16	43			17	116
3900	hexachlorobutadiene										
	1. ug/l	N.D.		83	85	3	52			24	116
3872	4-chloro-3-methylphenol										
	2. ug/l	N.D.		88	91	4	87			22	147
3905	2-methylnaphthalene										
	1. ug/l	N.D.		86	87	1	80			28	123
3901	hexachlorocyclopentadiene										
	3. ug/l	N.D.		71	72	1	54			1	100
3923	2,4,6-trichlorophenol										
	1. ug/l	N.D.		93	95	2	91			37	144
3922	2,4,5-trichlorophenol										
	1. ug/l	N.D.		90	95	6	88			39	151
3873	2-chloronaphthalene										
	1. ug/l	N.D.		90	91	1	86			60	118
3907	2-nitroaniline										
	1. ug/l	N.D.		84	90	7	86			53	143
3891	dimethyl phthalate										
	3. ug/l	N.D.		63	65	3	28			1	112
3858	acenaphthylene										
	1. ug/l	N.D.		88	90	2	86			33	145

4679	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									

3908	3-nitroaniline										
	1. ug/l	N.D.		61	67	9	57			7	143



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LLI Sample No. 2677530
MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3857	acenaphthene										
	1. ug/l	N.D.		82	84	2	78			47	145
3893	2,4-dinitrophenol										
	5. ug/l	N.D.		82	83	1	87			1	191
3912	4-nitrophenol										
	5. ug/l	N.D.		41	43	6	41			1	132
3879	dibenzofuran										
	1. ug/l	N.D.		85	87	2	83			28	131
3894	2,4-dinitrotoluene										
	2. ug/l	N.D.		88	95	8	89			39	139
3895	2,6-dinitrotoluene										
	1. ug/l	N.D.		90	95	6	92			50	158
3887	diethyl phthalate										
	2. ug/l	N.D.		76	78	2	61			1	114
3875	4-chlorophenyl phenyl ether										
	2. ug/l	N.D.		86	88	2	82			25	158
3898	fluorene										
	1. ug/l	N.D.		85	86	2	80			59	121
3909	4-nitroaniline										
	2. ug/l	N.D.		79	84	6	78			38	122
683	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		87	91	5	90			1	181
3914	N-nitrosodiphenylamine										
	2. ug/l	N.D.		85	86	2	83			38	147
3869	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		86	88	3	86			53	127
3899	hexachlorobenzene										
	1. ug/l	N.D.		85	86	1	84			1	152
3916	pentachlorophenol										
	1. ug/l	N.D.		86	85	2	89			14	176
3917	phenanthrene										
	1. ug/l	N.D.		86	86	0	83			54	120
3859	anthracene										
	1. ug/l	N.D.		85	85	0	83			27	133
4684	carbazole										
	1. ug/l	N.D.		90	90	1	88			40	137
3880	di-n-butyl phthalate										
	1. ug/l	N.D.		93	92	0	86			1	118
3897	fluoranthene										
	1. ug/l	N.D.		87	88	0	86			26	137
3919	pyrene										
	1. ug/l	N.D.		85	90	6	82			52	115
3870	butyl benzyl phthalate										
	2. ug/l	N.D.		88	85	4	75			1	152
3885	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		60	71	17	61			1	262
3860	benzo (a) anthracene										
	1. ug/l	N.D.		85	91	7	85			33	143
3868	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		93	96	2	90			8	158



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
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717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96



LLI Sample No. 2677530
MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3876	chrysene										
	1. ug/l	N.D.		89	89	1	88			17	168
3896	di-n-octyl phthalate										
	2. ug/l	N.D.		87	89	2	87			4	146
3861	benzo (b) fluoranthene										
	2. ug/l	N.D.		79	83	5	80			24	159
3862	benzo (k) fluoranthene										
	2. ug/l	N.D.		87	89	2	86			11	163
3864	benzo (a) pyrene										
	2. ug/l	N.D.		81	83	2	81			17	163
3903	indeno (1,2,3-cd) pyrene										
	2. ug/l	N.D.		87	89	1	90			1	171
3881	dibenz (a,h) anthracene										
	2. ug/l	N.D.		91	93	1	92			1	227
3863	benzo (ghi) perylene										
	2. ug/l	N.D.		88	89	1	89			1	219
0237	Total Cyanide (water)										
	0.0040 mg/l	Batch: 97080102101A N.D.	0 (1)	97	101	4	98	101	4	90	110

(1) The result for one or both determinations was less than five times the LOQ.



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. **2677530**
MW-04 Unspiked Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
0937 TCL Pesticides in Waters	TCX	93	60	120
	DCB	44	60	120
4592 TCL Volatiles by 8240 - Water	d4-1,2-DCA	101	76	114
	d8-toluene	104	88	110
	4-BFB	110	86	115
4678 TCL SW846 Semivolatiles/Waters	2-F1pheno1	58	21	100
	Pheno1-d6	43	10	94
	2,4,6-TBP	36	10	123
4679 TCL SW846 Semivolatiles/Waters	Nitrobz-d5	89	35	114
	2-Fbiphnyl	80	43	116
	Tphenylid14	112	33	141



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. WW 2677531
Collected: 3/12/97 at 11:25 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-04 Duplicate Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02DUP

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ret.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
1743	Aluminum	19.8		0.057 mg/l
1744	Antimony	N.D.		0.015 mg/l
1746	Barium	0.51		0.0022 mg/l
1747	Beryllium	0.0022 J		0.0013 mg/l
1749	Cadmium	N.D.		0.0027 mg/l
1750	Calcium	42.9		0.030 mg/l
1751	Chromium	0.0217 J		0.0043 mg/l
1752	Cobalt	0.0177 J		0.0055 mg/l
1753	Copper	0.0217 J		0.0038 mg/l
1754	Iron	27.1		0.0059 mg/l
1757	Magnesium	21.5		0.024 mg/l
1758	Manganese	1.26		0.0029 mg/l
1761	Nickel	0.0350 J		0.0054 mg/l
1762	Potassium	6.10		0.15 mg/l
1766	Silver	N.D.		0.0036 mg/l
1767	Sodium	59.4		1.0 mg/l
1771	Vanadium	0.054		0.0070 mg/l
1772	Zinc	0.089		0.012 mg/l
7022	Thallium	N.D.		0.0045 mg/l
7035	Arsenic	0.014		0.0027 mg/l
7036	Selenium	N.D.		0.0027 mg/l
7055	Lead	0.0301		0.0020 mg/l
0259	Mercury	0.000093J		0.00004 mg/l
0237	Total Cyanide	N.D.		0.0040 mg/l

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:51:13 D 0003 12 129915 556882
560 0.00 00025140 ASR000



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
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717-656-2300 Fax: 717-656-2681

Respectfully Submitted
Ramona V. Layman
Manager, Metals/Leachates





LLI Sample No. WW 2677531
 Collected: 03/12/97 at 11:25 by DA

Submitted: 03/14/97

MW-04 Duplicate Water Sample

Gulf States Creosoting: Hattiesburg, MS
 KMMW4 SDG#: HMS02-02DUP

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
1743	Aluminum	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1744	Antimony	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1746	Barium	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1747	Beryllium	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1749	Cadmium	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1750	Calcium	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1751	Chromium	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1752	Cobalt	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1753	Copper	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1754	Iron	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1757	Magnesium	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1758	Manganese	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1761	Nickel	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1762	Potassium	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1766	Silver	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1767	Sodium	SW-846 6010A	1	03/26/97 0808	Nina C. Haller
1771	Vanadium	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1772	Zinc	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
1848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	03/21/97 1802	Marie D. Kimmel
7022	Thallium TR	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
7035	Arsenic TR	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
7036	Selenium TR	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
7055	Lead TR	SW-846 6010A	1	03/24/97 1110	Nina C. Haller
0259	Mercury	SW-846 7470A	1	03/25/97 1451	Nelli S. Markaryan
5713	WW SW846 Hg Digest	SW-846 7470A	1	03/24/97 2131	Nelli S. Markaryan
0237	Total Cyanide (water)	SW-846 9012	1	03/24/97 1256	John W. Ballard, Jr.
0492	Cyanide Water Distillation	SW-846 9012	1	03/21/97 0530	Dawn M. Kreider



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 2425 New Holland Pike
 PO Box 12425
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 717-656-2300 Fax: 717-656-2681



LLI Sample No. 2677531
MW-04 Duplicate Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
1743 Aluminum	0.057 mg/l	Batch: 970801848006 N.D.	18	1044	972 (2)	4	105			80	120
1744 Antimony	0.015 mg/l	Batch: 970801848006 N.D.	0 (1)	72	70	2	108			80	120
1746 Barium	0.0022 mg/l	Batch: 970801848006 N.D.	0 (1)	101	97	3	97			80	120
1747 Beryllium	0.0013 mg/l	Batch: 970801848006 N.D.	0 (1)	93	91	3	94			80	120
1749 Cadmium	0.0027 mg/l	Batch: 970801848006 N.D.	0 (1)	92	90	3	95			80	120
1750 Calcium	0.030 mg/l	Batch: 970801848006 0.058 J mg/l	1	187	150 (2)	3	102			80	120
1751 Chromium	0.0043 mg/l	Batch: 970801848006 N.D.	0 (1)	112	109	3	105			80	120
1752 Cobalt	0.0055 mg/l	Batch: 970801848006 N.D.	0 (1)	97	94	3	96			80	120
1753 Copper	0.0038 mg/l	Batch: 970801848006 N.D.	0 (1)	103	99	3	98			80	120
1754 Iron	0.0059 mg/l	Batch: 970801848006 0.0082 J mg/l	21	1709	1544 (2)	4	102			80	120
1757 Magnesium	0.024 mg/l	Batch: 970801848006 0.041 J mg/l	4	307	264 (2)	3	98			80	120
1758 Manganese	0.0029 mg/l	Batch: 970801848006 N.D.	3	148	135	3	97			80	120
1761 Nickel	0.0054 mg/l	Batch: 970801848006 N.D.	0 (1)	102	99	3	98			80	120
1762 Potassium	0.15 mg/l	Batch: 970801848006 N.D.	7	140	132	3	97			80	120
1766 Silver	0.0036 mg/l	Batch: 970801848006 N.D.	0 (1)	99	96	3	99			80	120
1767 Sodium	1.0 mg/l	Batch: 970801848006 N.D.	11	301	299 (2)	0	105			80	120
1771 Vanadium	0.0070 mg/l	Batch: 970801848006 N.D.	0 (1)	108	104	3	104			80	120
1772 Zinc	0.012 mg/l	Batch: 970801848006 N.D.	0 (1)	99	95	3	97			80	120
7022 Thallium TR	0.0045 mg/l	Batch: 970801848006 N.D.	0 (1)	98	95	3	97			80	120
7035 Arsenic TR	0.0027 mg/l	Batch: 970801848006 N.D.	0 (1)	97	94	3	99			80	120
7036 Selenium TR	0.0027 mg/l	Batch: 970801848006 N.D.	0 (1)	94	91	2	97			80	120
7055 Lead TR	0.0020 mg/l	Batch: 970801848006 0.0036 J mg/l	14	98	95	3	98			80	120
0259 Mercury	0.000043 mg/l	Batch: 970835713001 0.000045J mg/l	0 (1)	96	91	5	115			80	120
0237 Total Cyanide (water)	0.0040 mg/l	Batch: 97080102101A N.D.	0 (1)	97	101	4	98	101	4	90	110

(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.



Lancaster Laboratories
2425 New Holland Pike
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 2677532

Collected: 3/12/97 at 11:25 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02MS

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		UNITS
		RESULTS	METHOD DETECTION LIMIT	
4592	TCL Volatiles			See Page 2
1743	Aluminum	37.4	0.057	mg/l
1744	Antimony	0.36	0.015	mg/l
1746	Barium	2.51	0.0022	mg/l
1747	Beryllium	0.051	0.0013	mg/l
1749	Cadmium	0.046	0.0027	mg/l
1750	Calcium	50.1	0.030	mg/l
1751	Chromium	0.244	0.0043	mg/l
1752	Cobalt	0.499	0.0055	mg/l
1753	Copper	0.279	0.0038	mg/l
1754	Iron	39.0	0.0059	mg/l
1757	Magnesium	26.7	0.024	mg/l
1758	Manganese	1.96	0.0029	mg/l
1761	Nickel	0.541	0.0054	mg/l
1762	Potassium	11.3	0.15	mg/l
1766	Silver	0.049	0.0036	mg/l
1767	Sodium	65.5	1.0	mg/l
1771	Vanadium	0.587	0.0070	mg/l
1772	Zinc	0.577	0.012	mg/l
7022	Thallium	1.95	0.0045	mg/l
7035	Arsenic	1.96	0.0027	mg/l
7036	Selenium	1.87	0.0027	mg/l
7055	Lead	0.516	0.0020	mg/l
0259	Mercury	0.00108	0.00004	mg/l
0937	TCL Pesticides			See Page 3
4678	TCL Semivolatiles			See Page 4
4679	TCL Semivolatiles cont'd			See Page 5
0237	Total Cyanide	0.194	0.0040	mg/l

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:51:58 0 0003 12 129915 556882
560 0.00 00084840 ASR000

Respectfully Submitted
Ramona V. Layman
Manager, Metals/Leachates



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See reverse side for explanation of symbols and abbreviations.





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Page: 2 of 15

LLI Sample No. **WW 2677532**
 Collected: 3/12/97 at 11:25 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
 Discard: 5/ 5/97

MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS
 KMMW4 SDG#: HMS02-02MS

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	18.	3.	ug/l
1257	Bromomethane	20.	3.	ug/l
3492	Vinyl Chloride	20.	2.	ug/l
3494	Chloroethane	20.	3.	ug/l
3497	Methylene Chloride	19.	2.	ug/l
3498	Acetone	130.	6.	ug/l
3499	Carbon Disulfide	180.	3.	ug/l
3500	1,1-Dichloroethene	20.	1.	ug/l
3501	1,1-Dichloroethane	20.	2.	ug/l
3503	Chloroform	20.	1.	ug/l
3504	1,2-Dichloroethane	20.	2.	ug/l
0316	2-Butanone	150.	3.	ug/l
3505	1,1,1-Trichloroethane	21.	1.	ug/l
3506	Carbon Tetrachloride	20.	1.	ug/l
3507	Vinyl Acetate	120.	2.	ug/l
3508	Bromodichloromethane	20.	1.	ug/l
3509	1,2-Dichloropropane	19.	1.	ug/l
3516	cis-1,3-Dichloropropene	19.	1.	ug/l
3511	Trichloroethene	21.	1.	ug/l
3512	Dibromochloromethane	21.	2.	ug/l
3513	1,1,2-Trichloroethane	20.	2.	ug/l
3515	Benzene	20.	1.	ug/l
3510	trans-1,3-Dichloropropene	19.	1.	ug/l
3518	Bromoform	20.	1.	ug/l
3521	4-Methyl-2-pentanone	85.	5.	ug/l
3520	2-Hexanone	93.	7.	ug/l
3522	Tetrachloroethene	21.	1.	ug/l
3523	1,1,2,2-Tetrachloroethane	19.	2.	ug/l
3524	Toluene	21.	2.	ug/l
3525	Chlorobenzene	21.	1.	ug/l
3526	Ethylbenzene	21.	2.	ug/l
3528	Styrene	21.	1.	ug/l
3529	Xylene (total)	64.	1.	ug/l
5780	trans-1,2-Dichloroethene	19.	2.	ug/l
6268	cis-1,2-Dichloroethene	20.	2.	ug/l

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300



Lancaster Laboratories
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 Lancaster, PA 17605-2425
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See reverse side for explanation of symbols and abbreviations.

Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles

2216 Rev. 5/01/96





LLI Sample No. WW 2677532
Collected: 3/12/97 at 11:25 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02MS

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Pesticides in Waters				
1600	Alpha BHC	0.76	0.004	ug/l
1601	Beta BHC	0.81	0.004	ug/l
1603	Delta BHC	0.85	0.01	ug/l
1602	Gamma BHC - Lindane	0.76	0.004	ug/l
1604	Heptachlor	0.70	0.006	ug/l
1605	Aldrin	0.66	0.03	ug/l
1606	Heptachlor Epoxide	0.74	0.004	ug/l
1616	Endosulfan I	0.76	0.008	ug/l
1610	Dieldrin	0.67	0.004	ug/l
1607	DDE	0.62	0.004	ug/l
1611	Endrin	0.89	0.03	ug/l
1615	Endosulfan II	0.78	0.02	ug/l
1608	DDD	0.79	0.02	ug/l
1617	Endosulfan Sulfate	0.9	0.01	ug/l
1609	DDT	0.77	0.04	ug/l
0938	Endrin Ketone	0.8	0.02	ug/l
1860	Methoxychlor	0.8	0.06	ug/l
1361	Alpha Chlordane	0.75	0.004	ug/l
1362	Gamma Chlordane	0.70	0.006	ug/l
1613	Toxaphene	N.D.	2.	ug/l
1618	Endrin Aldehyde	1.0	0.02	ug/l
1619	PCB-1016	N.D.	0.2	ug/l
1620	PCB-1221	N.D.	0.5	ug/l
1621	PCB-1232	N.D.	0.2	ug/l
1622	PCB-1242	N.D.	0.4	ug/l
1623	PCB-1248	N.D.	0.2	ug/l
1624	PCB-1254	N.D.	0.6	ug/l
1626	PCB-1260	N.D.	0.1	ug/l

The LCS results are shown on the QC summary. Since the MS/MSD data are within the QC limits, no action is needed for LCS results outside the QC limits.

Due to insufficient sample size, we were unable to report our usual quantitation limits. The values reported represent the lowest quantitation limits obtainable.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. WW 2677532

Collected: 3/12/97 at 11:25 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02MS

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters				
3918	phenol	43.	1.	ug/l
3867	bis (2-chloroethyl) ether	88.	1.	ug/l
3874	2-chlorophenol	88.	1.	ug/l
3883	1,3-dichlorobenzene	84.	1.	ug/l
3884	1,4-dichlorobenzene	86.	1.	ug/l
3882	1,2-dichlorobenzene	86.	1.	ug/l
4680	2-methylphenol	78.	2.	ug/l
4681	2,2'-oxybis (1-chloropropane)	69.	2.	ug/l
4682	4-methylphenol	76.	2.	ug/l
3915	N-nitrosodi-n-propylamine	94.	2.	ug/l
3902	hexachloroethane	76.	2.	ug/l
3910	nitrobenzene	96.	1.	ug/l
3904	isophorone	94.	1.	ug/l
3911	2-nitrophenol	91.	2.	ug/l
3890	2,4-dimethylphenol	75.	1.	ug/l
3866	bis (2-chloroethoxy) methane	88.	1.	ug/l
3886	2,4-dichlorophenol	85.	2.	ug/l
3921	1,2,4-trichlorobenzene	83.	1.	ug/l
3906	naphthalene	84.	1.	ug/l
3871	4-chloroaniline	47.	2.	ug/l
3900	hexachlorobutadiene	83.	1.	ug/l
3872	4-chloro-3-methylphenol	88.	2.	ug/l
3905	2-methylnaphthalene	86.	1.	ug/l
3901	hexachlorocyclopentadiene	140.	3.	ug/l
3923	2,4,6-trichlorophenol	93.	1.	ug/l
3922	2,4,5-trichlorophenol	90.	1.	ug/l
3873	2-chloronaphthalene	90.	1.	ug/l
3907	2-nitroaniline	84.	1.	ug/l
3891	dimethyl phthalate	63.	3.	ug/l
3858	acenaphthylene	88.	1.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. **WW 2677532**
Collected: 3/12/97 at 11:25 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02MS

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters				
3908	3-nitroaniline	61.	1.	ug/l
3857	acenaphthene	82.	1.	ug/l
3893	2,4-dinitrophenol	82.	5.	ug/l
3912	4-nitrophenol	41.	5.	ug/l
3879	dibenzofuran	85.	1.	ug/l
3894	2,4-dinitrotoluene	88.	2.	ug/l
3895	2,6-dinitrotoluene	90.	1.	ug/l
3887	diethyl phthalate	76.	2.	ug/l
3875	4-chlorophenyl phenyl ether	86.	2.	ug/l
3898	fluorene	85.	1.	ug/l
3909	4-nitroaniline	79.	2.	ug/l
4683	4,6-dinitro-2-methylphenol	87.	5.	ug/l
3914	N-nitrosodiphenylamine	85.	2.	ug/l
3869	4-bromophenyl phenyl ether	86.	2.	ug/l
3899	hexachlorobenzene	85.	1.	ug/l
3916	pentachlorophenol	86.	1.	ug/l
3917	phenanthrene	86.	1.	ug/l
3859	anthracene	85.	1.	ug/l
4684	carbazole	90.	1.	ug/l
3880	di-n-butyl phthalate	93.	1.	ug/l
3897	fluoranthene	87.	1.	ug/l
3919	pyrene	85.	1.	ug/l
3870	butyl benzyl phthalate	88.	2.	ug/l
3885	3,3'-dichlorobenzidine	60.	2.	ug/l
3860	benzo (a) anthracene	85.	1.	ug/l
3868	bis (2-ethylhexyl) phthalate	93.	2.	ug/l
3876	chrysene	89.	1.	ug/l
3896	di-n-octyl phthalate	87.	2.	ug/l
3861	benzo (b) fluoranthene	79.	2.	ug/l
3862	benzo (k) fluoranthene	87.	2.	ug/l
3864	benzo (a) pyrene	81.	2.	ug/l
3903	indeno (1,2,3-cd) pyrene	87.	2.	ug/l
3881	dibenz (a,h) anthracene	91.	2.	ug/l
3863	benzo (ghi) perylene	88.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. WW 2677532

Collected: 3/12/97 at 11:25 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02MS

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT

NO. ANALYSIS NAME

AS RECEIVED

METHOD

RESULTS

DETECTION LIMIT UNITS

TCL SWB46 Semivolatiles/Waters

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

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Respectfully Submitted
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Senior Chemist, GC/MS



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LLI Sample No. WW 2677532
Collected: 03/12/97 at 11:25 by DA

Submitted: 03/14/97

MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02MS

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/19/97 2016	Trent S. Sprengle
1743	Aluminum	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1744	Antimony	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1746	Barium	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1747	Beryllium	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1749	Cadmium	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1750	Calcium	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1751	Chromium	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1752	Cobalt	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1753	Copper	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1754	Iron	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1757	Magnesium	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1758	Manganese	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1761	Nickel	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1762	Potassium	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1766	Silver	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1767	Sodium	SW-846 6010A	1	03/26/97 0813	Nina C. Haller
1771	Vanadium	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1772	Zinc	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
1848	MW SW846 ICP Digest (tot rec)	SW-846 3005A	1	03/21/97 1802	Marie D. Kimmel
7022	Thallium TR	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
7035	Arsenic TR	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
7036	Selenium TR	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
7055	Lead TR	SW-846 6010A	1	03/24/97 1115	Nina C. Haller
0259	Mercury	SW-846 7470A	1	03/25/97 1453	Nelli S. Markaryan
5713	WW SW846 Hg Digest	SW-846 7470A	1	03/24/97 2131	Nelli S. Markaryan
0817	Water Sample Pest. Extraction	SW-846 3510B	1	03/18/97 1640	Sherry Lynn Devlin
0937	TCL Pesticides in Waters	SW-846 8081	1	03/26/97 1944	Douglas D. Seitz
0813	BNA Water Extraction	SW-846 3510B	1	03/17/97 1640	Sherry Lynn Devlin
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/18/97 1931	David J. Evans
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/18/97 1931	David J. Evans
0237	Total Cyanide (water)	SW-846 9012	1	03/24/97 1258	John W. Ballard, Jr.
0492	Cyanide Water Distillation	SW-846 9012	1	03/21/97 0530	Dawn M. Kreider



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LLI Sample No. 2677532
MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4592 TCL Volatiles by 8240 - Water Batch: K970781AA											

1258	Chloromethane										
	3. ug/l	N.D.		91	87	5					
1257	Bromomethane										
	3. ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
	2. ug/l	N.D.		99	97	1					
3494	Chloroethane										
	3. ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
	2. ug/l	N.D.		95	92	3					
3498	Acetone										
	6. ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
	3. ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
	1. ug/l	N.D.		99	96	4					
501	1,1-Dichloroethane										
	2. ug/l	N.D.		99	96	3					
503	Chloroform										
	1. ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
	2. ug/l	N.D.		98	97	1					
0316	2-Butanone										
	3. ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
	1. ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
	1. ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
	2. ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
	1. ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
	1. ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
	1. ug/l	N.D.		97	97	0					
3511	Trichloroethene										
	1. ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
	2. ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
	2. ug/l	N.D.		102	104	2					
3515	Benzene										
	1. ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
	1. ug/l	N.D.		92	95	3					



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LLI Sample No. 2677532
MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS LIMITS HIGH
3518	Bromoform										
	1. ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
	5. ug/l	N.D.		85	84	1					
3520	2-Hexanone										
	7. ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
	1. ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
	2. ug/l	N.D.		96	95	1					
3524	Toluene										
	2. ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
	1. ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
	2. ug/l	N.D.		106	101	4					
3528	Styrene										
	1. ug/l	N.D.		107	104	3					
3529	Xylene (total)										
	1. ug/l	N.D.		107	103	5					
3780	trans-1,2-Dichloroethene										
	2. ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
	2. ug/l	N.D.		100	98	2					
1743	Aluminum	Batch: 970801848006									
	0.057 mg/l	N.D.	18	1044	972 (2)	4	105			80	120
1744	Antimony	Batch: 970801848006									
	0.015 mg/l	N.D.	0 (1)	72	70	2	108			80	120
1746	Barium	Batch: 970801848006									
	0.0022 mg/l	N.D.	0 (1)	101	97	3	97			80	120
1747	Beryllium	Batch: 970801848006									
	0.0013 mg/l	N.D.	0 (1)	93	91	3	94			80	120
1749	Cadmium	Batch: 970801848006									
	0.0027 mg/l	N.D.	0 (1)	92	90	3	95			80	120
1750	Calcium	Batch: 970801848006									
	0.030 mg/l	0.058 J mg/l	1	187	150 (2)	3	102			80	120
1751	Chromium	Batch: 970801848006									
	0.0043 mg/l	N.D.	0 (1)	112	109	3	105			80	120
1752	Cobalt	Batch: 970801848006									
	0.0055 mg/l	N.D.	0 (1)	97	94	3	96			80	120
1753	Copper	Batch: 970801848006									
	0.0038 mg/l	N.D.	0 (1)	103	99	3	98			80	120
1754	Iron	Batch: 970801848006									
	0.0059 mg/l	0.0082 J mg/l	21	1709	1544 (2)	4	102			80	120
1757	Magnesium	Batch: 970801848006									
	0.024 mg/l	0.041 J mg/l	4	307	264 (2)	3	98			80	120
1758	Manganese	Batch: 970801848006									
	0.0029 mg/l	N.D.	3	148	135	3	97			80	120
1761	Nickel	Batch: 970801848006									
	0.0054 mg/l	N.D.	0 (1)	102	99	3	98			80	120

(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.



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LLI Sample No. 2677532
MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
1762 Potassium		Batch: 970801848006									
0.15	mg/l	N.D.	7	140	132	3	97			80	120
1766 Silver		Batch: 970801848006									
0.0036	mg/l	N.D.	0 (1)	99	96	3	99			80	120
1767 Sodium		Batch: 970801848006									
1.0	mg/l	N.D.	11	301	299 (2)	0	105			80	120
1771 Vanadium		Batch: 970801848006									
0.0070	mg/l	N.D.	0 (1)	108	104	3	104			80	120
1772 Zinc		Batch: 970801848006									
0.012	mg/l	N.D.	0 (1)	99	95	3	97			80	120
7022 Thallium TR		Batch: 970801848006									
0.0045	mg/l	N.D.	0 (1)	98	95	3	97			80	120
7035 Arsenic TR		Batch: 970801848006									
0.0027	mg/l	N.D.	0 (1)	97	94	3	99			80	120
7036 Selenium TR		Batch: 970801848006									
0.0027	mg/l	N.D.	0 (1)	94	91	2	97			80	120
7055 Lead TR		Batch: 970801848006									
0.0020	mg/l	0.0036 J mg/l	14	98	95	3	98			80	120
259 Mercury		Batch: 970835713001									
0.000043	mg/l	0.000045J mg/l	0 (1)	96	91	5	115			80	120
0937 TCL Pesticides in Waters		Batch: 970770001A									
1600 Alpha BHC											
0.004	ug/l	N.D.		95	96	1	95			67	122
1601 Beta BHC											
0.004	ug/l	N.D.		100	97	4	98			74	120
1603 Delta BHC											
0.01	ug/l	N.D.		105	106	1	107			69	126
1602 Gamma BHC - Lindane											
0.004	ug/l	N.D.		95	96	1	99			66	120
1604 Heptachlor											
0.006	ug/l	N.D.		87	86	1	81			54	120
1605 Aldrin											
0.03	ug/l	N.D.		82	80	2	76			42	120
1606 Heptachlor Epoxide											
0.004	ug/l	N.D.		92	91	1	93			64	120
1616 Endosulfan I											
0.008	ug/l	N.D.		94	95	1	95			60	120
1610 Dieldrin											
0.004	ug/l	N.D.		83	82	1	82			66	120
1607 DDE											
0.004	ug/l	N.D.		77	75	3	77			60	120
1611 Endrin											
0.03	ug/l	N.D.		111	106	4	109			73	129
1615 Endosulfan II											
0.02	ug/l	N.D.		97	96	1	102			67	120
1608 DDD											
0.02	ug/l	N.D.		98	94	5	95			67	121

(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.



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LLI Sample No. 2677532

MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
1617	Endosulfan Sulfate										
	0.01 ug/l	N.D.		112	114	2	122			53	128
1609	DDT										
	0.04 ug/l	N.D.		96	94	2	97			71	120
0938	Endrin Ketone										
	0.02 ug/l	N.D.		99	99	0	106			76	120
1860	Methoxychlor										
	0.06 ug/l	N.D.		102	101	2	111			57	140
1361	Alpha Chlordane										
	0.004 ug/l	N.D.		93	94	1	92			75	120
1362	Gamma Chlordane										
	0.006 ug/l	N.D.		88	86	2	86			75	120
1613	Toxaphene										
	2. ug/l	N.D.									
1618	Endrin Aldehyde										
	0.02 ug/l	N.D.		120	126	5	133			59	126
1619	PCB-1016										
	0.2 ug/l	N.D.									
1620	PCB-1221										
	0.5 ug/l	N.D.									
1621	PCB-1232										
	0.2 ug/l	N.D.									
1622	PCB-1242										
	0.4 ug/l	N.D.									
1623	PCB-1248										
	0.2 ug/l	N.D.									
1624	PCB-1254										
	0.6 ug/l	N.D.									
1626	PCB-1260										
	0.1 ug/l	N.D.									

4678 TCL SW846 Semivolatiles/Waters Batch: 97076WAE026											

3918	pheno1										
	1. ug/l	N.D.		43	41	3	43			5	112
3867	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		88	90	3	89			12	158
3874	2-chloropheno1										
	1. ug/l	N.D.		88	90	3	88			23	134
3883	1,3-dichlorobenzene										
	1. ug/l	N.D.		84	92	9	70			1	172
3884	1,4-dichlorobenzene										
	1. ug/l	N.D.		86	89	3	74			20	124
3882	1,2-dichlorobenzene										
	1. ug/l	N.D.		86	89	4	77			32	129
4680	2-methylpheno1										
	2. ug/l	N.D.		78	80	3	80			46	123
4681	2,2'oxybis (1-chloropropane)										
	2. ug/l	N.D.		69	72	5	71			36	166



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LLI Sample No. 2677532
MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4682	4-methylphenol										
	2. ug/l	N.D.		76	78	3	77			5	152
3915	N-nitrosodi-n-propylamine										
	2. ug/l	N.D.		94	100	6	99			1	230
3902	hexachloroethane										
	2. ug/l	N.D.		76	80	5	54			40	113
3910	nitrobenzene										
	1. ug/l	N.D.		96	98	2	97			35	180
3904	isophorone										
	1. ug/l	N.D.		94	93	0	94			21	196
3911	2-nitrophenol										
	2. ug/l	N.D.		91	94	3	90			29	182
3890	2,4-dimethylphenol										
	1. ug/l	N.D.		75	71	5	78			32	119
3866	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		88	90	2	88			33	184
3886	2,4-dichlorophenol										
	2. ug/l	N.D.		85	85	1	83			39	135
3921	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		83	83	1	72			44	142
906	naphthalene										
	1. ug/l	N.D.		84	86	2	81			21	133
3871	4-chloroaniline										
	2. ug/l	N.D.		47	55	16	43			17	116
3900	hexachlorobutadiene										
	1. ug/l	N.D.		83	85	3	52			24	116
3872	4-chloro-3-methylphenol										
	2. ug/l	N.D.		88	91	4	87			22	147
3905	2-methylnaphthalene										
	1. ug/l	N.D.		86	87	1	80			28	123
3901	hexachlorocyclopentadiene										
	3. ug/l	N.D.		71	72	1	54			1	100
3923	2,4,6-trichlorophenol										
	1. ug/l	N.D.		93	95	2	91			37	144
3922	2,4,5-trichlorophenol										
	1. ug/l	N.D.		90	95	6	88			39	151
3873	2-chloronaphthalene										
	1. ug/l	N.D.		90	91	1	86			60	118
3907	2-nitroaniline										
	1. ug/l	N.D.		84	90	7	86			53	143
3891	dimethyl phthalate										
	3. ug/l	N.D.		63	65	3	28			1	112
3858	acenaphthylene										
	1. ug/l	N.D.		88	90	2	86			33	145

4679	TCL SWB46 Semivolatiles/Waters	Batch: 97076WAE026									

3908	3-nitroaniline										
	1. ug/l	N.D.		61	67	9	57			7	143



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2677532
MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3857	acenaphthene										
	1. ug/l	N.D.		82	84	2	78			47	145
3893	2,4-dinitrophenol										
	5. ug/l	N.D.		82	83	1	87			1	191
3912	4-nitrophenol										
	5. ug/l	N.D.		41	43	6	41			1	132
3879	dibenzofuran										
	1. ug/l	N.D.		85	87	2	83			28	131
3894	2,4-dinitrotoluene										
	2. ug/l	N.D.		88	95	8	89			39	139
3895	2,6-dinitrotoluene										
	1. ug/l	N.D.		90	95	6	92			50	158
3887	diethyl phthalate										
	2. ug/l	N.D.		76	78	2	61			1	114
3875	4-chlorophenyl phenyl ether										
	2. ug/l	N.D.		86	88	2	82			25	158
3898	fluorene										
	1. ug/l	N.D.		85	86	2	80			59	121
909	4-nitroaniline										
	2. ug/l	N.D.		79	84	6	78			38	122
583	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		87	91	5	90			1	181
3914	N-nitrosodiphenylamine										
	2. ug/l	N.D.		85	86	2	83			38	147
3869	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		86	88	3	86			53	127
3899	hexachlorobenzene										
	1. ug/l	N.D.		85	86	1	84			1	152
3916	pentachlorophenol										
	1. ug/l	N.D.		86	85	2	89			14	176
3917	phenanthrene										
	1. ug/l	N.D.		86	86	0	83			54	120
3859	anthracene										
	1. ug/l	N.D.		85	85	0	83			27	133
4684	carbazole										
	1. ug/l	N.D.		90	90	1	88			40	137
3880	di-n-butyl phthalate										
	1. ug/l	N.D.		93	92	0	86			1	118
3897	fluoranthene										
	1. ug/l	N.D.		87	88	0	86			26	137
3919	pyrene										
	1. ug/l	N.D.		85	90	6	82			52	115
3870	butyl benzyl phthalate										
	2. ug/l	N.D.		88	85	4	75			1	152
3885	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		60	71	17	61			1	262
3860	benzo (a) anthracene										
	1. ug/l	N.D.		85	91	7	85			33	143
3868	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		93	96	2	90			8	158



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LLI Sample No. 2677532
 MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3876	chrysene										
1.	ug/l	N.D.		89	89	1	88			17	168
3896	di-n-octyl phthalate										
2.	ug/l	N.D.		87	89	2	87			4	146
3861	benzo (b) fluoranthene										
2.	ug/l	N.D.		79	83	5	80			24	159
3862	benzo (k) fluoranthene										
2.	ug/l	N.D.		87	89	2	86			11	163
3864	benzo (a) pyrene										
2.	ug/l	N.D.		81	83	2	81			17	163
3903	indeno (1,2,3-cd) pyrene										
2.	ug/l	N.D.		87	89	1	90			1	171
3881	dibenz (a,h) anthracene										
2.	ug/l	N.D.		91	93	1	92			1	227
3863	benzo (ghi) perylene										
2.	ug/l	N.D.		88	89	1	89			1	219
0237	Total Cyanide (water)	Batch: 97080102101A									
0.0040	mg/l	N.D.	0 (1)	97	101	4	98	101	4	90	110

(1) The result for one or both determinations was less than five times the LOQ.



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LLI Sample No. 2677532
 MW-04 Matrix Spike Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
0937 TCL Pesticides in Waters	TCX	80	60	120
	DCB	68	60	120
4592 TCL Volatiles by 8240 - Water	d4-1,2-DCA	99	76	114
	d8-toluene	107	88	110
	4-BFB	108	86	115
4678 TCL SW846 Semivolatiles/Waters	2-F1phenol	60	21	100
	Phenol-d6	40	10	94
	2,4,6-TBP	82	10	123
4679 TCL SW846 Semivolatiles/Waters	Nitrobz-d5	96	35	114
	2-Fbiphenyl	90	43	116
	Tphenylid14	81	33	141



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LLI Sample No. WW 2677533
Collected: 3/12/97 at 11:25 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-04 Matrix Spike Duplicate Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMM4 SDG#: HMS02-02MSD

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
4592	TCL Volatiles		See Page 2
1743	Aluminum	36.0	0.057 mg/l
1744	Antimony	0.35	0.015 mg/l
1746	Barium	2.44	0.0022 mg/l
1747	Beryllium	0.049	0.0013 mg/l
1749	Cadmium	0.045	0.0027 mg/l
1750	Calcium	48.6	0.030 mg/l
1751	Chromium	0.236	0.0043 mg/l
1752	Cobalt	0.485	0.0055 mg/l
1753	Copper	0.269	0.0038 mg/l
1754	Iron	37.3	0.0059 mg/l
1757	Magnesium	25.8	0.024 mg/l
1758	Manganese	1.90	0.0029 mg/l
1761	Nickel	0.524	0.0054 mg/l
1762	Potassium	11.0	0.15 mg/l
1766	Silver	0.048	0.0036 mg/l
1767	Sodium	65.4	1.0 mg/l
1771	Vanadium	0.570	0.0070 mg/l
1772	Zinc	0.558	0.012 mg/l
7022	Thallium	1.91	0.0045 mg/l
7035	Arsenic	1.90	0.0027 mg/l
7036	Selenium	1.83	0.0027 mg/l
7055	Lead	0.502	0.0020 mg/l
0259	Mercury	0.00103	0.00004 mg/l
0937	TCL Pesticides		See Page 3
4678	TCL Semivolatiles		See Page 4
4679	TCL Semivolatiles cont'd		See Page 5

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:54:17 D 0003 12 129915 556882
560 0.00 00081540 ASR000

MEMBER
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Respectfully Submitted
Ramona V. Layman
Manager, Metals/Leachates





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LLI Sample No. WW 2677533

Collected: 3/12/97 at 11:25 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-04 Matrix Spike Duplicate Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02MSD

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
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AS RECEIVED

CAT NO.	ANALYSIS NAME	METHOD		
		RESULTS	DETECTION LIMIT	UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	17.	3.	ug/l
1257	Bromomethane	20.	3.	ug/l
3492	Vinyl Chloride	19.	2.	ug/l
3494	Chloroethane	19.	3.	ug/l
3497	Methylene Chloride	18.	2.	ug/l
3498	Acetone	130.	6.	ug/l
3499	Carbon Disulfide	170.	3.	ug/l
3500	1,1-Dichloroethene	19.	1.	ug/l
3501	1,1-Dichloroethane	19.	2.	ug/l
3503	Chloroform	19.	1.	ug/l
3504	1,2-Dichloroethane	19.	2.	ug/l
0316	2-Butanone	140.	3.	ug/l
3505	1,1,1-Trichloroethane	21.	1.	ug/l
3506	Carbon Tetrachloride	20.	1.	ug/l
3507	Vinyl Acetate	120.	2.	ug/l
3508	Bromodichloromethane	20.	1.	ug/l
3509	1,2-Dichloropropane	19.	1.	ug/l
3516	cis-1,3-Dichloropropene	19.	1.	ug/l
3511	Trichloroethene	20.	1.	ug/l
3512	Dibromochloromethane	21.	2.	ug/l
3513	1,1,2-Trichloroethane	21.	2.	ug/l
3515	Benzene	20.	1.	ug/l
3510	trans-1,3-Dichloropropene	20.	1.	ug/l
3518	Bromoform	20.	1.	ug/l
3521	4-Methyl-2-pentanone	84.	5.	ug/l
3520	2-Hexanone	91.	7.	ug/l
3522	Tetrachloroethene	20.	1.	ug/l
3523	1,1,2,2-Tetrachloroethane	19.	2.	ug/l
3524	Toluene	20.	2.	ug/l
3525	Chlorobenzene	20.	1.	ug/l
3526	Ethylbenzene	20.	2.	ug/l
3528	Styrene	21.	1.	ug/l
3529	Xylene (total)	62.	1.	ug/l
5780	trans-1,2-Dichloroethene	19.	2.	ug/l
6268	cis-1,2-Dichloroethene	20.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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LLI Sample No. WW 2677533

Collected: 3/12/97 at 11:25 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-04 Matrix Spike Duplicate Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02MSD

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

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CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
TCL Pesticides in Waters			
1600	Alpha BHC	0.77	0.004 ug/l
1601	Beta BHC	0.78	0.004 ug/l
1603	Delta BHC	0.85	0.01 ug/l
1602	Gamma BHC - Lindane	0.77	0.004 ug/l
1604	Heptachlor	0.69	0.006 ug/l
1605	Aldrin	0.64	0.03 ug/l
1606	Heptachlor Epoxide	0.73	0.004 ug/l
1616	Endosulfan I	0.76	0.008 ug/l
1610	Dieldrin	0.66	0.004 ug/l
1607	DDE	0.60	0.004 ug/l
1611	Endrin	0.85	0.03 ug/l
1615	Endosulfan II	0.77	0.02 ug/l
1608	DDD	0.75	0.02 ug/l
1617	Endosulfan Sulfate	0.9	0.01 ug/l
1609	DDT	0.75	0.04 ug/l
0938	Endrin Ketone	0.8	0.02 ug/l
1860	Methoxychlor	0.8	0.06 ug/l
1361	Alpha Chlordane	0.76	0.004 ug/l
1362	Gamma Chlordane	0.69	0.006 ug/l
1613	Toxaphene	N.D.	2. ug/l
1618	Endrin Aldehyde	1.0	0.02 ug/l
1619	PCB-1016	N.D.	0.2 ug/l
1620	PCB-1221	N.D.	0.5 ug/l
1621	PCB-1232	N.D.	0.2 ug/l
1622	PCB-1242	N.D.	0.4 ug/l
1623	PCB-1248	N.D.	0.2 ug/l
1624	PCB-1254	N.D.	0.6 ug/l
1626	PCB-1260	N.D.	0.1 ug/l

The LCS results are shown on the QC summary. Since the MS/MSD data are within the QC limits, no action is needed for LCS results outside the QC limits.

Due to insufficient sample size, we were unable to report our usual quantitation limits. The values reported represent the lowest quantitation limits obtainable.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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LLI Sample No. WW 2677533

Collected: 3/12/97 at 11:25 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MM-04 Matrix Spike Duplicate Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02MSD

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters				
3918	phenol	41.	1.	ug/l
3867	bis (2-chloroethyl) ether	90.	1.	ug/l
3874	2-chlorophenol	90.	1.	ug/l
3883	1,3-dichlorobenzene	92.	1.	ug/l
3884	1,4-dichlorobenzene	89.	1.	ug/l
3882	1,2-dichlorobenzene	89.	1.	ug/l
4680	2-methylphenol	80.	2.	ug/l
4681	2,2'-oxybis (1-chloropropane)	72.	2.	ug/l
4682	4-methylphenol	78.	2.	ug/l
3915	N-nitrosodi-n-propylamine	100.	2.	ug/l
3902	hexachloroethane	80.	2.	ug/l
3910	nitrobenzene	98.	1.	ug/l
3904	isophorone	93.	1.	ug/l
3911	2-nitrophenol	94.	2.	ug/l
3890	2,4-dimethylphenol	71.	1.	ug/l
3866	bis (2-chloroethoxy) methane	90.	1.	ug/l
3886	2,4-dichlorophenol	85.	2.	ug/l
3921	1,2,4-trichlorobenzene	83.	1.	ug/l
3906	naphthalene	86.	1.	ug/l
3871	4-chloroaniline	55.	2.	ug/l
3900	hexachlorobutadiene	85.	1.	ug/l
3872	4-chloro-3-methylphenol	91.	2.	ug/l
3905	2-methylnaphthalene	87.	1.	ug/l
3901	hexachlorocyclopentadiene	140.	3.	ug/l
3923	2,4,6-trichlorophenol	95.	1.	ug/l
3922	2,4,5-trichlorophenol	95.	1.	ug/l
3873	2-chloronaphthalene	91.	1.	ug/l
3907	2-nitroaniline	90.	1.	ug/l
3891	dimethyl phthalate	65.	3.	ug/l
3858	acenaphthylene	90.	1.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96



LLI Sample No. **WW 2677533**
Collected: 3/12/97 at 11:25 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-04 Matrix Spike Duplicate Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02MSD

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters				
3908	3-nitroaniline	67.	1.	ug/l
3857	acenaphthene	84.	1.	ug/l
3893	2,4-dinitrophenol	83.	5.	ug/l
3912	4-nitrophenol	43.	5.	ug/l
3879	dibenzofuran	87.	1.	ug/l
3894	2,4-dinitrotoluene	95.	2.	ug/l
3895	2,6-dinitrotoluene	95.	1.	ug/l
3887	diethyl phthalate	78.	2.	ug/l
3875	4-chlorophenyl phenyl ether	88.	2.	ug/l
3898	fluorene	86.	1.	ug/l
3909	4-nitroaniline	84.	2.	ug/l
4683	4,6-dinitro-2-methylphenol	91.	5.	ug/l
3914	N-nitrosodiphenylamine	86.	2.	ug/l
3869	4-bromophenyl phenyl ether	88.	2.	ug/l
3899	hexachlorobenzene	86.	1.	ug/l
3916	pentachlorophenol	85.	1.	ug/l
3917	phenanthrene	86.	1.	ug/l
3859	anthracene	85.	1.	ug/l
4684	carbazole	90.	1.	ug/l
3880	di-n-butyl phthalate	92.	1.	ug/l
3897	fluoranthene	88.	1.	ug/l
3919	pyrene	90.	1.	ug/l
3870	butyl benzyl phthalate	85.	2.	ug/l
3885	3,3'-dichlorobenzidine	71.	2.	ug/l
3860	benzo (a) anthracene	91.	1.	ug/l
3868	bis (2-ethylhexyl) phthalate	96.	2.	ug/l
3876	chrysene	89.	1.	ug/l
3896	di-n-octyl phthalate	89.	2.	ug/l
3861	benzo (b) fluoranthene	83.	2.	ug/l
3862	benzo (k) fluoranthene	89.	2.	ug/l
3864	benzo (a) pyrene	83.	2.	ug/l
3903	indeno (1,2,3-cd) pyrene	89.	2.	ug/l
3881	dibenz (a,h) anthracene	93.	2.	ug/l
3863	benzo (ghi) perylene	89.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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2216 Rev. 5/01/96





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Page: 6 of 15

LLI Sample No. WW 2677533

Collected: 3/12/97 at 11:25 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-04 Matrix Spike Duplicate Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02MSD

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

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Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL SW846 Semivolatiles/Waters

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS

MEMBER
ACIL

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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. WW 2677533

Collected: 03/12/97 at 11:25 by DA

Submitted: 03/14/97

MW-04 Matrix Spike Duplicate Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW4 SDG#: HMS02-02MSD

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/19/97 2054	Trent S. Sprengle
1743	Aluminum	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1744	Antimony	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1746	Barium	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1747	Beryllium	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1749	Cadmium	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1750	Calcium	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1751	Chromium	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1752	Cobalt	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1753	Copper	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1754	Iron	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1757	Magnesium	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1758	Manganese	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1761	Nickel	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1762	Potassium	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1766	Silver	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1767	Sodium	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1771	Vanadium	SW-846 6010A	1	03/26/97 0818	Nina C. Haller
1772	Zinc	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
1848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	03/24/97 1119	Nina C. Haller
7022	Thallium TR	SW-846 6010A	1	03/21/97 1802	Marie D. Kimmel
7035	Arsenic TR	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
7036	Selenium TR	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
7055	Lead TR	SW-846 6010A	1	03/24/97 1119	Nina C. Haller
0259	Mercury	SW-846 7470A	1	03/25/97 1455	Nelli S. Markaryan
5713	WW SW846 Hg Digest	SW-846 7470A	1	03/24/97 2131	Nelli S. Markaryan
0817	Water Sample Pest. Extraction	SW-846 3510B	1	03/18/97 1640	Sherry Lynn Devlin
0937	TCL Pesticides in Waters	SW-846 8081	1	03/26/97 2026	Douglas D. Seitz
0813	BNA Water Extraction	SW-846 3510B	1	03/17/97 1640	Sherry Lynn Devlin
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/18/97 2028	David J. Evans
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/18/97 2028	David J. Evans



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LLI Sample No. 2677533
 MW-04 Matrix Spike Duplicate Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH

4592	TCL Volatiles by 8240 - Water	Batch: K970781AA									
1258	Chloromethane										
	3. ug/l	N.D.		91	87	5					
1257	Bromomethane										
	3. ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
	2. ug/l	N.D.		99	97	1					
3494	Chloroethane										
	3. ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
	2. ug/l	N.D.		95	92	3					
3498	Acetone										
	6. ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
	3. ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
	1. ug/l	N.D.		99	96	4					
501	1,1-Dichloroethane										
	2. ug/l	N.D.		99	96	3					
3503	Chloroform										
	1. ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
	2. ug/l	N.D.		98	97	1					
0316	2-Butanone										
	3. ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
	1. ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
	1. ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
	2. ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
	1. ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
	1. ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
	1. ug/l	N.D.		97	97	0					
3511	Trichloroethene										
	1. ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
	2. ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
	2. ug/l	N.D.		102	104	2					
3515	Benzene										
	1. ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
	1. ug/l	N.D.		92	95	3					



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LLI Sample No. 2677533
 MW-04 Matrix Spike Duplicate Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3518	Bromoform										
	1. ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
	5. ug/l	N.D.		85	84	1					
3520	2-Hexanone										
	7. ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
	1. ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
	2. ug/l	N.D.		96	95	1					
3524	Toluene										
	2. ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
	1. ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
	2. ug/l	N.D.		106	101	4					
3528	Styrene										
	1. ug/l	N.D.		107	104	3					
3529	Xylene (total)										
	1. ug/l	N.D.		107	103	5					
780	trans-1,2-Dichloroethene										
	2. ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
	2. ug/l	N.D.		100	98	2					
1743	Aluminum	Batch: 970801848006									
	0.057 mg/l	N.D.	18	1044	972 (2)	4	105			80	120
1744	Antimony	Batch: 970801848006									
	0.015 mg/l	N.D.	0 (1)	72	70	2	108			80	120
1746	Barium	Batch: 970801848006									
	0.0022 mg/l	N.D.	0 (1)	101	97	3	97			80	120
1747	Beryllium	Batch: 970801848006									
	0.0013 mg/l	N.D.	0 (1)	93	91	3	94			80	120
1749	Cadmium	Batch: 970801848006									
	0.0027 mg/l	N.D.	0 (1)	92	90	3	95			80	120
1750	Calcium	Batch: 970801848006									
	0.030 mg/l	0.058 J mg/l	1	187	150 (2)	3	102			80	120
1751	Chromium	Batch: 970801848006									
	0.0043 mg/l	N.D.	0 (1)	112	109	3	105			80	120
1752	Cobalt	Batch: 970801848006									
	0.0055 mg/l	N.D.	0 (1)	97	94	3	96			80	120
1753	Copper	Batch: 970801848006									
	0.0038 mg/l	N.D.	0 (1)	103	99	3	98			80	120
1754	Iron	Batch: 970801848006									
	0.0059 mg/l	0.0082 J mg/l	21	1709	1544 (2)	4	102			80	120
1757	Magnesium	Batch: 970801848006									
	0.024 mg/l	0.041 J mg/l	4	307	264 (2)	3	98			80	120
1758	Manganese	Batch: 970801848006									
	0.0029 mg/l	N.D.	3	148	135	3	97			80	120
1761	Nickel	Batch: 970801848006									
	0.0054 mg/l	N.D.	0 (1)	102	99	3	98			80	120

(1) The result for one or both determinations was less than five times the LOQ.
 The background result was more than four times the spike added.



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LLI Sample No. 2677533
 MW-04 Matrix Spike Duplicate Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
1762 Potassium	0.15 mg/l	Batch: 970801848006									
		N.D.	7	140	132	3	97			80	120
1766 Silver	0.0036 mg/l	Batch: 970801848006									
		N.D.	0 (1)	99	96	3	99			80	120
1767 Sodium	1.0 mg/l	Batch: 970801848006									
		N.D.	11	301	299 (2)	0	105			80	120
1771 Vanadium	0.0070 mg/l	Batch: 970801848006									
		N.D.	0 (1)	108	104	3	104			80	120
1772 Zinc	0.012 mg/l	Batch: 970801848006									
		N.D.	0 (1)	99	95	3	97			80	120
7022 Thallium TR	0.0045 mg/l	Batch: 970801848006									
		N.D.	0 (1)	98	95	3	97			80	120
7035 Arsenic TR	0.0027 mg/l	Batch: 970801848006									
		N.D.	0 (1)	97	94	3	99			80	120
7036 Selenium TR	0.0027 mg/l	Batch: 970801848006									
		N.D.	0 (1)	94	91	2	97			80	120
7055 Lead TR	0.0020 mg/l	Batch: 970801848006									
		0.0036 J mg/l	14	98	95	3	98			80	120
0259 Mercury	0.000043 mg/l	Batch: 970835713001									
		0.000045J mg/l	0 (1)	96	91	5	115			80	120
0937 TCL Pesticides in Waters		Batch: 970770001A									
1600 Alpha BHC	0.004 ug/l	N.D.		95	96	1	95			67	122
1601 Beta BHC	0.004 ug/l	N.D.		100	97	4	98			74	120
1603 Delta BHC	0.01 ug/l	N.D.		105	106	1	107			69	126
1602 Gamma BHC - Lindane	0.004 ug/l	N.D.		95	96	1	99			66	120
1604 Heptachlor	0.006 ug/l	N.D.		87	86	1	81			54	120
1605 Aldrin	0.03 ug/l	N.D.		82	80	2	76			42	120
1606 Heptachlor Epoxide	0.004 ug/l	N.D.		92	91	1	93			64	120
1616 Endosulfan I	0.008 ug/l	N.D.		94	95	1	95			60	120
1610 Dieldrin	0.004 ug/l	N.D.		83	82	1	82			66	120
1607 DDE	0.004 ug/l	N.D.		77	75	3	77			60	120
1611 Endrin	0.03 ug/l	N.D.		111	106	4	109			73	129
1615 Endosulfan II	0.02 ug/l	N.D.		97	96	1	102			67	120
1608 DDD	0.02 ug/l	N.D.		98	94	5	95			67	121

(1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.



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LLI Sample No. 2677533
 MW-04 Matrix Spike Duplicate Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
1617	Endosulfan Sulfate										
	0.01 ug/l	N.D.		112	114	2	122			53	128
1609	DDT										
	0.04 ug/l	N.D.		96	94	2	97			71	120
0938	Endrin Ketone										
	0.02 ug/l	N.D.		99	99	0	106			76	120
1860	Methoxychlor										
	0.06 ug/l	N.D.		102	101	2	111			57	140
1361	Alpha Chlordane										
	0.004 ug/l	N.D.		93	94	1	92			75	120
1362	Gamma Chlordane										
	0.006 ug/l	N.D.		88	86	2	86			75	120
1613	Toxaphene										
	2. ug/l	N.D.									
1618	Endrin Aldehyde										
	0.02 ug/l	N.D.		120	126	5	133			59	126
1619	PCB-1016										
	0.2 ug/l	N.D.									
1620	PCB-1221										
	0.5 ug/l	N.D.									
1621	PCB-1232										
	0.2 ug/l	N.D.									
1622	PCB-1242										
	0.4 ug/l	N.D.									
1623	PCB-1248										
	0.2 ug/l	N.D.									
1624	PCB-1254										
	0.6 ug/l	N.D.									
1626	PCB-1260										
	0.1 ug/l	N.D.									

4678	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									

3918	phenol										
	1. ug/l	N.D.		43	41	3	43			5	112
3867	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		88	90	3	89			12	158
3874	2-chlorophenol										
	1. ug/l	N.D.		88	90	3	88			23	134
3883	1,3-dichlorobenzene										
	1. ug/l	N.D.		84	92	9	70			1	172
3884	1,4-dichlorobenzene										
	1. ug/l	N.D.		86	89	3	74			20	124
3882	1,2-dichlorobenzene										
	1. ug/l	N.D.		86	89	4	77			32	129
4680	2-methylphenol										
	2. ug/l	N.D.		78	80	3	80			46	123
4681	2,2'-oxybis (1-chloropropane)										
	2. ug/l	N.D.		69	72	5	71			36	166



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LLI Sample No. 2677533
MW-04 Matrix Spike Duplicate Water Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Table with columns: Sample MDL, Sample UNITS, BLANK, DUP RPD, MS, MSD, MS RPD, LCS, LCS DUP, LCS RPD, LCS LOW, LIMITS HIGH. Rows include various chemical samples like 4-methylphenol, N-nitrosodi-n-propylamine, hexachloroethane, etc.

4679 TCL SW846 Semivolatiles/Waters Batch: 97076WAE026

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LLI Sample No. 2677533
MW-04 Matrix Spike Duplicate Water Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3857	acenaphthene										
	1. ug/l	N.D.		82	84	2	78			47	145
3893	2,4-dinitrophenol										
	5. ug/l	N.D.		82	83	1	87			1	191
3912	4-nitrophenol										
	5. ug/l	N.D.		41	43	6	41			1	132
3879	dibenzofuran										
	1. ug/l	N.D.		85	87	2	83			28	131
3894	2,4-dinitrotoluene										
	2. ug/l	N.D.		88	95	8	89			39	139
3895	2,6-dinitrotoluene										
	1. ug/l	N.D.		90	95	6	92			50	158
3887	diethyl phthalate										
	2. ug/l	N.D.		76	78	2	61			1	114
3875	4-chlorophenyl phenyl ether										
	2. ug/l	N.D.		86	88	2	82			25	158
3898	fluorene										
	1. ug/l	N.D.		85	86	2	80			59	121
2909	4-nitroaniline										
	2. ug/l	N.D.		79	84	6	78			38	122
583	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		87	91	5	90			1	181
3914	N-nitrosodiphenylamine										
	2. ug/l	N.D.		85	86	2	83			38	147
3869	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		86	88	3	86			53	127
3899	hexachlorobenzene										
	1. ug/l	N.D.		85	86	1	84			1	152
3916	pentachlorophenol										
	1. ug/l	N.D.		86	85	2	89			14	176
3917	phenanthrene										
	1. ug/l	N.D.		86	86	0	83			54	120
3859	anthracene										
	1. ug/l	N.D.		85	85	0	83			27	133
4684	carbazole										
	1. ug/l	N.D.		90	90	1	88			40	137
3880	di-n-butyl phthalate										
	1. ug/l	N.D.		93	92	0	86			1	118
3897	fluoranthene										
	1. ug/l	N.D.		87	88	0	86			26	137
3919	pyrene										
	1. ug/l	N.D.		85	90	6	82			52	115
3870	butyl benzyl phthalate										
	2. ug/l	N.D.		88	85	4	75			1	152
3885	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		60	71	17	61			1	262
3860	benzo (a) anthracene										
	1. ug/l	N.D.		85	91	7	85			33	143
3868	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		93	96	2	90			8	158



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L/LI Sample No. 2677533
 MW-04 Matrix Spike Duplicate Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3876	chrysene										
1.	ug/l	N.D.		89	89	1	88			17	168
3896	di-n-octyl phthalate										
2.	ug/l	N.D.		87	89	2	87			4	146
3861	benzo (b) fluoranthene										
2.	ug/l	N.D.		79	83	5	80			24	159
3862	benzo (k) fluoranthene										
2.	ug/l	N.D.		87	89	2	86			11	163
3864	benzo (a) pyrene										
2.	ug/l	N.D.		81	83	2	81			17	163
3903	indeno (1,2,3-cd) pyrene										
2.	ug/l	N.D.		87	89	1	90			1	171
3881	dibenz (a,h) anthracene										
2.	ug/l	N.D.		91	93	1	92			1	227
3863	benzo (ghi) perylene										
2.	ug/l	N.D.		88	89	1	89			1	219



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LLI Sample No. **2677533**
 MW-04 Matrix Spike Duplicate Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
0937 TCL Pesticides in Waters	TCX	81	60	120
	DCB	76	60	120
4592 TCL Volatiles by 8240 - Water	d4-1,2-DCA	95	76	114
	d8-toluene	102	88	110
	4-BFB	105	86	115
4678 TCL SW846 Semivolatiles/Waters	2-Flphenol	60	21	100
	Phenol-d6	41	10	94
	2,4,6-TBP	86	10	123
4679 TCL SW846 Semivolatiles/Waters	Nitrobz-d5	99	35	114
	2-Fbiphenyl	89	43	116
	Tphenyl14	65	33	141



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LLI Sample No. WW 2677534
Collected: 3/12/97 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

TB-1 Trip Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS
KM-TB SDG#: HMS02-03TB

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

AS RECEIVED

CAT
NO. ANALYSIS NAME
4592 TCL Volatiles

METHOD
RESULTS DETECTION LIMIT UNITS

See Page 2

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove

ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:56:55 D 0003 12 129915 556882
560 0.00 00015600 ASR000

Respectfully Submitted
Ramona V. Layman
Manager, Metals/Leachates



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LLI Sample No. WW 2677534

Collected: 3/12/97 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

TB-1 Trip Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS
KM-TB SDG#: HMS02-03TB

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	N.D.	3.	ug/l
1257	Bromomethane	N.D.	3.	ug/l
3492	Vinyl Chloride	N.D.	2.	ug/l
3494	Chloroethane	N.D.	3.	ug/l
3497	Methylene Chloride	N.D.	2.	ug/l
3498	Acetone	N.D.	6.	ug/l
3499	Carbon Disulfide	N.D.	3.	ug/l
3500	1,1-Dichloroethene	N.D.	1.	ug/l
3501	1,1-Dichloroethane	N.D.	2.	ug/l
3503	Chloroform	N.D.	1.	ug/l
3504	1,2-Dichloroethane	N.D.	2.	ug/l
0316	2-Butanone	N.D.	3.	ug/l
3505	1,1,1-Trichloroethane	N.D.	1.	ug/l
3506	Carbon Tetrachloride	N.D.	1.	ug/l
3507	Vinyl Acetate	N.D.	2.	ug/l
3508	Bromodichloromethane	N.D.	1.	ug/l
3509	1,2-Dichloropropane	N.D.	1.	ug/l
3516	cis-1,3-Dichloropropene	N.D.	1.	ug/l
3511	Trichloroethene	N.D.	1.	ug/l
3512	Dibromochloromethane	N.D.	2.	ug/l
3513	1,1,2-Trichloroethane	N.D.	2.	ug/l
3515	Benzene	N.D.	1.	ug/l
3510	trans-1,3-Dichloropropene	N.D.	1.	ug/l
3518	Bromoform	N.D.	1.	ug/l
3521	4-Methyl-2-pentanone	N.D.	5.	ug/l
3520	2-Hexanone	N.D.	7.	ug/l
3522	Tetrachloroethene	N.D.	1.	ug/l
3523	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
3524	Toluene	N.D.	2.	ug/l
3525	Chlorobenzene	N.D.	1.	ug/l
3526	Ethylbenzene	N.D.	2.	ug/l
3528	Styrene	N.D.	1.	ug/l
3529	Xylene (total)	N.D.	1.	ug/l
5780	trans-1,2-Dichloroethene	N.D.	2.	ug/l
6268	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. WW 2677534
Collected: 03/12/97 by DA

Submitted: 03/14/97

TB-1 Trip Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS
KM-TB SDG#: HMS02-03TB

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/19/97 2241	Trent S. Sprenkle



Lancaster Laboratories
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PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681





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LLI Sample No. 2677534
TB-1 Trip Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH

4592 TCL Volatiles by 8240 - Water Batch: K970781AA											

1258	Chloromethane										
	3. ug/l	N.D.		91	87	5					
1257	Bromomethane										
	3. ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
	2. ug/l	N.D.		99	97	1					
3494	Chloroethane										
	3. ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
	2. ug/l	N.D.		95	92	3					
3498	Acetone										
	6. ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
	3. ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
	1. ug/l	N.D.		99	96	4					
3501	1,1-Dichloroethane										
	2. ug/l	N.D.		99	96	3					
3503	Chloroform										
	1. ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
	2. ug/l	N.D.		98	97	1					
0316	2-Butanone										
	3. ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
	1. ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
	1. ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
	2. ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
	1. ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
	1. ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
	1. ug/l	N.D.		97	97	0					
3511	Trichloroethene										
	1. ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
	2. ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
	2. ug/l	N.D.		102	104	2					
3515	Benzene										
	1. ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
	1. ug/l	N.D.		92	95	3					



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2677534

TB-1 Trip Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3518	Bromoform										
	1. ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
	5. ug/l	N.D.		85	84	1					
3520	2-Hexanone										
	7. ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
	1. ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
	2. ug/l	N.D.		96	95	1					
3524	Toluene										
	2. ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
	1. ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
	2. ug/l	N.D.		106	101	4					
3528	Styrene										
	1. ug/l	N.D.		107	104	3					
3529	Xylene (total)										
	1. ug/l	N.D.		107	103	5					
780	trans-1,2-Dichloroethene										
	2. ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
	2. ug/l	N.D.		100	98	2					



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LLI Sample No. 2677534
TB-1 Trip Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

TRIAL ID	SURROGATE SUMMARY		SURROGATE LIMITS	
	SURROGATE	RECOVERY %	LOW	HIGH
4592 TCL Volatiles by 8240 - Water	d4-1,2-DCA	101	76	114
	d8-toluene	105	88	110
	4-BFB	109	86	115



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LLI Sample No. **WW 2677535**
Collected: 3/12/97 at 13:22 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-05 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW5 SDG#: HMS02-04

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
4592	TCL Volatiles			See Page 2
1743	Aluminum	47.8	0.057	mg/l
1744	Antimony	N.D.	0.015	mg/l
1746	Barium	0.61	0.0022	mg/l
1747	Beryllium	0.0071 J	0.0013	mg/l
1749	Cadmium	N.D.	0.0027	mg/l
1750	Calcium	19.2	0.030	mg/l
1751	Chromium	0.071	0.0043	mg/l
1752	Cobalt	0.0403 J	0.0055	mg/l
1753	Copper	0.047	0.0038	mg/l
1754	Iron	79.3	0.0059	mg/l
1757	Magnesium	10.3	0.024	mg/l
1758	Manganese	1.09	0.0029	mg/l
1761	Nickel	0.0407 J	0.0054	mg/l
1762	Potassium	5.64	0.15	mg/l
1766	Silver	N.D.	0.0036	mg/l
1767	Sodium	19.6	0.20	mg/l
1771	Vanadium	0.109	0.0070	mg/l
1772	Zinc	0.135	0.012	mg/l
7022	Thallium	N.D.	0.0045	mg/l
7035	Arsenic	0.057	0.0027	mg/l
7036	Selenium	N.D.	0.0027	mg/l
7055	Lead	0.0669	0.0020	mg/l
0259	Mercury	0.000185J	0.00004	mg/l
0937	TCL Pesticides			See Page 3
4678	TCL Semivolatiles			See Page 4
4679	TCL Semivolatiles cont'd			See Page 5
0237	Total Cyanide	N.D.	0.0040	mg/l

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:57:55 D 0003 12 129915 556882
560 0.00 00084840 ASR000

Respectfully Submitted
Ramona V. Layman
Manager, Metals/Leachates



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Page: 2 of 15

LLI Sample No. **WW 2677535**
 Collected: 3/12/97 at 13:22 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
 Discard: 5/ 5/97

MW-05 Water Sample

Gulf States Creosoting: Hattiesburg, MS
 KMMW5 SDG#: HMS02-04

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	N.D.	3.	ug/l
1257	Bromomethane	N.D.	3.	ug/l
3492	Vinyl Chloride	N.D.	2.	ug/l
3494	Chloroethane	N.D.	3.	ug/l
3497	Methylene Chloride	N.D.	2.	ug/l
3498	Acetone	N.D.	6.	ug/l
3499	Carbon Disulfide	N.D.	3.	ug/l
3500	1,1-Dichloroethene	N.D.	1.	ug/l
3501	1,1-Dichloroethane	N.D.	2.	ug/l
3503	Chloroform	2.	1.	ug/l
3504	1,2-Dichloroethane	N.D.	2.	ug/l
0316	2-Butanone	N.D.	3.	ug/l
3505	1,1,1-Trichloroethane	N.D.	1.	ug/l
3506	Carbon Tetrachloride	N.D.	1.	ug/l
3507	Vinyl Acetate	N.D.	2.	ug/l
3508	Bromodichloromethane	N.D.	1.	ug/l
3509	1,2-Dichloropropane	N.D.	1.	ug/l
3516	cis-1,3-Dichloropropene	N.D.	1.	ug/l
3511	Trichloroethene	N.D.	1.	ug/l
3512	Dibromochloromethane	N.D.	2.	ug/l
3513	1,1,2-Trichloroethane	N.D.	2.	ug/l
3515	Benzene	N.D.	1.	ug/l
3510	trans-1,3-Dichloropropene	N.D.	1.	ug/l
3518	Bromoform	N.D.	1.	ug/l
3521	4-Methyl-2-pentanone	N.D.	5.	ug/l
3520	2-Hexanone	N.D.	7.	ug/l
3522	Tetrachloroethene	N.D.	1.	ug/l
3523	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
3524	Toluene	N.D.	2.	ug/l
3525	Chlorobenzene	N.D.	1.	ug/l
3526	Ethylbenzene	N.D.	2.	ug/l
3528	Styrene	N.D.	1.	ug/l
3529	Xylene (total)	N.D.	1.	ug/l
5780	trans-1,2-Dichloroethene	N.D.	2.	ug/l
6268	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96



LLI Sample No. WW 2677535
Collected: 3/12/97 at 13:22 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-05 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW5 SDG#: HMS02-04

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ret.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
TCL Pesticides in Waters			
1600	Alpha BHC	N.D.	0.001 ug/l
1601	Beta BHC	N.D.	0.001 ug/l
1603	Delta BHC	N.D.	0.003 ug/l
1602	Gamma BHC - Lindane	0.002 J	0.001 ug/l
1604	Heptachlor	N.D.	0.002 ug/l
1605	Aldrin	N.D.	0.006 ug/l
1606	Heptachlor Epoxide	0.002 J	0.001 ug/l
1616	Endosulfan I	N.D.	0.002 ug/l
1610	Dieldrin	N.D.	0.001 ug/l
1607	DDE	N.D.	0.001 ug/l
1611	Endrin	N.D.	0.007 ug/l
1615	Endosulfan II	N.D.	0.005 ug/l
1608	DDD	N.D.	0.005 ug/l
1617	Endosulfan Sulfate	N.D.	0.003 ug/l
1609	DDT	N.D.	0.009 ug/l
0938	Endrin Ketone	N.D.	0.004 ug/l
1860	Methoxychlor	N.D.	0.02 ug/l
1361	Alpha Chlordane	N.D.	0.001 ug/l
1362	Gamma Chlordane	N.D.	0.001 ug/l
1613	Toxaphene	N.D.	0.4 ug/l
1618	Endrin Aldehyde	N.D.	0.005 ug/l
1619	PCB-1016	N.D.	0.04 ug/l
1620	PCB-1221	N.D.	0.1 ug/l
1621	PCB-1232	N.D.	0.05 ug/l
1622	PCB-1242	N.D.	0.1 ug/l
1623	PCB-1248	N.D.	0.04 ug/l
1624	PCB-1254	N.D.	0.1 ug/l
1626	PCB-1260	N.D.	0.04 ug/l

The LCS results are shown on the QC summary. Since the MS/MSD data are within the QC limits, no action is needed for LCS results outside the QC limits.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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2216 Rev. 5/01/96





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Page: 4 of 15

LLI Sample No. WW 2677535
Collected: 3/12/97 at 13:22 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-05 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMM5 SDG#: HMS02-04

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters				
3918	phenol	N.D.	1.	ug/l
3867	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3874	2-chlorophenol	N.D.	1.	ug/l
3883	1,3-dichlorobenzene	N.D.	1.	ug/l
3884	1,4-dichlorobenzene	N.D.	1.	ug/l
3882	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	2.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	2.	ug/l
3915	N-nitrosodi-n-propylamine	N.D.	2.	ug/l
3902	hexachloroethane	N.D.	2.	ug/l
3910	nitrobenzene	N.D.	1.	ug/l
3904	isophorone	N.D.	1.	ug/l
3911	2-nitrophenol	N.D.	2.	ug/l
3890	2,4-dimethylphenol	N.D.	1.	ug/l
3866	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3886	2,4-dichlorophenol	N.D.	2.	ug/l
3921	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3906	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	2.	ug/l
3900	hexachlorobutadiene	N.D.	1.	ug/l
3872	4-chloro-3-methylphenol	N.D.	2.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3901	hexachlorocyclopentadiene	N.D.	3.	ug/l
3923	2,4,6-trichlorophenol	N.D.	1.	ug/l
3922	2,4,5-trichlorophenol	N.D.	1.	ug/l
3873	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	1.	ug/l
3891	dimethyl phthalate	N.D.	3.	ug/l
3858	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





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Page: 5 of 15

LLI Sample No. WW 2677535

Collected: 3/12/97 at 13:22 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-05 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW5 SDG#: HMS02-04

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL SW846 Semivolatiles/Waters				
3908	3-nitroaniline	N.D.	1.	ug/l
3857	acenaphthene	N.D.	1.	ug/l
3893	2,4-dinitrophenol	N.D.	5.	ug/l
3912	4-nitrophenol	N.D.	5.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3894	2,4-dinitrotoluene	N.D.	2.	ug/l
3895	2,6-dinitrotoluene	N.D.	1.	ug/l
3887	diethyl phthalate	N.D.	2.	ug/l
3875	4-chlorophenyl phenyl ether	N.D.	2.	ug/l
3898	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
4683	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3914	N-nitrosodiphenylamine	N.D.	2.	ug/l
3869	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3899	hexachlorobenzene	N.D.	1.	ug/l
3916	pentachlorophenol	N.D.	1.	ug/l
3917	phenanthrene	N.D.	1.	ug/l
3859	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3880	di-n-butyl phthalate	N.D.	1.	ug/l
3897	fluoranthene	N.D.	1.	ug/l
3919	pyrene	N.D.	1.	ug/l
3870	butyl benzyl phthalate	N.D.	2.	ug/l
3885	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3860	benzo (a) anthracene	N.D.	1.	ug/l
3868	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3876	chrysene	N.D.	1.	ug/l
3896	di-n-octyl phthalate	N.D.	2.	ug/l
3861	benzo (b) fluoranthene	N.D.	2.	ug/l
3862	benzo (k) fluoranthene	N.D.	2.	ug/l
3864	benzo (a) pyrene	N.D.	2.	ug/l
3903	indeno (1,2,3-cd) pyrene	N.D.	2.	ug/l
3881	dibenz (a,h) anthracene	N.D.	2.	ug/l
3863	benzo (ghi) perylene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.

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LLI Sample No. WW 2677535

Collected: 3/12/97 at 13:22 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-05 Water Sample

Gulf States Creosoting: Hattiesburg, MS

KMMWS SDG#: HMS02-04

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
ReI.

AS RECEIVED

CAT
NO. ANALYSIS NAME

METHOD
RESULTS DETECTION LIMIT UNITS

TCL SW846 Semivolatiles/Waters

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



Lancaster Laboratories
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PO Box 12425
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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. WW 2677535

Collected: 03/12/97 at 13:22 by DA

Submitted: 03/14/97

MW-05 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW5 SDG#: HMS02-04

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
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CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/19/97 2206	Trent S. Sprenkle
1743	Aluminum	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1744	Antimony	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1746	Barium	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1747	Beryllium	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1749	Cadmium	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1750	Calcium	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1751	Chromium	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1752	Cobalt	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1753	Copper	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1754	Iron	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1757	Magnesium	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1758	Manganese	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1761	Nickel	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1762	Potassium	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1766	Silver	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1767	Sodium	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1771	Vanadium	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1772	Zinc	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
1848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	03/21/97 1802	Marie D. Kimmel
7022	Thallium TR	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
7035	Arsenic TR	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
7036	Selenium TR	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
7055	Lead TR	SW-846 6010A	1	03/24/97 1132	Nina C. Haller
0259	Mercury	SW-846 7470A	1	03/25/97 1457	Nelli S. Markaryan
5713	WW SW846 Hg Digest	SW-846 7470A	1	03/24/97 2131	Nelli S. Markaryan
0817	Water Sample Pest. Extraction	SW-846 3510B	1	03/18/97 1640	Sherry Lynn Devlin
0937	TCL Pesticides in Waters	SW-846 8081	1	03/26/97 2108	Douglas D. Seitz
0813	BNA Water Extraction	SW-846 3510B	1	03/17/97 1640	Sherry Lynn Devlin
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 0109	Deb Gifford
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 0109	Deb Gifford
0237	Total Cyanide (water)	SW-846 9012	1	03/24/97 1301	John W. Ballard, Jr.
0492	Cyanide Water Distillation	SW-846 9012	1	03/21/97 0530	Dawn M. Kreider



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LLI Sample No. 2677535
 MW-05 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4592 TCL Volatiles by 8240 - Water Batch: K970781AA											
1258	Chloromethane										
	3. ug/l	N.D.		91	87	5					
1257	Bromomethane										
	3. ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
	2. ug/l	N.D.		99	97	1					
3494	Chloroethane										
	3. ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
	2. ug/l	N.D.		95	92	3					
3498	Acetone										
	6. ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
	3. ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
	1. ug/l	N.D.		99	96	4					
501	1,1-Dichloroethane										
	2. ug/l	N.D.		99	96	3					
3503	Chloroform										
	1. ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
	2. ug/l	N.D.		98	97	1					
0316	2-Butanone										
	3. ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
	1. ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
	1. ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
	2. ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
	1. ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
	1. ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
	1. ug/l	N.D.		97	97	0					
3511	Trichloroethene										
	1. ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
	2. ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
	2. ug/l	N.D.		102	104	2					
3515	Benzene										
	1. ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
	1. ug/l	N.D.		92	95	3					



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MW-05 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3518	Bromoform										
	1. ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
	5. ug/l	N.D.		85	84	1					
3520	2-Hexanone										
	7. ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
	1. ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
	2. ug/l	N.D.		96	95	1					
3524	Toluene										
	2. ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
	1. ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
	2. ug/l	N.D.		106	101	4					
3528	Styrene										
	1. ug/l	N.D.		107	104	3					
3529	Xylene (total)										
	1. ug/l	N.D.		107	103	5					
5780	trans-1,2-Dichloroethene										
	2. ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
	2. ug/l	N.D.		100	98	2					
1743	Aluminum	Batch: 970801848006									
	0.057 mg/l	N.D.	18	1044	972 (2)	4	105			80	120
1744	Antimony	Batch: 970801848006									
	0.015 mg/l	N.D.	0 (1)	72	70	2	108			80	120
1746	Barium	Batch: 970801848006									
	0.0022 mg/l	N.D.	0 (1)	101	97	3	97			80	120
1747	Beryllium	Batch: 970801848006									
	0.0013 mg/l	N.D.	0 (1)	93	91	3	94			80	120
1749	Cadmium	Batch: 970801848006									
	0.0027 mg/l	N.D.	0 (1)	92	90	3	95			80	120
1750	Calcium	Batch: 970801848006									
	0.030 mg/l	0.058 J mg/l	1	187	150 (2)	3	102			80	120
1751	Chromium	Batch: 970801848006									
	0.0043 mg/l	N.D.	0 (1)	112	109	3	105			80	120
1752	Cobalt	Batch: 970801848006									
	0.0055 mg/l	N.D.	0 (1)	97	94	3	96			80	120
1753	Copper	Batch: 970801848006									
	0.0038 mg/l	N.D.	0 (1)	103	99	3	98			80	120
1754	Iron	Batch: 970801848006									
	0.0059 mg/l	0.0082 J mg/l	21	1709	1544 (2)	4	102			80	120
1757	Magnesium	Batch: 970801848006									
	0.024 mg/l	0.041 J mg/l	4	307	264 (2)	3	98			80	120
1758	Manganese	Batch: 970801848006									
	0.0029 mg/l	N.D.	3	148	135	3	97			80	120
1761	Nickel	Batch: 970801848006									
	0.0054 mg/l	N.D.	0 (1)	102	99	3	98			80	120

(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.



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Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
1762 Potassium	0.15 mg/l	Batch: 970801848006									
		N.D.	7	140	132	3	97			80	120
1766 Silver	0.0036 mg/l	Batch: 970801848006									
		N.D.	0 (1)	99	96	3	99			80	120
1767 Sodium	0.20 mg/l	Batch: 970801848006									
		N.D.	11	301	299 (2)	0	105			80	120
1771 Vanadium	0.0070 mg/l	Batch: 970801848006									
		N.D.	0 (1)	108	104	3	104			80	120
1772 Zinc	0.012 mg/l	Batch: 970801848006									
		N.D.	0 (1)	99	95	3	97			80	120
7022 Thallium TR	0.0045 mg/l	Batch: 970801848006									
		N.D.	0 (1)	98	95	3	97			80	120
7035 Arsenic TR	0.0027 mg/l	Batch: 970801848006									
		N.D.	0 (1)	97	94	3	99			80	120
7036 Selenium TR	0.0027 mg/l	Batch: 970801848006									
		N.D.	0 (1)	94	91	2	97			80	120
7055 Lead TR	0.0020 mg/l	Batch: 970801848006									
		0.0036 J mg/l	14	98	95	3	98			80	120
0259 Mercury	0.000043 mg/l	Batch: 970835713001									
		0.000045J mg/l	0 (1)	96	91	5	115			80	120

77 TCL Pesticides in Waters		Batch: 970770001A									
1600 Alpha BHC	0.001 ug/l	N.D.		95	96	1	95			67	122
1601 Beta BHC	0.001 ug/l	N.D.		100	97	4	98			74	120
1603 Delta BHC	0.003 ug/l	N.D.		105	106	1	107			69	126
1602 Gamma BHC - Lindane	0.001 ug/l	N.D.		95	96	1	99			66	120
1604 Heptachlor	0.002 ug/l	N.D.		87	86	1	81			54	120
1605 Aldrin	0.006 ug/l	N.D.		82	80	2	76			42	120
1606 Heptachlor Epoxide	0.001 ug/l	N.D.		92	91	1	93			64	120
1616 Endosulfan I	0.002 ug/l	N.D.		94	95	1	95			60	120
1610 Dieldrin	0.001 ug/l	N.D.		83	82	1	82			66	120
1607 DDE	0.001 ug/l	N.D.		77	75	3	77			60	120
1611 Endrin	0.007 ug/l	N.D.		111	106	4	109			73	129
1615 Endosulfan II	0.005 ug/l	N.D.		97	96	1	102			67	120
1608 DDD	0.005 ug/l	N.D.		98	94	5	95			67	121

(1) The result for one or both determinations was less than five times the LOQ.
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Gulf States Creosoting: Hattiesburg, MS

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Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
1617	Endosulfan Sulfate										
	0.003 ug/l	N.D.		112	114	2	122			53	128
1609	DDT										
	0.009 ug/l	N.D.		96	94	2	97			71	120
0938	Endrin Ketone										
	0.004 ug/l	N.D.		99	99	0	106			76	120
1860	Methoxychlor										
	0.02 ug/l	N.D.		102	101	2	111			57	140
1361	Alpha Chlordane										
	0.001 ug/l	N.D.		93	94	1	92			75	120
1362	Gamma Chlordane										
	0.001 ug/l	N.D.		88	86	2	86			75	120
1613	Toxaphene										
	0.4 ug/l	N.D.									
1618	Endrin Aldehyde										
	0.005 ug/l	N.D.		120	126	5	133			59	126
1619	PCB-1016										
	0.04 ug/l	N.D.									
1620	PCB-1221										
	0.1 ug/l	N.D.									
1621	PCB-1232										
	0.05 ug/l	N.D.									
1622	PCB-1242										
	0.1 ug/l	N.D.									
1623	PCB-1248										
	0.04 ug/l	N.D.									
1624	PCB-1254										
	0.1 ug/l	N.D.									
1626	PCB-1260										
	0.04 ug/l	N.D.									

4678	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									

3918	phenol										
	1. ug/l	N.D.		43	41	3	43			5	112
3867	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		88	90	3	89			12	158
3874	2-chlorophenol										
	1. ug/l	N.D.		88	90	3	88			23	134
3883	1,3-dichlorobenzene										
	1. ug/l	N.D.		84	92	9	70			1	172
3884	1,4-dichlorobenzene										
	1. ug/l	N.D.		86	89	3	74			20	124
3882	1,2-dichlorobenzene										
	1. ug/l	N.D.		86	89	4	77			32	129
4680	2-methylphenol										
	2. ug/l	N.D.		78	80	3	80			46	123
4681	2,2'-oxybis (1-chloropropane)										
	2. ug/l	N.D.		69	72	5	71			36	166





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Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4682	4-methylphenol										
	2. ug/l	N.D.		76	78	3	77			5	152
3915	N-nitrosodi-n-propylamine										
	2. ug/l	N.D.		94	100	6	99			1	230
3902	hexachloroethane										
	2. ug/l	N.D.		76	80	5	54			40	113
3910	nitrobenzene										
	1. ug/l	N.D.		96	98	2	97			35	180
3904	isophorone										
	1. ug/l	N.D.		94	93	0	94			21	196
3911	2-nitrophenol										
	2. ug/l	N.D.		91	94	3	90			29	182
3890	2,4-dimethylphenol										
	1. ug/l	N.D.		75	71	5	78			32	119
3866	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		88	90	2	88			33	184
3886	2,4-dichlorophenol										
	2. ug/l	N.D.		85	85	1	83			39	135
3921	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		83	83	1	72			44	142
3906	naphthalene										
	1. ug/l	N.D.		84	86	2	81			21	133
3871	4-chloroaniline										
	2. ug/l	N.D.		47	55	16	43			17	116
3900	hexachlorobutadiene										
	1. ug/l	N.D.		83	85	3	52			24	116
3872	4-chloro-3-methylphenol										
	2. ug/l	N.D.		88	91	4	87			22	147
3905	2-methylnaphthalene										
	1. ug/l	N.D.		86	87	1	80			28	123
3901	hexachlorocyclopentadiene										
	3. ug/l	N.D.		71	72	1	54			1	100
3923	2,4,6-trichlorophenol										
	1. ug/l	N.D.		93	95	2	91			37	144
3922	2,4,5-trichlorophenol										
	1. ug/l	N.D.		90	95	6	88			39	151
3873	2-chloronaphthalene										
	1. ug/l	N.D.		90	91	1	86			60	118
3907	2-nitroaniline										
	1. ug/l	N.D.		84	90	7	86			53	143
3891	dimethyl phthalate										
	3. ug/l	N.D.		63	65	3	28			1	112
3858	acenaphthylene										
	1. ug/l	N.D.		88	90	2	86			33	145

4679	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									

3908	3-nitroaniline										
	1. ug/l	N.D.		61	67	9	57			7	143



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Gulf States Creosoting: Hattiesburg, MS

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Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3857	acenaphthene										
	1. ug/l	N.D.		82	84	2	78			47	145
3893	2,4-dinitrophenol										
	5. ug/l	N.D.		82	83	1	87			1	191
3912	4-nitrophenol										
	5. ug/l	N.D.		41	43	6	41			1	132
3879	dibenzofuran										
	1. ug/l	N.D.		85	87	2	83			28	131
3894	2,4-dinitrotoluene										
	2. ug/l	N.D.		88	95	8	89			39	139
3895	2,6-dinitrotoluene										
	1. ug/l	N.D.		90	95	6	92			50	158
3887	diethyl phthalate										
	2. ug/l	N.D.		76	78	2	61			1	114
3875	4-chlorophenyl phenyl ether										
	2. ug/l	N.D.		86	88	2	82			25	158
3898	fluorene										
	1. ug/l	N.D.		85	86	2	80			59	121
3909	4-nitroaniline										
	2. ug/l	N.D.		79	84	6	78			38	122
4683	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		87	91	5	90			1	181
3914	N-nitrosodiphenylamine										
	2. ug/l	N.D.		85	86	2	83			38	147
3869	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		86	88	3	86			53	127
3899	hexachlorobenzene										
	1. ug/l	N.D.		85	86	1	84			1	152
3916	pentachlorophenol										
	1. ug/l	N.D.		86	85	2	89			14	176
3917	phenanthrene										
	1. ug/l	N.D.		86	86	0	83			54	120
3859	anthracene										
	1. ug/l	N.D.		85	85	0	83			27	133
4684	carbazole										
	1. ug/l	N.D.		90	90	1	88			40	137
3880	di-n-butyl phthalate										
	1. ug/l	N.D.		93	92	0	86			1	118
3897	fluoranthene										
	1. ug/l	N.D.		87	88	0	86			26	137
3919	pyrene										
	1. ug/l	N.D.		85	90	6	82			52	115
3870	butyl benzyl phthalate										
	2. ug/l	N.D.		88	85	4	75			1	152
3885	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		60	71	17	61			1	262
3860	benzo (a) anthracene										
	1. ug/l	N.D.		85	91	7	85			33	143
3868	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		93	96	2	90			8	158



Lancaster Laboratories
2425 New Holland Pike
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2677535
 MW-05 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3876	chrysene										
1.	ug/l	N.D.		89	89	1	88			17	168
3896	di-n-octyl phthalate										
2.	ug/l	N.D.		87	89	2	87			4	146
3861	benzo (b) fluoranthene										
2.	ug/l	N.D.		79	83	5	80			24	159
3862	benzo (k) fluoranthene										
2.	ug/l	N.D.		87	89	2	86			11	163
3864	benzo (a) pyrene										
2.	ug/l	N.D.		81	83	2	81			17	163
3903	indeno (1,2,3-cd) pyrene										
2.	ug/l	N.D.		87	89	1	90			1	171
3881	dibenz (a,h) anthracene										
2.	ug/l	N.D.		91	93	1	92			1	227
3863	benzo (ghi) perylene										
2.	ug/l	N.D.		88	89	1	89			1	219
0237	Total Cyanide (water)	Batch: 97080102101A									
0.0040	mg/l	N.D.	0 (1)	97	101	4	98	101	4	90	110

(1) The result for one or both determinations was less than five times the LOQ.



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LLI Sample No. 2677535
MW-05 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
0937 TCL Pesticides in Waters	TCX	85	60	120
	DCB	37	60	120
4592 TCL Volatiles by 8240 - Water	d4-1,2-DCA	104	76	114
	d8-toluene	107	88	110
	4-BFB	109	86	115
4678 TCL SW846 Semivolatiles/Waters	2-F1phenol	23	21	100
	Phenol-d6	23	10	94
	2,4,6-TBP	42	10	123
4679 TCL SW846 Semivolatiles/Waters	Nitrobz-d5	88	35	114
	2-Fbiphenyl	85	43	116
	Tphenyl14	73	33	141



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LLI Sample No. WW 2677536

Collected: 3/12/97 at 15:05 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW1 SDG#: HMS02-05

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		UNITS
		RESULTS	METHOD DETECTION LIMIT	
4592	TCL Volatiles			See Page 2
1743	Aluminum	9.03	0.057	mg/l
1744	Antimony	N.D.	0.015	mg/l
1746	Barium	0.27	0.0022	mg/l
1747	Beryllium	0.0017 J	0.0013	mg/l
1749	Cadmium	N.D.	0.0027	mg/l
1750	Calcium	12.7	0.030	mg/l
1751	Chromium	0.042	0.0043	mg/l
1752	Cobalt	0.0121 J	0.0055	mg/l
1753	Copper	0.0117 J	0.0038	mg/l
1754	Iron	13.2	0.0059	mg/l
1757	Magnesium	4.18	0.024	mg/l
1758	Manganese	0.343	0.0029	mg/l
1761	Nickel	0.0124 J	0.0054	mg/l
1762	Potassium	2.21	0.15	mg/l
1766	Silver	N.D.	0.0036	mg/l
1767	Sodium	15.5	0.20	mg/l
1771	Vanadium	0.051	0.0070	mg/l
1772	Zinc	0.075	0.012	mg/l
7022	Thallium	N.D.	0.0045	mg/l
7035	Arsenic	0.047	0.0027	mg/l
7036	Selenium	0.0044 J	0.0027	mg/l
7055	Lead	0.0168	0.0020	mg/l
0259	Mercury	0.00023	0.00004	mg/l
0937	TCL Pesticides			See Page 3
4678	TCL Semivolatiles			See Page 4
4679	TCL Semivolatiles cont'd			See Page 5
0237	Total Cyanide	N.D.	0.0040	mg/l

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
04:00:36 D 0003 12 129915 556882
560 0.00 00084840 ASR000

Respectfully Submitted
Ramona V. Layman
Manager, Metals/Leachates



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Page: 2 of 15

LLI Sample No. WW 2677536

Collected: 3/12/97 at 15:05 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW1 SDG#: HMS02-05

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	N.D.	3.	ug/l
1257	Bromomethane	N.D.	3.	ug/l
3492	Vinyl Chloride	N.D.	2.	ug/l
3494	Chloroethane	N.D.	3.	ug/l
3497	Methylene Chloride	N.D.	2.	ug/l
3498	Acetone	N.D.	6.	ug/l
3499	Carbon Disulfide	57.	3.	ug/l
3500	1,1-Dichloroethane	N.D.	1.	ug/l
3501	1,1-Dichloroethane	N.D.	2.	ug/l
3503	Chloroform	6.	1.	ug/l
3504	1,2-Dichloroethane	N.D.	2.	ug/l
0316	2-Butanone	N.D.	3.	ug/l
3505	1,1,1-Trichloroethane	N.D.	1.	ug/l
3506	Carbon Tetrachloride	N.D.	1.	ug/l
3507	Vinyl Acetate	N.D.	2.	ug/l
3508	Bromodichloromethane	N.D.	1.	ug/l
3509	1,2-Dichloropropane	N.D.	1.	ug/l
3516	cis-1,3-Dichloropropene	N.D.	1.	ug/l
3511	Trichloroethene	N.D.	1.	ug/l
3512	Dibromochloromethane	N.D.	2.	ug/l
3513	1,1,2-Trichloroethane	N.D.	2.	ug/l
3515	Benzene	N.D.	1.	ug/l
3510	trans-1,3-Dichloropropene	N.D.	1.	ug/l
3518	Bromoform	N.D.	1.	ug/l
3521	4-Methyl-2-pentanone	N.D.	5.	ug/l
3520	2-Hexanone	N.D.	7.	ug/l
3522	Tetrachloroethene	N.D.	1.	ug/l
3523	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
3524	Toluene	N.D.	2.	ug/l
3525	Chlorobenzene	N.D.	1.	ug/l
3526	Ethylbenzene	N.D.	2.	ug/l
3528	Styrene	N.D.	1.	ug/l
3529	Xylene (total)	N.D.	1.	ug/l
5780	trans-1,2-Dichloroethene	N.D.	2.	ug/l
6268	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96



LLI Sample No. WW 2677536
Collected: 3/12/97 at 15:05 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW1 SDG#: HMS02-05

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

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AS RECEIVED
RESULTS METHOD DETECTION LIMIT UNITS

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	DETECTION LIMIT	UNITS
TCL Pesticides in Waters					
1600	Alpha BHC	N.D.		0.001	ug/l
1601	Beta BHC	N.D.		0.001	ug/l
1603	Delta BHC	N.D.		0.003	ug/l
1602	Gamma BHC - Lindane	0.002	J	0.001	ug/l
1604	Heptachlor	N.D.		0.002	ug/l
1605	Aldrin	N.D.		0.006	ug/l
1606	Heptachlor Epoxide	N.D.		0.001	ug/l
1616	Endosulfan I	N.D.		0.002	ug/l
1610	Dieldrin	N.D.		0.001	ug/l
1607	DDE	0.002	J	0.001	ug/l
1611	Endrin	N.D.		0.007	ug/l
1615	Endosulfan II	N.D.		0.005	ug/l
1608	DDD	N.D.		0.005	ug/l
1617	Endosulfan Sulfate	N.D.		0.003	ug/l
1609	DDT	N.D.		0.009	ug/l
0938	Endrin Ketone	N.D.		0.004	ug/l
1860	Methoxychlor	N.D.		0.02	ug/l
1361	Alpha Chlordane	N.D.		0.001	ug/l
1362	Gamma Chlordane	N.D.		0.001	ug/l
1613	Toxaphene	N.D.		0.4	ug/l
1618	Endrin Aldehyde	N.D.		0.005	ug/l
1619	PCB-1016	N.D.		0.04	ug/l
1620	PCB-1221	N.D.		0.1	ug/l
1621	PCB-1232	N.D.		0.05	ug/l
1622	PCB-1242	N.D.		0.1	ug/l
1623	PCB-1248	N.D.		0.04	ug/l
1624	PCB-1254	N.D.		0.1	ug/l
1626	PCB-1260	N.D.		0.04	ug/l

The LCS results are shown on the QC summary. Since the MS/MSD data are within the QC limits, no action is needed for LCS results outside the QC limits.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96



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LLI Sample No. **WW 2677536**
Collected: 3/12/97 at 15:05 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW1 SDG#: HMS02-05

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

CAT ANALYSIS NAME
TCL SW846 Semivolatiles/Waters

CAT NO.	ANALYSIS NAME	RESULTS	DETECTION	LIMIT	UNITS
3918	pheno1	N.D.	1.		ug/l
3867	bis (2-chloroethyl) ether	N.D.	1.		ug/l
3874	2-chloropheno1	N.D.	1.		ug/l
3883	1,3-dichlorobenzene	N.D.	1.		ug/l
3884	1,4-dichlorobenzene	N.D.	1.		ug/l
3882	1,2-dichlorobenzene	N.D.	1.		ug/l
4680	2-methylpheno1	N.D.	2.		ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.		ug/l
4682	4-methylpheno1	N.D.	2.		ug/l
3915	N-nitrosodi-n-propylamine	N.D.	2.		ug/l
3902	hexachloroethane	N.D.	2.		ug/l
3910	nitrobenzene	N.D.	1.		ug/l
3904	isophorone	N.D.	1.		ug/l
3911	2-nitrophenol	N.D.	2.		ug/l
3890	2,4-dimethylpheno1	N.D.	1.		ug/l
3866	bis (2-chloroethoxy) methane	N.D.	1.		ug/l
3886	2,4-dichloropheno1	N.D.	2.		ug/l
3921	1,2,4-trichlorobenzene	3.	1.		ug/l
3906	naphthalene	N.D.	1.		ug/l
3871	4-chloroaniline	N.D.	2.		ug/l
3900	hexachlorobutadiene	N.D.	1.		ug/l
3872	4-chloro-3-methylpheno1	N.D.	2.		ug/l
3905	2-methylnaphthalene	N.D.	1.		ug/l
3901	hexachlorocyclopentadiene	N.D.	3.		ug/l
3923	2,4,6-trichloropheno1	N.D.	1.		ug/l
3922	2,4,5-trichloropheno1	N.D.	1.		ug/l
3873	2-chloronaphthalene	N.D.	1.		ug/l
3907	2-nitroaniline	N.D.	1.		ug/l
3891	dimethyl phthalate	N.D.	3.		ug/l
3858	acenaphthylene	N.D.	1.		ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. WW 2677536

Collected: 3/12/97 at 15:05 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMMW1 SDG#: HMS02-05

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL SW846 Semivolatiles/Waters				
3908	3-nitroaniline	N.D.	1.	ug/l
3857	acenaphthene	N.D.	1.	ug/l
3893	2,4-dinitrophenol	N.D.	5.	ug/l
3912	4-nitrophenol	N.D.	5.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3894	2,4-dinitrotoluene	N.D.	2.	ug/l
3895	2,6-dinitrotoluene	N.D.	1.	ug/l
3887	diethyl phthalate	N.D.	2.	ug/l
3875	4-chlorophenyl phenyl ether	N.D.	2.	ug/l
3898	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
4683	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3914	N-nitrosodiphenylamine	N.D.	2.	ug/l
3869	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3899	hexachlorobenzene	N.D.	1.	ug/l
3916	pentachlorophenol	N.D.	1.	ug/l
3917	phenanthrene	N.D.	1.	ug/l
3859	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3880	di-n-butyl phthalate	1.	1.	ug/l
3897	fluoranthene	N.D.	1.	ug/l
3919	pyrene	N.D.	1.	ug/l
3870	butyl benzyl phthalate	N.D.	2.	ug/l
3885	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3860	benzo (a) anthracene	N.D.	1.	ug/l
3868	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3876	chrysene	N.D.	1.	ug/l
3896	di-n-octyl phthalate	N.D.	2.	ug/l
3861	benzo (b) fluoranthene	N.D.	2.	ug/l
3862	benzo (k) fluoranthene	N.D.	2.	ug/l
3864	benzo (a) pyrene	N.D.	2.	ug/l
3903	indeno (1,2,3-cd) pyrene	N.D.	2.	ug/l
3881	dibenz (a,h) anthracene	N.D.	2.	ug/l
3863	benzo (ghi) perylene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS





LLI Sample No. WW 2677536
 Collected: 3/12/97 at 15:05 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
 Discard: 5/ 5/97

MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS
 KMMW1 SDG#: HMS02-05

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

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CAT			
NO.	ANALYSIS NAME	RESULTS	METHOD DETECTION LIMIT UNITS

TCL SW846 Semivolatiles/Waters

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
 The result reported for N-nitrosodiphenylamine represents the combined
 total of both compounds.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Senior Chemist, GC/MS



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LLI Sample No. WW 2677536
 Collected: 03/12/97 at 15:05 by DA

Submitted: 03/14/97

MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS
 KMMW1 SDG#: HMS02-05

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/19/97 2338	Joel R. Nace
1743	Aluminum	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1744	Antimony	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1746	Barium	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1747	Beryllium	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1749	Cadmium	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1750	Calcium	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1751	Chromium	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1752	Cobalt	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1753	Copper	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1754	Iron	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1757	Magnesium	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1758	Manganese	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1761	Nickel	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1762	Potassium	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1766	Silver	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1767	Sodium	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1771	Vanadium	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1772	Zinc	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
1848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	03/21/97 1802	Marie D. Kimmel
7022	Thallium TR	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
7035	Arsenic TR	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
7036	Selenium TR	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
7055	Lead TR	SW-846 6010A	1	03/24/97 1145	Nina C. Haller
0259	Mercury	SW-846 7470A	1	03/25/97 1500	Nelli S. Markaryan
5713	WW SW846 Hg Digest	SW-846 7470A	1	03/24/97 2131	Nelli S. Markaryan
0817	Water Sample Pest. Extraction	SW-846 3510B	1	03/18/97 1640	Sherry Lynn Devlin
0937	TCL Pesticides in Waters	SW-846 8081	1	03/26/97 2150	Douglas D. Seitz
0813	BNA Water Extraction	SW-846 3510B	1	03/17/97 1640	Sherry Lynn Devlin
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 0205	Deb Gifford
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 0205	Deb Gifford
0237	Total Cyanide (water)	SW-846 9012	1	03/24/97 1302	John W. Ballard, Jr.
0492	Cyanide Water Distillation	SW-846 9012	1	03/21/97 0530	Dawn M. Kreider



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 717-656-2300 Fax: 717-656-2681





LLI Sample No. 2677536
 MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4592	TCL Volatiles by 8240 - Water	Batch: K970781AA									
1258	Chloromethane										
	3. ug/l	N.D.		91	87	5					
1257	Bromomethane										
	3. ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
	2. ug/l	N.D.		99	97	1					
3494	Chloroethane										
	3. ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
	2. ug/l	N.D.		95	92	3					
3498	Acetone										
	6. ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
	3. ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
	1. ug/l	N.D.		99	96	4					
501	1,1-Dichloroethane										
	2. ug/l	N.D.		99	96	3					
3503	Chloroform										
	1. ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
	2. ug/l	N.D.		98	97	1					
0316	2-Butanone										
	3. ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
	1. ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
	1. ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
	2. ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
	1. ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
	1. ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
	1. ug/l	N.D.		97	97	0					
3511	Trichloroethene										
	1. ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
	2. ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
	2. ug/l	N.D.		102	104	2					
3515	Benzene										
	1. ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
	1. ug/l	N.D.		92	95	3					



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LLI Sample No. 2677536
MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3518	Bromoform										
	1. ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
	5. ug/l	N.D.		85	84	1					
3520	2-Hexanone										
	7. ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
	1. ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
	2. ug/l	N.D.		96	95	1					
3524	Toluene										
	2. ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
	1. ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
	2. ug/l	N.D.		106	101	4					
3528	Styrene										
	1. ug/l	N.D.		107	104	3					
3529	Xylene (total)										
	1. ug/l	N.D.		107	103	5					
5780	trans-1,2-Dichloroethene										
	2. ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
	2. ug/l	N.D.		100	98	2					
1743	Aluminum	Batch: 970801848006									
	0.057 mg/l	N.D.	18	1044	972 (2)	4	105			80	120
1744	Antimony	Batch: 970801848006									
	0.015 mg/l	N.D.	0 (1)	72	70	2	108			80	120
1746	Barium	Batch: 970801848006									
	0.0022 mg/l	N.D.	0 (1)	101	97	3	97			80	120
1747	Beryllium	Batch: 970801848006									
	0.0013 mg/l	N.D.	0 (1)	93	91	3	94			80	120
1749	Cadmium	Batch: 970801848006									
	0.0027 mg/l	N.D.	0 (1)	92	90	3	95			80	120
1750	Calcium	Batch: 970801848006									
	0.030 mg/l	0.058 J mg/l	1	187	150 (2)	3	102			80	120
1751	Chromium	Batch: 970801848006									
	0.0043 mg/l	N.D.	0 (1)	112	109	3	105			80	120
1752	Cobalt	Batch: 970801848006									
	0.0055 mg/l	N.D.	0 (1)	97	94	3	96			80	120
1753	Copper	Batch: 970801848006									
	0.0038 mg/l	N.D.	0 (1)	103	99	3	98			80	120
1754	Iron	Batch: 970801848006									
	0.0059 mg/l	0.0082 J mg/l	21	1709	1544 (2)	4	102			80	120
1757	Magnesium	Batch: 970801848006									
	0.024 mg/l	0.041 J mg/l	4	307	264 (2)	3	98			80	120
1758	Manganese	Batch: 970801848006									
	0.0029 mg/l	N.D.	3	148	135	3	97			80	120
1761	Nickel	Batch: 970801848006									
	0.0054 mg/l	N.D.	0 (1)	102	99	3	98			80	120

(1) The result for one or both determinations was less than five times the LOQ.
The background result was more than four times the spike added.



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LLI Sample No. 2677536
MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
1762 Potassium		Batch: 970801848006									
0.15	mg/l	N.D.	7	140	132	3	97			80	120
1766 Silver		Batch: 970801848006									
0.0036	mg/l	N.D.	0 (1)	99	96	3	99			80	120
1767 Sodium		Batch: 970801848006									
0.20	mg/l	N.D.	11	301	299 (2)	0	105			80	120
1771 Vanadium		Batch: 970801848006									
0.0070	mg/l	N.D.	0 (1)	108	104	3	104			80	120
1772 Zinc		Batch: 970801848006									
0.012	mg/l	N.D.	0 (1)	99	95	3	97			80	120
7022 Thallium TR		Batch: 970801848006									
0.0045	mg/l	N.D.	0 (1)	98	95	3	97			80	120
7035 Arsenic TR		Batch: 970801848006									
0.0027	mg/l	N.D.	0 (1)	97	94	3	99			80	120
7036 Selenium TR		Batch: 970801848006									
0.0027	mg/l	N.D.	0 (1)	94	91	2	97			80	120
7055 Lead TR		Batch: 970801848006									
0.0020	mg/l	0.0036 J mg/l	14	98	95	3	98			80	120
7059 Mercury		Batch: 970835713001									
0.000043	mg/l	0.000045J mg/l	0 (1)	96	91	5	115			80	120
0937 TCL Pesticides in Waters		Batch: 970770001A									
1600 Alpha BHC											
0.001	ug/l	N.D.		95	96	1	95			67	122
1601 Beta BHC											
0.001	ug/l	N.D.		100	97	4	98			74	120
1603 Delta BHC											
0.003	ug/l	N.D.		105	106	1	107			69	126
1602 Gamma BHC - Lindane											
0.001	ug/l	N.D.		95	96	1	99			66	120
1604 Heptachlor											
0.002	ug/l	N.D.		87	86	1	81			54	120
1605 Aldrin											
0.006	ug/l	N.D.		82	80	2	76			42	120
1606 Heptachlor Epoxide											
0.001	ug/l	N.D.		92	91	1	93			64	120
1616 Endosulfan I											
0.002	ug/l	N.D.		94	95	1	95			60	120
1610 Dieldrin											
0.001	ug/l	N.D.		83	82	1	82			66	120
1607 DDE											
0.001	ug/l	N.D.		77	75	3	77			60	120
1611 Endrin											
0.007	ug/l	N.D.		111	106	4	109			73	129
1615 Endosulfan II											
0.005	ug/l	N.D.		97	96	1	102			67	120
1608 DDD											
0.005	ug/l	N.D.		98	94	5	95			67	121

(1) The result for one or both determinations was less than five times the LOQ. The background result was more than four times the spike added.



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LLI Sample No. 2677536
 MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
1617	Endosulfan Sulfate										
	0.003 ug/l	N.D.		112	114	2	122			53	128
1609	DDT										
	0.009 ug/l	N.D.		96	94	2	97			71	120
0938	Endrin Ketone										
	0.004 ug/l	N.D.		99	99	0	106			76	120
1860	Methoxychlor										
	0.02 ug/l	N.D.		102	101	2	111			57	140
1361	Alpha Chlordane										
	0.001 ug/l	N.D.		93	94	1	92			75	120
1362	Gamma Chlordane										
	0.001 ug/l	N.D.		88	86	2	86			75	120
1613	Toxaphene										
	0.4 ug/l	N.D.									
1618	Endrin Aldehyde										
	0.005 ug/l	N.D.		120	126	5	133			59	126
1619	PCB-1016										
	0.04 ug/l	N.D.									
1620	PCB-1221										
	0.1 ug/l	N.D.									
1621	PCB-1232										
	0.05 ug/l	N.D.									
1622	PCB-1242										
	0.1 ug/l	N.D.									
1623	PCB-1248										
	0.04 ug/l	N.D.									
1624	PCB-1254										
	0.1 ug/l	N.D.									
1626	PCB-1260										
	0.04 ug/l	N.D.									

4678	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									

3918	phenol										
	1. ug/l	N.D.		43	41	3	43			5	112
3867	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		88	90	3	89			12	158
3874	2-chlorophenol										
	1. ug/l	N.D.		88	90	3	88			23	134
3883	1,3-dichlorobenzene										
	1. ug/l	N.D.		84	92	9	70			1	172
3884	1,4-dichlorobenzene										
	1. ug/l	N.D.		86	89	3	74			20	124
3882	1,2-dichlorobenzene										
	1. ug/l	N.D.		86	89	4	77			32	129
4680	2-methylphenol										
	2. ug/l	N.D.		78	80	3	80			46	123
4681	2,2'-oxybis (1-chloropropane)										
	2. ug/l	N.D.		69	72	5	71			36	166



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LLI Sample No. 2677536
MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4682	4-methylphenol										
	2. ug/l	N.D.		76	78	3	77			5	152
3915	N-nitrosodi-n-propylamine										
	2. ug/l	N.D.		94	100	6	99			1	230
3902	hexachloroethane										
	2. ug/l	N.D.		76	80	5	54			40	113
3910	nitrobenzene										
	1. ug/l	N.D.		96	98	2	97			35	180
3904	isophorone										
	1. ug/l	N.D.		94	93	0	94			21	196
3911	2-nitrophenol										
	2. ug/l	N.D.		91	94	3	90			29	182
3890	2,4-dimethylphenol										
	1. ug/l	N.D.		75	71	5	78			32	119
3866	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		88	90	2	88			33	184
3886	2,4-dichlorophenol										
	2. ug/l	N.D.		85	85	1	83			39	135
3921	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		83	83	1	72			44	142
3906	naphthalene										
	1. ug/l	N.D.		84	86	2	81			21	133
3871	4-chloroaniline										
	2. ug/l	N.D.		47	55	16	43			17	116
3900	hexachlorobutadiene										
	1. ug/l	N.D.		83	85	3	52			24	116
3872	4-chloro-3-methylphenol										
	2. ug/l	N.D.		88	91	4	87			22	147
3905	2-methylnaphthalene										
	1. ug/l	N.D.		86	87	1	80			28	123
3901	hexachlorocyclopentadiene										
	3. ug/l	N.D.		71	72	1	54			1	100
3923	2,4,6-trichlorophenol										
	1. ug/l	N.D.		93	95	2	91			37	144
3922	2,4,5-trichlorophenol										
	1. ug/l	N.D.		90	95	6	88			39	151
3873	2-chloronaphthalene										
	1. ug/l	N.D.		90	91	1	86			60	118
3907	2-nitroaniline										
	1. ug/l	N.D.		84	90	7	86			53	143
3891	dimethyl phthalate										
	3. ug/l	N.D.		63	65	3	28			1	112
3858	acenaphthylene										
	1. ug/l	N.D.		88	90	2	86			33	145

4679	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									

3908	3-nitroaniline										
	1. ug/l	N.D.		61	67	9	57			7	143



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LLI Sample No. 2677536
MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3857	acenaphthene										
	1. ug/l	N.D.		82	84	2	78			47	145
3893	2,4-dinitrophenol										
	5. ug/l	N.D.		82	83	1	87			1	191
3912	4-nitrophenol										
	5. ug/l	N.D.		41	43	6	41			1	132
3879	dibenzofuran										
	1. ug/l	N.D.		85	87	2	83			28	131
3894	2,4-dinitrotoluene										
	2. ug/l	N.D.		88	95	8	89			39	139
3895	2,6-dinitrotoluene										
	1. ug/l	N.D.		90	95	6	92			50	158
3887	diethyl phthalate										
	2. ug/l	N.D.		76	78	2	61			1	114
3875	4-chlorophenyl phenyl ether										
	2. ug/l	N.D.		86	88	2	82			25	158
3898	fluorene										
	1. ug/l	N.D.		85	86	2	80			59	121
3909	4-nitroaniline										
	2. ug/l	N.D.		79	84	6	78			38	122
4683	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		87	91	5	90			1	181
3914	N-nitrosodiphenylamine										
	2. ug/l	N.D.		85	86	2	83			38	147
3869	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		86	88	3	86			53	127
3899	hexachlorobenzene										
	1. ug/l	N.D.		85	86	1	84			1	152
3916	pentachlorophenol										
	1. ug/l	N.D.		86	85	2	89			14	176
3917	phenanthrene										
	1. ug/l	N.D.		86	86	0	83			54	120
3859	anthracene										
	1. ug/l	N.D.		85	85	0	83			27	133
4684	carbazole										
	1. ug/l	N.D.		90	90	1	88			40	137
3880	di-n-butyl phthalate										
	1. ug/l	N.D.		93	92	0	86			1	118
3897	fluoranthene										
	1. ug/l	N.D.		87	88	0	86			26	137
3919	pyrene										
	1. ug/l	N.D.		85	90	6	82			52	115
3870	butyl benzyl phthalate										
	2. ug/l	N.D.		88	85	4	75			1	152
3885	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		60	71	17	61			1	262
3860	benzo (a) anthracene										
	1. ug/l	N.D.		85	91	7	85			33	143
3868	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		93	96	2	90			8	158



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LLI Sample No. 2677536
MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3876	chrysene										
	1. ug/l	N.D.		89	89	1	88			17	168
3896	di-n-octyl phthalate										
	2. ug/l	N.D.		87	89	2	87			4	146
3861	benzo (b) fluoranthene										
	2. ug/l	N.D.		79	83	5	80			24	159
3862	benzo (k) fluoranthene										
	2. ug/l	N.D.		87	89	2	86			11	163
3864	benzo (a) pyrene										
	2. ug/l	N.D.		81	83	2	81			17	163
3903	indeno (1,2,3-cd) pyrene										
	2. ug/l	N.D.		87	89	1	90			1	171
3881	dibenz (a,h) anthracene										
	2. ug/l	N.D.		91	93	1	92			1	227
3863	benzo (ghi) perylene										
	2. ug/l	N.D.		88	89	1	89			1	219
0237	Total Cyanide (water)	Batch: 97080102101A									
	0.0040 mg/l	N.D.	0 (1)	97	101	4	98	101	4	90	110

(1) The result for one or both determinations was less than five times the LOQ.



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LLI Sample No. 2677536
 MW-01 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
0937 TCL Pesticides in Waters	TCX	91	60	120
	DCB	54	60	120
4592 TCL Volatiles by 8240 - Water	d4-1,2-DCA	102	76	114
	d8-toluene	103	88	110
	4-BFB	108	86	115
4678 TCL SW846 Semivolatiles/Waters	2-F1phenol	58	21	100
	Phenol-d6	39	10	94
	2,4,6-TBP	83	10	123
4679 TCL SW846 Semivolatiles/Waters	Nitrobz-d5	88	35	114
	2-Fbiphnyl	85	43	116
	Tphenyl d14	81	33	141



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LLI Sample No. **WW 2677537**
 Collected: 3/12/97 at 16:49 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
 Discard: 5/ 5/97

MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS
 KMW-3 SDG#: HMS02-06

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		UNITS
		RESULTS	METHOD DETECTION LIMIT	
4592	TCL Volatiles			See Page 2
1743	Aluminum	7.32	0.057	mg/l
1744	Antimony	N.D.	0.015	mg/l
1746	Barium	0.11	0.0022	mg/l
1747	Beryllium	0.0037 J	0.0013	mg/l
1749	Cadmium	N.D.	0.0027	mg/l
1750	Calcium	2.84	0.030	mg/l
1751	Chromium	0.0197 J	0.0043	mg/l
1752	Cobalt	N.D.	0.0055	mg/l
1753	Copper	0.0129 J	0.0038	mg/l
1754	Iron	9.84	0.0059	mg/l
1757	Magnesium	1.80	0.024	mg/l
1758	Manganese	0.061	0.0029	mg/l
1761	Nickel	0.0068 J	0.0054	mg/l
1762	Potassium	1.15	0.15	mg/l
1766	Silver	N.D.	0.0036	mg/l
1767	Sodium	13.7	0.20	mg/l
1771	Vanadium	0.035	0.0070	mg/l
1772	Zinc	0.054	0.012	mg/l
7022	Thallium	N.D.	0.0045	mg/l
7035	Arsenic	0.068	0.0027	mg/l
7036	Selenium	N.D.	0.0027	mg/l
7055	Lead	0.0118	0.0020	mg/l
0259	Mercury	0.000165J	0.00004	mg/l
0937	TCL Pesticides			See Page 4
4678	TCL Semivolatiles			See Page 6
4679	TCL Semivolatiles cont'd			See Page 7
0237	Total Cyanide	N.D.	0.0040	mg/l

1 COPY TO Michael Pisani & Assoc.
 1 COPY TO Data Package Group
 1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
 ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300
 04:03:36 D 0003 12 129915 556882
 560 0.00 00084840 ASR000

Respectfully Submitted
 Ramona V. Layman
 Manager, Metals/Leachates



Lancaster Laboratories
 2425 New Holland Pike
 PO Box 12425
 Lancaster, PA 17605-2425
 717-656-2300 Fax: 717-656-2681



LLI Sample No. WW 2677537

Collected: 3/12/97 at 16:49 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS

KMW-3 SDG#: HMS02-06

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	N.D.	60.	ug/l
1257	Bromomethane	N.D.	60.	ug/l
3492	Vinyl Chloride	N.D.	40.	ug/l
3494	Chloroethane	N.D.	60.	ug/l
3497	Methylene Chloride	N.D.	40.	ug/l
3498	Acetone	N.D.	120.	ug/l
3499	Carbon Disulfide	N.D.	60.	ug/l
3500	1,1-Dichloroethene	N.D.	20.	ug/l
3501	1,1-Dichloroethane	N.D.	40.	ug/l
3503	Chloroform	N.D.	20.	ug/l
3504	1,2-Dichloroethane	N.D.	40.	ug/l
0316	2-Butanone	N.D.	60.	ug/l
3505	1,1,1-Trichloroethane	N.D.	20.	ug/l
3506	Carbon Tetrachloride	N.D.	20.	ug/l
3507	Vinyl Acetate	N.D.	40.	ug/l
3508	Bromodichloromethane	N.D.	20.	ug/l
3509	1,2-Dichloropropane	N.D.	20.	ug/l
3516	cis-1,3-Dichloropropene	N.D.	20.	ug/l
3511	Trichloroethene	N.D.	20.	ug/l
3512	Dibromochloromethane	N.D.	40.	ug/l
3513	1,1,2-Trichloroethane	N.D.	40.	ug/l
3515	Benzene	810.	20.	ug/l
3510	trans-1,3-Dichloropropene	N.D.	20.	ug/l
3518	Bromoform	N.D.	20.	ug/l
3521	4-Methyl-2-pentanone	N.D.	100.	ug/l
3520	2-Hexanone	N.D.	140.	ug/l
3522	Tetrachloroethene	N.D.	20.	ug/l
3523	1,1,2,2-Tetrachloroethane	N.D.	40.	ug/l
3524	Toluene	440.	40.	ug/l
3525	Chlorobenzene	N.D.	20.	ug/l
3526	Ethylbenzene	62.	J 40.	ug/l
3528	Styrene	85.	J 20.	ug/l
3529	Xylene (total)	380.	20.	ug/l
5780	trans-1,2-Dichloroethene	N.D.	40.	ug/l
6268	cis-1,2-Dichloroethene	N.D.	40.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. WW 2677537

Collected: 3/12/97 at 16:49 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
 Discard: 5/ 5/97

MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS
 KMW-3 SDG#: HMS02-06

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

AS RECEIVED

CAT		RESULTS	METHOD	DETECTION LIMIT UNITS
NO.	ANALYSIS NAME			

TCL Volatiles by 8240 - Water

The quantitation limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles



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LLI Sample No. **WW 2677537**
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Discard: 5/ 5/97

MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW-3 SDG#: HMS02-06

Account No: 07802
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Technology Center
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P.O.
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CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Pesticides in Waters				
1600	Alpha BHC	N.D.	0.03	ug/l
1601	Beta BHC	N.D.	0.001	ug/l
1603	Delta BHC	N.D.	0.004	ug/l
1602	Gamma BHC - Lindane	N.D.	0.001	ug/l
1604	Heptachlor	N.D.	0.002	ug/l
1605	Aldrin	N.D.	0.008	ug/l
1606	Heptachlor Epoxide	N.D.	0.001	ug/l
1616	Endosulfan I	N.D.	0.003	ug/l
1610	Dieldrin	N.D.	0.001	ug/l
1607	DDE	N.D.	0.003	ug/l
1611	Endrin	0.04	0.009	ug/l
1615	Endosulfan II	N.D.	0.006	ug/l
1608	DDD	N.D.	0.006	ug/l
1617	Endosulfan Sulfate	N.D.	0.004	ug/l
1609	DDT	N.D.	0.01	ug/l
0938	Endrin Ketone	N.D.	0.005	ug/l
1860	Methoxychlor	N.D.	0.02	ug/l
1361	Alpha Chlordane	N.D.	0.001	ug/l
1362	Gamma Chlordane	N.D.	0.002	ug/l
1613	Toxaphene	N.D.	0.5	ug/l
1618	Endrin Aldehyde	N.D.	0.006	ug/l
1619	PCB-1016	N.D.	0.05	ug/l
1620	PCB-1221	N.D.	0.8	ug/l
1621	PCB-1232	N.D.	0.06	ug/l
1622	PCB-1242	N.D.	0.1	ug/l
1623	PCB-1248	N.D.	0.05	ug/l
1624	PCB-1254	N.D.	0.2	ug/l
1626	PCB-1260	N.D.	0.05	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Jennifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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LLI Sample No. **WW 2677537**
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 Discard: 5/ 5/97

MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS
 KMW-3 SDG#: HMS02-06

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

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CAT				METHOD
NO.	ANALYSIS NAME	RESULTS		DETECTION LIMIT UNITS

TCL Pesticides in Waters

The LCS results are shown on the QC summary. Since the MS/MSD data are within the QC limits, no action is needed for LCS results outside the QC limits.

Due to insufficient sample size, we were unable to report our usual quantitation limits.

Due to interfering peaks on the chromatogram, the values reported represent the lowest quantitation limits obtainable. Despite numerous cleanup methods, we were unable to reach our usual quantitation limits.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Jenifer E. Hess, B.S.
 Group Leader Pesticides/PCBs



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LLI Sample No. WW 2677537
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MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS
 KMW-3 SDG#: HMS02-06

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			
		RESULTS		METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters					
3918	phenol	320.	J	40.	ug/l
3867	bis (2-chloroethyl) ether	N.D.		1.	ug/l
3874	2-chlorophenol	N.D.		1.	ug/l
3883	1,3-dichlorobenzene	N.D.		1.	ug/l
3884	1,4-dichlorobenzene	N.D.		1.	ug/l
3882	1,2-dichlorobenzene	N.D.		1.	ug/l
4680	2-methylphenol	1,300.		80.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.		2.	ug/l
4682	4-methylphenol	1,800.		80.	ug/l
3915	N-nitrosodi-n-propylamine	N.D.		2.	ug/l
3902	hexachloroethane	N.D.		2.	ug/l
3910	nitrobenzene	N.D.		1.	ug/l
3904	isophorone	N.D.		1.	ug/l
3911	2-nitrophenol	N.D.		2.	ug/l
3890	2,4-dimethylphenol	4,500.		40.	ug/l
3866	bis (2-chloroethoxy) methane	N.D.		1.	ug/l
3886	2,4-dichlorophenol	N.D.		2.	ug/l
3921	1,2,4-trichlorobenzene	N.D.		1.	ug/l
3906	naphthalene	5,800.		40.	ug/l
3871	4-chloroaniline	N.D.		2.	ug/l
3900	hexachlorobutadiene	N.D.		1.	ug/l
3872	4-chloro-3-methylphenol	N.D.		2.	ug/l
3905	2-methylnaphthalene	1,100.		40.	ug/l
3901	hexachlorocyclopentadiene	N.D.		3.	ug/l
3923	2,4,6-trichlorophenol	N.D.		1.	ug/l
3922	2,4,5-trichlorophenol	N.D.		1.	ug/l
3873	2-chloronaphthalene	N.D.		1.	ug/l
3907	2-nitroaniline	N.D.		1.	ug/l
3891	dimethyl phthalate	N.D.		3.	ug/l
3858	acenaphthylene	19.		1.	ug/l

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. WW 2677537
Collected: 3/12/97 at 16:49 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW-3 SDG#: HMS02-06

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters				
3908	3-nitroaniline	N.D.	1.	ug/l
3857	acenaphthene	300.	J	40.
3893	2,4-dinitrophenol	N.D.	5.	ug/l
3912	4-nitrophenol	N.D.	5.	ug/l
3879	dibenzofuran	150.	1.	ug/l
3894	2,4-dinitrotoluene	N.D.	2.	ug/l
3895	2,6-dinitrotoluene	N.D.	1.	ug/l
3887	diethyl phthalate	N.D.	2.	ug/l
3875	4-chlorophenyl phenyl ether	N.D.	2.	ug/l
3898	fluorene	140.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
4683	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3914	N-nitrosodiphenylamine	N.D.	2.	ug/l
3869	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3899	hexachlorobenzene	N.D.	1.	ug/l
3916	pentachlorophenol	N.D.	1.	ug/l
3917	phenanthrene	130.	1.	ug/l
3859	anthracene	20.	1.	ug/l
4684	carbazole	380.	J	40.
3880	di-n-butyl phthalate	N.D.	1.	ug/l
3897	fluoranthene	34.	1.	ug/l
3919	pyrene	23.	1.	ug/l
3870	butyl benzyl phthalate	N.D.	2.	ug/l
3885	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3860	benzo (a) anthracene	7.	J	1.
3868	bis (2-ethylhexyl) phthalate	7.	J	2.
3876	chrysene	7.	J	1.
3896	di-n-octyl phthalate	N.D.	2.	ug/l
3861	benzo (b) fluoranthene	5.	J	2.
3862	benzo (k) fluoranthene	N.D.	2.	ug/l
3864	benzo (a) pyrene	3.	J	2.
3903	indeno (1,2,3-cd) pyrene	N.D.	2.	ug/l
3881	dibenz (a,h) anthracene	N.D.	2.	ug/l
3863	benzo (ghi) perylene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





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Page: 8 of 17

LLI Sample No. WW 2677537

Collected: 3/12/97 at 16:49 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW-3 SDG#: HMS02-06

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

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Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	METHOD	
		RESULTS	DETECTION LIMIT UNITS

TCL SW846 Semivolatiles/Waters

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

The GC/MS semivolatile internal standard peak areas were outside of the QC
limits for both the initial injection and the re-injection. The values here
are from the initial injection of the sample.

The GC/MS semivolatile surrogate recovery of Nitrobenzene-d5 was
outside of QC limits. The recovery was, however, greater than 10%.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. **WW 2677537**
 Collected: 03/12/97 at 16:49 by DA

Submitted: 03/14/97

MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS
 KMW-3 SDG#: HMS02-06

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/20/97 0012	JoeI R. Nace
1743	Aluminum	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1744	Antimony	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1746	Barium	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1747	Beryllium	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1749	Cadmium	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1750	Calcium	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1751	Chromium	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1752	Cobalt	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1753	Copper	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1754	Iron	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1757	Magnesium	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1758	Manganese	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1761	Nickel	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1762	Potassium	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1766	Silver	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1767	Sodium	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1771	Vanadium	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1772	Zinc	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
1848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	03/21/97 1802	Marie D. Kimmel
7022	Thallium TR	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
7035	Arsenic TR	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
7036	Selenium TR	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
7055	Lead TR	SW-846 6010A	1	03/24/97 1150	Nina C. Haller
0259	Mercury	SW-846 7470A	1	03/25/97 1502	Nelli S. Markaryan
5713	WW SW846 Hg Digest	SW-846 7470A	1	03/24/97 2131	Nelli S. Markaryan
0817	Water Sample Pest. Extraction	SW-846 3510B	1	03/18/97 1640	Sherry Lynn Devlin
0937	TCL Pesticides in Waters	SW-846 8081	1	04/02/97 0847	Douglas D. Seitz
0813	BNA Water Extraction	SW-846 3510B	1	03/17/97 1640	Sherry Lynn Devlin
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 0807	David J. Evans
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 0807	David J. Evans
0237	Total Cyanide (water)	SW-846 9012	1	03/24/97 1303	John W. Ballard, Jr.
0492	Cyanide Water Distillation	SW-846 9012	1	03/21/97 0530	Dawn M. Kreider



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LLI Sample No. 2677537
MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH

4592 TCL Volatiles by 8240 - Water Batch: K970781AA											

1258	Chloromethane										
60.	ug/l	N.D.		91	87	5					
1257	Bromomethane										
60.	ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
40.	ug/l	N.D.		99	97	1					
3494	Chloroethane										
60.	ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
40.	ug/l	N.D.		95	92	3					
3498	Acetone										
120.	ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
60.	ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
20.	ug/l	N.D.		99	96	4					
501	1,1-Dichloroethane										
40.	ug/l	N.D.		99	96	3					
3503	Chloroform										
20.	ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
40.	ug/l	N.D.		98	97	1					
0316	2-Butanone										
60.	ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
20.	ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
20.	ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
40.	ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
20.	ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
20.	ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
20.	ug/l	N.D.		97	97	0					
3511	Trichloroethene										
20.	ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
40.	ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
40.	ug/l	N.D.		102	104	2					
3515	Benzene										
20.	ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
20.	ug/l	N.D.		92	95	3					



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2216 Rev. 5/01/96





LLI Sample No. 2677537
MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3518	Bromoform										
20.	ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
100.	ug/l	N.D.		85	84	1					
3520	2-Hexanone										
140.	ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
20.	ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
40.	ug/l	N.D.		96	95	1					
3524	Toluene										
40.	ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
20.	ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
40.	ug/l	N.D.		106	101	4					
3528	Styrene										
20.	ug/l	N.D.		107	104	3					
3529	Xylene (total)										
20.	ug/l	N.D.		107	103	5					
3570	trans-1,2-Dichloroethene										
40.	ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
40.	ug/l	N.D.		100	98	2					
1743	Aluminum	Batch: 970801848006									
0.057	mg/l	N.D.	18	1044	972 (2)	4	105			80	120
1744	Antimony	Batch: 970801848006									
0.015	mg/l	N.D.	0 (1)	72	70	2	108			80	120
1746	Barium	Batch: 970801848006									
0.0022	mg/l	N.D.	0 (1)	101	97	3	97			80	120
1747	Beryllium	Batch: 970801848006									
0.0013	mg/l	N.D.	0 (1)	93	91	3	94			80	120
1749	Cadmium	Batch: 970801848006									
0.0027	mg/l	N.D.	0 (1)	92	90	3	95			80	120
1750	Calcium	Batch: 970801848006									
0.030	mg/l	0.058 J mg/l	1	187	150 (2)	3	102			80	120
1751	Chromium	Batch: 970801848006									
0.0043	mg/l	N.D.	0 (1)	112	109	3	105			80	120
1752	Cobalt	Batch: 970801848006									
0.0055	mg/l	N.D.	0 (1)	97	94	3	96			80	120
1753	Copper	Batch: 970801848006									
0.0038	mg/l	N.D.	0 (1)	103	99	3	98			80	120
1754	Iron	Batch: 970801848006									
0.0059	mg/l	0.0082 J mg/l	21	1709	1544 (2)	4	102			80	120
1757	Magnesium	Batch: 970801848006									
0.024	mg/l	0.041 J mg/l	4	307	264 (2)	3	98			80	120
1758	Manganese	Batch: 970801848006									
0.0029	mg/l	N.D.	3	148	135	3	97			80	120
1761	Nickel	Batch: 970801848006									
0.0054	mg/l	N.D.	0 (1)	102	99	3	98			80	120

(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.



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LLI Sample No. 2677537
MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
1762 Potassium	0.15 mg/l	Batch: 970801848006 N.D.	7	140	132	3	97			80	120
1766 Silver	0.0036 mg/l	Batch: 970801848006 N.D.	0 (1)	99	96	3	99			80	120
1767 Sodium	0.20 mg/l	Batch: 970801848006 N.D.	11	301	299 (2)	0	105			80	120
1771 Vanadium	0.0070 mg/l	Batch: 970801848006 N.D.	0 (1)	108	104	3	104			80	120
1772 Zinc	0.012 mg/l	Batch: 970801848006 N.D.	0 (1)	99	95	3	97			80	120
7022 Thallium TR	0.0045 mg/l	Batch: 970801848006 N.D.	0 (1)	98	95	3	97			80	120
7035 Arsenic TR	0.0027 mg/l	Batch: 970801848006 N.D.	0 (1)	97	94	3	99			80	120
7036 Selenium TR	0.0027 mg/l	Batch: 970801848006 N.D.	0 (1)	94	91	2	97			80	120
7055 Lead TR	0.0020 mg/l	Batch: 970801848006 0.0036 J mg/l	14	98	95	3	98			80	120
59 Mercury	0.000043 mg/l	Batch: 970835713001 0.000045J mg/l	0 (1)	96	91	5	115			80	120
0937 TCL Pesticides in Waters		Batch: 970770001A									
1600 Alpha BHC	0.03 ug/l	N.D.		95	96	1	95			67	122
1601 Beta BHC	0.001 ug/l	N.D.		100	97	4	98			74	120
1603 Delta BHC	0.004 ug/l	N.D.		105	106	1	107			69	126
1602 Gamma BHC - Lindane	0.001 ug/l	N.D.		95	96	1	99			66	120
1604 Heptachlor	0.002 ug/l	N.D.		87	86	1	81			54	120
1605 Aldrin	0.008 ug/l	N.D.		82	80	2	76			42	120
1606 Heptachlor Epoxide	0.001 ug/l	N.D.		92	91	1	93			64	120
1616 Endosulfan I	0.003 ug/l	N.D.		94	95	1	95			60	120
1610 Dieldrin	0.001 ug/l	N.D.		83	82	1	82			66	120
1607 DDE	0.003 ug/l	N.D.		77	75	3	77			60	120
1611 Endrin	0.009 ug/l	N.D.		111	106	4	109			73	129
1615 Endosulfan II	0.006 ug/l	N.D.		97	96	1	102			67	120
1608 DDD	0.006 ug/l	N.D.		98	94	5	95			67	121

(1) The result for one or both determinations was less than five times the LOQ.
The background result was more than four times the spike added.



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LLI Sample No. 2677537
MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
1617	Endosulfan Sulfate 0.004 ug/l	N.D.		112	114	2	122			53	128
1609	DDT 0.01 ug/l	N.D.		96	94	2	97			71	120
0938	Endrin Ketone 0.005 ug/l	N.D.		99	99	0	106			76	120
1860	Methoxychlor 0.02 ug/l	N.D.		102	101	2	111			57	140
1361	Alpha Chlordane 0.001 ug/l	N.D.		93	94	1	92			75	120
1362	Gamma Chlordane 0.002 ug/l	N.D.		88	86	2	86			75	120
1613	Toxaphene 0.5 ug/l	N.D.									
1618	Endrin Aldehyde 0.006 ug/l	N.D.		120	126	5	133			59	126
1619	PCB-1016 0.05 ug/l	N.D.									
1620	PCB-1221 0.8 ug/l	N.D.									
1621	PCB-1232 0.06 ug/l	N.D.									
1622	PCB-1242 0.1 ug/l	N.D.									
1623	PCB-1248 0.05 ug/l	N.D.									
1624	PCB-1254 0.2 ug/l	N.D.									
1626	PCB-1260 0.05 ug/l	N.D.									

4678 TCL SW846 Semivolatiles/Waters Batch: 97076WAE026											

3918	phenol 40. ug/l	N.D.		43	41	3	43			5	112
3867	bis (2-chloroethyl) ether 1. ug/l	N.D.		88	90	3	89			12	158
3874	2-chlorophenol 1. ug/l	N.D.		88	90	3	88			23	134
3883	1,3-dichlorobenzene 1. ug/l	N.D.		84	92	9	70			1	172
3884	1,4-dichlorobenzene 1. ug/l	N.D.		86	89	3	74			20	124
3882	1,2-dichlorobenzene 1. ug/l	N.D.		86	89	4	77			32	129
4680	2-methylphenol 80. ug/l	N.D.		78	80	3	80			46	123
4681	2,2'-oxybis (1-chloropropane) 2. ug/l	N.D.		69	72	5	71			36	166



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LLI Sample No. 2677537
MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4682	4-methylphenol										
80.	ug/l	N.D.		76	78	3	77			5	152
3915	N-nitrosodi-n-propylamine										
2.	ug/l	N.D.		94	100	6	99			1	230
3902	hexachloroethane										
2.	ug/l	N.D.		76	80	5	54			40	113
3910	nitrobenzene										
1.	ug/l	N.D.		96	98	2	97			35	180
3904	isophorone										
1.	ug/l	N.D.		94	93	0	94			21	196
3911	2-nitrophenol										
2.	ug/l	N.D.		91	94	3	90			29	182
3890	2,4-dimethylphenol										
40.	ug/l	N.D.		75	71	5	78			32	119
3866	bis (2-chloroethoxy) methane										
1.	ug/l	N.D.		88	90	2	88			33	184
3886	2,4-dichlorophenol										
2.	ug/l	N.D.		85	85	1	83			39	135
3921	1,2,4-trichlorobenzene										
1.	ug/l	N.D.		83	83	1	72			44	142
3906	naphthalene										
40.	ug/l	N.D.		84	86	2	81			21	133
3871	4-chloroaniline										
2.	ug/l	N.D.		47	55	16	43			17	116
3900	hexachlorobutadiene										
1.	ug/l	N.D.		83	85	3	52			24	116
3872	4-chloro-3-methylphenol										
2.	ug/l	N.D.		88	91	4	87			22	147
3905	2-methylnaphthalene										
40.	ug/l	N.D.		86	87	1	80			28	123
3901	hexachlorocyclopentadiene										
3.	ug/l	N.D.		71	72	1	54			1	100
3923	2,4,6-trichlorophenol										
1.	ug/l	N.D.		93	95	2	91			37	144
3922	2,4,5-trichlorophenol										
1.	ug/l	N.D.		90	95	6	88			39	151
3873	2-chloronaphthalene										
1.	ug/l	N.D.		90	91	1	86			60	118
3907	2-nitroaniline										
1.	ug/l	N.D.		84	90	7	86			53	143
3891	dimethyl phthalate										
3.	ug/l	N.D.		63	65	3	28			1	112
3858	acenaphthylene										
1.	ug/l	N.D.		88	90	2	86			33	145

4679	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									

3908	3-nitroaniline										
1.	ug/l	N.D.		61	67	9	57			7	143



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LLI Sample No. 2677537
MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3857	acenaphthene										
40.	ug/l	N.D.		82	84	2	78			47	145
3893	2,4-dinitrophenol										
5.	ug/l	N.D.		82	83	1	87			1	191
3912	4-nitrophenol										
5.	ug/l	N.D.		41	43	6	41			1	132
3879	dibenzofuran										
1.	ug/l	N.D.		85	87	2	83			28	131
3894	2,4-dinitrotoluene										
2.	ug/l	N.D.		88	95	8	89			39	139
3895	2,6-dinitrotoluene										
1.	ug/l	N.D.		90	95	6	92			50	158
3887	diethyl phthalate										
2.	ug/l	N.D.		76	78	2	61			1	114
3875	4-chlorophenyl phenyl ether										
2.	ug/l	N.D.		86	88	2	82			25	158
3898	fluorene										
1.	ug/l	N.D.		85	86	2	80			59	121
3909	4-nitroaniline										
2.	ug/l	N.D.		79	84	6	78			38	122
4683	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		87	91	5	90			1	181
3914	N-nitrosodiphenylamine										
2.	ug/l	N.D.		85	86	2	83			38	147
3869	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		86	88	3	86			53	127
3899	hexachlorobenzene										
1.	ug/l	N.D.		85	86	1	84			1	152
3916	pentachlorophenol										
1.	ug/l	N.D.		86	85	2	89			14	176
3917	phenanthrene										
1.	ug/l	N.D.		86	86	0	83			54	120
3859	anthracene										
1.	ug/l	N.D.		85	85	0	83			27	133
4684	carbazole										
40.	ug/l	N.D.		90	90	1	88			40	137
3880	di-n-butyl phthalate										
1.	ug/l	N.D.		93	92	0	86			1	118
3897	fluoranthene										
1.	ug/l	N.D.		87	88	0	86			26	137
3919	pyrene										
1.	ug/l	N.D.		85	90	6	82			52	115
3870	butyl benzyl phthalate										
2.	ug/l	N.D.		88	85	4	75			1	152
3885	3,3'-dichlorobenzidine										
2.	ug/l	N.D.		60	71	17	61			1	262
3860	benzo (a) anthracene										
1.	ug/l	N.D.		85	91	7	85			33	143
3868	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		93	96	2	90			8	158



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LLI Sample No. 2677537
MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3876	chrysene										
1.	ug/l	N.D.		89	89	1	88			17	168
3896	di-n-octyl phthalate										
2.	ug/l	N.D.		87	89	2	87			4	146
3861	benzo (b) fluoranthene										
2.	ug/l	N.D.		79	83	5	80			24	159
3862	benzo (k) fluoranthene										
2.	ug/l	N.D.		87	89	2	86			11	163
3864	benzo (a) pyrene										
2.	ug/l	N.D.		81	83	2	81			17	163
3903	indeno (1,2,3-cd) pyrene										
2.	ug/l	N.D.		87	89	1	90			1	171
3881	dibenz (a,h) anthracene										
2.	ug/l	N.D.		91	93	1	92			1	227
3863	benzo (ghi) perylene										
2.	ug/l	N.D.		88	89	1	89			1	219
0237	Total Cyanide (water)	Batch: 97080102101A									
0.0040	mg/l	N.D.	0 (1)	97	101	4	98	101	4	90	110

(1) The result for one or both determinations was less than five times the LOQ.



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LLI Sample No. 2677537
MW-3 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
0937 TCL Pesticides in Waters	TCX	66	60	120
	DCB	26	60	120
4592 TCL Volatiles by 8240 - Water	d4-1,2-DCA	104	76	114
	d8-toluene	104	88	110
	4-BFB	111	86	115
4678 TCL SW846 Semivolatiles/Waters	2-F1pheno1	60	21	100
	Pheno1-d6	35	10	94
	2,4,6-TBP	90	10	123
4679 TCL SW846 Semivolatiles/Waters	Nitrobz-d5	257	35	114
	2-Fbiphny1	89	43	116
	Tphenyld14	87	33	141



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LLI Sample No. **WW 2677538**

Collected: 3/12/97 at 16:51 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW23 SDG#: HMS02-07

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		UNITS
		RESULTS	METHOD DETECTION LIMIT	
4592	TCL Volatiles			See Page 2
1743	Aluminum	14.8	0.057	mg/l
1744	Antimony	N.D.	0.015	mg/l
1746	Barium	0.16	0.0022	mg/l
1747	Beryllium	0.0026 J	0.0013	mg/l
1749	Cadmium	N.D.	0.0027	mg/l
1750	Calcium	3.67	0.030	mg/l
1751	Chromium	0.038	0.0043	mg/l
1752	Cobalt	0.0086 J	0.0055	mg/l
1753	Copper	0.0234 J	0.0038	mg/l
1754	Iron	15.3	0.0059	mg/l
1757	Magnesium	2.39	0.024	mg/l
1758	Manganese	0.088	0.0029	mg/l
1761	Nickel	0.0112 J	0.0054	mg/l
1762	Potassium	1.59	0.15	mg/l
1766	Silver	N.D.	0.0036	mg/l
1767	Sodium	14.2	0.20	mg/l
1771	Vanadium	0.063	0.0070	mg/l
1772	Zinc	0.093	0.012	mg/l
7022	Thallium	N.D.	0.0045	mg/l
7035	Arsenic	0.070	0.0027	mg/l
7036	Selenium	N.D.	0.0027	mg/l
7055	Lead	0.0225	0.0020	mg/l
0259	Mercury	0.00026	0.00004	mg/l
0937	TCL Pesticides			See Page 4
4678	TCL Semivolatiles			See Page 5
4679	TCL Semivolatiles cont'd			See Page 6
0237	Total Cyanide	N.D.	0.0040	mg/l

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
04:06:12 D 0003 12 129915 556882
560 0.00 00084840 ASR000

Respectfully Submitted
Ramona V. Layman
Manager, Metals/Leachates



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LLI Sample No. WW 2677538
Collected: 3/12/97 at 16:51 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW23 SDG#: HMS02-07

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	N.D.	60.	ug/l
1257	Bromomethane	N.D.	60.	ug/l
3492	Vinyl Chloride	N.D.	40.	ug/l
3494	Chloroethane	N.D.	60.	ug/l
3497	Methylene Chloride	N.D.	40.	ug/l
3498	Acetone	N.D.	120.	ug/l
3499	Carbon Disulfide	N.D.	60.	ug/l
3500	1,1-Dichloroethene	N.D.	20.	ug/l
3501	1,1-Dichloroethane	N.D.	40.	ug/l
3503	Chloroform	N.D.	20.	ug/l
3504	1,2-Dichloroethane	N.D.	40.	ug/l
0316	2-Butanone	N.D.	60.	ug/l
3505	1,1,1-Trichloroethane	N.D.	20.	ug/l
3506	Carbon Tetrachloride	N.D.	20.	ug/l
3507	Vinyl Acetate	N.D.	40.	ug/l
3508	Bromodichloromethane	N.D.	20.	ug/l
3509	1,2-Dichloropropane	N.D.	20.	ug/l
3516	cis-1,3-Dichloropropene	N.D.	20.	ug/l
3511	Trichloroethene	N.D.	20.	ug/l
3512	Dibromochloromethane	N.D.	40.	ug/l
3513	1,1,2-Trichloroethane	N.D.	40.	ug/l
3515	Benzene	790.	20.	ug/l
3510	trans-1,3-Dichloropropene	N.D.	20.	ug/l
3518	Bromoform	N.D.	20.	ug/l
3521	4-Methyl-2-pentanone	N.D.	100.	ug/l
3520	2-Hexanone	N.D.	140.	ug/l
3522	Tetrachloroethene	N.D.	20.	ug/l
3523	1,1,2,2-Tetrachloroethane	N.D.	40.	ug/l
3524	Toluene	430.	40.	ug/l
3525	Chlorobenzene	N.D.	20.	ug/l
3526	Ethylbenzene	60.	J 40.	ug/l
3528	Styrene	77.	J 20.	ug/l
3529	Xylene (total)	370.	20.	ug/l
5780	trans-1,2-Dichloroethene	N.D.	40.	ug/l
6268	cis-1,2-Dichloroethene	N.D.	40.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





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Page: 3 of 16

LLI Sample No. WW 2677538

Collected: 3/12/97 at 16:51 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW23 SDG#: HMS02-07

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
ReI.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Volatiles by 8240 - Water

The quantitation limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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LLI Sample No. WW 2677538

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MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW23 SDG#: HMS02-07

Account No: 07802
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Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Pesticides in Waters				
1600	Alpha BHC	N.D.		0.001 ug/l
1601	Beta BHC	N.D.		0.001 ug/l
1603	Delta BHC	N.D.		0.003 ug/l
1602	Gamma BHC - Lindane	N.D.		0.001 ug/l
1604	Heptachlor	N.D.		0.002 ug/l
1605	Aldrin	N.D.		0.006 ug/l
1606	Heptachlor Epoxide	N.D.		0.001 ug/l
1616	Endosulfan I	N.D.		0.002 ug/l
1610	Dieldrin	N.D.		0.02 ug/l
1607	DDE	0.02		0.001 ug/l
1611	Endrin	N.D.		0.007 ug/l
1615	Endosulfan II	0.009	J	0.005 ug/l
1608	DDD	N.D.		0.005 ug/l
1617	Endosulfan Sulfate	0.024	J	0.003 ug/l
1609	DDT	0.010	J	0.009 ug/l
0938	Endrin Ketone	N.D.		0.004 ug/l
1860	Methoxychlor	N.D.		0.02 ug/l
1361	Alpha Chlordane	N.D.		0.001 ug/l
1362	Gamma Chlordane	N.D.		0.001 ug/l
1613	Toxaphene	N.D.		0.4 ug/l
1618	Endrin Aldehyde	0.024	J	0.005 ug/l
1619	PCB-1016	N.D.		0.04 ug/l
1620	PCB-1221	N.D.		0.6 ug/l
1621	PCB-1232	N.D.		0.05 ug/l
1622	PCB-1242	N.D.		0.1 ug/l
1623	PCB-1248	N.D.		0.04 ug/l
1624	PCB-1254	N.D.		0.1 ug/l
1626	PCB-1260	N.D.		0.04 ug/l

The LCS results are shown on the QC summary. Since the MS/MSD data are within the QC limits, no action is needed for LCS results outside the QC limits.

Due to interfering peaks on the chromatogram, the values reported represent the lowest quantitation limits obtainable. Despite numerous cleanup methods, we were unable to reach our usual quantitation limits.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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2216 Rev. 5/01/96





LLI Sample No. **WW 2677538**
Collected: 3/12/97 at 16:51 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW23 SDG#: HMS02-07

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters				
3918	phenol	360.	10.	ug/l
3867	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3874	2-chlorophenol	N.D.	1.	ug/l
3883	1,3-dichlorobenzene	N.D.	1.	ug/l
3884	1,4-dichlorobenzene	N.D.	1.	ug/l
3882	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	1,200.	20.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	2,000.	160.	ug/l
3915	N-nitrosodi-n-propylamine	N.D.	2.	ug/l
3902	hexachloroethane	N.D.	2.	ug/l
3910	nitrobenzene	N.D.	1.	ug/l
3904	isophorone	N.D.	1.	ug/l
3911	2-nitrophenol	N.D.	2.	ug/l
3890	2,4-dimethylphenol	5,200.	80.	ug/l
3866	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3886	2,4-dichlorophenol	N.D.	2.	ug/l
3921	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3906	naphthalene	11,000.	80.	ug/l
3871	4-chloroaniline	N.D.	2.	ug/l
3900	hexachlorobutadiene	N.D.	1.	ug/l
3872	4-chloro-3-methylphenol	N.D.	2.	ug/l
3905	2-methylnaphthalene	990.	10.	ug/l
3901	hexachlorocyclopentadiene	N.D.	3.	ug/l
3923	2,4,6-trichlorophenol	N.D.	1.	ug/l
3922	2,4,5-trichlorophenol	N.D.	1.	ug/l
3873	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	1.	ug/l
3891	dimethyl phthalate	N.D.	3.	ug/l
3858	acenaphthylene	20.	1.	ug/l

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Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. WW 2677538

Collected: 3/12/97 at 16:51 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW23 SDG#: HMS02-07

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL SW846 Semivolatiles/Waters				
3908	3-nitroaniline	N.D.	1.	ug/l
3857	acenaphthene	310.	10.	ug/l
3893	2,4-dinitrophenol	N.D.	5.	ug/l
3912	4-nitrophenol	N.D.	5.	ug/l
3879	dibenzofuran	150.	1.	ug/l
3894	2,4-dinitrotoluene	N.D.	2.	ug/l
3895	2,6-dinitrotoluene	N.D.	1.	ug/l
3887	diethyl phthalate	N.D.	2.	ug/l
3875	4-chlorophenyl phenyl ether	N.D.	2.	ug/l
3898	fluorene	140.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
4683	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3914	N-nitrosodiphenylamine	N.D.	2.	ug/l
3869	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3899	hexachlorobenzene	N.D.	1.	ug/l
3916	pentachlorophenol	N.D.	1.	ug/l
3917	phenanthrene	120.	1.	ug/l
3859	anthracene	17.	1.	ug/l
4684	carbazole	390.	10.	ug/l
3880	di-n-butyl phthalate	N.D.	1.	ug/l
3897	fluoranthene	20.	1.	ug/l
3919	pyrene	14.	1.	ug/l
3870	butyl benzyl phthalate	N.D.	2.	ug/l
3885	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3860	benzo (a) anthracene	4.	J 1.	ug/l
3868	bis (2-ethylhexyl) phthalate	4.	J 2.	ug/l
3876	chrysene	4.	J 1.	ug/l
3896	di-n-octyl phthalate	N.D.	2.	ug/l
3861	benzo (b) fluoranthene	3.	J 2.	ug/l
3862	benzo (k) fluoranthene	N.D.	2.	ug/l
3864	benzo (a) pyrene	N.D.	2.	ug/l
3903	indeno (1,2,3-cd) pyrene	N.D.	2.	ug/l
3881	dibenz (a,h) anthracene	N.D.	2.	ug/l
3863	benzo (ghi) perylene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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2216 Rev. 5/01/96



LLI Sample No. **WW 2677538**

Collected: 3/12/97 at 16:51 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW23 SDG#: HMS02-07

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL SW846 Semivolatiles/Waters

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
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Respectfully Submitted
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Senior Chemist, GC/MS



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2216 Rev. 5/01/96





LLI Sample No. WW 2677538

Collected: 03/12/97 at 16:51 by DA

Submitted: 03/14/97

MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW23 SDG#: HMS02-07

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
--

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/20/97 0059	Joel R. Nace
1743	Aluminum	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1744	Antimony	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1746	Barium	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1747	Beryllium	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1749	Cadmium	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1750	Calcium	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1751	Chromium	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1752	Cobalt	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1753	Copper	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1754	Iron	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1757	Magnesium	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1758	Manganese	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1761	Nickel	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1762	Potassium	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1766	Silver	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1767	Sodium	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1771	Vanadium	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1772	Zinc	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
1848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	03/21/97 1802	Marie D. Kimmel
7022	Thallium TR	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
7035	Arsenic TR	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
7036	Selenium TR	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
7055	Lead TR	SW-846 6010A	1	03/24/97 1154	Nina C. Haller
0259	Mercury	SW-846 7470A	1	03/25/97 1504	Nelli S. Markaryan
5713	WW SW846 Hg Digest	SW-846 7470A	1	03/24/97 2131	Nelli S. Markaryan
0817	Water Sample Pest. Extraction	SW-846 3510B	1	03/18/97 1640	Sherry Lynn Devlin
0937	TCL Pesticides in Waters	SW-846 8081	1	04/02/97 0928	Douglas D. Seitz
0813	BNA Water Extraction	SW-846 3510B	1	03/17/97 1640	Sherry Lynn Devlin
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 0903	David J. Evans
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 0903	David J. Evans
0237	Total Cyanide (water)	SW-846 9012	1	03/24/97 1305	John W. Ballard, Jr.
0492	Cyanide Water Distillation	SW-846 9012	1	03/21/97 0530	Dawn M. Kreider



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LLI Sample No. 2677538
MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MOL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH

4592 TCL Volatiles by 8240 - Water Batch: K970781AA											

1258	Chloromethane										
60.	ug/l	N.D.		91	87	5					
1257	Bromomethane										
60.	ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
40.	ug/l	N.D.		99	97	1					
3494	Chloroethane										
60.	ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
40.	ug/l	N.D.		95	92	3					
3498	Acetone										
120.	ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
60.	ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
20.	ug/l	N.D.		99	96	4					
501	1,1-Dichloroethane										
40.	ug/l	N.D.		99	96	3					
3503	Chloroform										
20.	ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
40.	ug/l	N.D.		98	97	1					
0316	2-Butanone										
60.	ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
20.	ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
20.	ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
40.	ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
20.	ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
20.	ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
20.	ug/l	N.D.		97	97	0					
3511	Trichloroethene										
20.	ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
40.	ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
40.	ug/l	N.D.		102	104	2					
3515	Benzene										
20.	ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
20.	ug/l	N.D.		92	95	3					



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2216 Rev. 5/01/96





LLI Sample No. 2677538
MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3518	Bromoform										
20.	ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
100.	ug/l	N.D.		85	84	1					
3520	2-Hexanone										
140.	ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
20.	ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
40.	ug/l	N.D.		96	95	1					
3524	Toluene										
40.	ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
20.	ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
40.	ug/l	N.D.		106	101	4					
3528	Styrene										
20.	ug/l	N.D.		107	104	3					
3529	Xylene (total)										
20.	ug/l	N.D.		107	103	5					
3780	trans-1,2-Dichloroethene										
40.	ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
40.	ug/l	N.D.		100	98	2					
1743	Aluminum	Batch: 970801848006									
0.057	mg/l	N.D.	18	1044	972 (2)	4	105			80	120
1744	Antimony	Batch: 970801848006									
0.015	mg/l	N.D.	0 (1)	72	70	2	108			80	120
1746	Barium	Batch: 970801848006									
0.0022	mg/l	N.D.	0 (1)	101	97	3	97			80	120
1747	Beryllium	Batch: 970801848006									
0.0013	mg/l	N.D.	0 (1)	93	91	3	94			80	120
1749	Cadmium	Batch: 970801848006									
0.0027	mg/l	N.D.	0 (1)	92	90	3	95			80	120
1750	Calcium	Batch: 970801848006									
0.030	mg/l	0.058 J mg/l	1	187	150 (2)	3	102			80	120
1751	Chromium	Batch: 970801848006									
0.0043	mg/l	N.D.	0 (1)	112	109	3	105			80	120
1752	Cobalt	Batch: 970801848006									
0.0055	mg/l	N.D.	0 (1)	97	94	3	96			80	120
1753	Copper	Batch: 970801848006									
0.0038	mg/l	N.D.	0 (1)	103	99	3	98			80	120
1754	Iron	Batch: 970801848006									
0.0059	mg/l	0.0082 J mg/l	21	1709	1544 (2)	4	102			80	120
1757	Magnesium	Batch: 970801848006									
0.024	mg/l	0.041 J mg/l	4	307	264 (2)	3	98			80	120
1758	Manganese	Batch: 970801848006									
0.0029	mg/l	N.D.	3	148	135	3	97			80	120
1761	Nickel	Batch: 970801848006									
0.0054	mg/l	N.D.	0 (1)	102	99	3	98			80	120

(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.



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2216 Rev. 5/01/96



LLI Sample No. 2677538
MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
1762 Potassium	0.15 mg/l	Batch: 970801848006									
		N.D.									
1766 Silver	0.0036 mg/l	Batch: 970801848006	7	140	132	3	97			80	120
		N.D.									
1767 Sodium	0.20 mg/l	Batch: 970801848006	0 (1)	99	96	3	99			80	120
		N.D.									
1771 Vanadium	0.0070 mg/l	Batch: 970801848006	11	301	299 (2)	0	105			80	120
		N.D.									
1772 Zinc	0.012 mg/l	Batch: 970801848006	0 (1)	108	104	3	104			80	120
		N.D.									
7022 Thallium TR	0.0045 mg/l	Batch: 970801848006	0 (1)	99	95	3	97			80	120
		N.D.									
7035 Arsenic TR	0.0027 mg/l	Batch: 970801848006	0 (1)	98	95	3	97			80	120
		N.D.									
7036 Selenium TR	0.0027 mg/l	Batch: 970801848006	0 (1)	97	94	3	99			80	120
		N.D.									
7055 Lead TR	0.0020 mg/l	Batch: 970801848006	0 (1)	94	91	2	97			80	120
		0.0036 J mg/l									
7059 Mercury	0.000043 mg/l	Batch: 970835713001	14	98	95	3	98			80	120
		0.000045J mg/l									
			0 (1)	96	91	5	115			80	120

937 TCL Pesticides in Waters		Batch: 970770001A									

1600 Alpha BHC	0.001 ug/l	N.D.		95	96	1	95			67	122
1601 Beta BHC	0.001 ug/l	N.D.		100	97	4	98			74	120
1603 Delta BHC	0.003 ug/l	N.D.		105	106	1	107			69	126
1602 Gamma BHC - Lindane	0.001 ug/l	N.D.		95	96	1	99			66	120
1604 Heptachlor	0.002 ug/l	N.D.		87	86	1	81			54	120
1605 Aldrin	0.006 ug/l	N.D.		82	80	2	76			42	120
1606 Heptachlor Epoxide	0.001 ug/l	N.D.		92	91	1	93			64	120
1616 Endosulfan I	0.002 ug/l	N.D.		94	95	1	95			60	120
1610 Dieldrin	0.02 ug/l	N.D.		83	82	1	82			66	120
1607 DDE	0.001 ug/l	N.D.		77	75	3	77			60	120
1611 Endrin	0.007 ug/l	N.D.		111	106	4	109			73	129
1615 Endosulfan II	0.005 ug/l	N.D.		97	96	1	102			67	120
1608 DDD	0.005 ug/l	N.D.		98	94	5	95			67	121

(1) The result for one or both determinations was less than five times the LOQ.
The background result was more than four times the spike added.



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2216 Rev. 5/01/96



LLI Sample No. 2677538
MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
1617	Endosulfan Sulfate 0.003 ug/l	N.D.		112	114	2	122			53	128
1609	DDT 0.009 ug/l	N.D.		96	94	2	97			71	120
0938	Endrin Ketone 0.004 ug/l	N.D.		99	99	0	106			76	120
1860	Methoxychlor 0.02 ug/l	N.D.		102	101	2	111			57	140
1361	Alpha Chlordane 0.001 ug/l	N.D.		93	94	1	92			75	120
1362	Gamma Chlordane 0.001 ug/l	N.D.		88	86	2	86			75	120
1613	Toxaphene 0.4 ug/l	N.D.									
1618	Endrin Aldehyde 0.005 ug/l	N.D.		120	126	5	133			59	126
1619	PCB-1016 0.04 ug/l	N.D.									
1620	PCB-1221 0.6 ug/l	N.D.									
1621	PCB-1232 0.05 ug/l	N.D.									
1622	PCB-1242 0.1 ug/l	N.D.									
1623	PCB-1248 0.04 ug/l	N.D.									
1624	PCB-1254 0.1 ug/l	N.D.									
1626	PCB-1260 0.04 ug/l	N.D.									

4678	TCL SWB46 Semivolatiles/Waters	Batch: 97076WAE026									
3918	phenol 10. ug/l	N.D.		43	41	3	43			5	112
3867	bis (2-chloroethyl) ether 1. ug/l	N.D.		88	90	3	89			12	158
3874	2-chlorophenol 1. ug/l	N.D.		88	90	3	88			23	134
3883	1,3-dichlorobenzene 1. ug/l	N.D.		84	92	9	70			1	172
3884	1,4-dichlorobenzene 1. ug/l	N.D.		86	89	3	74			20	124
3882	1,2-dichlorobenzene 1. ug/l	N.D.		86	89	4	77			32	129
4680	2-methylphenol 20. ug/l	N.D.		78	80	3	80			46	123
4681	2,2'-oxybis (1-chloropropane) 2. ug/l	N.D.		69	72	5	71			36	166



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2216 Rev. 5/01/96





LLI Sample No. 2677538
MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4682	4-methylphenol										
160.	ug/l	N.D.		76	78	3	77			5	152
3915	N-nitrosodi-n-propylamine										
2.	ug/l	N.D.		94	100	6	99			1	230
3902	hexachloroethane										
2.	ug/l	N.D.		76	80	5	54			40	113
3910	nitrobenzene										
1.	ug/l	N.D.		96	98	2	97			35	180
3904	isophorone										
1.	ug/l	N.D.		94	93	0	94			21	196
3911	2-nitrophenol										
2.	ug/l	N.D.		91	94	3	90			29	182
3890	2,4-dimethylphenol										
80.	ug/l	N.D.		75	71	5	78			32	119
3866	bis (2-chloroethoxy) methane										
1.	ug/l	N.D.		88	90	2	88			33	184
3886	2,4-dichlorophenol										
2.	ug/l	N.D.		85	85	1	83			39	135
3921	1,2,4-trichlorobenzene										
1.	ug/l	N.D.		83	83	1	72			44	142
3906	naphthalene										
80.	ug/l	N.D.		84	86	2	81			21	133
3871	4-chloroaniline										
2.	ug/l	N.D.		47	55	16	43			17	116
3900	hexachlorobutadiene										
1.	ug/l	N.D.		83	85	3	52			24	116
3872	4-chloro-3-methylphenol										
2.	ug/l	N.D.		88	91	4	87			22	147
3905	2-methylnaphthalene										
10.	ug/l	N.D.		86	87	1	80			28	123
3901	hexachlorocyclopentadiene										
3.	ug/l	N.D.		71	72	1	54			1	100
3923	2,4,6-trichlorophenol										
1.	ug/l	N.D.		93	95	2	91			37	144
3922	2,4,5-trichlorophenol										
1.	ug/l	N.D.		90	95	6	88			39	151
3873	2-chloronaphthalene										
1.	ug/l	N.D.		90	91	1	86			60	118
3907	2-nitroaniline										
1.	ug/l	N.D.		84	90	7	86			53	143
3891	dimethyl phthalate										
3.	ug/l	N.D.		63	65	3	28			1	112
3858	acenaphthylene										
1.	ug/l	N.D.		88	90	2	86			33	145

4679	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									

3908	3-nitroaniline										
1.	ug/l	N.D.		61	67	9	57			7	143



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2216 Rev. 5/01/96





LLI Sample No. 2677538
MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3857	acenaphthene										
10.	ug/l	N.D.		82	84	2	78			47	145
3893	2,4-dinitrophenol										
5.	ug/l	N.D.		82	83	1	87			1	191
3912	4-nitrophenol										
5.	ug/l	N.D.		41	43	6	41			1	132
3879	dibenzofuran										
1.	ug/l	N.D.		85	87	2	83			28	131
3894	2,4-dinitrotoluene										
2.	ug/l	N.D.		88	95	8	89			39	139
3895	2,6-dinitrotoluene										
1.	ug/l	N.D.		90	95	6	92			50	158
3887	diethyl phthalate										
2.	ug/l	N.D.		76	78	2	61			1	114
3875	4-chlorophenyl phenyl ether										
2.	ug/l	N.D.		86	88	2	82			25	158
3898	fluorene										
1.	ug/l	N.D.		85	86	2	80			59	121
3909	4-nitroaniline										
2.	ug/l	N.D.		79	84	6	78			38	122
3683	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		87	91	5	90			1	181
3914	N-nitrosodiphenylamine										
2.	ug/l	N.D.		85	86	2	83			38	147
3869	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		86	88	3	86			53	127
3899	hexachlorobenzene										
1.	ug/l	N.D.		85	86	1	84			1	152
3916	pentachlorophenol										
1.	ug/l	N.D.		86	85	2	89			14	176
3917	phenanthrene										
1.	ug/l	N.D.		86	86	0	83			54	120
3859	anthracene										
1.	ug/l	N.D.		85	85	0	83			27	133
4684	carbazole										
10.	ug/l	N.D.		90	90	1	88			40	137
3880	di-n-butyl phthalate										
1.	ug/l	N.D.		93	92	0	86			1	118
3897	fluoranthene										
1.	ug/l	N.D.		87	88	0	86			26	137
3919	pyrene										
1.	ug/l	N.D.		85	90	6	82			52	115
3870	butyl benzyl phthalate										
2.	ug/l	N.D.		88	85	4	75			1	152
3885	3,3'-dichlorobenzidine										
2.	ug/l	N.D.		60	71	17	61			1	262
3860	benzo (a) anthracene										
1.	ug/l	N.D.		85	91	7	85			33	143
3868	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		93	96	2	90			8	158



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2216 Rev. 5/01/96



LLI Sample No. 2677538
MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3876	chrysene										
	1. ug/l	N.D.		89	89	1	88			17	168
3896	di-n-octyl phthalate										
	2. ug/l	N.D.		87	89	2	87			4	146
3861	benzo (b) fluoranthene										
	2. ug/l	N.D.		79	83	5	80			24	159
3862	benzo (k) fluoranthene										
	2. ug/l	N.D.		87	89	2	86			11	163
3864	benzo (a) pyrene										
	2. ug/l	N.D.		81	83	2	81			17	163
3903	indeno (1,2,3-cd) pyrene										
	2. ug/l	N.D.		87	89	1	90			1	171
3881	dibenz (a,h) anthracene										
	2. ug/l	N.D.		91	93	1	92			1	227
3863	benzo (ghi) perylene										
	2. ug/l	N.D.		88	89	1	89			1	219
0237	Total Cyanide (water)	Batch: 970801021018									
	0.0040 mg/l	N.D.	0 (1)	92			98	101	4	90	110

(1) The result for one or both determinations was less than five times the LOQ.



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LLI Sample No. 2677538
 MW-23 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
0937 TCL Pesticides in Waters		TCX	64	60	120
		DCB	28	60	120
4592 TCL Volatiles by 8240 - Water		d4-1,2-DCA	101	76	114
		d8-toluene	102	88	110
		4-BFB	110	86	115
4678 TCL SW846 Semivolatiles/Waters		2-F1pheno1	60	21	100
		Pheno1-d6	36	10	94
		2,4,6-TBP	85	10	123
4679 TCL SW846 Semivolatiles/Waters		Nitrobz-d5	62	35	114
		2-Fbiphny1	92	43	116
		Tpheny1d14	87	33	141



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2216 Rev. 5/01/96





LLI Sample No. WW 2677539
Collected: 3/12/97 at 18:29 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW-4 SDG#: HMS02-08

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
4592	TCL Volatiles			See Page 2
1743	Aluminum	1.77	0.057	mg/l
1744	Antimony	N.D.	0.015	mg/l
1746	Barium	0.0917 J	0.0022	mg/l
1747	Beryllium	N.D.	0.0013	mg/l
1749	Cadmium	N.D.	0.0027	mg/l
1750	Calcium	5.85	0.030	mg/l
1751	Chromium	N.D.	0.0043	mg/l
1752	Cobalt	N.D.	0.0055	mg/l
1753	Copper	N.D.	0.0038	mg/l
1754	Iron	2.30	0.0059	mg/l
1757	Magnesium	1.93	0.024	mg/l
1758	Manganese	0.128	0.0029	mg/l
1761	Nickel	N.D.	0.0054	mg/l
1762	Potassium	1.73	0.15	mg/l
1766	Silver	N.D.	0.0036	mg/l
1767	Sodium	7.18	0.20	mg/l
1771	Vanadium	N.D.	0.0070	mg/l
1772	Zinc	0.031	0.012	mg/l
7022	Thallium	0.0110 J	0.0045	mg/l
7035	Arsenic	0.025	0.0027	mg/l
7036	Selenium	N.D.	0.0027	mg/l
7055	Lead	0.0043 J	0.0020	mg/l
0259	Mercury	0.000052J	0.00004	mg/l
0937	TCL Pesticides			See Page 3
4678	TCL Semivolatiles			See Page 4
4679	TCL Semivolatiles cont'd			See Page 5
0237	Total Cyanide	N.D.	0.0040	mg/l

1 COPY TO Michael Pisani & Assoc. ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
04:08:53 D 0003 12 129915 556882
560 0.00 00084840 ASR000

Respectfully Submitted
Ramona V. Layman
Manager, Metals/Leachates



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LLI Sample No. **WW 2677539**

Collected: 3/12/97 at 18:29 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS

KMW-4 SDG#: HMS02-08

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	N.D.	3.	ug/l
1257	Bromomethane	N.D.	3.	ug/l
3492	Vinyl Chloride	N.D.	2.	ug/l
3494	Chloroethane	N.D.	3.	ug/l
3497	Methylene Chloride	N.D.	2.	ug/l
3498	Acetone	N.D.	6.	ug/l
3499	Carbon Disulfide	N.D.	3.	ug/l
3500	1,1-Dichloroethene	N.D.	1.	ug/l
3501	1,1-Dichloroethane	N.D.	2.	ug/l
3503	Chloroform	N.D.	1.	ug/l
3504	1,2-Dichloroethane	N.D.	2.	ug/l
0316	2-Butanone	N.D.	3.	ug/l
3505	1,1,1-Trichloroethane	N.D.	1.	ug/l
3506	Carbon Tetrachloride	N.D.	1.	ug/l
3507	Vinyl Acetate	N.D.	2.	ug/l
3508	Bromodichloromethane	N.D.	1.	ug/l
3509	1,2-Dichloropropane	N.D.	1.	ug/l
3516	cis-1,3-Dichloropropene	N.D.	1.	ug/l
3511	Trichloroethene	N.D.	1.	ug/l
3512	Dibromochloromethane	N.D.	2.	ug/l
3513	1,1,2-Trichloroethane	N.D.	2.	ug/l
3515	Benzene	N.D.	1.	ug/l
3510	trans-1,3-Dichloropropene	N.D.	1.	ug/l
3518	Bromoform	N.D.	1.	ug/l
3521	4-Methyl-2-pentanone	N.D.	5.	ug/l
3520	2-Hexanone	N.D.	7.	ug/l
3522	Tetrachloroethene	N.D.	1.	ug/l
3523	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
3524	Toluene	N.D.	2.	ug/l
3525	Chlorobenzene	N.D.	1.	ug/l
3526	Ethylbenzene	N.D.	2.	ug/l
3528	Styrene	N.D.	1.	ug/l
3529	Xylene (total)	N.D.	1.	ug/l
5780	trans-1,2-Dichloroethene	N.D.	2.	ug/l
6268	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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2216 Rev. 5/01/96



LLI Sample No. WW 2677539
Collected: 3/12/97 at 18:29 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
Discard: 5/ 5/97

MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW-4 SDG#: HMS02-08

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rei.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Pesticides in Waters				
1600	Alpha BHC	N.D.	0.001	ug/l
1601	Beta BHC	N.D.	0.001	ug/l
1603	Delta BHC	N.D.	0.003	ug/l
1602	Gamma BHC - Lindane	N.D.	0.001	ug/l
1604	Heptachlor	N.D.	0.002	ug/l
1605	Aldrin	N.D.	0.006	ug/l
1606	Heptachlor Epoxide	N.D.	0.001	ug/l
1616	Endosulfan I	N.D.	0.002	ug/l
1610	Dieldrin	N.D.	0.001	ug/l
1607	DDE	N.D.	0.001	ug/l
1611	Endrin	N.D.	0.007	ug/l
1615	Endosulfan II	N.D.	0.005	ug/l
1608	DDD	N.D.	0.005	ug/l
1617	Endosulfan Sulfate	N.D.	0.003	ug/l
1609	DDT	N.D.	0.009	ug/l
0938	Endrin Ketone	N.D.	0.004	ug/l
1860	Methoxychlor	N.D.	0.02	ug/l
1361	Alpha Chlordane	N.D.	0.001	ug/l
1362	Gamma Chlordane	N.D.	0.001	ug/l
1613	Toxaphene	N.D.	0.4	ug/l
1618	Endrin Aldehyde	N.D.	0.005	ug/l
1619	PCB-1016	N.D.	0.04	ug/l
1620	PCB-1221	N.D.	0.1	ug/l
1621	PCB-1232	N.D.	0.05	ug/l
1622	PCB-1242	N.D.	0.1	ug/l
1623	PCB-1248	N.D.	0.04	ug/l
1624	PCB-1254	N.D.	0.1	ug/l
1626	PCB-1260	N.D.	0.04	ug/l

The LCS results are shown on the QC summary. Since the MS/MSD data are within the QC limits, no action is needed for LCS results outside the QC limits.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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2216 Rev. 5/01/96





LLI Sample No. WW 2677539

Collected: 3/12/97 at 18:29 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS

KMW-4 SDG#: HMS02-08

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters				
3918	phenol	N.D.	1.	ug/l
3867	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3874	2-chlorophenol	N.D.	1.	ug/l
3883	1,3-dichlorobenzene	N.D.	1.	ug/l
3884	1,4-dichlorobenzene	N.D.	1.	ug/l
3882	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	2.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	2.	ug/l
3915	N-nitrosodi-n-propylamine	N.D.	2.	ug/l
3902	hexachloroethane	N.D.	2.	ug/l
3910	nitrobenzene	N.D.	1.	ug/l
3904	isophorone	N.D.	1.	ug/l
3911	2-nitrophenol	N.D.	2.	ug/l
3890	2,4-dimethylphenol	N.D.	1.	ug/l
3866	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3886	2,4-dichlorophenol	N.D.	2.	ug/l
3921	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3906	naphthalene	18.	1.	ug/l
3871	4-chloroaniline	N.D.	2.	ug/l
3900	hexachlorobutadiene	N.D.	1.	ug/l
3872	4-chloro-3-methylphenol	N.D.	2.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3901	hexachlorocyclopentadiene	N.D.	3.	ug/l
3923	2,4,6-trichlorophenol	N.D.	1.	ug/l
3922	2,4,5-trichlorophenol	N.D.	1.	ug/l
3873	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	1.	ug/l
3891	dimethyl phthalate	N.D.	3.	ug/l
3858	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Senior Chemist, GC/MS



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LLI Sample No. WW 2677539

Collected: 3/12/97 at 18:29 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW-4 SDG#: HMS02-08

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

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AS RECEIVED

CAT NO.	ANALYSIS NAME	METHOD		
		RESULTS	DETECTION LIMIT	UNITS
TCL SW846 Semivolatiles/Waters				
3908	3-nitroaniline	N.D.	1.	ug/l
3857	acenaphthene	N.D.	1.	ug/l
3893	2,4-dinitrophenol	N.D.	5.	ug/l
3912	4-nitrophenol	N.D.	5.	ug/l
3879	dibenzofuran	4.	J 1.	ug/l
3894	2,4-dinitrotoluene	N.D.	2.	ug/l
3895	2,6-dinitrotoluene	N.D.	1.	ug/l
3887	diethyl phthalate	N.D.	2.	ug/l
3875	4-chlorophenyl phenyl ether	N.D.	2.	ug/l
3898	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
4683	4,6-dinitro-2-methylpheno	N.D.	5.	ug/l
3914	N-nitrosodiphenylamine	N.D.	2.	ug/l
3869	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3899	hexachlorobenzene	N.D.	1.	ug/l
3916	pentachlorophenol	N.D.	1.	ug/l
3917	phenanthrene	N.D.	1.	ug/l
3859	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3880	di-n-butyl phthalate	N.D.	1.	ug/l
3897	fluoranthene	N.D.	1.	ug/l
3919	pyrene	N.D.	1.	ug/l
3870	butyl benzyl phthalate	N.D.	2.	ug/l
3885	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3860	benzo (a) anthracene	N.D.	1.	ug/l
3868	bis (2-ethylhexyl) phthalate	19.	2.	ug/l
3876	chrysene	N.D.	1.	ug/l
3896	di-n-octyl phthalate	N.D.	2.	ug/l
3861	benzo (b) fluoranthene	N.D.	2.	ug/l
3862	benzo (k) fluoranthene	N.D.	2.	ug/l
3864	benzo (a) pyrene	N.D.	2.	ug/l
3903	indeno (1,2,3-cd) pyrene	N.D.	2.	ug/l
3881	dibenz (a,h) anthracene	N.D.	2.	ug/l
3863	benzo (ghi) perylene	N.D.	2.	ug/l

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Senior Chemist, GC/MS



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LLI Sample No. WW 2677539

Collected: 3/12/97 at 18:29 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS

KMW-4 SDG#: HMS02-08

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

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CAT
NO. ANALYSIS NAME

METHOD
RESULTS DETECTION LIMIT UNITS

TCL SW846 Semivolatiles/Waters

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

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Respectfully Submitted
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LLI Sample No. WW 2677539

Collected: 03/12/97 at 18:29 by DA

Submitted: 03/14/97

MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS
KMW-4 SDG#: HMS02-08

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/20/97 0507	Joel R. Nace
1743	Aluminum	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1744	Antimony	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1746	Barium	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1747	Beryllium	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1749	Cadmium	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1750	Calcium	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1751	Chromium	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1752	Cobalt	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1753	Copper	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1754	Iron	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1757	Magnesium	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1758	Manganese	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1761	Nickel	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1762	Potassium	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1766	Silver	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1767	Sodium	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1771	Vanadium	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1772	Zinc	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
1848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	03/21/97 1802	Marie D. Kimmel
7022	Thallium TR	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
7035	Arsenic TR	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
7036	Selenium TR	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
7055	Lead TR	SW-846 6010A	1	03/24/97 1212	Nina C. Haller
0259	Mercury	SW-846 7470A	1	03/25/97 1506	Nelli S. Markaryan
5713	WW SW846 Hg Digest	SW-846 7470A	1	03/24/97 2131	Nelli S. Markaryan
0817	Water Sample Pest. Extraction	SW-846 3510B	1	03/18/97 1640	Sherry Lynn Devlin
0937	TCL Pesticides in Waters	SW-846 8081	1	03/26/97 2356	Douglas D. Seitz
0813	BNA Water Extraction	SW-846 3510B	1	03/17/97 1640	Sherry Lynn Devlin
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 1401	Deb Gifford
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 1401	Deb Gifford
0237	Total Cyanide (water)	SW-846 9012	1	03/24/97 1306	John W. Ballard, Jr.
0492	Cyanide Water Distillation	SW-846 9012	1	03/21/97 0530	Dawn M. Kreider



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LLI Sample No. 2677539
MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH

4592	TCL Volatiles by 8240 - Water	Batch: K970781AB									
1258	Chloromethane										
	3. ug/l	N.D.		91	87	5					
1257	Bromomethane										
	3. ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
	2. ug/l	N.D.		99	97	1					
3494	Chloroethane										
	3. ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
	2. ug/l	N.D.		95	92	3					
3498	Acetone										
	6. ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
	3. ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
	1. ug/l	N.D.		99	96	4					
.01	1,1-Dichloroethane										
	2. ug/l	N.D.		99	96	3					
3503	Chloroform										
	1. ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
	2. ug/l	N.D.		98	97	1					
0316	2-Butanone										
	3. ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
	1. ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
	1. ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
	2. ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
	1. ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
	1. ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
	1. ug/l	N.D.		97	97	0					
3511	Trichloroethene										
	1. ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
	2. ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
	2. ug/l	N.D.		102	104	2					
3515	Benzene										
	1. ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
	1. ug/l	N.D.		92	95	3					



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2677539
MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3518	Bromoform										
1.	ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
5.	ug/l	N.D.		85	84	1					
3520	2-Hexanone										
7.	ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
1.	ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
2.	ug/l	N.D.		96	95	1					
3524	Toluene										
2.	ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
1.	ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
2.	ug/l	N.D.		106	101	4					
3528	Styrene										
1.	ug/l	N.D.		107	104	3					
3529	Xylene (total)										
1.	ug/l	N.D.		107	103	5					
5780	trans-1,2-Dichloroethene										
2.	ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
2.	ug/l	N.D.		100	98	2					
1743	Aluminum	Batch: 970801848006									
0.057	mg/l	N.D.	18	1044	972 (2)	4	105			80	120
1744	Antimony	Batch: 970801848006									
0.015	mg/l	N.D.	0 (1)	72	70	2	108			80	120
1746	Barium	Batch: 970801848006									
0.0022	mg/l	N.D.	0 (1)	101	97	3	97			80	120
1747	Beryllium	Batch: 970801848006									
0.0013	mg/l	N.D.	0 (1)	93	91	3	94			80	120
1749	Cadmium	Batch: 970801848006									
0.0027	mg/l	N.D.	0 (1)	92	90	3	95			80	120
1750	Calcium	Batch: 970801848006									
0.030	mg/l	0.058 J mg/l	1	187	150 (2)	3	102			80	120
1751	Chromium	Batch: 970801848006									
0.0043	mg/l	N.D.	0 (1)	112	109	3	105			80	120
1752	Cobalt	Batch: 970801848006									
0.0055	mg/l	N.D.	0 (1)	97	94	3	96			80	120
1753	Copper	Batch: 970801848006									
0.0038	mg/l	N.D.	0 (1)	103	99	3	98			80	120
1754	Iron	Batch: 970801848006									
0.0059	mg/l	0.0082 J mg/l	21	1709	1544 (2)	4	102			80	120
1757	Magnesium	Batch: 970801848006									
0.024	mg/l	0.041 J mg/l	4	307	264 (2)	3	98			80	120
1758	Manganese	Batch: 970801848006									
0.0029	mg/l	N.D.	3	148	135	3	97			80	120
1761	Nickel	Batch: 970801848006									
0.0054	mg/l	N.D.	0 (1)	102	99	3	98			80	120

(1) The result for one or both determinations was less than five times the LOQ. The background result was more than four times the spike added.



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2216 Rev. 5/01/96



LLI Sample No. 2677539
MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
1762 Potassium	0.15 mg/l	Batch: 970801848006 N.D.	7	140	132	3	97			80	120
1766 Silver	0.0036 mg/l	Batch: 970801848006 N.D.	0 (1)	99	96	3	99			80	120
1767 Sodium	0.20 mg/l	Batch: 970801848006 N.D.	11	301	299 (2)	0	105			80	120
1771 Vanadium	0.0070 mg/l	Batch: 970801848006 N.D.	0 (1)	108	104	3	104			80	120
1772 Zinc	0.012 mg/l	Batch: 970801848006 N.D.	0 (1)	99	95	3	97			80	120
7022 Thallium TR	0.0045 mg/l	Batch: 970801848006 N.D.	0 (1)	98	95	3	97			80	120
7035 Arsenic TR	0.0027 mg/l	Batch: 970801848006 N.D.	0 (1)	97	94	3	99			80	120
7036 Selenium TR	0.0027 mg/l	Batch: 970801848006 N.D.	0 (1)	94	91	2	97			80	120
7055 Lead TR	0.0020 mg/l	Batch: 970801848006 0.0036 J mg/l	14	98	95	3	98			80	120
9 Mercury	0.000043 mg/l	Batch: 970835713001 0.000045J mg/l	0 (1)	96	91	5	115			80	120

37 TCL Pesticides in Waters		Batch: 970770001A									

1600 Alpha BHC	0.001 ug/l	N.D.		95	96	1	95			67	122
1601 Beta BHC	0.001 ug/l	N.D.		100	97	4	98			74	120
1603 Delta BHC	0.003 ug/l	N.D.		105	106	1	107			69	126
1602 Gamma BHC - Lindane	0.001 ug/l	N.D.		95	96	1	99			66	120
1604 Heptachlor	0.002 ug/l	N.D.		87	86	1	81			54	120
1605 Aldrin	0.006 ug/l	N.D.		82	80	2	76			42	120
1606 Heptachlor Epoxide	0.001 ug/l	N.D.		92	91	1	93			64	120
1616 Endosulfan I	0.002 ug/l	N.D.		94	95	1	95			60	120
1610 Dieldrin	0.001 ug/l	N.D.		83	82	1	82			66	120
1607 DDE	0.001 ug/l	N.D.		77	75	3	77			60	120
1611 Endrin	0.007 ug/l	N.D.		111	106	4	109			73	129
1615 Endosulfan II	0.005 ug/l	N.D.		97	96	1	102			67	120
1608 DDD	0.005 ug/l	N.D.		98	94	5	95			67	121

(1) The result for one or both determinations was less than five times the LOQ. The background result was more than four times the spike added.



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2216 Rev. 5/01/96





LLI Sample No. 2677539
MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
1617	Endosulfan Sulfate										
	0.003 ug/l	N.D.		112	114	2	122			53	128
1609	DDT										
	0.009 ug/l	N.D.		96	94	2	97			71	120
0938	Endrin Ketone										
	0.004 ug/l	N.D.		99	99	0	106			76	120
1860	Methoxychlor										
	0.02 ug/l	N.D.		102	101	2	111			57	140
1361	Alpha Chlordane										
	0.001 ug/l	N.D.		93	94	1	92			75	120
1362	Gamma Chlordane										
	0.001 ug/l	N.D.		88	86	2	86			75	120
1613	Toxaphene										
	0.4 ug/l	N.D.									
1618	Endrin Aldehyde										
	0.005 ug/l	N.D.		120	126	5	133			59	126
1619	PCB-1016										
	0.04 ug/l	N.D.									
1620	PCB-1221										
	0.1 ug/l	N.D.									
1621	PCB-1232										
	0.05 ug/l	N.D.									
1622	PCB-1242										
	0.1 ug/l	N.D.									
1623	PCB-1248										
	0.04 ug/l	N.D.									
1624	PCB-1254										
	0.1 ug/l	N.D.									
1626	PCB-1260										
	0.04 ug/l	N.D.									

4678	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									
3918	phenol										
	1. ug/l	N.D.		43	41	3	43			5	112
3867	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		88	90	3	89			12	158
3874	2-chlorophenol										
	1. ug/l	N.D.		88	90	3	88			23	134
3883	1,3-dichlorobenzene										
	1. ug/l	N.D.		84	92	9	70			1	172
3884	1,4-dichlorobenzene										
	1. ug/l	N.D.		86	89	3	74			20	124
3882	1,2-dichlorobenzene										
	1. ug/l	N.D.		86	89	4	77			32	129
4680	2-methylphenol										
	2. ug/l	N.D.		78	80	3	80			46	123
4681	2,2'-oxybis (1-chloropropane)										
	2. ug/l	N.D.		69	72	5	71			36	166



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2216 Rev. 5/01/96





LLI Sample No. 2677539

MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4682	4-methylphenol										
	2. ug/l	N.D.		76	78	3	77			5	152
3915	N-nitrosodi-n-propylamine										
	2. ug/l	N.D.		94	100	6	99			1	230
3902	hexachloroethane										
	2. ug/l	N.D.		76	80	5	54			40	113
3910	nitrobenzene										
	1. ug/l	N.D.		96	98	2	97			35	180
3904	isophorone										
	1. ug/l	N.D.		94	93	0	94			21	196
3911	2-nitrophenol										
	2. ug/l	N.D.		91	94	3	90			29	182
3890	2,4-dimethylphenol										
	1. ug/l	N.D.		75	71	5	78			32	119
3866	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		88	90	2	88			33	184
3886	2,4-dichlorophenol										
	2. ug/l	N.D.		85	85	1	83			39	135
3921	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		83	83	1	72			44	142
3906	naphthalene										
	1. ug/l	N.D.		84	86	2	81			21	133
3871	4-chloroaniline										
	2. ug/l	N.D.		47	55	16	43			17	116
3900	hexachlorobutadiene										
	1. ug/l	N.D.		83	85	3	52			24	116
3872	4-chloro-3-methylphenol										
	2. ug/l	N.D.		88	91	4	87			22	147
3905	2-methylnaphthalene										
	1. ug/l	N.D.		86	87	1	80			28	123
3901	hexachlorocyclopentadiene										
	3. ug/l	N.D.		71	72	1	54			1	100
3923	2,4,6-trichlorophenol										
	1. ug/l	N.D.		93	95	2	91			37	144
3922	2,4,5-trichlorophenol										
	1. ug/l	N.D.		90	95	6	88			39	151
3873	2-chloronaphthalene										
	1. ug/l	N.D.		90	91	1	86			60	118
3907	2-nitroaniline										
	1. ug/l	N.D.		84	90	7	86			53	143
3891	dimethyl phthalate										
	3. ug/l	N.D.		63	65	3	28			1	112
3858	acenaphthylene										
	1. ug/l	N.D.		88	90	2	86			33	145

4679	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									

3908	3-nitroaniline										
	1. ug/l	N.D.		61	67	9	57			7	143



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96



LLI Sample No. 2677539
MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3857	acenaphthene										
	1. ug/l	N.D.		82	84	2	78			47	145
3893	2,4-dinitrophenol										
	5. ug/l	N.D.		82	83	1	87			1	191
3912	4-nitrophenol										
	5. ug/l	N.D.		41	43	6	41			1	132
3879	dibenzofuran										
	1. ug/l	N.D.		85	87	2	83			28	131
3894	2,4-dinitrotoluene										
	2. ug/l	N.D.		88	95	8	89			39	139
3895	2,6-dinitrotoluene										
	1. ug/l	N.D.		90	95	6	92			50	158
3887	diethyl phthalate										
	2. ug/l	N.D.		76	78	2	61			1	114
3875	4-chlorophenyl phenyl ether										
	2. ug/l	N.D.		86	88	2	82			25	158
3898	fluorene										
	1. ug/l	N.D.		85	86	2	80			59	121
3909	4-nitroaniline										
	2. ug/l	N.D.		79	84	6	78			38	122
4683	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		87	91	5	90			1	181
3914	N-nitrosodiphenylamine										
	2. ug/l	N.D.		85	86	2	83			38	147
3869	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		86	88	3	86			53	127
3899	hexachlorobenzene										
	1. ug/l	N.D.		85	86	1	84			1	152
3916	pentachlorophenol										
	1. ug/l	N.D.		86	85	2	89			14	176
3917	phenanthrene										
	1. ug/l	N.D.		86	86	0	83			54	120
3859	anthracene										
	1. ug/l	N.D.		85	85	0	83			27	133
4684	carbazole										
	1. ug/l	N.D.		90	90	1	88			40	137
3880	di-n-butyl phthalate										
	1. ug/l	N.D.		93	92	0	86			1	118
3897	fluoranthene										
	1. ug/l	N.D.		87	88	0	86			26	137
3919	pyrene										
	1. ug/l	N.D.		85	90	6	82			52	115
3870	butyl benzyl phthalate										
	2. ug/l	N.D.		88	85	4	75			1	152
3885	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		60	71	17	61			1	262
3860	benzo (a) anthracene										
	1. ug/l	N.D.		85	91	7	85			33	143
3868	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		93	96	2	90			8	158



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2677539
MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3876	chrysene										
1.	ug/l	N.D.		89	89	1	88			17	168
3896	di-n-octyl phthalate										
2.	ug/l	N.D.		87	89	2	87			4	146
3861	benzo (b) fluoranthene										
2.	ug/l	N.D.		79	83	5	80			24	159
3862	benzo (k) fluoranthene										
2.	ug/l	N.D.		87	89	2	86			11	163
3864	benzo (a) pyrene										
2.	ug/l	N.D.		81	83	2	81			17	163
3903	indeno (1,2,3-cd) pyrene										
2.	ug/l	N.D.		87	89	1	90			1	171
3881	dibenz (a,h) anthracene										
2.	ug/l	N.D.		91	93	1	92			1	227
3863	benzo (ghi) perylene										
2.	ug/l	N.D.		88	89	1	89			1	219
0237	Total Cyanide (water)	Batch: 97080102101B									
0.0040	mg/l	N.D.	0 (1)	92			98	101	4	90	110

(1) The result for one or both determinations was less than five times the LOQ.



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LLI Sample No. 2677539
 MW-4 Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

TRIAL ID	SURROGATE SUMMARY		SURROGATE LIMITS	
	SURROGATE	RECOVERY %	LOW	HIGH
0937 TCL Pesticides in Waters	TCX	92	60	120
	DCB	69	60	120
4592 TCL Volatiles by 8240 - Water	d4-1,2-DCA	102	76	114
	d8-toluene	104	88	110
	4-BFB	109	86	115
4678 TCL SW846 Semivolatiles/Waters	2-F1pheno1	57	21	100
	Pheno1-d6	39	10	94
	2,4,6-TBP	93	10	123
4679 TCL SW846 Semivolatiles/Waters	Nitrobz-d5	95	35	114
	2-Fbiphny1	83	43	116
	Tpheny1d14	77	33	141



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LLI Sample No. WW 2677540

Collected: 3/12/97 at 18:10 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

RB-1 Rinseate Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

RB--1 SDG#: HMS02-09RB*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
4592	TCL Volatiles			See Page 2
1743	Aluminum	0.064 J	0.057	mg/l
1744	Antimony	N.D.	0.015	mg/l
1746	Barium	N.D.	0.0022	mg/l
1747	Beryllium	N.D.	0.0013	mg/l
1749	Cadmium	N.D.	0.0027	mg/l
1750	Calcium	0.052 J	0.030	mg/l
1751	Chromium	N.D.	0.0043	mg/l
1752	Cobalt	N.D.	0.0055	mg/l
1753	Copper	0.0052 J	0.0038	mg/l
1754	Iron	N.D.	0.0059	mg/l
1757	Magnesium	N.D.	0.024	mg/l
1758	Manganese	N.D.	0.0029	mg/l
1761	Nickel	N.D.	0.0054	mg/l
1762	Potassium	N.D.	0.15	mg/l
1766	Silver	N.D.	0.0036	mg/l
1767	Sodium	N.D.	0.20	mg/l
1771	Vanadium	N.D.	0.0070	mg/l
1772	Zinc	0.014 J	0.012	mg/l
7022	Thallium	N.D.	0.0045	mg/l
7035	Arsenic	N.D.	0.0027	mg/l
7036	Selenium	N.D.	0.0027	mg/l
7055	Lead	0.0037 J	0.0020	mg/l
0259	Mercury	0.000046J	0.00004	mg/l
0937	TCL Pesticides			See Page 3
4678	TCL Semivolatiles			See Page 4
4679	TCL Semivolatiles cont'd			See Page 5
0237	Total Cyanide	N.D.	0.0040	mg/l

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garett Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
04:11:40 D 0003 12 129915 556882
560 0.00 00084840 ASR000



Lancaster Laboratories
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Respectfully Submitted
Ramona V. Layman
Manager, Metals/Leachates



LLI Sample No. WW 2677540
 Collected: 3/12/97 at 18:10 by DA

Submitted: 3/14/97 Reported: 4/ 4/97
 Discard: 5/ 5/97

RB-1 Rinseate Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS
 RB--1 SDG#: HMS02-09RB*

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	N.D.	3.	ug/l
1257	Bromomethane	N.D.	3.	ug/l
3492	Vinyl Chloride	N.D.	2.	ug/l
3494	Chloroethane	N.D.	3.	ug/l
3497	Methylene Chloride	N.D.	2.	ug/l
3498	Acetone	N.D.	6.	ug/l
3499	Carbon Disulfide	N.D.	3.	ug/l
3500	1,1-Dichloroethene	N.D.	1.	ug/l
3501	1,1-Dichloroethane	N.D.	2.	ug/l
3503	Chloroform	N.D.	1.	ug/l
3504	1,2-Dichloroethane	N.D.	2.	ug/l
0316	2-Butanone	N.D.	3.	ug/l
3505	1,1,1-Trichloroethane	N.D.	1.	ug/l
3506	Carbon Tetrachloride	N.D.	1.	ug/l
3507	Vinyl Acetate	N.D.	2.	ug/l
3508	Bromodichloromethane	N.D.	1.	ug/l
3509	1,2-Dichloropropane	N.D.	1.	ug/l
3516	cis-1,3-Dichloropropene	N.D.	1.	ug/l
3511	Trichloroethene	N.D.	1.	ug/l
3512	Dibromochloromethane	N.D.	2.	ug/l
3513	1,1,2-Trichloroethane	N.D.	2.	ug/l
3515	Benzene	N.D.	1.	ug/l
3510	trans-1,3-Dichloropropene	N.D.	1.	ug/l
3518	Bromoform	N.D.	1.	ug/l
3521	4-Methyl-2-pentanone	N.D.	5.	ug/l
3520	2-Hexanone	N.D.	7.	ug/l
3522	Tetrachloroethene	N.D.	1.	ug/l
3523	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
3524	Toluene	N.D.	2.	ug/l
3525	Chlorobenzene	N.D.	1.	ug/l
3526	Ethylbenzene	N.D.	2.	ug/l
3528	Styrene	N.D.	1.	ug/l
3529	Xylene (total)	N.D.	1.	ug/l
5780	trans-1,2-Dichloroethene	N.D.	2.	ug/l
6268	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles



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2216 Rev. 5/01/96





LLI Sample No. WW 2677540

Collected: 3/12/97 at 18:10 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

RB-1 Rinseate Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

RB--1 SDG#: HMS02-09RB*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION LIMIT	UNITS
TCL Pesticides in Waters				
1600	Alpha BHC	N.D.	0.001	ug/l
1601	Beta BHC	N.D.	0.001	ug/l
1603	Delta BHC	N.D.	0.003	ug/l
1602	Gamma BHC - Lindane	N.D.	0.001	ug/l
1604	Heptachlor	N.D.	0.002	ug/l
1605	Aldrin	N.D.	0.006	ug/l
1606	Heptachlor Epoxide	N.D.	0.001	ug/l
1616	Endosulfan I	N.D.	0.002	ug/l
1610	Dieldrin	N.D.	0.001	ug/l
1607	DDE	N.D.	0.001	ug/l
1611	Endrin	N.D.	0.007	ug/l
1615	Endosulfan II	N.D.	0.005	ug/l
1608	DDD	N.D.	0.005	ug/l
1617	Endosulfan Sulfate	N.D.	0.003	ug/l
1609	DDT	N.D.	0.009	ug/l
0938	Endrin Ketone	N.D.	0.004	ug/l
1860	Methoxychlor	N.D.	0.02	ug/l
1361	Alpha Chlordane	N.D.	0.001	ug/l
1362	Gamma Chlordane	N.D.	0.001	ug/l
1613	Toxaphene	N.D.	0.4	ug/l
1618	Endrin Aldehyde	N.D.	0.005	ug/l
1619	PCB-1016	N.D.	0.04	ug/l
1620	PCB-1221	N.D.	0.1	ug/l
1621	PCB-1232	N.D.	0.05	ug/l
1622	PCB-1242	N.D.	0.1	ug/l
1623	PCB-1248	N.D.	0.04	ug/l
1624	PCB-1254	N.D.	0.1	ug/l
1626	PCB-1260	N.D.	0.04	ug/l

The LCS results are shown on the QC summary. Since the MS/MSD data are within the QC limits, no action is needed for LCS results outside the QC limits.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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LLI Sample No. WW 2677540

Collected: 3/12/97 at 18:10 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

RB-1 Rinseate Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

RB--1 SDG#: HMS02-09RB*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

AS RECEIVED
RESULTS METHOD DETECTION LIMIT UNITS

TCL SW846 Semivolatiles/Waters

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	DETECTION LIMIT	UNITS
3918	phenol	N.D.	1.	1.	ug/l
3867	bis (2-chloroethyl) ether	N.D.	1.	1.	ug/l
3874	2-chlorophenol	N.D.	1.	1.	ug/l
3883	1,3-dichlorobenzene	N.D.	1.	1.	ug/l
3884	1,4-dichlorobenzene	N.D.	1.	1.	ug/l
3882	1,2-dichlorobenzene	N.D.	1.	1.	ug/l
4680	2-methylphenol	N.D.	2.	2.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	2.	ug/l
4682	4-methylphenol	N.D.	2.	2.	ug/l
3915	N-nitrosodi-n-propylamine	N.D.	2.	2.	ug/l
3902	hexachloroethane	N.D.	2.	2.	ug/l
3910	nitrobenzene	N.D.	1.	1.	ug/l
3904	isophorone	N.D.	1.	1.	ug/l
3911	2-nitrophenol	N.D.	2.	2.	ug/l
3890	2,4-dimethylphenol	N.D.	1.	1.	ug/l
3866	bis (2-chloroethoxy) methane	N.D.	1.	1.	ug/l
3886	2,4-dichlorophenol	N.D.	2.	2.	ug/l
3921	1,2,4-trichlorobenzene	N.D.	1.	1.	ug/l
3906	naphthalene	N.D.	1.	1.	ug/l
3871	4-chloroaniline	N.D.	2.	2.	ug/l
3900	hexachlorobutadiene	N.D.	1.	1.	ug/l
3872	4-chloro-3-methylphenol	N.D.	2.	2.	ug/l
3905	2-methylnaphthalene	N.D.	1.	1.	ug/l
3901	hexachlorocyclopentadiene	N.D.	3.	3.	ug/l
3923	2,4,6-trichlorophenol	N.D.	1.	1.	ug/l
3922	2,4,5-trichlorophenol	N.D.	1.	1.	ug/l
3873	2-chloronaphthalene	N.D.	1.	1.	ug/l
3907	2-nitroaniline	N.D.	1.	1.	ug/l
3891	dimethyl phthalate	N.D.	3.	3.	ug/l
3858	acenaphthylene	N.D.	1.	1.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. WW 2677540

Collected: 3/12/97 at 18:10 by DA

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Discard: 5/ 5/97

RB-1 Rinseate Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

RB--1 SDG#: HMS02-09RB*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters				
3908	3-nitroaniline	N.D.	1.	ug/l
3857	acenaphthene	N.D.	1.	ug/l
3893	2,4-dinitrophenol	N.D.	5.	ug/l
3912	4-nitrophenol	N.D.	5.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3894	2,4-dinitrotoluene	N.D.	2.	ug/l
3895	2,6-dinitrotoluene	N.D.	1.	ug/l
3887	diethyl phthalate	N.D.	2.	ug/l
3875	4-chlorophenyl phenyl ether	N.D.	2.	ug/l
3898	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
4683	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3914	N-nitrosodiphenylamine	N.D.	2.	ug/l
3869	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3899	hexachlorobenzene	N.D.	1.	ug/l
3916	pentachlorophenol	N.D.	1.	ug/l
3917	phenanthrene	N.D.	1.	ug/l
3859	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3880	di-n-butyl phthalate	N.D.	1.	ug/l
3897	fluoranthene	N.D.	1.	ug/l
3919	pyrene	N.D.	1.	ug/l
3870	butyl benzyl phthalate	N.D.	2.	ug/l
3885	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3860	benzo (a) anthracene	N.D.	1.	ug/l
3868	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3876	chrysene	N.D.	1.	ug/l
3896	di-n-octyl phthalate	N.D.	2.	ug/l
3861	benzo (b) fluoranthene	N.D.	2.	ug/l
3862	benzo (k) fluoranthene	N.D.	2.	ug/l
3864	benzo (a) pyrene	N.D.	2.	ug/l
3903	indeno (1,2,3-cd) pyrene	N.D.	2.	ug/l
3881	dibenz (a,h) anthracene	N.D.	2.	ug/l
3863	benzo (ghi) perylene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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2216 Rev. 5/01/96





LLI Sample No. **ww 2677540**

Collected: 3/12/97 at 18:10 by DA

Submitted: 3/14/97 Reported: 4/ 4/97

Discard: 5/ 5/97

RB-1 Rinseate Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

RB--1 SDG#: HMS02-09RB*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL SW846 Semivolatiles/Waters

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. WW 2677540

Collected: 03/12/97 at 18:10 by DA

Submitted: 03/14/97

RB-1 Rinseate Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS
RB--1 SDG#: HMS02-09RB*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/20/97 0542	Joel R. Nace
1743	Aluminum	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1744	Antimony	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1746	Barium	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1747	Beryllium	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1749	Cadmium	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1750	Calcium	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1751	Chromium	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1752	Cobalt	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1753	Copper	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1754	Iron	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1757	Magnesium	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1758	Manganese	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1761	Nickel	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1762	Potassium	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1766	Silver	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1767	Sodium	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1771	Vanadium	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1772	Zinc	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
1848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	03/21/97 1802	Marie D. Kimmel
7022	Thallium TR	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
7035	Arsenic TR	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
7036	Selenium TR	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
7055	Lead TR	SW-846 6010A	1	03/24/97 1158	Nina C. Haller
0259	Mercury	SW-846 7470A	1	03/25/97 1509	Nelli S. Markaryan
5713	WW SW846 Hg Digest	SW-846 7470A	1	03/24/97 2131	Nelli S. Markaryan
0817	Water Sample Pest. Extraction	SW-846 3510B	1	03/18/97 1640	Sherry Lynn Devlin
0937	TCL Pesticides in Waters	SW-846 8081	1	03/27/97 0037	Douglas D. Seitz
0813	BNA Water Extraction	SW-846 3510B	1	03/17/97 1640	Sherry Lynn Devlin
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 1457	Deb Gifford
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/19/97 1457	Deb Gifford
0237	Total Cyanide (water)	SW-846 9012	1	03/24/97 1312	John W. Ballard, Jr.
0492	Cyanide Water Distillation	SW-846 9012	1	03/21/97 0530	Dawn M. Kreider



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LLI Sample No. 2677540
 RB-1 Rinseate Blank Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH

4592 TCL Volatiles by 8240 - Water Batch: K970781AB											

1258	Chloromethane										
	3. ug/l	N.D.		91	87	5					
1257	Bromomethane										
	3. ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
	2. ug/l	N.D.		99	97	1					
3494	Chloroethane										
	3. ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
	2. ug/l	N.D.		95	92	3					
3498	Acetone										
	6. ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
	3. ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
	1. ug/l	N.D.		99	96	4					
501	1,1-Dichloroethane										
	2. ug/l	N.D.		99	96	3					
3503	Chloroform										
	1. ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
	2. ug/l	N.D.		98	97	1					
0316	2-Butanone										
	3. ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
	1. ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
	1. ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
	2. ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
	1. ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
	1. ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
	1. ug/l	N.D.		97	97	0					
3511	Trichloroethene										
	1. ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
	2. ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
	2. ug/l	N.D.		102	104	2					
3515	Benzene										
	1. ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
	1. ug/l	N.D.		92	95	3					



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LLI Sample No. 2677540
 RB-1 Rinseate Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3518	Bromoform										
1.	ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
5.	ug/l	N.D.		85	84	1					
3520	2-Hexanone										
7.	ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
1.	ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
2.	ug/l	N.D.		96	95	1					
3524	Toluene										
2.	ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
1.	ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
2.	ug/l	N.D.		106	101	4					
3528	Styrene										
1.	ug/l	N.D.		107	104	3					
3529	Xylene (total)										
1.	ug/l	N.D.		107	103	5					
3780	trans-1,2-Dichloroethene										
2.	ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
2.	ug/l	N.D.		100	98	2					
1743	Aluminum	Batch: 970801848006									
0.057	mg/l	N.D.	18	1044	972 (2)	4	105			80	120
1744	Antimony	Batch: 970801848006									
0.015	mg/l	N.D.	0 (1)	72	70	2	108			80	120
1746	Barium	Batch: 970801848006									
0.0022	mg/l	N.D.	0 (1)	101	97	3	97			80	120
1747	Beryllium	Batch: 970801848006									
0.0013	mg/l	N.D.	0 (1)	93	91	3	94			80	120
1749	Cadmium	Batch: 970801848006									
0.0027	mg/l	N.D.	0 (1)	92	90	3	95			80	120
1750	Calcium	Batch: 970801848006									
0.030	mg/l	0.058 J mg/l	1	187	150 (2)	3	102			80	120
1751	Chromium	Batch: 970801848006									
0.0043	mg/l	N.D.	0 (1)	112	109	3	105			80	120
1752	Cobalt	Batch: 970801848006									
0.0055	mg/l	N.D.	0 (1)	97	94	3	96			80	120
1753	Copper	Batch: 970801848006									
0.0038	mg/l	N.D.	0 (1)	103	99	3	98			80	120
1754	Iron	Batch: 970801848006									
0.0059	mg/l	0.0082 J mg/l	21	1709	1544 (2)	4	102			80	120
1757	Magnesium	Batch: 970801848006									
0.024	mg/l	0.041 J mg/l	4	307	264 (2)	3	98			80	120
1758	Manganese	Batch: 970801848006									
0.0029	mg/l	N.D.	3	148	135	3	97			80	120
1761	Nickel	Batch: 970801848006									
0.0054	mg/l	N.D.	0 (1)	102	99	3	98			80	120

(1) The result for one or both determinations was less than five times the LOQ. The background result was more than four times the spike added.



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LLI Sample No. 2677540
 RB-1 Rinseate Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
1762 Potassium		Batch: 970801848006									
0.15	mg/l	N.D.	7	140	132	3	97			80	120
1766 Silver		Batch: 970801848006									
0.0036	mg/l	N.D.	0 (1)	99	96	3	99			80	120
1767 Sodium		Batch: 970801848006									
0.20	mg/l	N.D.	11	301	299 (2)	0	105			80	120
1771 Vanadium		Batch: 970801848006									
0.0070	mg/l	N.D.	0 (1)	108	104	3	104			80	120
1772 Zinc		Batch: 970801848006									
0.012	mg/l	N.D.	0 (1)	99	95	3	97			80	120
7022 Thallium TR		Batch: 970801848006									
0.0045	mg/l	N.D.	0 (1)	98	95	3	97			80	120
.7035 Arsenic TR		Batch: 970801848006									
0.0027	mg/l	N.D.	0 (1)	97	94	3	99			80	120
7036 Selenium TR		Batch: 970801848006									
0.0027	mg/l	N.D.	0 (1)	94	91	2	97			80	120
7055 Lead TR		Batch: 970801848006									
0.0020	mg/l	0.0036 J mg/l	14	98	95	3	98			80	120
.59 Mercury		Batch: 970835713001									
0.000043	mg/l	0.000045J mg/l	0 (1)	96	91	5	115			80	120

0937 TCL Pesticides in Waters		Batch: 970770001A									

1600 Alpha BHC											
0.001	ug/l	N.D.		95	96	1	95			67	122
1601 Beta BHC											
0.001	ug/l	N.D.		100	97	4	98			74	120
1603 Delta BHC											
0.003	ug/l	N.D.		105	106	1	107			69	126
1602 Gamma BHC - Lindane											
0.001	ug/l	N.D.		95	96	1	99			66	120
1604 Heptachlor											
0.002	ug/l	N.D.		87	86	1	81			54	120
1605 Aldrin											
0.006	ug/l	N.D.		82	80	2	76			42	120
1606 Heptachlor Epoxide											
0.001	ug/l	N.D.		92	91	1	93			64	120
1616 Endosulfan I											
0.002	ug/l	N.D.		94	95	1	95			60	120
1610 Dieldrin											
0.001	ug/l	N.D.		83	82	1	82			66	120
1607 DDE											
0.001	ug/l	N.D.		77	75	3	77			60	120
1611 Endrin											
0.007	ug/l	N.D.		111	106	4	109			73	129
1615 Endosulfan II											
0.005	ug/l	N.D.		97	96	1	102			67	120
1608 DDD											
0.005	ug/l	N.D.		98	94	5	95			67	121

(1) The result for one or both determinations was less than five times the LOQ. The background result was more than four times the spike added.



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LLI Sample No. 2677540
 RB-1 Rinseate Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
1617	Endosulfan Sulfate										
	0.003 ug/l	N.D.		112	114	2	122			53	128
1609	DDT										
	0.009 ug/l	N.D.		96	94	2	97			71	120
0938	Endrin Ketone										
	0.004 ug/l	N.D.		99	99	0	106			76	120
1860	Methoxychlor										
	0.02 ug/l	N.D.		102	101	2	111			57	140
1361	Alpha Chlordane										
	0.001 ug/l	N.D.		93	94	1	92			75	120
1362	Gamma Chlordane										
	0.001 ug/l	N.D.		88	86	2	86			75	120
1613	Toxaphene										
	0.4 ug/l	N.D.									
1618	Endrin Aldehyde										
	0.005 ug/l	N.D.		120	126	5	133			59	126
1619	PCB-1016										
	0.04 ug/l	N.D.									
1620	PCB-1221										
	0.1 ug/l	N.D.									
1621	PCB-1232										
	0.05 ug/l	N.D.									
1622	PCB-1242										
	0.1 ug/l	N.D.									
1623	PCB-1248										
	0.04 ug/l	N.D.									
1624	PCB-1254										
	0.1 ug/l	N.D.									
1626	PCB-1260										
	0.04 ug/l	N.D.									

4678	TCL SW846 Semivolatiles/Waters	Batch: 97076WAE026									
3918	phenol										
	1. ug/l	N.D.		43	41	3	43			5	112
3867	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		88	90	3	89			12	158
3874	2-chlorophenol										
	1. ug/l	N.D.		88	90	3	88			23	134
3883	1,3-dichlorobenzene										
	1. ug/l	N.D.		84	92	9	70			1	172
3884	1,4-dichlorobenzene										
	1. ug/l	N.D.		86	89	3	74			20	124
3882	1,2-dichlorobenzene										
	1. ug/l	N.D.		86	89	4	77			32	129
4680	2-methylphenol										
	2. ug/l	N.D.		78	80	3	80			46	123
4681	2,2'oxybis (1-chloropropane)										
	2. ug/l	N.D.		69	72	5	71			36	166



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LLI Sample No. 2677540
RB-1 Rinseate Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4682	4-methylphenol										
	2. ug/l	N.D.		76	78	3	77			5	152
3915	N-nitrosodi-n-propylamine										
	2. ug/l	N.D.		94	100	6	99			1	230
3902	hexachloroethane										
	2. ug/l	N.D.		76	80	5	54			40	113
3910	nitrobenzene										
	1. ug/l	N.D.		96	98	2	97			35	180
3904	isophorone										
	1. ug/l	N.D.		94	93	0	94			21	196
3911	2-nitrophenol										
	2. ug/l	N.D.		91	94	3	90			29	182
3890	2,4-dimethylphenol										
	1. ug/l	N.D.		75	71	5	78			32	119
3866	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		88	90	2	88			33	184
3886	2,4-dichlorophenol										
	2. ug/l	N.D.		85	85	1	83			39	135
3921	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		83	83	1	72			44	142
3906	naphthalene										
	1. ug/l	N.D.		84	86	2	81			21	133
3871	4-chloroaniline										
	2. ug/l	N.D.		47	55	16	43			17	116
3900	hexachlorobutadiene										
	1. ug/l	N.D.		83	85	3	52			24	116
3872	4-chloro-3-methylphenol										
	2. ug/l	N.D.		88	91	4	87			22	147
3905	2-methylnaphthalene										
	1. ug/l	N.D.		86	87	1	80			28	123
3901	hexachlorocyclopentadiene										
	3. ug/l	N.D.		71	72	1	54			1	100
3923	2,4,6-trichlorophenol										
	1. ug/l	N.D.		93	95	2	91			37	144
3922	2,4,5-trichlorophenol										
	1. ug/l	N.D.		90	95	6	88			39	151
3873	2-chloronaphthalene										
	1. ug/l	N.D.		90	91	1	86			60	118
3907	2-nitroaniline										
	1. ug/l	N.D.		84	90	7	86			53	143
3891	dimethyl phthalate										
	3. ug/l	N.D.		63	65	3	28			1	112
3858	acenaphthylene										
	1. ug/l	N.D.		88	90	2	86			33	145

4679	TCL SWB46 Semivolatiles/Waters	Batch: 97076WAE026									

3908	3-nitroaniline										
	1. ug/l	N.D.		61	67	9	57			7	143



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LLI Sample No. 2677540

RB-1 Rinseate Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3857	acenaphthene										
1.	ug/l	N.D.		82	84	2	78			47	145
3893	2,4-dinitrophenol										
5.	ug/l	N.D.		82	83	1	87			1	191
3912	4-nitrophenol										
5.	ug/l	N.D.		41	43	6	41			1	132
3879	dibenzofuran										
1.	ug/l	N.D.		85	87	2	83			28	131
3894	2,4-dinitrotoluene										
2.	ug/l	N.D.		88	95	8	89			39	139
3895	2,6-dinitrotoluene										
1.	ug/l	N.D.		90	95	6	92			50	158
3887	diethyl phthalate										
2.	ug/l	N.D.		76	78	2	61			1	114
3875	4-chlorophenyl phenyl ether										
2.	ug/l	N.D.		86	88	2	82			25	158
3898	fluorene										
1.	ug/l	N.D.		85	86	2	80			59	121
3909	4-nitroaniline										
2.	ug/l	N.D.		79	84	6	78			38	122
683	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		87	91	5	90			1	181
3914	N-nitrosodiphenylamine										
2.	ug/l	N.D.		85	86	2	83			38	147
3869	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		86	88	3	86			53	127
3899	hexachlorobenzene										
1.	ug/l	N.D.		85	86	1	84			1	152
3916	pentachlorophenol										
1.	ug/l	N.D.		86	85	2	89			14	176
3917	phenanthrene										
1.	ug/l	N.D.		86	86	0	83			54	120
3859	anthracene										
1.	ug/l	N.D.		85	85	0	83			27	133
4684	carbazole										
1.	ug/l	N.D.		90	90	1	88			40	137
3880	di-n-butyl phthalate										
1.	ug/l	N.D.		93	92	0	86			1	118
3897	fluoranthene										
1.	ug/l	N.D.		87	88	0	86			26	137
3919	pyrene										
1.	ug/l	N.D.		85	90	6	82			52	115
3870	butyl benzyl phthalate										
2.	ug/l	N.D.		88	85	4	75			1	152
3885	3,3'-dichlorobenzidine										
2.	ug/l	N.D.		60	71	17	61			1	262
3860	benzo (a) anthracene										
1.	ug/l	N.D.		85	91	7	85			33	143
3868	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		93	96	2	90			8	158



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2677540

RB-1 Rinseate Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3876	chrysene										
	1. ug/l	N.D.		89	89	1	88			17	168
3896	di-n-octyl phthalate										
	2. ug/l	N.D.		87	89	2	87			4	146
3861	benzo (b) fluoranthene										
	2. ug/l	N.D.		79	83	5	80			24	159
3862	benzo (k) fluoranthene										
	2. ug/l	N.D.		87	89	2	86			11	163
3864	benzo (a) pyrene										
	2. ug/l	N.D.		81	83	2	81			17	163
3903	indeno (1,2,3-cd) pyrene										
	2. ug/l	N.D.		87	89	1	90			1	171
3881	dibenz (a,h) anthracene										
	2. ug/l	N.D.		91	93	1	92			1	227
3863	benzo (ghi) perylene										
	2. ug/l	N.D.		88	89	1	89			1	219
0237	Total Cyanide (water)	Batch: 97080102101B									
	0.0040 mg/l	N.D.	0 (1)	92			98	101	4	90	110

(1) The result for one or both determinations was less than five times the LOQ.



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LLI Sample No. **2677540**
RB-1 Rinseate Blank Water Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 556882
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
0937 TCL Pesticides in Waters		TCX	103	60	120
		DCB	91	60	120
4592 TCL Volatiles by 8240 - Water		d4-1,2-DCA	101	76	114
		d8-toluene	103	88	110
		4-BFB	108	86	115
4678 TCL SW846 Semivolatiles/Waters		2-FIphenoI	57	21	100
		PhenoI-d6	40	10	94
		2,4,6-TBP	87	10	123
4679 TCL SW846 Semivolatiles/Waters		Nitrobz-d5	93	35	114
		2-Fbiphenyl	80	43	116
		Tphenylid14	86	33	141



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717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.



For Lancaster Laboratories use only
 Acct. # 7802 Sample # 2677529-40



1 Client: Kerr McGee Acct. #: _____
 Project Name#: Gulf States Newstate PWSID #: _____
 Project Manager: Dave Upthegrove P.O.#: _____
 Sampler: Dave Angle Quote #: _____
 Name of state where samples were collected: Mississippi

2

3

4

5

Sample ID	Date	Time	Relinquished by	Relinquished by	Date	Time	Received by	Date	Time
MW-03	3/12/97	912	X						
MW-04	3/12/97	1125	X						
MW-04	3/12/97	1122	X						
TB-1	3/12/97	NA	X						
MW-05	3/12/97	1322	X						
MW-01	3/12/97	1505	X						
MW-3	3/12/97	1649	X						
MW-23	3/12/97	1651	X						
MW-4	3/12/97	1824	X						
RB-1	3/12/97	1810	X						

For lab use only
 FSC: _____
 SCR #: 10949

Received by: Paul C. Upthegrove Date: 3/4/97 Time: 151
 Received by: Dave S. Angle Date: 3/11/97 Time: 1400
 Received by: FED EX: 4336747936 Date: 3/13/97 Time: 1100
 Received by: _____ Date: _____ Time: _____

7 Turnaround Time Requested (TAT) (please circle): Normal Rush
 (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
 Date results are needed: _____
 Rush results requested by (please circle): Phone _____ Fax _____
 Phone #: _____ Fax #: _____

8 Data Package Options (please circle if requested)
 Type VI (Raw Data) _____
 Type I (Tier I) _____
 Type II (Tier II) _____
 Type III (NJ Red. Del.) _____
 Type IV (CLP) _____

SDG Complete? Yes No
 Site-specific QC required? Yes No
 (if yes, indicate QC sample and submit triplicate volume.)
 Internal Chain of Custody required? Yes No



LLI Sample No. G5 2677693
Collected: 3/13/97 at 07:55 by DS

Submitted: 3/14/97 Reported: 4/ 9/97
Discard: 5/10/97

MW-1 Product Sample

Gulf States Creosoting: Hattiesburg, MS
MW-1- SDG#: HMS03-01

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4593	TCL Volatiles				See Page	2
4688	TCL Semivolatiles				See Page	4
4689	TCL Semivolatiles cont'd				See Page	5
0111	Moisture	48.8		0.080	% by wt.	

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.
Due to the presence of a non-aqueous liquid, this sample could not be evaporated to dryness.

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
13:30:05 D 0003 3 REP 129915 556914
386 0.00 00049920 ASR000



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



LLI Sample No. G5 2677693

Collected: 3/13/97 at 07:55 by DS

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Gulf States Creosoting: Hattiesburg, MS

MW-1- SDG#: HMS03-01

Account No: 07802
 Kerr-McGee Corporation
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 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Volatiles by 8240						
3434	Chloromethane	N.D.	13,000.	ug/kg	N.D.	24,000.
3435	Bromomethane	N.D.	19,000.	ug/kg	N.D.	37,000.
3436	Vinyl Chloride	N.D.	13,000.	ug/kg	N.D.	24,000.
3437	Chloroethane	N.D.	19,000.	ug/kg	N.D.	37,000.
3440	Methylene Chloride	N.D.	13,000.	ug/kg	N.D.	24,000.
4074	Acetone	N.D.	44,000.	ug/kg	N.D.	85,000.
4076	Carbon Disulfide	N.D.	19,000.	ug/kg	N.D.	37,000.
1180	1,1-Dichloroethene	N.D.	13,000.	ug/kg	N.D.	24,000.
3442	1,1-Dichloroethane	N.D.	6,300.	ug/kg	N.D.	12,000.
3444	Chloroform	N.D.	6,300.	ug/kg	N.D.	12,000.
3445	1,2-Dichloroethane	N.D.	13,000.	ug/kg	N.D.	24,000.
4085	2-Butanone	N.D.	44,000.	ug/kg	N.D.	85,000.
3446	1,1,1-Trichloroethane	N.D.	6,300.	ug/kg	N.D.	12,000.
3447	Carbon Tetrachloride	N.D.	6,300.	ug/kg	N.D.	12,000.
4091	Vinyl Acetate	N.D.	19,000.	ug/kg	N.D.	37,000.
3448	Bromodichloromethane	N.D.	13,000.	ug/kg	N.D.	24,000.
3450	1,2-Dichloropropane	N.D.	19,000.	ug/kg	N.D.	37,000.
3454	cis-1,3-Dichloropropene	N.D.	6,300.	ug/kg	N.D.	12,000.
1181	Trichloroethene	N.D.	6,300.	ug/kg	N.D.	12,000.
3452	Dibromochloromethane	N.D.	6,300.	ug/kg	N.D.	12,000.
3453	1,1,2-Trichloroethane	N.D.	13,000.	ug/kg	N.D.	24,000.
1182	Benzene	36,000.	6,300.	ug/kg	70,000.	12,000.
3451	trans-1,3-Dichloropropene	N.D.	6,300.	ug/kg	N.D.	12,000.
3456	Bromoform	N.D.	6,300.	ug/kg	N.D.	12,000.
4108	4-Methyl-2-pentanone	N.D.	19,000.	ug/kg	N.D.	37,000.
4107	2-Hexanone	N.D.	19,000.	ug/kg	N.D.	37,000.
3457	Tetrachloroethene	N.D.	6,300.	ug/kg	N.D.	12,000.
3449	1,1,2,2-Tetrachloroethane	N.D.	6,300.	ug/kg	N.D.	12,000.
1183	Toluene	190,000.	6,300.	ug/kg	380,000.	12,000.
1184	Chlorobenzene	N.D.	6,300.	ug/kg	N.D.	12,000.
3458	Ethylbenzene	180,000.	6,300.	ug/kg	360,000.	12,000.
4117	Styrene	120,000.	6,300.	ug/kg	230,000.	12,000.
3355	Xylene (total)	1,000,000.	6,300.	ug/kg	2,000,000.	12,000.
6187	trans-1,2-Dichloroethene	N.D.	13,000.	ug/kg	N.D.	24,000.
6277	cis-1,2-Dichloroethene	N.D.	13,000.	ug/kg	N.D.	24,000.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles



Lancaster Laboratories
 2425 New Holland Pike
 PO Box 12425
 Lancaster, PA 17605-2425
 717-656-2300 Fax: 717-656-2681



LLI Sample No. G5 2677693
Collected: 3/13/97 at 07:55 by DS

Submitted: 3/14/97 Reported: 4/ 9/97
Discard: 5/10/97

MW-1 Product Sample

Gulf States Creosoting: Hattiesburg, MS
MW-1- SDG#: HMS03-01

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Volatiles by 8240

The GC/MS volatile analysis was performed according to the medium level soil method due to the level of target compounds. The quantitation limits were therefore raised.

Poor surrogate recoveries were observed for the GC/MS volatile fraction due to the dilution needed to perform the analysis.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. G5 2677693

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MW-1 Product Sample

Gulf States Creosoting: Hattiesburg, MS

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Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
						DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	5,000.	ug/kg	N.D.	9,800.
3753	bis (2-chloroethyl) ether	N.D.	10,000.	ug/kg	N.D.	20,000.
1186	2-chlorophenol	N.D.	5,000.	ug/kg	N.D.	9,800.
3754	1,3-dichlorobenzene	N.D.	5,000.	ug/kg	N.D.	9,800.
1187	1,4-dichlorobenzene	N.D.	5,000.	ug/kg	N.D.	9,800.
3755	1,2-dichlorobenzene	N.D.	5,000.	ug/kg	N.D.	9,800.
4690	2-methylphenol	N.D.	10,000.	ug/kg	N.D.	20,000.
4691	2,2'-oxybis (1-chloropropane)	N.D.	15,000.	ug/kg	N.D.	29,000.
4692	4-methylphenol	N.D.	15,000.	ug/kg	N.D.	29,000.
1188	N-nitrosodi-n-propylamine	N.D.	10,000.	ug/kg	N.D.	20,000.
3757	hexachloroethane	N.D.	10,000.	ug/kg	N.D.	20,000.
3758	nitrobenzene	N.D.	5,000.	ug/kg	N.D.	9,800.
3759	isophorone	N.D.	10,000.	ug/kg	N.D.	20,000.
3746	2-nitrophenol	N.D.	10,000.	ug/kg	N.D.	20,000.
3747	2,4-dimethylphenol	140,000.	20,000.	ug/kg	N.D.	20,000.
3760	bis (2-chloroethoxy) methane	N.D.	5,000.	ug/kg	280,000.	39,000.
3748	2,4-dichlorophenol	N.D.	5,000.	ug/kg	N.D.	9,800.
1189	1,2,4-trichlorobenzene	N.D.	5,000.	ug/kg	N.D.	9,800.
3761	naphthalene	62,000,000.	400,000.	ug/kg	120,000,000.	9,800.
4693	4-chloroaniline	N.D.	15,000.	ug/kg	N.D.	780,000.
3762	hexachlorobutadiene	N.D.	10,000.	ug/kg	N.D.	29,000.
1190	4-chloro-3-methylphenol	N.D.	10,000.	ug/kg	N.D.	20,000.
4694	2-methylnaphthalene	28,000,000.	400,000.	ug/kg	N.D.	20,000.
3763	hexachlorocyclopentadiene	N.D.	25,000.	ug/kg	55,000,000.	780,000.
3749	2,4,6-trichlorophenol	N.D.	10,000.	ug/kg	N.D.	49,000.
4695	2,4,5-trichlorophenol	N.D.	10,000.	ug/kg	N.D.	20,000.
3764	2-chloronaphthalene	N.D.	5,000.	ug/kg	N.D.	20,000.
4696	2-nitroaniline	N.D.	10,000.	ug/kg	N.D.	9,800.
3766	dimethyl phthalate	N.D.	5,000.	ug/kg	N.D.	20,000.
3765	acenaphthylene	720,000.	10,000.	ug/kg	1,400,000.	9,800.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. G5 2677693
Collected: 3/13/97 at 07:55 by DS

Submitted: 3/14/97 Reported: 4/ 9/97
Discard: 5/10/97

MW-1 Product Sample

Gulf States Creosoting: Hattiesburg, MS
MW-1- SDG#: HMS03-01

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	N.D.		10,000. ug/kg	N.D.		20,000.
1191	acenaphthene	18,000,000.		400,000. ug/kg	35,000,000.		780,000.
3750	2,4-dinitrophenol	N.D.		25,000. ug/kg	N.D.		49,000.
1192	4-nitrophenol	N.D.		25,000. ug/kg	N.D.		49,000.
4698	dibenzofuran	15,000,000.		400,000. ug/kg	29,000,000.		780,000.
1193	2,4-dinitrotoluene	N.D.		10,000. ug/kg	N.D.		20,000.
4699	2,6-dinitrotoluene	N.D.		10,000. ug/kg	N.D.		20,000.
3770	diethyl phthalate	N.D.		10,000. ug/kg	N.D.		20,000.
3769	4-chlorophenyl phenyl ether	N.D.		10,000. ug/kg	N.D.		20,000.
3768	fluorene	18,000,000.		400,000. ug/kg	34,000,000.		780,000.
4700	4-nitroaniline	N.D.		15,000. ug/kg	N.D.		29,000.
4701	4,6-dinitro-2-methylphenol	N.D.		25,000. ug/kg	N.D.		49,000.
3772	N-nitrosodiphenylamine	N.D.		10,000. ug/kg	N.D.		20,000.
3773	4-bromophenyl phenyl ether	N.D.		15,000. ug/kg	N.D.		29,000.
3774	hexachlorobenzene	N.D.		15,000. ug/kg	N.D.		29,000.
1194	pentachlorophenol	N.D.		25,000. ug/kg	N.D.		49,000.
3775	phenanthrene	41,000,000.		400,000. ug/kg	79,000,000.		780,000.
3776	anthracene	4,600,000.		400,000. ug/kg	9,000,000.		780,000.
4702	carbazole	2,300,000.	J	400,000. ug/kg	4,400,000.	J	780,000.
3777	di-n-butyl phthalate	N.D.		5,000. ug/kg	N.D.		9,800.
3778	fluoranthene	21,000,000.		400,000. ug/kg	42,000,000.		780,000.
1195	pyrene	15,000,000.		800,000. ug/kg	30,000,000.		1,600,000.
3780	butyl benzyl phthalate	N.D.		10,000. ug/kg	N.D.		20,000.
3783	3,3'-dichlorobenzidine	N.D.		20,000. ug/kg	N.D.		39,000.
3781	benzo (a) anthracene	4,600,000.		400,000. ug/kg	8,900,000.		780,000.
3784	bis (2-ethylhexyl) phthalate	N.D.		10,000. ug/kg	N.D.		20,000.
3782	chrysene	3,900,000.	J	400,000. ug/kg	7,600,000.	J	780,000.
3785	di-n-octyl phthalate	N.D.		10,000. ug/kg	N.D.		20,000.
3786	benzo (b) fluoranthene	2,100,000.	J	800,000. ug/kg	4,200,000.	J	1,600,000.
3787	benzo (k) fluoranthene	1,000,000.		40,000. ug/kg	2,000,000.		78,000.
3788	benzo (a) pyrene	1,500,000.	J	800,000. ug/kg	3,000,000.	J	1,600,000.
3789	indeno (1,2,3-cd) pyrene	700,000.		20,000. ug/kg	1,400,000.		39,000.
3790	dibenz (a,h) anthracene	180,000.		20,000. ug/kg	360,000.		39,000.
3791	benzo (ghi) perylene	490,000.		20,000. ug/kg	950,000.		39,000.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



Lancaster Laboratories
2425 New Holland Pike
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LLI Sample No. G5 2677693
Collected: 3/13/97 at 07:55 by DS
Submitted: 3/14/97 Reported: 4/ 9/97
Discard: 5/10/97

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

MW-1 Product Sample
Gulf States Creosoting: Hattiesburg, MS
MW-1- SDG#: HMS03-01

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD	DETECTION LIMIT
TCL SW846	Semivolatiles/Soil						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. The GC/MS semivolatile internal standard peak areas were outside of QC limits. The matrix spike and matrix spike duplicate samples were analyzed and internal standard peak areas were again outside of QC limits, indicating a significant matrix effect.

The quantitation limits for the GC/MS semivolatile compounds were raised due to the high concentration of target compounds.

Questions? Contact your Client Services Representative
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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. G5 2677693

Collected: 03/13/97 at 07:55 by DS

Submitted: 03/14/97

MW-1 Product Sample

Gulf States Creosoting: Hattiesburg, MS
MW-1- SDG#: HMS03-01

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/21/97 0509	Clark A. Dougherty
0381	BNA Soil Extraction	SW-846 3550A	1	03/18/97 1900	Wanda F. Oswald
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/20/97 2331	Joseph M. Gambler
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/20/97 2331	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	04/03/97 1514	Susan A. Engle



Lancaster Laboratories
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PO Box 12425
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2677693
MW-I Product Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
4593 TCL Volatiles by 8240		Batch: D970781AC										
3434	Chloromethane	N.D.		98	103	5	110	113	3	1	272	
13,000.	ug/kg											
3435	Bromomethane	N.D.		98	103	5	112	109	2	1	241	
19,000.	ug/kg											
3436	Vinyl Chloride	N.D.		100	105	5	114	113	1	1	250	
13,000.	ug/kg											
3437	Chloroethane	N.D.		84	88	6	107	97	10	10	254	
19,000.	ug/kg											
3440	Methylene Chloride	N.D.		103	106	3	112	112	0	1	221	
13,000.	ug/kg											
4074	Acetone	N.D.		87	96	10	88	101	14	19	150	
44,000.	ug/kg											
4076	Carbon Disulfide	N.D.		91	91	0	108	106	2	24	188	
19,000.	ug/kg											
1180	1,1-Dichloroethene	N.D.		101	103	3	115	112	3	1	233	
13,000.	ug/kg											
442	1,1-Dichloroethane	N.D.		103	105	2	114	110	4	59	155	
6,300.	ug/kg											
3444	Chloroform	N.D.		104	107	3	113	110	2	51	138	
6,300.	ug/kg											
3445	1,2-Dichloroethane	N.D.		102	104	2	110	111	1	49	155	
13,000.	ug/kg											
4085	2-Butanone	N.D.		97	102	6	107	108	1	22	167	
44,000.	ug/kg											
3446	1,1,1-Trichloroethane	N.D.		110	116	6	121	120	0	52	162	
6,300.	ug/kg											
3447	Carbon Tetrachloride	N.D.		103	111	7	111	111	1	70	140	
6,300.	ug/kg											
4091	Vinyl Acetate	N.D.		8	0	200	151	149	1	19	190	
19,000.	ug/kg											
3448	Bromodichloromethane	N.D.		105	112	7	112	115	2	35	155	
13,000.	ug/kg											
3450	1,2-Dichloropropane	N.D.		103	108	4	110	109	0	1	209	
19,000.	ug/kg											
3454	cis-1,3-Dichloropropene	N.D.		103	107	3	111	113	2	1	226	
6,300.	ug/kg											
1181	Trichloroethene	N.D.		109	115	5	115	118	2	71	157	
6,300.	ug/kg											
3452	Dibromochloromethane	N.D.		103	112	8	111	112	1	53	149	
6,300.	ug/kg											
3453	1,1,1,2-Trichloroethane	N.D.		103	109	5	109	111	2	52	150	
13,000.	ug/kg											
1182	Benzene	N.D.		104	110	5	115	110	4	37	151	
6,300.	ug/kg											
3451	trans-1,3-Dichloropropene	N.D.		96	102	5	103	104	2	17	183	
6,300.	ug/kg											



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2677693
MM-1 Product Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
6,300.	ug/kg	N.D.		100	109	8	100	107	6	45	169
4108	4-Methyl-2-pentanone										
19,000.	ug/kg	N.D.		86	91	6	96	101	5	50	124
4107	2-Hexanone										
19,000.	ug/kg	N.D.		89	96	8	101	110	9	52	140
3457	Tetrachloroethene										
6,300.	ug/kg	N.D.		172	190	9	121	119	2	64	148
3449	1,1,2,2-Tetrachloroethane										
6,300.	ug/kg	N.D.		99	101	2	107	112	4	46	157
1183	Toluene										
6,300.	ug/kg	N.D.		106	107	1	114	112	2	47	150
1184	Chlorobenzene										
6,300.	ug/kg	N.D.		106	108	2	113	111	2	37	160
3458	Ethylbenzene										
6,300.	ug/kg	N.D.		109	111	2	113	117	3	37	162
4117	Styrene										
6,300.	ug/kg	N.D.		103	106	3	109	109	0	74	136
3355	Xylene (total)										
6,300.	ug/kg	N.D.		106	110	4	113	109	4	30	200
187	trans-1,2-Dichloroethene										
13,000.	ug/kg	N.D.		99	103	3	112	109	3	51	149
6277	cis-1,2-Dichloroethene										
13,000.	ug/kg	N.D.		99	105	6	111	107	4	54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97077SMA026									
1185	phenol										
5,000.	ug/kg	N.D.		78	85	9	80			5	112
3753	bis (2-chloroethyl) ether										
10,000.	ug/kg	N.D.		127	143	12	89			12	158
1186	2-chlorophenol										
5,000.	ug/kg	N.D.		76	84	10	88			23	134
3754	1,3-dichlorobenzene										
5,000.	ug/kg	N.D.		82	93	12	86			1	172
1187	1,4-dichlorobenzene										
5,000.	ug/kg	N.D.		78	87	11	85			20	124
3755	1,2-dichlorobenzene										
5,000.	ug/kg	N.D.		66	74	12	84			32	129
4690	2-methylphenol										
10,000.	ug/kg	N.D.		86	93	8	84			46	123
4691	2,2'-oxybis (1-chloropropane)										
15,000.	ug/kg	N.D.		37	40	7	68			36	166
4692	4-methylphenol										
15,000.	ug/kg	N.D.		98	101	3	87			5	152
1188	N-nitrosodi-n-propylamine										
10,000.	ug/kg	N.D.		64	63	0	89			1	230
3757	hexachloroethane										
10,000.	ug/kg	N.D.		0	0	0	93			40	113



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LLI Sample No. 2677693
MW-1 Product Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
5,000.	ug/kg	N.D.		347	256	30	90			35	180
3759	isophorone										
10,000.	ug/kg	N.D.		187	160	15	95			21	196
3746	2-nitrophenol										
10,000.	ug/kg	N.D.		152	137	10	92			29	182
3747	2,4-dimethylphenol										
20,000.	ug/kg	N.D.		212	190	6	78			32	119
3760	bis (2-chloroethoxy) methane										
5,000.	ug/kg	N.D.		324	294	10	87			33	184
3748	2,4-dichlorophenol										
5,000.	ug/kg	N.D.		179	160	11	86			39	135
1189	1,2,4-trichlorobenzene										
5,000.	ug/kg	N.D.		108	172	46	82			44	142
3761	naphthalene										
400,000.	ug/kg	N.D.		(6)	(6) (2)	3	80			21	133
4693	4-chloroaniline										
15,000.	ug/kg	N.D.		23	17	30	71			17	116
3762	hexachlorobutadiene										
10,000.	ug/kg	N.D.		203	184	10	92			24	116
1190	4-chloro-3-methylphenol										
10,000.	ug/kg	N.D.		178	159	11	91			22	147
4694	2-methylnaphthalene										
400,000.	ug/kg	N.D.		(6)	(6) (2)	3	83			28	123
3763	hexachlorocyclopentadiene										
25,000.	ug/kg	N.D.		58	53	10	81			1	100
3749	2,4,6-trichlorophenol										
10,000.	ug/kg	N.D.		73	77	5	91			37	144
4695	2,4,5-trichlorophenol										
10,000.	ug/kg	N.D.		93	96	3	86			39	151
3764	2-chloronaphthalene										
5,000.	ug/kg	N.D.		86	91	6	86			60	118
4696	2-nitroaniline										
10,000.	ug/kg	N.D.		59	53	10	87			53	143
3766	dimethyl phthalate										
5,000.	ug/kg	N.D.		80	84	4	89			1	112
3765	acenaphthylene										
10,000.	ug/kg	N.D.		98	134 (2)	4	89			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97077SMA026									

4697	3-nitroaniline										
10,000.	ug/kg	N.D.		73	75	2	81			7	143
1191	acenaphthene										
400,000.	ug/kg	N.D.		(6)	(6) (2)	13	84			47	145
3750	2,4-dinitrophenol										
25,000.	ug/kg	N.D.		0	0	0	108			1	191
1192	4-nitrophenol										
25,000.	ug/kg	N.D.		148	137	8	92			1	132

(2) The background result was more than four times the spike added.

(6) Matrix interferences within the sample has caused the Recovery Percent of the MS and/or MSD to exceed 10,000%.

MEMBER
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2216 Rev. 5/01/96





LLI Sample No. 2677693
MW-1 Product Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran 400,000. ug/kg	N.D.		-9247	-8140 (2)	17	87			28	131
1193	2,4-dinitrotoluene 10,000. ug/kg	N.D.		158	140	12	92			39	139
4699	2,6-dinitrotoluene 10,000. ug/kg	N.D.		39	43	9	100			50	158
3770	diethyl phthalate 10,000. ug/kg	N.D.		70	65	7	85			1	114
3769	4-chlorophenyl phenyl ether 10,000. ug/kg	N.D.		40	47	16	73			25	158
3768	fluorene 400,000. ug/kg	N.D.		(6)	(6) (2)	16	76			59	121
4700	4-nitroaniline 15,000. ug/kg	N.D.		420	271	43	83			38	122
4701	4,6-dinitro-2-methylphenol 25,000. ug/kg	N.D.		0	0	0	102			1	181
3772	N-nitrosodiphenylamine 10,000. ug/kg	N.D.		306	336	9	91			38	147
3773	4-bromophenyl phenyl ether 15,000. ug/kg	N.D.		85	93	9	94			53	127
3774	hexachlorobenzene 15,000. ug/kg	N.D.		80	64	23	93			1	152
1194	pentachlorophenol 25,000. ug/kg	N.D.		136	124	9	93			14	176
3775	phenanthrene 400,000. ug/kg	N.D.		(6)	(6) (2)	25	84			54	120
3776	anthracene 400,000. ug/kg	N.D.		-651	-323 (2)	8	82			27	133
4702	carbazole 400,000. ug/kg	N.D.		562	673 (2)	4	86			35	133
3777	di-n-butyl phthalate 5,000. ug/kg	N.D.		99	89	10	87			1	118
3778	fluoranthene 400,000. ug/kg	N.D.		(6)	-9930 (2)	12	77			26	137
1195	pyrene 800,000. ug/kg	N.D.		-6564	-2659 (2)	36	101			52	115
3780	butyl benzyl phthalate 10,000. ug/kg	N.D.		102	112	9	99			1	152
3783	3,3'-dichlorobenzidine 20,000. ug/kg	N.D.		73	68	7	91			1	262
3781	benzo (a) anthracene 400,000. ug/kg	N.D.		92	1090 (2)	19	86			33	143
3784	bis (2-ethylhexyl) phthalate 10,000. ug/kg	N.D.		115	116	1	88			8	158
3782	chrysene 400,000. ug/kg	N.D.		123	837 (2)	16	90			17	168
3785	di-n-octyl phthalate 10,000. ug/kg	N.D.		97	103	5	84			4	146
3786	benzo (b) fluoranthene 800,000. ug/kg	N.D.		415	944 (2)	19	83			24	159

(c) The background result was more than four times the spike added.

(b) Matrix interferences within the sample has caused the Recovery Percent of the MS and/or MSD to exceed 10,000%.

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LLI Sample No. 2677693
MW-1 Product Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3787	benzo (k) fluoranthene 40,000. ug/kg	N.D.		-50	274 (2)	28	89			11	163
3788	benzo (a) pyrene 800,000. ug/kg	N.D.		398	697 (2)	14	85			17	163
3789	indeno (1,2,3-cd) pyrene 20,000. ug/kg	N.D.		155	212 (2)	6	89			1	171
3790	dibenz (a,h) anthracene 20,000. ug/kg	N.D.		181	114	20	91			1	227
3791	benzo (ghi) perylene 20,000. ug/kg	N.D.		148	184 (2)	5	83			1	219
0111	Moisture 0.080 % by wt.	Batch: 970930227820000A	0				100	100	0	100	101

The background result was more than four times the spike added.



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LLI Sample No. 2677693
MW-1 Product Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	27	70	121
	d8-toluene	67	81	117
	4-BFB	78	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	74	24	113
	2-F1pheno1	77	25	121
	2,4,6-TBP	54	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	(5)	23	120
	2-Fbiphenyl	82	30	115
	Tphenyl d14	126	18	137

Accurate surrogate recoveries could not be determined due to interferences or dilution necessary for this sample.



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LLI Sample No. G5 2677694
Collected: 3/13/97 at 08:50 by DS

Submitted: 3/14/97 Reported: 4/ 9/97
Discard: 5/10/97

MW-2 Product Sample

Guif States Creosoting: Hattiesburg, MS
MW-2- SDG#: HMS03-02

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	DETECTION	LIMIT UNITS	RESULTS	DETECTION	LIMIT
4593	TCL Volatiles			See Page		2	
4688	TCL Semivolatiles			See Page		4	
4689	TCL Semivolatiles cont'd			See Page		5	
0111	Moisture	45.7		0.080	% by wt.		

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.
Due to the presence of a non-aqueous liquid, this sample could not be evaporated to dryness.

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garett Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
10:44:58 D 0003 3 REP 129915 556914
288 0.00 00049920 ASR000



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





LLI Sample No. G5 2677694
 Collected: 3/13/97 at 08:50 by DS

Submitted: 3/14/97 Reported: 4/ 9/97
 Discard: 5/10/97

MW-2 Product Sample

Gulf States Creosoting: Hattiesburg, MS
 MW-2- SDG#: HMS03-02

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Volatiles by 8240						
3434	Chloromethane	N.D.		13,000. ug/kg	N.D.	23,000.
3435	Bromomethane	N.D.		19,000. ug/kg	N.D.	35,000.
3436	Vinyl Chloride	N.D.		13,000. ug/kg	N.D.	23,000.
3437	Chloroethane	N.D.		19,000. ug/kg	N.D.	35,000.
3440	Methylene Chloride	N.D.		13,000. ug/kg	N.D.	23,000.
4074	Acetone	N.D.		44,000. ug/kg	N.D.	81,000.
4076	Carbon Disulfide	N.D.		19,000. ug/kg	N.D.	35,000.
1180	1,1-Dichloroethene	N.D.		13,000. ug/kg	N.D.	23,000.
3442	1,1-Dichloroethane	N.D.		6,300. ug/kg	N.D.	12,000.
3444	Chloroform	N.D.		6,300. ug/kg	N.D.	12,000.
3445	1,2-Dichloroethane	N.D.		13,000. ug/kg	N.D.	23,000.
4085	2-Butanone	N.D.		44,000. ug/kg	N.D.	81,000.
3446	1,1,1-Trichloroethane	N.D.		6,300. ug/kg	N.D.	12,000.
3447	Carbon Tetrachloride	N.D.		6,300. ug/kg	N.D.	12,000.
4091	Vinyl Acetate	N.D.		19,000. ug/kg	N.D.	35,000.
3448	Bromodichloromethane	N.D.		13,000. ug/kg	N.D.	23,000.
3450	1,2-Dichloropropane	N.D.		19,000. ug/kg	N.D.	35,000.
3454	cis-1,3-Dichloropropene	N.D.		6,300. ug/kg	N.D.	12,000.
1181	Trichloroethene	N.D.		6,300. ug/kg	N.D.	12,000.
3452	Dibromochloromethane	N.D.		6,300. ug/kg	N.D.	12,000.
3453	1,1,2-Trichloroethane	N.D.		13,000. ug/kg	N.D.	23,000.
1182	Benzene	92,000.		6,300. ug/kg	170,000.	12,000.
3451	trans-1,3-Dichloropropene	N.D.		6,300. ug/kg	N.D.	12,000.
3456	Bromoform	N.D.		6,300. ug/kg	N.D.	12,000.
4108	4-Methyl-2-pentanone	N.D.		19,000. ug/kg	N.D.	35,000.
4107	2-Hexanone	N.D.		19,000. ug/kg	N.D.	35,000.
3457	Tetrachloroethene	N.D.		6,300. ug/kg	N.D.	12,000.
3449	1,1,2,2-Tetrachloroethane	N.D.		6,300. ug/kg	N.D.	12,000.
1183	Toluene	350,000.		6,300. ug/kg	640,000.	12,000.
1184	Chlorobenzene	N.D.		6,300. ug/kg	N.D.	12,000.
3458	Ethylbenzene	230,000.		6,300. ug/kg	420,000.	12,000.
4117	Styrene	240,000.		6,300. ug/kg	440,000.	12,000.
3355	Xylene (total)	1,100,000.		6,300. ug/kg	2,100,000.	12,000.
6187	trans-1,2-Dichloroethene	N.D.		13,000. ug/kg	N.D.	23,000.
6277	cis-1,2-Dichloroethene	N.D.		13,000. ug/kg	N.D.	23,000.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles



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2216 Rev. 5/01/96





LLI Sample No. G5 2677694
 Collected: 3/13/97 at 08:50 by DS

Submitted: 3/14/97 Reported: 4/ 9/97
 Discard: 5/10/97

MW-2 Product Sample

Gulf States Creosoting: Hattiesburg, MS
 MW-2- SDG#: HMS03-02

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT
 NO. ANALYSIS NAME

AS RECEIVED
 RESULTS METHOD
 DETECTION LIMIT UNITS

DRY WEIGHT
 RESULTS METHOD
 DETECTION LIMIT

TCL Volatiles by 8240

The GC/MS volatile analysis was performed according to the medium level soil method due to the level of target compounds. The quantitation limits were therefore raised.

Poor surrogate recoveries were observed for the GC/MS volatile fraction due to the dilution needed to perform the analysis.

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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. G5 2677694

Collected: 3/13/97 at 08:50 by DS

Submitted: 3/14/97 Reported: 4/ 9/97

Discard: 5/10/97

MW-2 Product Sample

Gulf States Creosoting: Hattiesburg, MS
MW-2- SDG#: HMS03-02

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles Soil							
1185	phenol	130,000.		10,000. ug/kg	240,000.		18,000.
3753	bis (2-chloroethyl) ether	N.D.		10,000. ug/kg	N.D.		18,000.
1186	2-chlorophenol	N.D.		5,000. ug/kg	N.D.		9,200.
3754	1,3-dichlorobenzene	N.D.		5,000. ug/kg	N.D.		9,200.
1187	1,4-dichlorobenzene	N.D.		5,000. ug/kg	N.D.		9,200.
3755	1,2-dichlorobenzene	N.D.		5,000. ug/kg	N.D.		9,200.
4690	2-methylphenol	400,000.		20,000. ug/kg	740,000.		37,000.
4691	2,2'-oxybis (1-chloropropane)	N.D.		15,000. ug/kg	N.D.		28,000.
4692	4-methylphenol	810,000.		30,000. ug/kg	1,500,000.		55,000.
1188	N-nitrosodi-n-propylamine	N.D.		10,000. ug/kg	N.D.		18,000.
3757	hexachloroethane	N.D.		10,000. ug/kg	N.D.		18,000.
3758	nitrobenzene	N.D.		5,000. ug/kg	N.D.		9,200.
3759	isophorone	N.D.		10,000. ug/kg	N.D.		18,000.
3746	2-nitrophenol	N.D.		10,000. ug/kg	N.D.		18,000.
3747	2,4-dimethylphenol	2,900,000.		20,000. ug/kg	5,300,000.		37,000.
3760	bis (2-chloroethoxy) methane	N.D.		5,000. ug/kg	N.D.		9,200.
3748	2,4-dichlorophenol	N.D.		5,000. ug/kg	N.D.		9,200.
1189	1,2,4-trichlorobenzene	N.D.		5,000. ug/kg	N.D.		9,200.
3761	naphthalene	96,000,000.		800,000. ug/kg	180,000,000.		1,500,000.
4693	4-chloroaniline	N.D.		15,000. ug/kg	N.D.		28,000.
3762	hexachlorobutadiene	N.D.		10,000. ug/kg	N.D.		18,000.
1190	4-chloro-3-methylphenol	N.D.		10,000. ug/kg	N.D.		18,000.
4694	2-methylnaphthalene	27,000,000.		800,000. ug/kg	50,000,000.		1,500,000.
3763	hexachlorocyclopentadiene	N.D.		25,000. ug/kg	N.D.		46,000.
3749	2,4,6-trichlorophenol	N.D.		10,000. ug/kg	N.D.		18,000.
4695	2,4,5-trichlorophenol	N.D.		10,000. ug/kg	N.D.		18,000.
3764	2-chloronaphthalene	N.D.		5,000. ug/kg	N.D.		9,200.
4696	2-nitroaniline	N.D.		10,000. ug/kg	N.D.		18,000.
3766	dimethyl phthalate	N.D.		5,000. ug/kg	N.D.		9,200.
3765	acenaphthylene	1,100,000.		10,000. ug/kg	2,000,000.		18,000.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96



Lancaster Laboratories
 A division of Thermo Analytical Inc.

LLI Sample No. G5 2677694
 Collected: 3/13/97 at 08:50 by DS

Submitted: 3/14/97 Reported: 4/ 9/97
 Discard: 5/10/97

MW-2 Product Sample

Gulf States Creosoting: Hattiesburg, MS
 MW-2- SDG#: HMS03-02

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.		10,000. ug/kg	N.D.	18,000.
1191	acenaphthene	17,000,000.		800,000. ug/kg	32,000,000.	1,500,000.
3750	2,4-dinitrophenol	N.D.		25,000. ug/kg	N.D.	46,000.
1192	4-nitrophenol	N.D.		25,000. ug/kg	N.D.	46,000.
4698	dibenzofuran	15,000,000.		800,000. ug/kg	27,000,000.	1,500,000.
1193	2,4-dinitrotoluene	N.D.		10,000. ug/kg	N.D.	18,000.
4699	2,6-dinitrotoluene	N.D.		10,000. ug/kg	N.D.	18,000.
3770	diethyl phthalate	N.D.		10,000. ug/kg	N.D.	18,000.
3769	4-chlorophenyl phenyl ether	N.D.		10,000. ug/kg	N.D.	18,000.
3768	fluorene	18,000,000.		800,000. ug/kg	34,000,000.	1,500,000.
4700	4-nitroaniline	N.D.		15,000. ug/kg	N.D.	28,000.
4701	4,6-dinitro-2-methylphenol	N.D.		25,000. ug/kg	N.D.	46,000.
3772	N-nitrosodiphenylamine	N.D.		10,000. ug/kg	N.D.	18,000.
3773	4-bromophenyl phenyl ether	N.D.		15,000. ug/kg	N.D.	28,000.
3774	hexachlorobenzene	N.D.		15,000. ug/kg	N.D.	28,000.
1194	pentachlorophenol	N.D.		25,000. ug/kg	N.D.	46,000.
3775	phenanthrene	47,000,000.		800,000. ug/kg	86,000,000.	1,500,000.
3776	anthracene	6,500,000.	J	800,000. ug/kg	12,000,000.	J 1,500,000.
4702	carbazole	3,000,000.	J	800,000. ug/kg	5,500,000.	J 1,500,000.
3777	di-n-butyl phthalate	N.D.		5,000. ug/kg	N.D.	9,200.
3778	fluoranthene	19,000,000.		800,000. ug/kg	34,000,000.	1,500,000.
1195	pyrene	14,000,000.		1,600,000. ug/kg	26,000,000.	2,900,000.
3780	butyl benzyl phthalate	N.D.		10,000. ug/kg	N.D.	18,000.
3783	3,3'-dichlorobenzidine	N.D.		20,000. ug/kg	N.D.	37,000.
3781	benzo (a) anthracene	3,900,000.	J	800,000. ug/kg	7,200,000.	J 1,500,000.
3784	bis (2-ethylhexyl) phthalate	N.D.		10,000. ug/kg	N.D.	18,000.
3782	chrysene	3,100,000.	J	800,000. ug/kg	5,800,000.	J 1,500,000.
3785	di-n-octyl phthalate	N.D.		10,000. ug/kg	N.D.	18,000.
3786	benzo (b) fluoranthene	1,800,000.	J	1,600,000. ug/kg	3,400,000.	J 2,900,000.
3787	benzo (k) fluoranthene	850,000.		40,000. ug/kg	1,600,000.	74,000.
3788	benzo (a) pyrene	1,800,000.		20,000. ug/kg	3,200,000.	37,000.
3789	indeno (1,2,3-cd) pyrene	740,000.		20,000. ug/kg	1,400,000.	37,000.
3790	dibenz (a,h) anthracene	210,000.		20,000. ug/kg	390,000.	37,000.
3791	benzo (ghi) perylene	530,000.		20,000. ug/kg	970,000.	37,000.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
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 Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. G5 2677694
 Collected: 3/13/97 at 08:50 by DS

Submitted: 3/14/97 Reported: 4/ 9/97
 Discard: 5/10/97

MW-2 Product Sample

Gulf States Creosoting: Hattiesburg, MS
 MW-2- SDG#: HMS03-02

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. The GC/MS semivolatile internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

The quantitation limits for the GC/MS semivolatile compounds were raised due to the high concentration of target compounds.

The concentrations of 2,4-Dimethylphenol and Benzo(a)pyrene are tentative since they were above calibration range in the initial analysis of the sample and were below detection limits in the diluted analysis of the sample.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Senior Chemist, GC/MS



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2216 Rev. 5/01/96





LLI Sample No. G5 2677694
 Collected: 03/13/97 at 08:50 by DS

Submitted: 03/14/97

MW-2 Product Sample

Gulf States Creosoting: Hattiesburg, MS
 MW-2- SDG#: HMS03-02

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/21/97 0419	Clark A. Dougherty
0381	BNA Soil Extraction	SW-846 3550A	1	03/18/97 1900	Wanda F. Oswald
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/21/97 0207	Joseph M. Gambler
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/21/97 0207	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	04/03/97 1514	Susan A. Engle



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LLI Sample No. 2677694
MW-2 Product Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
4593 TCL Volatiles by 8240		Batch: D970781AC										
3434	Chloromethane	N.D.		98	103	5	110	113	3	1	272	
13,000.	ug/kg											
3435	Bromomethane	N.D.		98	103	5	112	109	2	1	241	
19,000.	ug/kg											
3436	Vinyl Chloride	N.D.		100	105	5	114	113	1	1	250	
13,000.	ug/kg											
3437	Chloroethane	N.D.		84	88	6	107	97	10	10	254	
19,000.	ug/kg											
3440	Methylene Chloride	N.D.		103	106	3	112	112	0	1	221	
13,000.	ug/kg											
4074	Acetone	N.D.		87	96	10	88	101	14	19	150	
44,000.	ug/kg											
4076	Carbon Disulfide	N.D.		91	91	0	108	106	2	24	188	
19,000.	ug/kg											
1180	1,1-Dichloroethene	N.D.		101	103	3	115	112	3	1	233	
13,000.	ug/kg											
3442	1,1-Dichloroethane	N.D.		103	105	2	114	110	4	59	155	
6,300.	ug/kg											
3444	Chloroform	N.D.		104	107	3	113	110	2	51	138	
6,300.	ug/kg											
3445	1,2-Dichloroethane	N.D.		102	104	2	110	111	1	49	155	
13,000.	ug/kg											
4085	2-Butanone	N.D.		97	102	6	107	108	1	22	167	
44,000.	ug/kg											
3446	1,1,1-Trichloroethane	N.D.		110	116	6	121	120	0	52	162	
6,300.	ug/kg											
3447	Carbon Tetrachloride	N.D.		103	111	7	111	111	1	70	140	
6,300.	ug/kg											
4091	Vinyl Acetate	N.D.		8	0	200	151	149	1	19	190	
19,000.	ug/kg											
3448	Bromodichloromethane	N.D.		105	112	7	112	115	2	35	155	
13,000.	ug/kg											
3450	1,2-Dichloropropane	N.D.		103	108	4	110	109	0	1	209	
19,000.	ug/kg											
3454	cis-1,3-Dichloropropene	N.D.		103	107	3	111	113	2	1	226	
6,300.	ug/kg											
1181	Trichloroethene	N.D.		109	115	5	115	118	2	71	157	
6,300.	ug/kg											
3452	Dibromochloromethane	N.D.		103	112	8	111	112	1	53	149	
6,300.	ug/kg											
3453	1,1,2-Trichloroethane	N.D.		103	109	5	109	111	2	52	150	
13,000.	ug/kg											
1182	Benzene	N.D.		104	110	5	115	110	4	37	151	
6,300.	ug/kg											
3451	trans-1,3-Dichloropropene	N.D.		96	102	5	103	104	2	17	183	
6,300.	ug/kg											



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2216 Rev. 5/01/96



LLI Sample No. 2677694
MW-2 Product Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3456	Bromoform										
6,300.	ug/kg	N.D.		100	109	8	100	107	6	45	169
4108	4-Methyl-2-pentanone										
19,000.	ug/kg	N.D.		86	91	6	96	101	5	50	124
4107	2-Hexanone										
19,000.	ug/kg	N.D.		89	96	8	101	110	9	52	140
3457	Tetrachloroethene										
6,300.	ug/kg	N.D.		172	190	9	121	119	2	64	148
3449	1,1,2,2-Tetrachloroethane										
6,300.	ug/kg	N.D.		99	101	2	107	112	4	46	157
1183	Toluene										
6,300.	ug/kg	N.D.		106	107	1	114	112	2	47	150
1184	Chlorobenzene										
6,300.	ug/kg	N.D.		106	108	2	113	111	2	37	160
3458	Ethylbenzene										
6,300.	ug/kg	N.D.		109	111	2	113	117	3	37	162
4117	Styrene										
6,300.	ug/kg	N.D.		103	106	3	109	109	0	74	136
3355	Xylene (total)										
6,300.	ug/kg	N.D.		106	110	4	113	109	4	30	200
1187	trans-1,2-Dichloroethene										
13,000.	ug/kg	N.D.		99	103	3	112	109	3	51	149
6277	cis-1,2-Dichloroethene										
13,000.	ug/kg	N.D.		99	105	6	111	107	4	54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97077SMA026									
1185	phenol										
10,000.	ug/kg	N.D.		78	85	9	80			5	112
3753	bis (2-chloroethyl) ether										
10,000.	ug/kg	N.D.		127	143	12	89			12	158
1186	2-chlorophenol										
5,000.	ug/kg	N.D.		76	84	10	88			23	134
3754	1,3-dichlorobenzene										
5,000.	ug/kg	N.D.		82	93	12	86			1	172
1187	1,4-dichlorobenzene										
5,000.	ug/kg	N.D.		78	87	11	85			20	124
3755	1,2-dichlorobenzene										
5,000.	ug/kg	N.D.		66	74	12	84			32	129
4690	2-methylphenol										
20,000.	ug/kg	N.D.		86	93	8	84			46	123
4691	2,2'-oxybis (1-chloropropane)										
15,000.	ug/kg	N.D.		37	40	7	68			36	166
4692	4-methylphenol										
30,000.	ug/kg	N.D.		98	101	3	87			5	152
1188	N-nitrosodi-n-propylamine										
10,000.	ug/kg	N.D.		64	63	0	89			1	230
3757	hexachloroethane										
10,000.	ug/kg	N.D.		0	0	0	93			40	113



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2216 Rev. 5/01/96





LLI Sample No. 2677694
MW-2 Product Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
5,000.	ug/kg	N.D.		347	256	30	90			35	180
3759	isophorone										
10,000.	ug/kg	N.D.		187	160	15	95			21	196
3746	2-nitrophenol										
10,000.	ug/kg	N.D.		152	137	10	92			29	182
3747	2,4-dimethylphenol										
20,000.	ug/kg	N.D.		212	190	6	78			32	119
3760	bis (2-chloroethoxy) methane										
5,000.	ug/kg	N.D.		324	294	10	87			33	184
3748	2,4-dichlorophenol										
5,000.	ug/kg	N.D.		179	160	11	86			39	135
1189	1,2,4-trichlorobenzene										
5,000.	ug/kg	N.D.		108	172	46	82			44	142
3761	naphthalene										
800,000.	ug/kg	N.D.		(6)	(6) (2)	3	80			21	133
4693	4-chloroaniline										
15,000.	ug/kg	N.D.		23	17	30	71			17	116
3762	hexachlorobutadiene										
10,000.	ug/kg	N.D.		203	184	10	92			24	116
1190	4-chloro-3-methylphenol										
10,000.	ug/kg	N.D.		178	159	11	91			22	147
4694	2-methylnaphthalene										
800,000.	ug/kg	N.D.		(6)	(6) (2)	3	83			28	123
3763	hexachlorocyclopentadiene										
25,000.	ug/kg	N.D.		58	53	10	81			1	100
3749	2,4,6-trichlorophenol										
10,000.	ug/kg	N.D.		73	77	5	91			37	144
4695	2,4,5-trichlorophenol										
10,000.	ug/kg	N.D.		93	96	3	86			39	151
3764	2-chloronaphthalene										
5,000.	ug/kg	N.D.		86	91	6	86			60	118
4696	2-nitroaniline										
10,000.	ug/kg	N.D.		59	53	10	87			53	143
3766	dimethyl phthalate										
5,000.	ug/kg	N.D.		80	84	4	89			1	112
3765	acenaphthylene										
10,000.	ug/kg	N.D.		98	134 (2)	4	89			33	145

4689	TCL SWB46 Semivolatiles/Soil	Batch: 97077SMA026									
4697	3-nitroaniline										
10,000.	ug/kg	N.D.		73	75	2	81			7	143
1191	acenaphthene										
800,000.	ug/kg	N.D.		(6)	(6) (2)	13	84			47	145
3750	2,4-dinitrophenol										
25,000.	ug/kg	N.D.		0	0	0	108			1	191
1192	4-nitrophenol										
25,000.	ug/kg	N.D.		148	137	8	92			1	132

(2) The background result was more than four times the spike added.

(6) Matrix interferences within the sample has caused the Recovery Percent of the MS and/or MSD to exceed 10,000%.



MEMBER
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2677694
MW-2 Product Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
800,000.	ug/kg	N.D.		-9247	-8140 (2)	17	87			28	131
1193	2,4-dinitrotoluene										
10,000.	ug/kg	N.D.		158	140	12	92			39	139
4699	2,6-dinitrotoluene										
10,000.	ug/kg	N.D.		39	43	9	100			50	158
3770	diethyl phthalate										
10,000.	ug/kg	N.D.		70	65	7	85			1	114
3769	4-chlorophenyl phenyl ether										
10,000.	ug/kg	N.D.		40	47	16	73			25	158
3768	fluorene										
800,000.	ug/kg	N.D.		(6)	(6) (2)	16	76			59	121
4700	4-nitroaniline										
15,000.	ug/kg	N.D.		420	271	43	83			38	122
4701	4,6-dinitro-2-methylphenol										
25,000.	ug/kg	N.D.		0	0	0	102			1	181
3772	N-nitrosodiphenylamine										
10,000.	ug/kg	N.D.		306	336	9	91			38	147
3773	4-bromophenyl phenyl ether										
5,000.	ug/kg	N.D.		85	93	9	94			53	127
74	hexachlorobenzene										
15,000.	ug/kg	N.D.		80	64	23	93			1	152
1194	pentachlorophenol										
25,000.	ug/kg	N.D.		136	124	9	93			14	176
3775	phenanthrene										
800,000.	ug/kg	N.D.		(6)	(6) (2)	25	84			54	120
3776	anthracene										
800,000.	ug/kg	N.D.		-651	-323 (2)	8	82			27	133
4702	carbazole										
800,000.	ug/kg	N.D.		562	673 (2)	4	86			35	133
3777	di-n-butyl phthalate										
5,000.	ug/kg	N.D.		99	89	10	87			1	118
3778	fluoranthene										
800,000.	ug/kg	N.D.		(6)	-9930 (2)	12	77			26	137
1195	pyrene										
1,600,000.	ug/kg	N.D.		-6564	-2659 (2)	36	101			52	115
3780	butyl benzyl phthalate										
10,000.	ug/kg	N.D.		102	112	9	99			1	152
3783	3,3'-dichlorobenzidine										
20,000.	ug/kg	N.D.		73	68	7	91			1	262
3781	benzo (a) anthracene										
800,000.	ug/kg	N.D.		92	1090 (2)	19	86			33	143
3784	bis (2-ethylhexyl) phthalate										
10,000.	ug/kg	N.D.		115	116	1	88			8	158
3782	chrysene										
800,000.	ug/kg	N.D.		123	837 (2)	16	90			17	168
3785	di-n-octyl phthalate										
10,000.	ug/kg	N.D.		97	103	5	84			4	146
3786	benzo (b) fluoranthene										
1,600,000.	ug/kg	N.D.		415	944 (2)	19	83			24	159

(?) The background result was more than four times the spike added.

(?) Matrix interferences within the sample has caused the Recovery Percent of the MS and/or MSD to exceed 10,000%.



2425 New Holland Pike
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2216 Rev. 5/01/96





LLI Sample No. 2677694
MW-2 Product Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3787	benzo (k) fluoranthene										
40,000.	ug/kg	N.D.		-50	274 (2)	28	89			11	163
3788	benzo (a) pyrene										
20,000.	ug/kg	N.D.		398	697 (2)	14	85			17	163
3789	indeno (1,2,3-cd) pyrene										
20,000.	ug/kg	N.D.		155	212 (2)	6	89			1	171
3790	dibenz (a,h) anthracene										
20,000.	ug/kg	N.D.		181	114	20	91			1	227
3791	benzo (ghi) perylene										
20,000.	ug/kg	N.D.		148	184 (2)	5	83			1	219
0111	Moisture	Batch: 970930227820000A									
0.080	% by wt.		0				100	100	0	100	101

(2) The background result was more than four times the spike added.



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2677694
 MW-2 Product Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	68	70	121
	d8-toluene	76	81	117
	4-BFB	89	74	121
4688 TCL SW846 Semivolatiles Soil	Pheno1-d6	78	24	113
	2-Flpheno1	83	25	121
	2,4,6-TBP	59	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	(5)	23	120
	2-Fbiphnyl	79	30	115
	Tpheny1d14	113	18	137

Accurate surrogate recoveries could not be determined due to interferences or dilution necessary for this sample.



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LLI Sample No. WW 2677695
Collected: 3/13/97

Submitted: 3/14/97 Reported: 4/ 8/97
Discard: 5/ 9/97

TB-2 Trip Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS
TB-2- SDG#: HMS03-03TB*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

AS RECEIVED

RESULTS METHOD
DETECTION LIMIT UNITS

CAT
NO. ANALYSIS NAME
4592 TCL Volatiles

See Page 2

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Uptegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
12:25:59 D 0003 3 129915 556914
355 0.00 00015600 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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Lancaster Laboratories

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Page: 2 of 6

LLI Sample No. **WW 2677695**
Collected: 3/13/97

Submitted: 3/14/97 Reported: 4/ 8/97
Discard: 5/ 9/97

TB-2 Trip Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS
TB-2- SDG#: HMS03-03TB*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	N.D.	3.	ug/l
1257	Bromomethane	N.D.	3.	ug/l
3492	Vinyl Chloride	N.D.	2.	ug/l
3494	Chloroethane	N.D.	3.	ug/l
3497	Methylene Chloride	N.D.	2.	ug/l
3498	Acetone	N.D.	6.	ug/l
3499	Carbon Disulfide	N.D.	3.	ug/l
3500	1,1-Dichloroethene	N.D.	1.	ug/l
3501	1,1-Dichloroethane	N.D.	2.	ug/l
3503	Chloroform	N.D.	1.	ug/l
3504	1,2-Dichloroethane	N.D.	2.	ug/l
0316	2-Butanone	N.D.	3.	ug/l
3505	1,1,1-Trichloroethane	N.D.	1.	ug/l
3506	Carbon Tetrachloride	N.D.	1.	ug/l
3507	Vinyl Acetate	N.D.	2.	ug/l
3508	Bromodichloromethane	N.D.	1.	ug/l
3509	1,2-Dichloropropane	N.D.	1.	ug/l
3516	cis-1,3-Dichloropropene	N.D.	1.	ug/l
3511	Trichloroethene	N.D.	1.	ug/l
3512	Dibromochloromethane	N.D.	2.	ug/l
3513	1,1,2-Trichloroethane	N.D.	2.	ug/l
3515	Benzene	N.D.	1.	ug/l
3510	trans-1,3-Dichloropropene	N.D.	1.	ug/l
3518	Bromoform	N.D.	1.	ug/l
3521	4-Methyl-2-pentanone	N.D.	5.	ug/l
3520	2-Hexanone	N.D.	7.	ug/l
3522	Tetrachloroethene	N.D.	1.	ug/l
3523	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
3524	Toluene	N.D.	2.	ug/l
3525	Chlorobenzene	N.D.	1.	ug/l
3526	Ethylbenzene	N.D.	2.	ug/l
3528	Styrene	N.D.	1.	ug/l
3529	Xylene (total)	N.D.	1.	ug/l
5780	trans-1,2-Dichloroethene	N.D.	2.	ug/l
6268	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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See reverse side for explanation of symbols and abbreviations.

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles

2216 Rev. 5/01/96





LLI Sample No. WW 2677695

Collected: 03/13/97

Submitted: 03/14/97

TB-2 Trip Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

TB-2- SDG#: HMS03-03TB*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/20/97 0828	John A. Layman



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2216 Rev. 5/01/96





LLI Sample No. 2677695
TB-2 Trip Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH

4592 TCL Volatiles by 8240 - Water Batch: K970781AB											

1258	Chloromethane										
	3. ug/l	N.D.		91	87	5					
1257	Bromomethane										
	3. ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
	2. ug/l	N.D.		99	97	1					
3494	Chloroethane										
	3. ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
	2. ug/l	N.D.		95	92	3					
3498	Acetone										
	6. ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
	3. ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
	1. ug/l	N.D.		99	96	4					
3501	1,1-Dichloroethane										
	2. ug/l	N.D.		99	96	3					
3503	Chloroform										
	1. ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
	2. ug/l	N.D.		98	97	1					
0316	2-Butanone										
	3. ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
	1. ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
	1. ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
	2. ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
	1. ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
	1. ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
	1. ug/l	N.D.		97	97	0					
3511	Trichloroethene										
	1. ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
	2. ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
	2. ug/l	N.D.		102	104	2					
3515	Benzene										
	1. ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
	1. ug/l	N.D.		92	95	3					



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LLI Sample No. **2677695**
TB-2 Trip Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3518	Bromoform										
	1. ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
	5. ug/l	N.D.		85	84	1					
3520	2-Hexanone										
	7. ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
	1. ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
	2. ug/l	N.D.		96	95	1					
3524	Toluene										
	2. ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
	1. ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
	2. ug/l	N.D.		106	101	4					
3528	Styrene										
	1. ug/l	N.D.		107	104	3					
3529	Xylene (total)										
	1. ug/l	N.D.		107	103	5					
5780	trans-1,2-Dichloroethene										
	2. ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
	2. ug/l	N.D.		100	98	2					



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2216 Rev. 5/01/96





LLI Sample No. 2677695
 TB-2 Trip Blank Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 556914
 Kerr-McGee Corporation

TRIAL ID	SURROGATE SUMMARY		SURROGATE LIMITS	
	SURROGATE	RECOVERY %	LOW	HIGH
4592 TCL Volatiles by 8240 - Water	d4-1,2-DCA	102	76	114
	d8-toluene	103	88	110
	4-BFB	110	86	115



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2216 Rev. 5/01/96



Acct #: 7802 S # : 2677693-5



CHAIN-OF-CUSTODY RECORD

No 0307

Kerr McGee

PROJECT NAME: GULF STEELS C.I.#

PROJECT NUMBER: 21-02

SAMPLERS (SIGNATURE)

[Signature]

PRINTED NAME

CLIENT ID (9 CHARACTERS)

1	2	3	4	5	6	7	8	9	
M	W	-	1	Project					3
M	W	-	2	Project					3
T	B	-	2						2

No. of Bottles/Vials	GC/MS	GC	INORGANICS										OTHER	MATRIX: Water/Soil	SAMPLING INFO		REMARKS											
			TCL-SVDA	TCL-VDA	624-8240	625-8270	Other:	601-8010	602-8020	608-8080	8140	TCL PEST/PCBs			Herbicides	Other:		Metals	Cyanide	TAL Metals	Other:	TOC	TOX	Oil & Grease	Pet Hydro.	Phenols	DATE	TIME
																										3/13/97	755	
																										3/13/97	850	Trip Blank # 2
																										3/13/97	N.A.	

RELINQUISHED BY:	<i>[Signature]</i>	Date/Time	3/13/97
COMPANY NAME:	Michael Pisoni & Assoc.		1115
RECEIVED BY:	FEDRA: 433674727	Date/Time	3/13/97
COMPANY NAME:			1115
RELINQUISHED BY:		Date/Time	
COMPANY NAME:			

RELINQUISHED BY:		Date/Time	
COMPANY NAME:			
RECEIVED BY:	<i>[Signature]</i>	Date/Time	3/13/97
COMPANY NAME:			0541
RELINQUISHED BY:		Date/Time	
COMPANY NAME:			

SHIPPING INFORMATION
 Number of Shipping Containers:
 Method of Shipment: **FED Ex Priority**
 Special Handling Requirements: **Call Desc. Update, give instructions**



LLI Sample No. SW 2679079

Collected: 3/15/97 at 15:00 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-05/10.5-12.5 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

05-10 SDG#: HMS04-07

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4593	TCL Volatiles				See Page	2
4688	TCL Semivolatiles				See Page	3
4689	TCL Semivolatiles cont'd				See Page	4
0111	Moisture	14.6		0.080	% by wt.	

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Dr. Garet Van De Steeg
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
15:24:45 D 0003 15 0 129915 557239
890 0.00 00049920 ASR000



Lancaster Laboratories
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717-656-2300 Fax 717-656-2681

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS





LLI Sample No. SW 2679079

Collected: 3/15/97 at 15:00 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-05/10.5-12.5 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

05-10 SDG#: HMS04-07

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Volatiles by 8240						
3434	Chloromethane	N.D.	10.	ug/kg	N.D.	12.
3435	Bromomethane	N.D.	15.	ug/kg	N.D.	18.
3436	Vinyl Chloride	N.D.	10.	ug/kg	N.D.	12.
3437	Chloroethane	N.D.	15.	ug/kg	N.D.	18.
3440	Methylene Chloride	N.D.	10.	ug/kg	N.D.	12.
4074	Acetone	100.	35.	ug/kg	120.	41.
4076	Carbon Disulfide	N.D.	15.	ug/kg	N.D.	18.
1180	1,1-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.
3442	1,1-Dichloroethane	N.D.	5.	ug/kg	N.D.	6.
3444	Chloroform	N.D.	5.	ug/kg	N.D.	6.
3445	1,2-Dichloroethane	N.D.	10.	ug/kg	N.D.	12.
4085	2-Butanone	N.D.	35.	ug/kg	N.D.	41.
3446	1,1,1-Trichloroethane	N.D.	5.	ug/kg	N.D.	6.
3447	Carbon Tetrachloride	N.D.	5.	ug/kg	N.D.	6.
4091	Vinyl Acetate	N.D.	15.	ug/kg	N.D.	18.
3448	Bromodichloromethane	N.D.	10.	ug/kg	N.D.	12.
3450	1,2-Dichloropropane	N.D.	15.	ug/kg	N.D.	18.
3454	cis-1,3-Dichloropropene	N.D.	5.	ug/kg	N.D.	6.
1181	Trichloroethene	N.D.	5.	ug/kg	N.D.	6.
3452	Dibromochloromethane	N.D.	5.	ug/kg	N.D.	6.
3453	1,1,2-Trichloroethane	N.D.	10.	ug/kg	N.D.	12.
1182	Benzene	7.	J	ug/kg	8.	J
3451	trans-1,3-Dichloropropene	N.D.	5.	ug/kg	N.D.	6.
3456	Bromoform	N.D.	5.	ug/kg	N.D.	6.
4108	4-Methyl-2-pentanone	N.D.	15.	ug/kg	N.D.	18.
4107	2-Hexanone	N.D.	15.	ug/kg	N.D.	18.
3457	Tetrachloroethene	N.D.	5.	ug/kg	N.D.	6.
3449	1,1,2,2-Tetrachloroethane	N.D.	5.	ug/kg	N.D.	6.
1183	Toluene	140.	5.	ug/kg	160.	6.
1184	Chlorobenzene	N.D.	5.	ug/kg	N.D.	6.
3458	Ethylbenzene	120.	5.	ug/kg	140.	6.
4117	Styrene	100.	5.	ug/kg	120.	6.
3355	Xylene (total)	780.	5.	ug/kg	910.	6.
6187	trans-1,2-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.
6277	cis-1,2-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



Lancaster Laboratories
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Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





LLI Sample No. 2679079
 CPT/SB-05/10.5-12.5 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3456	Bromoform										
5.	ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
15.	ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
15.	ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
5.	ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
5.	ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
5.	ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
5.	ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
5.	ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
5.	ug/kg	N.D.		98	101	3	101			74	136
355	Xylene (total)										
5.	ug/kg	N.D.		103	104	2	102			30	200
6187	trans-1,2-Dichloroethene										
10.	ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
10.	ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97078SLC026									
1185	phenol										
670.	ug/kg	N.D.		86	76	13	78			5	112
3753	bis (2-chloroethyl) ether										
1,300.	ug/kg	N.D.		88	77	14	84			12	158
1186	2-chlorophenol										
670.	ug/kg	N.D.		88	77	14	82			23	134
3754	1,3-dichlorobenzene										
670.	ug/kg	N.D.		81	74	10	82			1	172
1187	1,4-dichlorobenzene										
670.	ug/kg	N.D.		82	75	9	83			20	124
3755	1,2-dichlorobenzene										
670.	ug/kg	N.D.		85	77	10	83			32	129
4690	2-methylphenol										
1,300.	ug/kg	N.D.		79	70	11	76			46	123
4691	2,2'-oxybis (1-chloropropane)										
2,000.	ug/kg	N.D.		74	65	14	66			36	166
4692	4-methylphenol										
2,000.	ug/kg	N.D.		83	75	10	79			5	152
1188	N-nitrosodi-n-propylamine										
1,300.	ug/kg	N.D.		105	92	13	92			1	230
3757	hexachloroethane										
1,300.	ug/kg	N.D.		83	76	10	84			40	113



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations

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LLI Sample No. **2679079**
 CPT/SB-05/10.5-12.5 Grab Soil Sample
 Gulf States Creosoting; Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
670.	ug/kg	N.D.		90	80	12	89			35	180
3759	isophorone										
1,300.	ug/kg	N.D.		94	85	10	91			21	196
3746	2-nitrophenol										
1,300.	ug/kg	N.D.		90	79	13	87			29	182
3747	2,4-dimethylphenol										
1,300.	ug/kg	N.D.		29	28	2	60			32	119
3760	bis (2-chloroethoxy) methane										
670.	ug/kg	N.D.		85	76	11	83			33	184
3748	2,4-dichlorophenol										
670.	ug/kg	N.D.		84	74	12	79			39	135
1189	1,2,4-trichlorobenzene										
670.	ug/kg	N.D.		83	74	11	84			44	142
3761	naphthalene										
6,700.	ug/kg	N.D.		80	73	9	81			21	133
4693	4-chloroaniline										
2,000.	ug/kg	N.D.		37	27	32	40			17	116
3762	hexachlorobutadiene										
1,300.	ug/kg	N.D.		95	85	11	96			24	116
1190	4-chloro-3-methylphenol										
1,300.	ug/kg	N.D.		90	81	11	85			22	147
4694	2-methylnaphthalene										
6,700.	ug/kg	N.D.		85	77	10	82			28	123
3763	hexachlorocyclopentadiene										
3,300.	ug/kg	N.D.		81	72	13	76			1	100
3749	2,4,6-trichlorophenol										
1,300.	ug/kg	N.D.		88	78	13	88			37	144
4695	2,4,5-trichlorophenol										
1,300.	ug/kg	N.D.		91	79	14	87			39	151
3764	2-chloronaphthalene										
670.	ug/kg	N.D.		86	78	9	88			60	118
4696	2-nitroaniline										
1,300.	ug/kg	N.D.		87	76	14	82			53	143
3766	dimethyl phthalate										
670.	ug/kg	N.D.		85	75	12	84			1	112
3765	acenaphthylene										
670.	ug/kg	N.D.		85	77	10	85			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97078SLC026									

4697	3-nitroaniline										
1,300.	ug/kg	N.D.		51	42	19	46			7	143
1191	acenaphthene										
6,700.	ug/kg	N.D.		80	73	10	81			47	145
3750	2,4-dinitrophenol										
3,300.	ug/kg	N.D.		97	81	18	81			1	191
1192	4-nitrophenol										
3,300.	ug/kg	N.D.		93	79	16	82			1	132



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LLI Sample No. 2679079
CPT/SB-05/10.5-12.5 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
6,700.	ug/kg	N.D.		85	76	10	84			28	131
1193	2,4-dinitrotoluene										
1,300.	ug/kg	N.D.		92	79	15	88			39	139
4699	2,6-dinitrotoluene										
1,300.	ug/kg	N.D.		92	80	14	88			50	158
3770	diethyl phthalate										
1,300.	ug/kg	N.D.		86	76	13	85			1	114
3769	4-chlorophenyl phenyl ether										
1,300.	ug/kg	N.D.		81	74	9	82			25	158
3768	fluorene										
6,700.	ug/kg	N.D.		82	75	9	84			59	121
4700	4-nitroaniline										
2,000.	ug/kg	N.D.		76	61	21	73			38	122
4701	4,6-dinitro-2-methylphenol										
3,300.	ug/kg	N.D.		91	77	17	81			1	181
3772	N-nitrosodiphenylamine										
1,300.	ug/kg	N.D.		82	72	12	86			38	147
773	4-bromophenyl phenyl ether										
2,000.	ug/kg	N.D.		93	81	14	87			53	127
774	hexachlorobenzene										
2,000.	ug/kg	N.D.		97	84	14	90			1	152
1194	pentachlorophenol										
3,300.	ug/kg	N.D.		97	82	17	80			14	176
3775	phenanthrene										
6,700.	ug/kg	N.D.		86	76	13	86			54	120
3776	anthracene										
670.	ug/kg	N.D.		83	73	13	84			27	133
4702	carbazole										
670.	ug/kg	N.D.		91	80	12	89			35	133
3777	di-n-butyl phthalate										
670.	ug/kg	N.D.		93	80	15	90			1	118
3778	fluoranthene										
6,700.	ug/kg	N.D.		95	82	14	89			26	137
1195	pyrene										
13,000.	ug/kg	N.D.		80	69	14	97			52	115
3780	butyl benzyl phthalate										
1,300.	ug/kg	N.D.		86	74	15	96			1	152
3783	3,3'-dichlorobenzidine										
2,700.	ug/kg	N.D.		49	21	81	70			1	262
3781	benzo (a) anthracene										
670.	ug/kg	N.D.		86	75	13	87			33	143
3784	bis (2-ethylhexyl) phthalate										
1,300.	ug/kg	N.D.		89	75	16	95			8	158
3782	chrysene										
670.	ug/kg	N.D.		90	79	13	90			17	168
3785	di-n-octyl phthalate										
1,300.	ug/kg	N.D.		91	75	19	93			4	146
3786	benzo (b) fluoranthene										
1,300.	ug/kg	N.D.		87	75	15	84			24	159



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LLI Sample No. **2679079**
 CPT/SB-05/10.5-12.5 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3787	benzo (k) fluoranthene										
2,700.	ug/kg	N.D.		92	81	13	89			11	163
3788	benzo (a) pyrene										
1,300.	ug/kg	N.D.		84	73	14	82			17	163
3789	indeno (1,2,3-cd) pyrene										
1,300.	ug/kg	N.D.		96	79	19	95			1	171
3790	dibenz (a,h) anthracene										
1,300.	ug/kg	N.D.		98	81	18	96			1	227
3791	benzo (ghi) perylene										
1,300.	ug/kg	N.D.		89	79	13	89			1	219
0111	Moisture	Batch: 970780316820003A	3								
0.080	% by wt.						100	100	0	100	101





LLI Sample No. **2679079**
 CPT/SB-05/10.5-12.5 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	98	70	121
	d8-toluene	102	81	117
	4-BFB	99	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	93	24	113
	2-F1phenol	89	25	121
	2,4,6-TBP	97	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	78	23	120
	2-Fbiphenyl	99	30	115
	Tphenyld14	103	18	137

LLI Sample No. **2679079**
CPT/SB-05/10.5-12.5 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
5.	ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
15.	ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
15.	ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
5.	ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
5.	ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
5.	ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
5.	ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
5.	ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
5.	ug/kg	N.D.		98	101	3	101			74	136
355	Xylene (total)										
5.	ug/kg	N.D.		103	104	2	102			30	200
187	trans-1,2-Dichloroethene										
10.	ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
10.	ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97078SLC026									

1185	phenol										
670.	ug/kg	N.D.		86	76	13	78			5	112
3753	bis (2-chloroethyl) ether										
1,300.	ug/kg	N.D.		88	77	14	84			12	158
1186	2-chlorophenol										
670.	ug/kg	N.D.		88	77	14	82			23	134
3754	1,3-dichlorobenzene										
670.	ug/kg	N.D.		81	74	10	82			1	172
1187	1,4-dichlorobenzene										
670.	ug/kg	N.D.		82	75	9	83			20	124
3755	1,2-dichlorobenzene										
670.	ug/kg	N.D.		85	77	10	83			32	129
4690	2-methylphenol										
1,300.	ug/kg	N.D.		79	70	11	76			46	123
4691	2,2'-oxybis (1-chloropropane)										
2,000.	ug/kg	N.D.		74	65	14	66			36	166
4692	4-methylphenol										
2,000.	ug/kg	N.D.		83	75	10	79			5	152
1188	N-nitrosodi-n-propylamine										
1,300.	ug/kg	N.D.		105	92	13	92			1	230
3757	hexachloroethane										
1,300.	ug/kg	N.D.		83	76	10	84			40	113



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LLI Sample No. **2679079**
 CPT/SB-05/10.5-12.5 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
670.	ug/kg	N.D.		90	80	12	89			35	180
3759	isophorone										
1,300.	ug/kg	N.D.		94	85	10	91			21	196
3746	2-nitrophenol										
1,300.	ug/kg	N.D.		90	79	13	87			29	182
3747	2,4-dimethylphenol										
1,300.	ug/kg	N.D.		29	28	2	60			32	119
3760	bis (2-chloroethoxy) methane										
670.	ug/kg	N.D.		85	76	11	83			33	184
3748	2,4-dichlorophenol										
670.	ug/kg	N.D.		84	74	12	79			39	135
1189	1,2,4-trichlorobenzene										
670.	ug/kg	N.D.		83	74	11	84			44	142
3761	naphthalene										
6,700.	ug/kg	N.D.		80	73	9	81			21	133
4693	4-chloroaniline										
2,000.	ug/kg	N.D.		37	27	32	40			17	116
3762	hexachlorobutadiene										
1,300.	ug/kg	N.D.		95	85	11	96			24	116
1190	4-chloro-3-methylphenol										
1,300.	ug/kg	N.D.		90	81	11	85			22	147
4694	2-methylnaphthalene										
6,700.	ug/kg	N.D.		85	77	10	82			28	123
3763	hexachlorocyclopentadiene										
3,300.	ug/kg	N.D.		81	72	13	76			1	100
3749	2,4,6-trichlorophenol										
1,300.	ug/kg	N.D.		88	78	13	88			37	144
4695	2,4,5-trichlorophenol										
1,300.	ug/kg	N.D.		91	79	14	87			39	151
3764	2-chloronaphthalene										
670.	ug/kg	N.D.		86	78	9	88			60	118
4696	2-nitroaniline										
1,300.	ug/kg	N.D.		87	76	14	82			53	143
3766	dimethyl phthalate										
670.	ug/kg	N.D.		85	75	12	84			1	112
3765	acenaphthylene										
670.	ug/kg	N.D.		85	77	10	85			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97078SLC026									

4697	3-nitroaniline										
1,300.	ug/kg	N.D.		51	42	19	46			7	143
1191	acenaphthene										
6,700.	ug/kg	N.D.		80	73	10	81			47	145
3750	2,4-dinitrophenol										
3,300.	ug/kg	N.D.		97	81	18	81			1	191
1192	4-nitrophenol										
3,300.	ug/kg	N.D.		93	79	16	82			1	132



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LLI Sample No. **2679079**
CPT/SB-05/10.5-12.5 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
6,700.	ug/kg	N.D.		85	76	10	84			28	131
1193	2,4-dinitrotoluene										
1,300.	ug/kg	N.D.		92	79	15	88			39	139
4699	2,6-dinitrotoluene										
1,300.	ug/kg	N.D.		92	80	14	88			50	158
3770	diethyl phthalate										
1,300.	ug/kg	N.D.		86	76	13	85			1	114
3769	4-chlorophenyl phenyl ether										
1,300.	ug/kg	N.D.		81	74	9	82			25	158
3768	fluorene										
6,700.	ug/kg	N.D.		82	75	9	84			59	121
4700	4-nitroaniline										
2,000.	ug/kg	N.D.		76	61	21	73			38	122
4701	4,6-dinitro-2-methylphenol										
3,300.	ug/kg	N.D.		91	77	17	81			1	181
3772	N-nitrosodiphenylamine										
1,300.	ug/kg	N.D.		82	72	12	86			38	147
773	4-bromophenyl phenyl ether										
2,000.	ug/kg	N.D.		93	81	14	87			53	127
774	hexachlorobenzene										
2,000.	ug/kg	N.D.		97	84	14	90			1	152
1194	pentachlorophenol										
3,300.	ug/kg	N.D.		97	82	17	80			14	176
3775	phenanthrene										
6,700.	ug/kg	N.D.		86	76	13	86			54	120
3776	anthracene										
670.	ug/kg	N.D.		83	73	13	84			27	133
4702	carbazole										
670.	ug/kg	N.D.		91	80	12	89			35	133
3777	di-n-butyl phthalate										
670.	ug/kg	N.D.		93	80	15	90			1	118
3778	fluoranthene										
6,700.	ug/kg	N.D.		95	82	14	89			26	137
1195	pyrene										
13,000.	ug/kg	N.D.		80	69	14	97			52	115
3780	butyl benzyl phthalate										
1,300.	ug/kg	N.D.		86	74	15	96			1	152
3783	3,3'-dichlorobenzidine										
2,700.	ug/kg	N.D.		49	21	81	70			1	262
3781	benzo (a) anthracene										
670.	ug/kg	N.D.		86	75	13	87			33	143
3784	bis (2-ethylhexyl) phthalate										
1,300.	ug/kg	N.D.		89	75	16	95			8	158
3782	chrysene										
670.	ug/kg	N.D.		90	79	13	90			17	168
3785	di-n-octyl phthalate										
1,300.	ug/kg	N.D.		91	75	19	93			4	146
3786	benzo (b) fluoranthene										
1,300.	ug/kg	N.D.		87	75	15	84			24	159



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LLI Sample No. **2679079**
 CPT/SB-05/10.5-12.5 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3787	benzo (k) fluoranthene										
2,700.	ug/kg	N.D.		92	81	13	89			11	163
3788	benzo (a) pyrene										
1,300.	ug/kg	N.D.		84	73	14	82			17	163
3789	indeno (1,2,3-cd) pyrene										
1,300.	ug/kg	N.D.		96	79	19	95			1	171
3790	dibenz (a,h) anthracene										
1,300.	ug/kg	N.D.		98	81	18	96			1	227
3791	benzo (ghi) perylene										
1,300.	ug/kg	N.D.		89	79	13	89			1	219
0111	Moisture	Batch: 970780316820003A	3					100	100	0	100
0.080	% by wt.										101





LLI Sample No. 2679079
 CPT/SB-05/10.5-12.5 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	98	70	121
	d8-toluene	102	81	117
	4-BFB	99	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	93	24	113
	2-Flphenol	89	25	121
	2,4,6-TBP	97	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	78	23	120
	2-Fbiphenyl	99	30	115
	Tphenylid14	103	18	137



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LLI Sample No. SW 2679073

Collected: 3/15/97 at 09:40 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

CPT/SB-01/8-10 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

01--8 SDG#: HMS04-01

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
4593	TCL Volatiles				See Page	2
4688	TCL Semivolatiles				See Page	3
4689	TCL Semivolatiles cont'd				See Page	4
0111	Moisture	14.3		0.080	% by wt.	
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Dr. Garet Van De Steeg
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
14:27:46 D 0003 15 0 129915 557239
890 0.00 00049920 ASR000



Lancaster Laboratories
2425 New Holland Pike
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Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS





LLI Sample No. SW 2679073
 Collected: 3/15/97 at 09:40 by DU
 Submitted: 3/18/97 Reported: 4/15/97
 Discard: 4/30/97
 CPT/SB-01/8-10 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS
 01--8 SDG#: HMS04-01

Account No: 07802
 Kerr-McGee Corporation
 PO Box 25861
 Oklahoma City, OK 73125-0861

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Volatiles by 8240						
3434	Chloromethane	N.D.	2.	ug/kg	N.D.	2.
3435	Bromomethane	N.D.	3.	ug/kg	N.D.	4.
3436	Vinyl Chloride	N.D.	2.	ug/kg	N.D.	2.
3437	Chloroethane	N.D.	3.	ug/kg	N.D.	4.
3440	Methylene Chloride	N.D.	2.	ug/kg	N.D.	2.
4074	Acetone	59.	7.	ug/kg	68.	8.
4076	Carbon Disulfide	N.D.	3.	ug/kg	N.D.	4.
1180	1,1-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.
3442	1,1-Dichloroethane	N.D.	1.	ug/kg	N.D.	1.
3444	Chloroform	N.D.	1.	ug/kg	N.D.	1.
3445	1,2-Dichloroethane	N.D.	2.	ug/kg	N.D.	2.
4085	2-Butanone	N.D.	7.	ug/kg	N.D.	8.
3446	1,1,1-Trichloroethane	N.D.	1.	ug/kg	N.D.	1.
3447	Carbon Tetrachloride	N.D.	1.	ug/kg	N.D.	1.
4091	Vinyl Acetate	N.D.	3.	ug/kg	N.D.	4.
3448	Bromodichloromethane	N.D.	2.	ug/kg	N.D.	2.
3450	1,2-Dichloropropane	N.D.	3.	ug/kg	N.D.	4.
3454	cis-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
1181	Trichloroethene	N.D.	1.	ug/kg	N.D.	1.
3452	Dibromochloromethane	N.D.	1.	ug/kg	N.D.	1.
3453	1,1,2-Trichloroethane	N.D.	2.	ug/kg	N.D.	2.
1182	Benzene	N.D.	1.	ug/kg	N.D.	1.
3451	trans-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
3456	Bromoform	N.D.	1.	ug/kg	N.D.	1.
4108	4-Methyl-2-pentanone	N.D.	3.	ug/kg	N.D.	4.
4107	2-Hexanone	N.D.	3.	ug/kg	N.D.	4.
3457	Tetrachloroethene	N.D.	1.	ug/kg	N.D.	1.
3449	1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	N.D.	1.
1183	Toluene	N.D.	1.	ug/kg	N.D.	1.
1184	Chlorobenzene	N.D.	1.	ug/kg	N.D.	1.
3458	Ethylbenzene	N.D.	1.	ug/kg	N.D.	1.
4117	Styrene	N.D.	1.	ug/kg	N.D.	1.
3355	Xylene (total)	N.D.	1.	ug/kg	N.D.	1.
6187	trans-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.
6277	cis-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96





LLI Sample No. SW 2679073

Collected: 3/15/97 at 09:40 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-01/8-10 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

01--8 SDG#: HMS04-01

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles Soil							
1185	phenol	N.D.	33.	ug/kg	N.D.		39.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.		78.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.		39.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.		39.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.		39.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.		39.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.		78.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.		120.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.		120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.		78.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.		78.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.		39.
3759	isophorone	N.D.	67.	ug/kg	N.D.		78.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.		78.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.		78.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.		39.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.		39.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.		39.
3761	naphthalene	N.D.	33.	ug/kg	N.D.		39.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.		120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.		78.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.		78.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.		39.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.		190.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.		78.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.		78.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.		39.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.		78.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.		39.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.		39.

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Respectfully Submitted
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Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2679073

Collected: 3/15/97 at 09:40 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-01/8-10 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

01--8 SDG#: HMS04-01

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.		67. ug/kg	N.D.	78.
1191	acenaphthene	N.D.		33. ug/kg	N.D.	39.
3750	2,4-dinitrophenol	N.D.		170. ug/kg	N.D.	190.
1192	4-nitrophenol	N.D.		170. ug/kg	N.D.	190.
4698	dibenzofuran	N.D.		33. ug/kg	N.D.	39.
1193	2,4-dinitrotoluene	N.D.		67. ug/kg	N.D.	78.
4699	2,6-dinitrotoluene	N.D.		67. ug/kg	N.D.	78.
3770	diethyl phthalate	120.	J	67. ug/kg	140.	J
3769	4-chlorophenyl phenyl ether	N.D.		67. ug/kg	N.D.	78.
3768	fluorene	N.D.		33. ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.		100. ug/kg	N.D.	120.
4701	4,6-dinitro-2-methylphenol	N.D.		170. ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.		67. ug/kg	N.D.	78.
3773	4-bromophenyl phenyl ether	N.D.		100. ug/kg	N.D.	120.
3774	hexachlorobenzene	N.D.		100. ug/kg	N.D.	120.
1194	pentachlorophenol	N.D.		170. ug/kg	N.D.	190.
3775	phenanthrene	N.D.		33. ug/kg	N.D.	39.
3776	anthracene	N.D.		33. ug/kg	N.D.	39.
4702	carbazole	N.D.		33. ug/kg	N.D.	39.
3777	di-n-butyl phthalate	N.D.		33. ug/kg	N.D.	39.
3778	fluoranthene	N.D.		33. ug/kg	N.D.	39.
1195	pyrene	N.D.		67. ug/kg	N.D.	78.
3780	butyl benzyl phthalate	N.D.		67. ug/kg	N.D.	78.
3783	3,3'-dichlorobenzidine	N.D.		130. ug/kg	N.D.	160.
3781	benzo (a) anthracene	N.D.		33. ug/kg	N.D.	39.
3784	bis (2-ethylhexyl) phthalate	98.	J	67. ug/kg	110.	J
3782	chrysene	N.D.		33. ug/kg	N.D.	39.
3785	di-n-octyl phthalate	N.D.		67. ug/kg	N.D.	78.
3786	benzo (b) fluoranthene	N.D.		67. ug/kg	N.D.	78.
3787	benzo (k) fluoranthene	N.D.		130. ug/kg	N.D.	160.
3788	benzo (a) pyrene	N.D.		67. ug/kg	N.D.	78.
3789	indeno (1,2,3-cd) pyrene	N.D.		67. ug/kg	N.D.	78.
3790	dibenz (a,h) anthracene	N.D.		67. ug/kg	N.D.	78.
3791	benzo (ghi) perylene	N.D.		67. ug/kg	N.D.	78.

Questions? Contact your Client Services Representative
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Respectfully Submitted
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Senior Chemist, GC/MS





LLI Sample No. SW 2679073
Collected: 3/15/97 at 09:40 by DU
Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

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Ref.

CPT/SB-01/8-10 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

01--8 SDG#: HMS04-01

CAT		AS RECEIVED		DRY WEIGHT
NO.	ANALYSIS NAME	RESULTS	METHOD DETECTION LIMIT UNITS	RESULTS METHOD DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.

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Respectfully Submitted
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Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2679073

Collected: 03/15/97 at 09:40 by DU

Submitted: 03/18/97

CPT/SB-01/8-10 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

01--8 SDG#: HMS04-01

Account No: 07802
Kerr-McGee Corporation
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Oklahoma City, OK 73125-0861

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/24/97 1100	Robin C. Runkle
0381	BNA Soil Extraction	SW-846 3550A	1	03/19/97 1650	Sherry Lynn Devlin
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/26/97 2051	David J. Evans
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/26/97 2051	David J. Evans
0111	Moisture	EPA 160.3 modified	1	03/19/97 1755	NeeJay B. Mehta



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LLI Sample No. **2679073**
CPT/SB-01/8-10 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4593 TCL Volatiles by 8240		Batch: G970801AA									

3434	Chloromethane										
	2. ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
	3. ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
	2. ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
	3. ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
	2. ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
	7. ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
	3. ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
	2. ug/kg	N.D.		107	113	5	111			1	233
142	1,1-Dichloroethane										
	1. ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
	1. ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
	2. ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
	7. ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
	1. ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
	1. ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
	3. ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
	2. ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
	3. ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
	1. ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
	1. ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
	1. ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
	2. ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
	1. ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
	1. ug/kg	N.D.		91	96	6	88			17	183



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LLI Sample No. **2679073**
 CPT/SB-01/8-10 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
	1. ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
	3. ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
	3. ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
	1. ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
	1. ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
	1. ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
	1. ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
	1. ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
	1. ug/kg	N.D.		98	101	3	101			74	136
355	Xylene (total)										
	1. ug/kg	N.D.		103	104	2	102			30	200
6187	trans-1,2-Dichloroethene										
	2. ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
	2. ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97078SLC026									

1185	phenol										
	33. ug/kg	N.D.		86	76	13	78			5	112
3753	bis (2-chloroethyl) ether										
	67. ug/kg	N.D.		88	77	14	84			12	158
1186	2-chlorophenol										
	33. ug/kg	N.D.		88	77	14	82			23	134
3754	1,3-dichlorobenzene										
	33. ug/kg	N.D.		81	74	10	82			1	172
1187	1,4-dichlorobenzene										
	33. ug/kg	N.D.		82	75	9	83			20	124
3755	1,2-dichlorobenzene										
	33. ug/kg	N.D.		85	77	10	83			32	129
4690	2-methylphenol										
	67. ug/kg	N.D.		79	70	11	76			46	123
4691	2,2'-oxybis (1-chloropropane)										
	100. ug/kg	N.D.		74	65	14	66			36	166
4692	4-methylphenol										
	100. ug/kg	N.D.		83	75	10	79			5	152
1188	N-nitrosodi-n-propylamine										
	67. ug/kg	N.D.		105	92	13	92			1	230
3757	hexachloroethane										
	67. ug/kg	N.D.		83	76	10	84			40	113



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2679073
 CPT/SB-01/8-10 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
33.	ug/kg	N.D.		90	80	12	89			35	180
3759	isophorone										
67.	ug/kg	N.D.		94	85	10	91			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		90	79	13	87			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		29	28	2	60			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		85	76	11	83			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		84	74	12	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		83	74	11	84			44	142
3761	naphthalene										
33.	ug/kg	N.D.		80	73	9	81			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		37	27	32	40			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	85	11	96			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		90	81	11	85			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		85	77	10	82			28	123
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		81	72	13	76			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		88	78	13	88			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		91	79	14	87			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		86	78	9	88			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		87	76	14	82			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		85	75	12	84			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		85	77	10	85			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97078SLC026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	42	19	46			7	143
1191	acenaphthene										
33.	ug/kg	N.D.		80	73	10	81			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		97	81	18	81			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	79	16	82			1	132



Lancaster Laboratories
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 717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations

2216 Rev 5/01/96



LLI Sample No. **2679073**
 CPT/SB-01/8-10 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
33.	ug/kg	N.D.		85	76	10	84			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	79	15	88			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		92	80	14	88			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		86	76	13	85			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		81	74	9	82			25	158
3768	fluorene										
33.	ug/kg	N.D.		82	75	9	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		76	61	21	73			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		91	77	17	81			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		82	72	12	86			38	147
773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		93	81	14	87			53	127
774	hexachlorobenzene										
100.	ug/kg	N.D.		97	84	14	90			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		97	82	17	80			14	176
3775	phenanthrene										
33.	ug/kg	N.D.		86	76	13	86			54	120
3776	anthracene										
33.	ug/kg	N.D.		83	73	13	84			27	133
4702	carbazole										
33.	ug/kg	N.D.		91	80	12	89			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		93	80	15	90			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		95	82	14	89			26	137
1195	pyrene										
67.	ug/kg	N.D.		80	69	14	97			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		86	74	15	96			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		49	21	81	70			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		86	75	13	87			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	75	16	95			8	158
3782	chrysene										
33.	ug/kg	N.D.		90	79	13	90			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		91	75	19	93			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		87	75	15	84			24	159



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96





LLI Sample No. 2679073
CPT/SB-01/8-10 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		92	81	13	89			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		84	73	14	82			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		96	79	19	95			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		98	81	18	96			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		89	79	13	89			1	219
0111	Moisture	Batch: 970780316820003A									
0.080	% by wt.		3				100	100	0	100	101



Lancaster Laboratories
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2216 Rev 5/01/96





LLI Sample No. 2679073
 CPT/SB-01/8-10 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	100	70	121
	d8-toluene	100	81	117
	4-BFB	102	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	81	24	113
	2-Flphenol	72	25	121
	2,4,6-TBP	84	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	88	23	120
	2-Fbiphenyl	84	30	115
	Tphenylid14	85	18	137



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See reverse side for explanation of symbols and abbreviations.





Lancaster Laboratories

A division of Thermo Analytical Inc.

LLI Sample No. SW 2679074

Collected: 3/15/97 at 10:40 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-01/44-46 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

01-44 SDG#: HMS04-02

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	DETECTION	METHOD LIMIT UNITS	RESULTS	DETECTION	METHOD LIMIT
4593	TCL Volatiles			See Page			2
4688	TCL Semivolatiles			See Page			3
4689	TCL Semivolatiles cont'd			See Page			4
0111	Moisture	15.7	0.080	% by wt.			
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Dr. Garet Van De Steeg
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
14:34:28 D 0003 15 0 129915 557239
890 0.00 00049920 ASR000



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS





LLI Sample No. SW 2679074
Collected: 3/15/97 at 10:40 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

CPT/SB-01/44-46 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

01-44 SDG#: HMS04-02

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL Volatiles by 8240							
3434	Chloromethane	N.D.	2.	ug/kg	N.D.	2.	
3435	Bromomethane	N.D.	3.	ug/kg	N.D.	4.	
3436	Vinyl Chloride	N.D.	2.	ug/kg	N.D.	2.	
3437	Chloroethane	N.D.	3.	ug/kg	N.D.	4.	
3440	Methylene Chloride	N.D.	2.	ug/kg	N.D.	2.	
4074	Acetone	730.	35.	ug/kg	860.	42.	
4076	Carbon Disulfide	N.D.	3.	ug/kg	N.D.	4.	
1180	1,1-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.	
3442	1,1-Dichloroethane	N.D.	1.	ug/kg	N.D.	1.	
3444	Chloroform	N.D.	1.	ug/kg	N.D.	1.	
3445	1,2-Dichloroethane	N.D.	2.	ug/kg	N.D.	2.	
4085	2-Butanone	N.D.	7.	ug/kg	N.D.	8.	
3446	1,1,1-Trichloroethane	N.D.	1.	ug/kg	N.D.	1.	
3447	Carbon Tetrachloride	N.D.	1.	ug/kg	N.D.	1.	
4091	Vinyl Acetate	N.D.	3.	ug/kg	N.D.	4.	
3448	Bromodichloromethane	N.D.	2.	ug/kg	N.D.	2.	
3450	1,2-Dichloropropane	N.D.	3.	ug/kg	N.D.	4.	
3454	cis-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.	
1181	Trichloroethene	N.D.	1.	ug/kg	N.D.	1.	
3452	Dibromochloromethane	N.D.	1.	ug/kg	N.D.	1.	
3453	1,1,2-Trichloroethane	N.D.	2.	ug/kg	N.D.	1.	
1182	Benzene	N.D.	1.	ug/kg	N.D.	2.	
3451	trans-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.	
3456	Bromoform	N.D.	1.	ug/kg	N.D.	1.	
4108	4-Methyl-2-pentanone	N.D.	3.	ug/kg	N.D.	4.	
4107	2-Hexanone	N.D.	3.	ug/kg	N.D.	4.	
3457	Tetrachloroethene	N.D.	1.	ug/kg	N.D.	1.	
3449	1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	N.D.	1.	
1183	Toluene	N.D.	1.	ug/kg	N.D.	1.	
1184	Chlorobenzene	N.D.	1.	ug/kg	N.D.	1.	
3458	Ethylbenzene	N.D.	1.	ug/kg	N.D.	1.	
4117	Styrene	N.D.	1.	ug/kg	N.D.	1.	
3355	Xylene (total)	N.D.	1.	ug/kg	N.D.	1.	
6187	trans-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.	
6277	cis-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.	

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





LLI Sample No. SW 2679074
Collected: 3/15/97 at 10:40 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

CPT/SB-01/44-46 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

01-44 SDG#: HMS04-02

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Ret.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	40.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	79.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	40.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	79.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	79.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	79.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	40.
3759	isophorone	N.D.	67.	ug/kg	N.D.	79.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	79.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	79.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	40.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	40.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	40.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	79.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	79.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	40.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	79.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	79.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	40.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	40.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	40.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS





LLI Sample No. SW 2679074
 Collected: 3/15/97 at 10:40 by DU

Submitted: 3/18/97 Reported: 4/15/97
 Discard: 4/30/97

CPT/SB-01/44-46 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

01-44 SDG#: HMS04-02

Account No: 07802
 Kerr-McGee Corporation
 PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
 Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	40.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	200.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	40.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	79.
3768	fluorene	N.D.	33.	ug/kg	N.D.	40.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	120.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	79.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	120.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	120.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	40.
3776	anthracene	N.D.	33.	ug/kg	N.D.	40.
4702	carbazole	N.D.	33.	ug/kg	N.D.	40.
3777	di-n-butyl phthalate	N.D.	33.	ug/kg	N.D.	40.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	40.
1195	pyrene	N.D.	67.	ug/kg	N.D.	79.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	160.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	40.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	79.
3782	chrysene	N.D.	33.	ug/kg	N.D.	40.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3786	benzo (b) fluoranthene	N.D.	67.	ug/kg	N.D.	79.
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	160.
3788	benzo (a) pyrene	N.D.	67.	ug/kg	N.D.	79.
3789	indeno (1,2,3-cd) pyrene	N.D.	67.	ug/kg	N.D.	79.
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	79.
3791	benzo (ghi) perylene	N.D.	67.	ug/kg	N.D.	79.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Senior Chemist, GC/MS



LLI Sample No. SW 2679074

Collected: 3/15/97 at 10:40 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

CPT/SB-01/44-46 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

01-44 SDG#: HMS04-02

Account No: 07802 Kerr-McGee Corporation PO Box 25861 Oklahoma City, OK 73125-0861

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846	Semivolatiles/Soil				

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. SW 2679074

Collected: 03/15/97 at 10:40 by DU

Submitted: 03/18/97

CPT/SB-01/44-46 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

01-44 SDG#: HMS04-02

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/24/97 1207	Robin C. Runkle
0381	BNA Soil Extraction	SW-846 3550A	1	03/19/97 1650	Sherry Lynn Devlin
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/26/97 2145	David J. Evans
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/26/97 2145	David J. Evans
0111	Moisture	EPA 160.3 modified	1	03/19/97 1755	Neelay B. Mehta



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LLI Sample No. 2679074
 CPT/SB-01/44-46 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4593 TCL Volatiles by 8240		Batch: G970801AA									
3434	Chloromethane										
	2. ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
	3. ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
	2. ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
	3. ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
	2. ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
	35. ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
	3. ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
	2. ug/kg	N.D.		107	113	5	111			1	233
42	1,1-Dichloroethane										
	1. ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
	1. ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
	2. ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
	7. ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
	1. ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
	1. ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
	3. ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
	2. ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
	3. ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
	1. ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
	1. ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
	1. ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
	2. ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
	1. ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
	1. ug/kg	N.D.		91	96	6	88			17	183



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. **2679074**
CPT/SB-01/44-46 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
	1. ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
	3. ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
	3. ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
	1. ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
	1. ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
	1. ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
	1. ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
	1. ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
	1. ug/kg	N.D.		98	101	3	101			74	136
55	Xylene (total)										
	1. ug/kg	N.D.		103	104	2	102			30	200
6187	trans-1,2-Dichloroethene										
	2. ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
	2. ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97078SLC026									

1185	phenol										
	33. ug/kg	N.D.		86	76	13	78			5	112
3753	bis (2-chloroethyl) ether										
	67. ug/kg	N.D.		88	77	14	84			12	158
1186	2-chlorophenol										
	33. ug/kg	N.D.		88	77	14	82			23	134
3754	1,3-dichlorobenzene										
	33. ug/kg	N.D.		81	74	10	82			1	172
1187	1,4-dichlorobenzene										
	33. ug/kg	N.D.		82	75	9	83			20	124
3755	1,2-dichlorobenzene										
	33. ug/kg	N.D.		85	77	10	83			32	129
4690	2-methylphenol										
	67. ug/kg	N.D.		79	70	11	76			46	123
4691	2,2'-oxybis (1-chloropropane)										
	100. ug/kg	N.D.		74	65	14	66			36	166
4692	4-methylphenol										
	100. ug/kg	N.D.		83	75	10	79			5	152
1188	N-nitrosodi-n-propylamine										
	67. ug/kg	N.D.		105	92	13	92			1	230
3757	hexachloroethane										
	67. ug/kg	N.D.		83	76	10	84			40	113



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LLI Sample No. 2679074
 CPT/SB-01/44-46 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3758	nitrobenzene										
33.	ug/kg	N.D.		90	80	12	89			35	180
3759	isophorone										
67.	ug/kg	N.D.		94	85	10	91			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		90	79	13	87			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		29	28	2	60			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		85	76	11	83			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		84	74	12	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		83	74	11	84			44	142
3761	naphthalene										
33.	ug/kg	N.D.		80	73	9	81			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		37	27	32	40			17	116
52	hexachlorobutadiene										
67.	ug/kg	N.D.		95	85	11	96			24	116
90	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		90	81	11	85			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		85	77	10	82			28	123
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		81	72	13	76			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		88	78	13	88			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		91	79	14	87			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		86	78	9	88			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		87	76	14	82			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		85	75	12	84			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		85	77	10	85			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97078SLC026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	42	19	46			7	143
1191	acenaphthene										
33.	ug/kg	N.D.		80	73	10	81			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		97	81	18	81			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	79	16	82			1	132



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2216 Rev. 5/01/96





LLI Sample No. **2679074**
CPT/SB-01/44-46 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
33.	ug/kg	N.D.		85	76	10	84			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	79	15	88			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		92	80	14	88			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		86	76	13	85			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		81	74	9	82			25	158
3768	fluorene										
33.	ug/kg	N.D.		82	75	9	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		76	61	21	73			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		91	77	17	81			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		82	72	12	86			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		93	81	14	87			53	127
74	hexachlorobenzene										
100.	ug/kg	N.D.		97	84	14	90			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		97	82	17	80			14	176
3775	phenanthrene										
33.	ug/kg	N.D.		86	76	13	86			54	120
3776	anthracene										
33.	ug/kg	N.D.		83	73	13	84			27	133
4702	carbazole										
33.	ug/kg	N.D.		91	80	12	89			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		93	80	15	90			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		95	82	14	89			26	137
1195	pyrene										
67.	ug/kg	N.D.		80	69	14	97			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		86	74	15	96			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		49	21	81	70			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		86	75	13	87			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	75	16	95			8	158
3782	chrysene										
33.	ug/kg	N.D.		90	79	13	90			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		91	75	19	93			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		87	75	15	84			24	159



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LLI Sample No. **2679074**
 CPT/SB-01/44-46 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3787	benzo (k) fluoranthene 130. ug/kg	N.D.		92	81	13	89			11	163
3788	benzo (a) pyrene 67. ug/kg	N.D.		84	73	14	82			17	163
3789	indeno (1,2,3-cd) pyrene 67. ug/kg	N.D.		96	79	19	95			1	171
3790	dibenz (a,h) anthracene 67. ug/kg	N.D.		98	81	18	96			1	227
3791	benzo (ghi) perylene 67. ug/kg	N.D.		89	79	13	89			1	219
0111	Moisture 0.080 % by wt.	Batch: 970780316820003A	3				100	100	0	100	101



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LLI Sample No. **2679074**
CPT/SB-01/44-46 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	93	70	121
	d8-toluene	95	81	117
	4-BFB	93	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	71	24	113
	2-Flphenol	65	25	121
	2,4,6-TBP	78	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	87	23	120
	2-Fbiphenyl	82	30	115
	Tphenylid14	82	18	137



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2216 Rev. 5/01/96



LLI Sample No. SW 2679075

Collected: 3/15/97 at 11:40 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

CPT/SB-02/9-11 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

02--9 SDG#: HMS04-03

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4593	TCL Volatiles				See Page	2
4688	TCL Semivolatiles				See Page	3
4689	TCL Semivolatiles cont'd				See Page	4
0111	Moisture	14.6		0.080	% by wt.	
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Dr. Garet Van De Steeg
ATTN: Mr. David Uptegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
14:38:48 D 0003 15 0 129915 557239
890 0.00 00049920 ASR000



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS





LLI Sample No. SW 2679075

Collected: 3/15/97 at 11:40 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-02/9-11 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

02--9 SDG#: HMS04-03

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL Volatiles by 8240							
3434	Chloromethane	N.D.	2.	ug/kg	N.D.	2.	
3435	Bromomethane	N.D.	3.	ug/kg	N.D.	4.	
3436	Vinyl Chloride	N.D.	2.	ug/kg	N.D.	2.	
3437	Chloroethane	N.D.	3.	ug/kg	N.D.	4.	
3440	Methylene Chloride	N.D.	2.	ug/kg	N.D.	2.	
4074	Acetone	9.	J	7.	10.	J	8.
4076	Carbon Disulfide	N.D.	3.	ug/kg	N.D.	4.	
1180	1,1-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.	
3442	1,1-Dichloroethane	N.D.	1.	ug/kg	N.D.	1.	
3444	Chloroform	N.D.	1.	ug/kg	N.D.	1.	
3445	1,2-Dichloroethane	N.D.	2.	ug/kg	N.D.	2.	
4085	2-Butanone	N.D.	7.	ug/kg	N.D.	8.	
3446	1,1,1-Trichloroethane	N.D.	1.	ug/kg	N.D.	1.	
3447	Carbon Tetrachloride	N.D.	1.	ug/kg	N.D.	1.	
4091	Vinyl Acetate	N.D.	3.	ug/kg	N.D.	4.	
3448	Bromodichloromethane	N.D.	2.	ug/kg	N.D.	2.	
3450	1,2-Dichloropropane	N.D.	3.	ug/kg	N.D.	4.	
3454	cis-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.	
1181	Trichloroethene	N.D.	1.	ug/kg	N.D.	1.	
3452	Dibromochloromethane	N.D.	1.	ug/kg	N.D.	1.	
3453	1,1,2-Trichloroethane	N.D.	2.	ug/kg	N.D.	2.	
1182	Benzene	N.D.	1.	ug/kg	N.D.	1.	
3451	trans-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.	
3456	Bromoform	N.D.	1.	ug/kg	N.D.	1.	
4108	4-Methyl-2-pentanone	N.D.	3.	ug/kg	N.D.	4.	
4107	2-Hexanone	N.D.	3.	ug/kg	N.D.	4.	
3457	Tetrachloroethene	N.D.	1.	ug/kg	N.D.	1.	
3449	1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	N.D.	1.	
1183	Toluene	13.	1.	ug/kg	15.	1.	
1184	Chlorobenzene	N.D.	1.	ug/kg	N.D.	1.	
3458	Ethylbenzene	46.	1.	ug/kg	54.	1.	
4117	Styrene	N.D.	1.	ug/kg	N.D.	1.	
3355	Xylene (total)	280.	1.	ug/kg	330.	1.	
6187	trans-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.	
6277	cis-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.	

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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LLI Sample No. SW 2679075

Collected: 3/15/97 at 11:40 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-02/9-11 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

02--9 SDG#: HMS04-03

Account No: 07802
Kerr-McGee Corporation
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P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.		170.	ug/kg	N.D.
3753	bis (2-chloroethyl) ether	N.D.		330.	ug/kg	N.D.
1186	2-chloropheno	N.D.		170.	ug/kg	N.D.
3754	1,3-dichlorobenzene	N.D.		170.	ug/kg	N.D.
1187	1,4-dichlorobenzene	N.D.		170.	ug/kg	N.D.
3755	1,2-dichlorobenzene	N.D.		170.	ug/kg	N.D.
4690	2-methylphenol	N.D.		330.	ug/kg	N.D.
4691	2,2'-oxybis (1-chloropropane)	N.D.		500.	ug/kg	N.D.
4692	4-methylphenol	N.D.		500.	ug/kg	N.D.
1188	N-nitrosodi-n-propylamine	N.D.		330.	ug/kg	N.D.
3757	hexachloroethane	N.D.		330.	ug/kg	N.D.
3758	nitrobenzene	N.D.		170.	ug/kg	N.D.
3759	isophorone	N.D.		330.	ug/kg	N.D.
3746	2-nitrophenol	N.D.		330.	ug/kg	N.D.
3747	2,4-dimethylphenol	N.D.		330.	ug/kg	N.D.
3760	bis (2-chloroethoxy) methane	N.D.		170.	ug/kg	N.D.
3748	2,4-dichloropheno	N.D.		170.	ug/kg	N.D.
1189	1,2,4-trichlorobenzene	N.D.		170.	ug/kg	N.D.
3761	naphthalene	180,000.		1,700.	ug/kg	210,000.
4693	4-chloroaniline	N.D.		500.	ug/kg	N.D.
3762	hexachlorobutadiene	N.D.		330.	ug/kg	N.D.
1190	4-chloro-3-methylphenol	N.D.		330.	ug/kg	N.D.
4694	2-methylnaphthalene	79,000.		1,700.	ug/kg	93,000.
3763	hexachlorocyclopentadiene	N.D.		830.	ug/kg	N.D.
3749	2,4,6-trichloropheno	N.D.		330.	ug/kg	N.D.
4695	2,4,5-trichloropheno	N.D.		330.	ug/kg	N.D.
3764	2-chloronaphthalene	N.D.		170.	ug/kg	N.D.
4696	2-nitroaniline	N.D.		330.	ug/kg	N.D.
3766	dimethyl phthalate	N.D.		170.	ug/kg	N.D.
3765	acenaphthylene	840.	J	170.	ug/kg	990. J

Questions? Contact your Client Services Representative
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Respectfully Submitted
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Senior Chemist, GC/MS



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2216 Rev. 5/01/96



LLI Sample No. SW 2679075

Collected: 3/15/97 at 11:40 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-02/9-11 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

02--9 SDG#: HMS04-03

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

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CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil					DETECTION LIMIT	
4697	3-nitroaniline	N.D.	330.	ug/kg	N.D.	390.
1191	acenaphthene	26,000.	170.	ug/kg	30,000.	200.
3750	2,4-dinitrophenol	N.D.	830.	ug/kg	N.D.	980.
1192	4-nitrophenol	N.D.	830.	ug/kg	N.D.	980.
4698	dibenzofuran	26,000.	170.	ug/kg	31,000.	200.
1193	2,4-dinitrotoluene	N.D.	330.	ug/kg	N.D.	390.
4699	2,6-dinitrotoluene	N.D.	330.	ug/kg	N.D.	390.
3770	diethyl phthalate	N.D.	330.	ug/kg	N.D.	390.
3769	4-chlorophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	390.
3768	fluorene	47,000.	1,700.	ug/kg	55,000.	2,000.
4700	4-nitroaniline	N.D.	500.	ug/kg	N.D.	590.
4701	4,6-dinitro-2-methylphenol	N.D.	830.	ug/kg	N.D.	980.
3772	N-nitrosodiphenylamine	N.D.	330.	ug/kg	N.D.	390.
3773	4-bromophenyl phenyl ether	N.D.	500.	ug/kg	N.D.	590.
3774	hexachlorobenzene	N.D.	500.	ug/kg	N.D.	590.
1194	pentachlorophenol	N.D.	830.	ug/kg	N.D.	980.
3775	phenanthrene	110,000.	1,700.	ug/kg	130,000.	2,000.
3776	anthracene	18,000.	170.	ug/kg	21,000.	200.
4702	carbazole	11,000.	170.	ug/kg	13,000.	200.
3777	di-n-butyl phthalate	N.D.	170.	ug/kg	N.D.	200.
3778	fluoranthene	56,000.	1,700.	ug/kg	66,000.	2,000.
1195	pyrene	24,000.	330.	ug/kg	28,000.	390.
3780	butyl benzyl phthalate	N.D.	330.	ug/kg	N.D.	390.
3783	3,3'-dichlorobenzidine	N.D.	670.	ug/kg	N.D.	780.
3781	benzo (a) anthracene	9,500.	170.	ug/kg	11,000.	200.
3784	bis (2-ethylhexyl) phthalate	N.D.	330.	ug/kg	N.D.	390.
3782	chrysene	8,500.	170.	ug/kg	10,000.	200.
3785	di-n-octyl phthalate	N.D.	330.	ug/kg	N.D.	390.
3786	benzo (b) fluoranthene	5,100.	330.	ug/kg	5,900.	390.
3787	benzo (k) fluoranthene	1,900.	670.	ug/kg	2,200.	780.
3788	benzo (a) pyrene	3,500.	330.	ug/kg	4,100.	390.
3789	indeno (1,2,3-cd) pyrene	1,200.	J 330.	ug/kg	1,500.	J 390.
3790	dibenz (a,h) anthracene	N.D.	330.	ug/kg	N.D.	390.
3791	benzo (ghi) perylene	990.	J 330.	ug/kg	1,200.	J 390.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



LLI Sample No. SW 2679075

Collected: 3/15/97 at 11:40 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-02/9-11 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

02--9 SDG#: HMS04-03

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.
The quantitation limits for the GC/MS semivolatile compounds were raised
due to the high concentration of target compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS





LLI Sample No. SW 2679075

Collected: 03/15/97 at 11:40 by DU

Submitted: 03/18/97

CPT/SB-02/9-11 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

02--9 SDG#: HMS04-03

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/24/97 1607	David A. Hoppman
0381	BNA Soil Extraction	SW-846 3550A	1	03/19/97 1650	Sherry Lynn Devlin
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/26/97 2240	Deb Gifford
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/26/97 2240	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	03/19/97 1755	Neelay B. Mehta



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LII Sample No. 2679075
CPT/SB-02/9-11 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4593 TCL Volatiles by 8240		Batch: G970801AA									
3434	Chloromethane										
	2. ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
	3. ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
	2. ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
	3. ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
	2. ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
	7. ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
	3. ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
	2. ug/kg	N.D.		107	113	5	111			1	233
42	1,1-Dichloroethane										
	1. ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
	1. ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
	2. ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
	7. ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
	1. ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
	1. ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
	3. ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
	2. ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
	3. ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
	1. ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
	1. ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
	1. ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,1,2-Trichloroethane										
	2. ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
	1. ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
	1. ug/kg	N.D.		91	96	6	88			17	183



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See reverse side for explanation of symbols and abbreviations.



LLI Sample No. **2679075**
CPT/SB-02/9-11 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
1.	ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
3.	ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
3.	ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
1.	ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,1,2-Tetrachloroethane										
1.	ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
1.	ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
1.	ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
1.	ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
1.	ug/kg	N.D.		98	101	3	101			74	136
3455	Xylene (total)										
1.	ug/kg	N.D.		103	104	2	102			30	200
3457	trans-1,2-Dichloroethene										
2.	ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
2.	ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97078SLC026									
1185	phenol										
170.	ug/kg	N.D.		86	76	13	78			5	112
3753	bis (2-chloroethyl) ether										
330.	ug/kg	N.D.		88	77	14	84			12	158
1186	2-chlorophenol										
170.	ug/kg	N.D.		88	77	14	82			23	134
3754	1,3-dichlorobenzene										
170.	ug/kg	N.D.		81	74	10	82			1	172
1187	1,4-dichlorobenzene										
170.	ug/kg	N.D.		82	75	9	83			20	124
3755	1,2-dichlorobenzene										
170.	ug/kg	N.D.		85	77	10	83			32	129
4690	2-methylphenol										
330.	ug/kg	N.D.		79	70	11	76			46	123
4691	2,2'-oxybis (1-chloropropane)										
500.	ug/kg	N.D.		74	65	14	66			36	166
4692	4-methylphenol										
500.	ug/kg	N.D.		83	75	10	79			5	152
1188	N-nitrosodi-n-propylamine										
330.	ug/kg	N.D.		105	92	13	92			1	230
3757	hexachloroethane										
330.	ug/kg	N.D.		83	76	10	84			40	113



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96



LLI Sample No. **2679075**
CPT/SB-02/9-11 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
170.	ug/kg	N.D.		90	80	12	89			35	180
3759	isophorone										
330.	ug/kg	N.D.		94	85	10	91			21	196
3746	2-nitrophenol										
330.	ug/kg	N.D.		90	79	13	87			29	182
3747	2,4-dimethylphenol										
330.	ug/kg	N.D.		29	28	2	60			32	119
3760	bis (2-chloroethoxy) methane										
170.	ug/kg	N.D.		85	76	11	83			33	184
3748	2,4-dichlorophenol										
170.	ug/kg	N.D.		84	74	12	79			39	135
1189	1,2,4-trichlorobenzene										
170.	ug/kg	N.D.		83	74	11	84			44	142
3761	naphthalene										
1,700.	ug/kg	N.D.		80	73	9	81			21	133
4693	4-chloroaniline										
500.	ug/kg	N.D.		37	27	32	40			17	116
762	hexachlorobutadiene										
330.	ug/kg	N.D.		95	85	11	96			24	116
90	4-chloro-3-methylphenol										
330.	ug/kg	N.D.		90	81	11	85			22	147
4694	2-methylnaphthalene										
1,700.	ug/kg	N.D.		85	77	10	82			28	123
3763	hexachlorocyclopentadiene										
830.	ug/kg	N.D.		81	72	13	76			1	100
3749	2,4,6-trichlorophenol										
330.	ug/kg	N.D.		88	78	13	88			37	144
4695	2,4,5-trichlorophenol										
330.	ug/kg	N.D.		91	79	14	87			39	151
3764	2-chloronaphthalene										
170.	ug/kg	N.D.		86	78	9	88			60	118
4696	2-nitroaniline										
330.	ug/kg	N.D.		87	76	14	82			53	143
3766	dimethyl phthalate										
170.	ug/kg	N.D.		85	75	12	84			1	112
3765	acenaphthylene										
170.	ug/kg	N.D.		85	77	10	85			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97078SLC026									

4697	3-nitroaniline										
330.	ug/kg	N.D.		51	42	19	46			7	143
1191	acenaphthene										
170.	ug/kg	N.D.		80	73	10	81			47	145
3750	2,4-dinitrophenol										
830.	ug/kg	N.D.		97	81	18	81			1	191
1192	4-nitrophenol										
830.	ug/kg	N.D.		93	79	16	82			1	132



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96





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A division of Thermo Analytical Inc.

LLI Sample No. 2679075
CPT/SB-02/9-11 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
170.	ug/kg	N.D.		85	76	10	84			28	131
1193	2,4-dinitrotoluene										
330.	ug/kg	N.D.		92	79	15	88			39	139
4699	2,6-dinitrotoluene										
330.	ug/kg	N.D.		92	80	14	88			50	158
3770	diethyl phthalate										
330.	ug/kg	N.D.		86	76	13	85			1	114
3769	4-chlorophenyl phenyl ether										
330.	ug/kg	N.D.		81	74	9	82			25	158
3768	fluorene										
1,700.	ug/kg	N.D.		82	75	9	84			59	121
4700	4-nitroaniline										
500.	ug/kg	N.D.		76	61	21	73			38	122
4701	4,6-dinitro-2-methylphenol										
830.	ug/kg	N.D.		91	77	17	81			1	181
3772	N-nitrosodiphenylamine										
330.	ug/kg	N.D.		82	72	12	86			38	147
3773	4-bromophenyl phenyl ether										
500.	ug/kg	N.D.		93	81	14	87			53	127
3774	hexachlorobenzene										
500.	ug/kg	N.D.		97	84	14	90			1	152
1194	pentachlorophenol										
830.	ug/kg	N.D.		97	82	17	80			14	176
3775	phenanthrene										
1,700.	ug/kg	N.D.		86	76	13	86			54	120
3776	anthracene										
170.	ug/kg	N.D.		83	73	13	84			27	133
4702	carbazole										
170.	ug/kg	N.D.		91	80	12	89			35	133
3777	di-n-butyl phthalate										
170.	ug/kg	N.D.		93	80	15	90			1	118
3778	fluoranthene										
1,700.	ug/kg	N.D.		95	82	14	89			26	137
1195	pyrene										
330.	ug/kg	N.D.		80	69	14	97			52	115
3780	butyl benzyl phthalate										
330.	ug/kg	N.D.		86	74	15	96			1	152
3783	3,3'-dichlorobenzidine										
670.	ug/kg	N.D.		49	21	81	70			1	262
3781	benzo (a) anthracene										
170.	ug/kg	N.D.		86	75	13	87			33	143
3784	bis (2-ethylhexyl) phthalate										
330.	ug/kg	N.D.		89	75	16	95			8	158
3782	chrysene										
170.	ug/kg	N.D.		90	79	13	90			17	168
3785	di-n-octyl phthalate										
330.	ug/kg	N.D.		91	75	19	93			4	146
3786	benzo (b) fluoranthene										
330.	ug/kg	N.D.		87	75	15	84			24	159



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LLI Sample No. 2679075
CPT/SB-02/9-11 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3787	benzo (k) fluoranthene										
670.	ug/kg	N.D.		92	81	13	89			11	163
3788	benzo (a) pyrene										
330.	ug/kg	N.D.		84	73	14	82			17	163
3789	indeno (1,2,3-cd) pyrene										
330.	ug/kg	N.D.		96	79	19	95			1	171
3790	dibenz (a,h) anthracene										
330.	ug/kg	N.D.		98	81	18	96			1	227
3791	benzo (ghi) perylene										
330.	ug/kg	N.D.		89	79	13	89			1	219
0111	Moisture	Batch: 970780316820003A									
0.080	% by wt.		3				100	100	0	100	101



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2216 Rev 5/01/96





LLI Sample No. 2679075
 CPT/SB-02/9-11 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	99	70	121
	d8-toluene	98	81	117
	4-BFB	100	74	121
4688 TCL SW846 Semivolatiles Soil	Pheno1-d6	104	24	113
	2-Flpheno1	93	25	121
	2,4,6-TBP	98	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	100	23	120
	2-Fbiphenyl	109	30	115
	Tphenylid14	111	18	137



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2679076

Collected: 3/15/97 at 12:50 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-03/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

03-20 SDG#: HMS04-04

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4593	TCL Volatiles					
4688	TCL Semivolatiles					
4689	TCL Semivolatiles cont'd					
0111	Moisture	21.8		0.080		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

See Page 2
See Page 3
See Page 4
% by wt.

1 COPY TO Kerr-McGee Corporation ATTN: Dr. Garet Van De Steeg
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
14:51:32 D 0003 15 0 129915 557239
890 0.00 00049920 ASR000



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Respectfully Submitted
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Senior Chemist, GC/MS





LLI Sample No. SW 2679076

Collected: 3/15/97 at 12:50 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-03/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

03-20 SDG#: HMS04-04

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P.O.
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CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
					DETECTION LIMIT	
TCL Volatiles by 8240						
3434	Chloromethane	N.D.	2.	ug/kg	N.D.	3.
3435	Bromomethane	N.D.	3.	ug/kg	N.D.	4.
3436	Vinyl Chloride	N.D.	2.	ug/kg	N.D.	3.
3437	Chloroethane	N.D.	3.	ug/kg	N.D.	4.
3440	Methylene Chloride	N.D.	2.	ug/kg	N.D.	3.
4074	Acetone	N.D.	7.	ug/kg	N.D.	9.
4076	Carbon Disulfide	N.D.	3.	ug/kg	N.D.	4.
1180	1,1-Dichloroethene	N.D.	2.	ug/kg	N.D.	3.
3442	1,1-Dichloroethane	N.D.	1.	ug/kg	N.D.	1.
3444	Chloroform	N.D.	1.	ug/kg	N.D.	1.
3445	1,2-Dichloroethane	N.D.	2.	ug/kg	N.D.	3.
4085	2-Butanone	N.D.	7.	ug/kg	N.D.	9.
3446	1,1,1-Trichloroethane	N.D.	1.	ug/kg	N.D.	1.
3447	Carbon Tetrachloride	N.D.	1.	ug/kg	N.D.	1.
4091	Vinyl Acetate	N.D.	3.	ug/kg	N.D.	4.
3448	Bromodichloromethane	N.D.	2.	ug/kg	N.D.	3.
3450	1,2-Dichloropropane	N.D.	3.	ug/kg	N.D.	4.
3454	cis-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
1181	Trichloroethene	N.D.	1.	ug/kg	N.D.	1.
3452	Dibromochloromethane	N.D.	1.	ug/kg	N.D.	1.
3453	1,1,2-Trichloroethane	N.D.	2.	ug/kg	N.D.	3.
1182	Benzene	N.D.	1.	ug/kg	N.D.	1.
3451	trans-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
3456	Bromoform	N.D.	1.	ug/kg	N.D.	1.
4108	4-Methyl-2-pentanone	N.D.	3.	ug/kg	N.D.	4.
4107	2-Hexanone	N.D.	3.	ug/kg	N.D.	4.
3457	Tetrachloroethene	N.D.	1.	ug/kg	N.D.	1.
3449	1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	N.D.	1.
1183	Toluene	N.D.	1.	ug/kg	N.D.	1.
1184	Chlorobenzene	N.D.	1.	ug/kg	N.D.	1.
3458	Ethylbenzene	N.D.	1.	ug/kg	N.D.	1.
4117	Styrene	N.D.	1.	ug/kg	N.D.	1.
3355	Xylene (total)	N.D.	1.	ug/kg	N.D.	1.
6187	trans-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	3.
6277	cis-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	3.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. SW 2679076

Collected: 3/15/97 at 12:50 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

CPT/SB-03/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

03-20 SDG#: HMS04-04

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	43.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	85.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	43.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	43.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	43.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	43.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	85.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	130.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	130.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	85.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	85.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	43.
3759	isophorone	N.D.	67.	ug/kg	N.D.	85.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	85.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	85.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	43.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	43.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	43.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	43.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	130.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	85.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	85.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	43.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	210.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	85.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	85.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	43.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	85.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	43.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	43.

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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



LLI Sample No. SW 2679076

Collected: 3/15/97 at 12:50 by DU

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Discard: 4/30/97

CPT/SB-03/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

03-20 SDG#: HMS04-04

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	85.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	43.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	210.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	210.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	43.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	85.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	85.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	85.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	85.
3768	fluorene	N.D.	33.	ug/kg	N.D.	43.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	130.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	210.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	85.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	130.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	130.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	210.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	43.
3776	anthracene	N.D.	33.	ug/kg	N.D.	43.
4702	carbazole	N.D.	33.	ug/kg	N.D.	43.
3777	di-n-butyl phthalate	N.D.	33.	ug/kg	N.D.	43.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	43.
1195	pyrene	N.D.	67.	ug/kg	N.D.	85.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	85.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	170.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	43.
3784	bis (2-ethylhexyl) phthalate	120.	J	67.	160.	J
3782	chrysene	N.D.	33.	ug/kg	N.D.	43.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	85.
3786	benzo (b) fluoranthene	N.D.	67.	ug/kg	N.D.	85.
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	170.
3788	benzo (a) pyrene	N.D.	67.	ug/kg	N.D.	85.
3789	indeno (1,2,3-cd) pyrene	N.D.	67.	ug/kg	N.D.	85.
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	85.
3791	benzo (ghi) perylene	N.D.	67.	ug/kg	N.D.	85.

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Respectfully Submitted
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2216 Rev 5/01/96





LLI Sample No. SW 2679076

Collected: 3/15/97 at 12:50 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-03/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

03-20 SDG#: HMS04-04

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846	Semivolatiles/Soil				

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

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2216 Rev. 5/01 96



LLI Sample No. SW 2679076

Collected: 03/15/97 at 12:50 by DU

Submitted: 03/18/97

CPT/SB-03/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

03-20 SDG#: HMS04-04

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/24/97 1133	Robin C. Runkle
0381	BNA Soil Extraction	SW-846 3550A	1	03/19/97 1650	Sherry Lynn Devlin
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/26/97 2334	Deb Gifford
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/26/97 2334	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	03/19/97 1755	Neelay B. Mehta



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2216 Rev. 5/01/96



LLI Sample No. 2679076
 CPT/SB-03/20-22 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
4593 TCL Volatiles by 8240		Batch: G970801AA										
3434	Chloromethane											
	2. ug/kg	N.D.		86	106	21	100			1	272	
3435	Bromomethane											
	3. ug/kg	N.D.		82	102	21	95			1	241	
3436	Vinyl Chloride											
	2. ug/kg	N.D.		94	116	21	108			1	250	
3437	Chloroethane											
	3. ug/kg	N.D.		72	95	28	100			10	254	
3440	Methylene Chloride											
	2. ug/kg	N.D.		100	107	6	101			1	221	
4074	Acetone											
	7. ug/kg	N.D.		78	81	3	52			19	150	
4076	Carbon Disulfide											
	3. ug/kg	N.D.		129	134	4	136			24	188	
1180	1,1-Dichloroethene											
	2. ug/kg	N.D.		107	113	5	111			1	233	
42	1,1-Dichloroethane											
	1. ug/kg	N.D.		105	109	3	108			59	155	
3444	Chloroform											
	1. ug/kg	N.D.		98	106	8	103			51	138	
3445	1,2-Dichloroethane											
	2. ug/kg	N.D.		92	97	6	94			49	155	
4085	2-Butanone											
	7. ug/kg	N.D.		91	98	7	65			22	167	
3446	1,1,1-Trichloroethane											
	1. ug/kg	N.D.		109	116	6	110			52	162	
3447	Carbon Tetrachloride											
	1. ug/kg	N.D.		105	111	6	109			70	140	
4091	Vinyl Acetate											
	3. ug/kg	N.D.		111	118	6	99			19	190	
3448	Bromodichloromethane											
	2. ug/kg	N.D.		97	105	8	99			35	155	
3450	1,2-Dichloropropane											
	3. ug/kg	N.D.		103	109	6	102			1	209	
3454	cis-1,3-Dichloropropene											
	1. ug/kg	N.D.		99	105	6	98			1	226	
1181	Trichloroethene											
	1. ug/kg	N.D.		103	109	6	106			71	157	
3452	Dibromochloromethane											
	1. ug/kg	N.D.		96	100	4	91			53	149	
3453	1,1,2-Trichloroethane											
	2. ug/kg	N.D.		95	99	5	88			52	150	
1182	Benzene											
	1. ug/kg	N.D.		100	109	8	102			37	151	
3451	trans-1,3-Dichloropropene											
	1. ug/kg	N.D.		91	96	6	88			17	183	



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2216 Rev. 5/01/96



LLI Sample No. **2679076**
CPT/SB-03/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS LIMITS HIGH
3456	Bromoform										
	1. ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
	3. ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
	3. ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
	1. ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
	1. ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
	1. ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
	1. ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
	1. ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
	1. ug/kg	N.D.		98	101	3	101			74	136
355	Xylene (total)										
	1. ug/kg	N.D.		103	104	2	102			30	200
187	trans-1,2-Dichloroethene										
	2. ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
	2. ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97078SLC026									

1185	phenol										
	33. ug/kg	N.D.		86	76	13	78			5	112
3753	bis (2-chloroethyl) ether										
	67. ug/kg	N.D.		88	77	14	84			12	158
1186	2-chlorophenol										
	33. ug/kg	N.D.		88	77	14	82			23	134
3754	1,3-dichlorobenzene										
	33. ug/kg	N.D.		81	74	10	82			1	172
1187	1,4-dichlorobenzene										
	33. ug/kg	N.D.		82	75	9	83			20	124
3755	1,2-dichlorobenzene										
	33. ug/kg	N.D.		85	77	10	83			32	129
4690	2-methylphenol										
	67. ug/kg	N.D.		79	70	11	76			46	123
4691	2,2'-oxybis (1-chloropropane)										
	100. ug/kg	N.D.		74	65	14	66			36	166
4692	4-methylphenol										
	100. ug/kg	N.D.		83	75	10	79			5	152
1188	N-nitrosodi-n-propylamine										
	67. ug/kg	N.D.		105	92	13	92			1	230
3757	hexachloroethane										
	67. ug/kg	N.D.		83	76	10	84			40	113



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LLI Sample No. 2679076
 CPT/SB-03/20-22 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
33.	ug/kg	N.D.		90	80	12	89			35	180
3759	isophorone										
67.	ug/kg	N.D.		94	85	10	91			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		90	79	13	87			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		29	28	2	60			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		85	76	11	83			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		84	74	12	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		83	74	11	84			44	142
3761	naphthalene										
33.	ug/kg	N.D.		80	73	9	81			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		37	27	32	40			17	116
762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	85	11	96			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		90	81	11	85			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		85	77	10	82			28	123
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		81	72	13	76			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		88	78	13	88			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		91	79	14	87			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		86	78	9	88			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		87	76	14	82			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		85	75	12	84			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		85	77	10	85			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97078SLC026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	42	19	46			7	143
1191	acenaphthene										
33.	ug/kg	N.D.		80	73	10	81			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		97	81	18	81			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	79	16	82			1	132



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96



LLI Sample No. **2679076**
CPT/SB-03/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
33.	ug/kg	N.D.		85	76	10	84			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	79	15	88			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		92	80	14	88			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		86	76	13	85			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		81	74	9	82			25	158
3768	fluorene										
33.	ug/kg	N.D.		82	75	9	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		76	61	21	73			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		91	77	17	81			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		82	72	12	86			38	147
73	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		93	81	14	87			53	127
74	hexachlorobenzene										
100.	ug/kg	N.D.		97	84	14	90			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		97	82	17	80			14	176
3775	phenanthrene										
33.	ug/kg	N.D.		86	76	13	86			54	120
3776	anthracene										
33.	ug/kg	N.D.		83	73	13	84			27	133
4702	carbazole										
33.	ug/kg	N.D.		91	80	12	89			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		93	80	15	90			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		95	82	14	89			26	137
1195	pyrene										
67.	ug/kg	N.D.		80	69	14	97			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		86	74	15	96			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		49	21	81	70			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		86	75	13	87			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	75	16	95			8	158
3782	chrysene										
33.	ug/kg	N.D.		90	79	13	90			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		91	75	19	93			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		87	75	15	84			24	159



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations



LLI Sample No. **2679076**
CPT/SB-03/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3787	benzo (k) fluoranthene 130. ug/kg	N.D.		92	81	13	89			11	163
3788	benzo (a) pyrene 67. ug/kg	N.D.		84	73	14	82			17	163
3789	indeno (1,2,3-cd) pyrene 67. ug/kg	N.D.		96	79	19	95			1	171
3790	dibenz (a,h) anthracene 67. ug/kg	N.D.		98	81	18	96			1	227
3791	benzo (ghi) perylene 67. ug/kg	N.D.		89	79	13	89			1	219
0111	Moisture 0.080 % by wt.	Batch: 970780316820003A	3				100	100	0	100	101



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2216 Rev. 5/01/96





LLI Sample No. **2679076**
 CPT/SB-03/20-22 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	94	70	121
	d8-toluene	96	81	117
	4-BFB	100	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	79	24	113
	2-Flphenol	72	25	121
	2,4,6-TBP	90	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	89	23	120
	2-Flbiphenyl	84	30	115
	Tphenylid14	80	18	137



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96





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 A division of Thermo Analytical Inc.

LLI Sample No. SW 2679077

Collected: 3/15/97 at 13:20 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-04/20-22 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

04-20 SDG#: HMS04-05

Account No: 07802
 Kerr-McGee Corporation
 PO Box 25861
 Oklahoma City, OK 73125-0861

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
4593	TCL Volatiles			See Page	2	
4688	TCL Semivolatiles			See Page	4	
4689	TCL Semivolatiles cont'd			See Page	5	
0111	Moisture	16.1	0.080	% by wt.		

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO Kerr-McGee Corporation
 1 COPY TO Michael Pisani & Associates
 1 COPY TO Data Package Group

ATTN: Dr. Garet Van De Steeg
 ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300
 15:02:04 D 0003 15 0 129915 557239
 890 0.00 00049920 ASR000



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Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Senior Chemist, GC/MS





LLI Sample No. SW 2679077
 Collected: 3/15/97 at 13:20 by DU
 Submitted: 3/18/97 Reported: 4/15/97
 Discard: 4/30/97

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CPT/SB-04/20-22 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

04-20 SDG#: HMS04-05

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Volatiles by 8240						
3434	Chloromethane	N.D.	10.	ug/kg	N.D.	12.
3435	Bromomethane	N.D.	15.	ug/kg	N.D.	18.
3436	Vinyl Chloride	N.D.	10.	ug/kg	N.D.	12.
3437	Chloroethane	N.D.	15.	ug/kg	N.D.	18.
3440	Methylene Chloride	N.D.	10.	ug/kg	N.D.	12.
4074	Acetone	99.	J	35.	120.	J
4076	Carbon Disulfide	N.D.	15.	ug/kg	N.D.	18.
1180	1,1-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.
3442	1,1-Dichloroethane	N.D.	5.	ug/kg	N.D.	6.
3444	Chloroform	N.D.	5.	ug/kg	N.D.	6.
3445	1,2-Dichloroethane	N.D.	10.	ug/kg	N.D.	12.
4085	2-Butanone	N.D.	35.	ug/kg	N.D.	42.
3446	1,1,1-Trichloroethane	N.D.	5.	ug/kg	N.D.	6.
3447	Carbon Tetrachloride	N.D.	5.	ug/kg	N.D.	6.
4091	Vinyl Acetate	N.D.	15.	ug/kg	N.D.	18.
3448	Bromodichloromethane	N.D.	10.	ug/kg	N.D.	12.
3450	1,2-Dichloropropane	N.D.	15.	ug/kg	N.D.	18.
3454	cis-1,3-Dichloropropene	N.D.	5.	ug/kg	N.D.	6.
1181	Trichloroethene	N.D.	5.	ug/kg	N.D.	6.
3452	Dibromochloromethane	N.D.	5.	ug/kg	N.D.	6.
3453	1,1,2-Trichloroethane	N.D.	10.	ug/kg	N.D.	12.
1182	Benzene	21.	J	5.	25.	J
3451	trans-1,3-Dichloropropene	N.D.	5.	ug/kg	N.D.	6.
3456	Bromoform	N.D.	5.	ug/kg	N.D.	6.
4108	4-Methyl-2-pentanone	N.D.	15.	ug/kg	N.D.	18.
4107	2-Hexanone	N.D.	15.	ug/kg	N.D.	18.
3457	Tetrachloroethene	N.D.	5.	ug/kg	N.D.	6.
3449	1,1,2,2-Tetrachloroethane	N.D.	5.	ug/kg	N.D.	6.
1183	Toluene	340.		5.	410.	
1184	Chlorobenzene	N.D.	5.	ug/kg	N.D.	6.
3458	Ethylbenzene	250.		5.	300.	
4117	Styrene	240.		5.	280.	
3355	Xylene (total)	1,300.		5.	1,600.	
6187	trans-1,2-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.
6277	cis-1,2-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96



LLI Sample No. SW 2679077

Collected: 3/15/97 at 13:20 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-04/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

04-20 SDG#: HMS04-05

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Volatiles by 8240

The quantitation limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

Questions? Contact your Client Services Representative
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Respectfully Submitted
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2216 Rev. 5/01/96





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P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	pheno1	53,000.	1,700.	ug/kg	63,000.	2,000.
3753	bis (2-chloroethyl) ether	N.D.	330.	ug/kg	N.D.	400.
1186	2-chloropheno1	N.D.	170.	ug/kg	N.D.	200.
3754	1,3-dichlorobenzene	N.D.	170.	ug/kg	N.D.	200.
1187	1,4-dichlorobenzene	N.D.	170.	ug/kg	N.D.	200.
3755	1,2-dichlorobenzene	N.D.	170.	ug/kg	N.D.	200.
4690	2-methylpheno1	20,000.	330.	ug/kg	24,000.	400.
4691	2,2'-oxybis (1-chloropropane)	N.D.	500.	ug/kg	N.D.	600.
4692	4-methylpheno1	76,000.	5,000.	ug/kg	90,000.	6,000.
1188	N-nitrosodi-n-propylamine	N.D.	330.	ug/kg	N.D.	400.
3757	hexachloroethane	N.D.	330.	ug/kg	N.D.	400.
3758	nitrobenzene	N.D.	170.	ug/kg	N.D.	200.
3759	isophorone	N.D.	330.	ug/kg	N.D.	400.
3746	2-nitropheno1	N.D.	330.	ug/kg	N.D.	400.
3747	2,4-dimethylpheno1	20,000.	330.	ug/kg	23,000.	400.
3760	bis (2-chloroethoxy) methane	N.D.	170.	ug/kg	N.D.	200.
3748	2,4-dichloropheno1	N.D.	170.	ug/kg	N.D.	200.
1189	1,2,4-trichlorobenzene	N.D.	170.	ug/kg	N.D.	200.
3761	naphthalene	340,000.	3,300.	ug/kg	400,000.	4,000.
4693	4-chloroaniline	N.D.	500.	ug/kg	N.D.	600.
3762	hexachlorobutadiene	N.D.	330.	ug/kg	N.D.	400.
1190	4-chloro-3-methylpheno1	N.D.	330.	ug/kg	N.D.	400.
4694	2-methylnaphthalene	110,000.	3,300.	ug/kg	140,000.	4,000.
3763	hexachlorocyclopentadiene	N.D.	830.	ug/kg	N.D.	990.
3749	2,4,6-trichloropheno1	N.D.	330.	ug/kg	N.D.	400.
4695	2,4,5-trichloropheno1	N.D.	330.	ug/kg	N.D.	400.
3764	2-chloronaphthalene	N.D.	170.	ug/kg	N.D.	200.
4696	2-nitroaniline	N.D.	330.	ug/kg	N.D.	400.
3766	dimethyl phthalate	N.D.	170.	ug/kg	N.D.	200.
3765	acenaphthylene	3,700.	170.	ug/kg	4,400.	200.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. SW 2679077

Collected: 3/15/97 at 13:20 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

CPT/SB-04/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

04-20 SDG#: HMS04-05

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	330.	ug/kg	N.D.	400.
1191	acenaphthene	73,000.	1,700.	ug/kg	88,000.	2,000.
3750	2,4-dinitrophenol	N.D.	830.	ug/kg	N.D.	990.
1192	4-nitrophenol	N.D.	830.	ug/kg	N.D.	990.
4698	dibenzofuran	68,000.	1,700.	ug/kg	81,000.	2,000.
1193	2,4-dinitrotoluene	N.D.	330.	ug/kg	N.D.	400.
4699	2,6-dinitrotoluene	N.D.	330.	ug/kg	N.D.	400.
3770	diethyl phthalate	N.D.	330.	ug/kg	N.D.	400.
3769	4-chlorophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	400.
3768	fluorene	90,000.	1,700.	ug/kg	110,000.	2,000.
4700	4-nitroaniline	N.D.	500.	ug/kg	N.D.	600.
4701	4,6-dinitro-2-methylphenol	N.D.	830.	ug/kg	N.D.	990.
3772	N-nitrosodiphenylamine	N.D.	330.	ug/kg	N.D.	400.
3773	4-bromophenyl phenyl ether	N.D.	500.	ug/kg	N.D.	600.
3774	hexachlorobenzene	N.D.	500.	ug/kg	N.D.	600.
1194	pentachlorophenol	N.D.	830.	ug/kg	N.D.	990.
3775	phenanthrene	190,000.	1,700.	ug/kg	220,000.	2,000.
3776	anthracene	26,000.	170.	ug/kg	31,000.	200.
4702	carbazole	15,000.	170.	ug/kg	18,000.	200.
3777	di-n-butyl phthalate	N.D.	170.	ug/kg	N.D.	200.
3778	fluoranthene	98,000.	1,700.	ug/kg	120,000.	2,000.
1195	pyrene	62,000.	3,300.	ug/kg	74,000.	4,000.
3780	butyl benzyl phthalate	N.D.	330.	ug/kg	N.D.	400.
3783	3,3'-dichlorobenzidine	N.D.	670.	ug/kg	N.D.	790.
3781	benzo (a) anthracene	15,000.	170.	ug/kg	18,000.	200.
3784	bis (2-ethylhexyl) phthalate	N.D.	330.	ug/kg	N.D.	400.
3782	chrysene	14,000.	170.	ug/kg	17,000.	200.
3785	di-n-octyl phthalate	N.D.	330.	ug/kg	N.D.	400.
3786	benzo (b) fluoranthene	8,900.	330.	ug/kg	11,000.	400.
3787	benzo (k) fluoranthene	3,600.	670.	ug/kg	4,300.	790.
3788	benzo (a) pyrene	6,600.	330.	ug/kg	7,900.	400.
3789	indeno (1,2,3-cd) pyrene	2,700.	330.	ug/kg	3,200.	400.
3790	dibenz (a,h) anthracene	790.	330.	ug/kg	940.	400.
3791	benzo (ghi) perylene	2,100.	330.	ug/kg	2,500.	400.

Questions? Contact your Client Services Representative
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Respectfully Submitted
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Senior Chemist, GC/MS





LLI Sample No. SW 2679077
Collected: 3/15/97 at 13:20 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

CPT/SB-04/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

04-20 SDG#: HMS04-05

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT	UNITS
TCL SW846	Semivolatiles/Soil						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. The quantitation limits for the GC/MS semivolatile compounds were raised due to the high concentration of target compounds.

Questions? Contact your Client Services Representative
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Respectfully Submitted
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Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. SW 2679077

Collected: 03/15/97 at 13:20 by DU

Submitted: 03/18/97

CPT/SB-04/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

04-20 SDG#: HMS04-05

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/24/97 1518	Robin C. Runkle
0381	BNA Soil Extraction	SW-846 3550A	1	03/19/97 1650	Sherry Lynn Devlin
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/27/97 0028	Deb Gifford
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/27/97 0028	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	03/19/97 1755	NeeJay B. Mehta



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2679077
 CPT/SB-04/20-22 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4593 TCL Volatiles by 8240		Batch: G970801AA									
3434	Chloromethane										
10.	ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
15.	ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
10.	ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
15.	ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
10.	ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
35.	ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
15.	ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
10.	ug/kg	N.D.		107	113	5	111			1	233
42	1,1-Dichloroethane										
5.	ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
5.	ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
10.	ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
35.	ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
5.	ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
5.	ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
15.	ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
10.	ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
15.	ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
5.	ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
5.	ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
5.	ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
10.	ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
5.	ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
5.	ug/kg	N.D.		91	96	6	88			17	183



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96



LLI Sample No. **2679077**
CPT/SB-04/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3456	Bromoform										
5.	ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
15.	ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
15.	ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
5.	ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
5.	ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
5.	ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
5.	ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
5.	ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
5.	ug/kg	N.D.		98	101	3	101			74	136
355	Xylene (total)										
5.	ug/kg	N.D.		103	104	2	102			30	200
187	trans-1,2-Dichloroethene										
10.	ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
10.	ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97078SLC026									

1185	phenol										
1,700.	ug/kg	N.D.		86	76	13	78			5	112
3753	bis (2-chloroethyl) ether										
330.	ug/kg	N.D.		88	77	14	84			12	158
1186	2-chlorophenol										
170.	ug/kg	N.D.		88	77	14	82			23	134
3754	1,3-dichlorobenzene										
170.	ug/kg	N.D.		81	74	10	82			1	172
1187	1,4-dichlorobenzene										
170.	ug/kg	N.D.		82	75	9	83			20	124
3755	1,2-dichlorobenzene										
170.	ug/kg	N.D.		85	77	10	83			32	129
4690	2-methylphenol										
330.	ug/kg	N.D.		79	70	11	76			46	123
4691	2,2'-oxybis (1-chloropropane)										
500.	ug/kg	N.D.		74	65	14	66			36	166
4692	4-methylphenol										
5,000.	ug/kg	N.D.		83	75	10	79			5	152
1188	N-nitrosodi-n-propylamine										
330.	ug/kg	N.D.		105	92	13	92			1	230
3757	hexachloroethane										
330.	ug/kg	N.D.		83	76	10	84			40	113



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2216 Rev 5/01/96



LLI Sample No. 2679077
CPT/SB-04/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
170.	ug/kg	N.D.		90	80	12	89			35	180
3759	isophorone										
330.	ug/kg	N.D.		94	85	10	91			21	196
3746	2-nitrophenol										
330.	ug/kg	N.D.		90	79	13	87			29	182
3747	2,4-dimethylphenol										
330.	ug/kg	N.D.		29	28	2	60			32	119
3760	bis (2-chloroethoxy) methane										
170.	ug/kg	N.D.		85	76	11	83			33	184
3748	2,4-dichlorophenol										
170.	ug/kg	N.D.		84	74	12	79			39	135
1189	1,2,4-trichlorobenzene										
170.	ug/kg	N.D.		83	74	11	84			44	142
3761	naphthalene										
3,300.	ug/kg	N.D.		80	73	9	81			21	133
4693	4-chloroaniline										
500.	ug/kg	N.D.		37	27	32	40			17	116
762	hexachlorobutadiene										
330.	ug/kg	N.D.		95	85	11	96			24	116
190	4-chloro-3-methylphenol										
330.	ug/kg	N.D.		90	81	11	85			22	147
4694	2-methylnaphthalene										
3,300.	ug/kg	N.D.		85	77	10	82			28	123
3763	hexachlorocyclopentadiene										
830.	ug/kg	N.D.		81	72	13	76			1	100
3749	2,4,6-trichlorophenol										
330.	ug/kg	N.D.		88	78	13	88			37	144
4695	2,4,5-trichlorophenol										
330.	ug/kg	N.D.		91	79	14	87			39	151
3764	2-chloronaphthalene										
170.	ug/kg	N.D.		86	78	9	88			60	118
4696	2-nitroaniline										
330.	ug/kg	N.D.		87	76	14	82			53	143
3766	dimethyl phthalate										
170.	ug/kg	N.D.		85	75	12	84			1	112
3765	acenaphthylene										
170.	ug/kg	N.D.		85	77	10	85			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97078SLC026									

4697	3-nitroaniline										
330.	ug/kg	N.D.		51	42	19	46			7	143
1191	acenaphthene										
1,700.	ug/kg	N.D.		80	73	10	81			47	145
3750	2,4-dinitrophenol										
830.	ug/kg	N.D.		97	81	18	81			1	191
1192	4-nitrophenol										
830.	ug/kg	N.D.		93	79	16	82			1	132



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L.I. Sample No. 2679077
CPT/SB-04/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4698	dibenzofuran										
1,700.	ug/kg	N.D.		85	76	10	84			28	131
1193	2,4-dinitrotoluene										
330.	ug/kg	N.D.		92	79	15	88			39	139
4699	2,6-dinitrotoluene										
330.	ug/kg	N.D.		92	80	14	88			50	158
3770	diethyl phthalate										
330.	ug/kg	N.D.		86	76	13	85			1	114
3769	4-chlorophenyl phenyl ether										
330.	ug/kg	N.D.		81	74	9	82			25	158
3768	fluorene										
1,700.	ug/kg	N.D.		82	75	9	84			59	121
4700	4-nitroaniline										
500.	ug/kg	N.D.		76	61	21	73			38	122
4701	4,6-dinitro-2-methylphenol										
830.	ug/kg	N.D.		91	77	17	81			1	181
3772	N-nitrosodiphenylamine										
330.	ug/kg	N.D.		82	72	12	86			38	147
773	4-bromophenyl phenyl ether										
500.	ug/kg	N.D.		93	81	14	87			53	127
3774	hexachlorobenzene										
500.	ug/kg	N.D.		97	84	14	90			1	152
1194	pentachlorophenol										
830.	ug/kg	N.D.		97	82	17	80			14	176
3775	phenanthrene										
1,700.	ug/kg	N.D.		86	76	13	86			54	120
3776	anthracene										
170.	ug/kg	N.D.		83	73	13	84			27	133
4702	carbazole										
170.	ug/kg	N.D.		91	80	12	89			35	133
3777	di-n-butyl phthalate										
170.	ug/kg	N.D.		93	80	15	90			1	118
3778	fluoranthene										
1,700.	ug/kg	N.D.		95	82	14	89			26	137
1195	pyrene										
3,300.	ug/kg	N.D.		80	69	14	97			52	115
3780	butyl benzyl phthalate										
330.	ug/kg	N.D.		86	74	15	96			1	152
3783	3,3'-dichlorobenzidine										
670.	ug/kg	N.D.		49	21	81	70			1	262
3781	benzo (a) anthracene										
170.	ug/kg	N.D.		86	75	13	87			33	143
3784	bis (2-ethylhexyl) phthalate										
330.	ug/kg	N.D.		89	75	16	95			8	158
3782	chrysene										
170.	ug/kg	N.D.		90	79	13	90			17	168
3785	di-n-octyl phthalate										
330.	ug/kg	N.D.		91	75	19	93			4	146
3786	benzo (b) fluoranthene										
330.	ug/kg	N.D.		87	75	15	84			24	159



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LLI Sample No. **2679077**
CPT/SB-04/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3787	benzo (k) Fluoranthene 670. ug/kg	N.D.		92	81	13	89			11	163
3788	benzo (a) pyrene 330. ug/kg	N.D.		84	73	14	82			17	163
3789	indeno (1,2,3-cd) pyrene 330. ug/kg	N.D.		96	79	19	95			1	171
3790	dibenz (a,h) anthracene 330. ug/kg	N.D.		98	81	18	96			1	227
3791	benzo (ghi) perylene 330. ug/kg	N.D.		89	79	13	89			1	219
0111	Moisture 0.080 % by wt.	Batch: 970780316820003A	3				100	100	0	100	101



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LLI Sample No. **2679077**
CPT/SB-04/20-22 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	91	70	121
	d8-toluene	95	81	117
	4-BFB	96	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	100	24	113
	2-F1phenol	97	25	121
	2,4,6-TBP	99	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	97	23	120
	2-Fbiphenyl	96	30	115
	Tphenylid14	99	18	137



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2216 Rev 5/01/96



Lancaster Laboratories
 A division of Thermo Analytical Inc.

LLI Sample No. SW 2679078

Collected: 3/15/97 at 13:40 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-04/29-31 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

04-29 SDG#: HMS04-06

Account No: 07802
 Kerr-McGee Corporation
 PO Box 25861
 Oklahoma City, OK 73125-0861

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4593	TCL Volatiles				See Page	2
4688	TCL Semivolatiles				See Page	3
4689	TCL Semivolatiles cont'd				See Page	4
0111	Moisture	17.0		0.080	% by wt.	

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO Kerr-McGee Corporation
 1 COPY TO Michael Pisani & Associates
 1 COPY TO Data Package Group

ATTN: Dr. Garet Van De Steeg
 ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300
 15:16:14 D 0003 15 0 129915 557239
 890 0.00 00049920 ASR000



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Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Senior Chemist, GC/MS





LLI Sample No. SW 2679078

Collected: 3/15/97 at 13:40 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-04/29-31 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

04-29 SDG#: HMS04-06

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT			
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT	
TCL Volatiles by 8240								
3434	Chloromethane	N.D.	10.	ug/kg	N.D.	12.		
3435	Bromomethane	N.D.	15.	ug/kg	N.D.	18.		
3436	Vinyl Chloride	N.D.	10.	ug/kg	N.D.	12.		
3437	Chloroethane	N.D.	15.	ug/kg	N.D.	18.		
3440	Methylene Chloride	N.D.	10.	ug/kg	N.D.	12.		
4074	Acetone	68.	J	35.	ug/kg	82.	J	42.
4076	Carbon Disulfide	N.D.	15.	ug/kg	N.D.	18.		
1180	1,1-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.		
3442	1,1-Dichloroethane	N.D.	5.	ug/kg	N.D.	6.		
3444	Chloroform	N.D.	5.	ug/kg	N.D.	6.		
3445	1,2-Dichloroethane	N.D.	10.	ug/kg	N.D.	12.		
4085	2-Butanone	N.D.	35.	ug/kg	N.D.	42.		
3446	1,1,1-Trichloroethane	N.D.	5.	ug/kg	N.D.	6.		
3447	Carbon Tetrachloride	N.D.	5.	ug/kg	N.D.	6.		
4091	Vinyl Acetate	N.D.	15.	ug/kg	N.D.	18.		
3448	Bromodichloromethane	N.D.	10.	ug/kg	N.D.	12.		
3450	1,2-Dichloropropane	N.D.	15.	ug/kg	N.D.	18.		
3454	cis-1,3-Dichloropropene	N.D.	5.	ug/kg	N.D.	6.		
1181	Trichloroethene	N.D.	5.	ug/kg	N.D.	6.		
3452	Dibromochloromethane	N.D.	5.	ug/kg	N.D.	6.		
3453	1,1,2-Trichloroethane	N.D.	10.	ug/kg	N.D.	12.		
1182	Benzene	6.	J	5.	ug/kg	7.	J	6.
3451	trans-1,3-Dichloropropene	N.D.	5.	ug/kg	N.D.	6.		
3456	Bromoform	N.D.	5.	ug/kg	N.D.	6.		
4108	4-Methyl-2-pentanone	N.D.	15.	ug/kg	N.D.	18.		
4107	2-Hexanone	N.D.	15.	ug/kg	N.D.	18.		
3457	Tetrachloroethene	N.D.	5.	ug/kg	N.D.	6.		
3449	1,1,2,2-Tetrachloroethane	N.D.	5.	ug/kg	N.D.	6.		
1183	Toluene	63.	5.	ug/kg	75.	6.		
1184	Chlorobenzene	N.D.	5.	ug/kg	N.D.	6.		
3458	Ethylbenzene	60.	5.	ug/kg	73.	6.		
4117	Styrene	71.	5.	ug/kg	85.	6.		
3355	Xylene (total)	350.	5.	ug/kg	420.	6.		
6187	trans-1,2-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.		
6277	cis-1,2-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.		

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



LLI Sample No. SW 2679078

Collected: 3/15/97 at 13:40 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-04/29-31 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

04-29 SDG#: HMS04-06

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles Soil							
1185	phenol	46,000.	1,700.	ug/kg	56,000.	2,000.	
3753	bis (2-chloroethyl) ether	N.D.	330.	ug/kg	N.D.	400.	
1186	2-chlorophenol	N.D.	170.	ug/kg	N.D.	200.	
3754	1,3-dichlorobenzene	N.D.	170.	ug/kg	N.D.	200.	
1187	1,4-dichlorobenzene	N.D.	170.	ug/kg	N.D.	200.	
3755	1,2-dichlorobenzene	N.D.	170.	ug/kg	N.D.	200.	
4690	2-methylphenol	17,000.	330.	ug/kg	N.D.	200.	
4691	2,2'-oxybis (1-chloropropane)	N.D.	500.	ug/kg	21,000.	400.	
4692	4-methylphenol	71,000.	5,000.	ug/kg	N.D.	600.	
1188	N-nitrosodi-n-propylamine	N.D.	330.	ug/kg	85,000.	6,000.	
3757	hexachloroethane	N.D.	330.	ug/kg	N.D.	400.	
3758	nitrobenzene	N.D.	170.	ug/kg	N.D.	400.	
3759	isophorone	N.D.	330.	ug/kg	N.D.	200.	
3746	2-nitrophenol	N.D.	330.	ug/kg	N.D.	400.	
3747	2,4-dimethylphenol	17,000.	330.	ug/kg	N.D.	400.	
3760	bis (2-chloroethoxy) methane	N.D.	170.	ug/kg	21,000.	400.	
3748	2,4-dichlorophenol	N.D.	170.	ug/kg	N.D.	200.	
1189	1,2,4-trichlorobenzene	N.D.	170.	ug/kg	N.D.	200.	
3761	naphthalene	200,000.	1,700.	ug/kg	N.D.	200.	
4693	4-chloroaniline	N.D.	500.	ug/kg	240,000.	2,000.	
3762	hexachlorobutadiene	N.D.	330.	ug/kg	N.D.	600.	
1190	4-chloro-3-methylphenol	N.D.	330.	ug/kg	N.D.	400.	
4694	2-methylnaphthalene	77,000.	330.	ug/kg	N.D.	400.	
3763	hexachlorocyclopentadiene	N.D.	1,700.	ug/kg	92,000.	2,000.	
3749	2,4,6-trichlorophenol	N.D.	830.	ug/kg	N.D.	1,000.	
4695	2,4,5-trichlorophenol	N.D.	330.	ug/kg	N.D.	400.	
3764	2-chloronaphthalene	N.D.	330.	ug/kg	N.D.	400.	
4696	2-nitroaniline	N.D.	170.	ug/kg	N.D.	200.	
3766	dimethyl phthalate	N.D.	330.	ug/kg	N.D.	400.	
3765	acenaphthylene	2,700.	170.	ug/kg	N.D.	200.	
					3,200.	200.	

Questions? Contact your Client Services Representative
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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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2216 Rev. 5/01/96



LLI Sample No. SW 2679078

Collected: 3/15/97 at 13:40 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

CPT/SB-04/29-31 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

04-29 SDG#: HMS04-06

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	330.	ug/kg	N.D.	400.
1191	acenaphthene	51,000.	1,700.	ug/kg	61,000.	2,000.
3750	2,4-dinitrophenol	N.D.	830.	ug/kg	N.D.	1,000.
1192	4-nitrophenol	N.D.	830.	ug/kg	N.D.	1,000.
4698	dibenzofuran	48,000.	1,700.	ug/kg	57,000.	2,000.
1193	2,4-dinitrotoluene	N.D.	330.	ug/kg	N.D.	400.
4699	2,6-dinitrotoluene	N.D.	330.	ug/kg	N.D.	400.
3770	diethyl phthalate	N.D.	330.	ug/kg	N.D.	400.
3769	4-chlorophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	400.
3768	fluorene	64,000.	1,700.	ug/kg	77,000.	2,000.
4700	4-nitroaniline	N.D.	500.	ug/kg	N.D.	600.
4701	4,6-dinitro-2-methylphenol	N.D.	830.	ug/kg	N.D.	1,000.
3772	N-nitrosodiphenylamine	N.D.	330.	ug/kg	N.D.	400.
3773	4-bromophenyl phenyl ether	N.D.	500.	ug/kg	N.D.	600.
3774	hexachlorobenzene	N.D.	500.	ug/kg	N.D.	600.
1194	pentachlorophenol	N.D.	830.	ug/kg	N.D.	1,000.
3775	phenanthrene	130,000.	1,700.	ug/kg	160,000.	2,000.
3776	anthracene	20,000.	170.	ug/kg	24,000.	200.
4702	carbazole	11,000.	170.	ug/kg	14,000.	200.
3777	di-n-butyl phthalate	N.D.	170.	ug/kg	N.D.	200.
3778	fluoranthene	71,000.	1,700.	ug/kg	85,000.	2,000.
1195	pyrene	26,000.	330.	ug/kg	32,000.	400.
3780	butyl benzyl phthalate	N.D.	330.	ug/kg	N.D.	400.
3783	3,3'-dichlorobenzidine	N.D.	670.	ug/kg	N.D.	800.
3781	benzo (a) anthracene	12,000.	170.	ug/kg	14,000.	200.
3784	bis (2-ethylhexyl) phthalate	N.D.	330.	ug/kg	N.D.	400.
3782	chrysene	10,000.	170.	ug/kg	12,000.	200.
3785	di-n-octyl phthalate	N.D.	330.	ug/kg	N.D.	400.
3786	benzo (b) fluoranthene	6,600.	330.	ug/kg	8,000.	400.
3787	benzo (k) fluoranthene	2,600.	670.	ug/kg	3,100.	800.
3788	benzo (a) pyrene	4,900.	330.	ug/kg	5,900.	400.
3789	indeno (1,2,3-cd) pyrene	2,000.	330.	ug/kg	2,400.	400.
3790	dibenz (a,h) anthracene	580.	J 330.	ug/kg	700.	J 400.
3791	benzo (ghi) perylene	1,500.	J 330.	ug/kg	1,800.	J 400.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. SW 2679078

Collected: 3/15/97 at 13:40 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-04/29-31 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

04-29 SDG#: HMS04-06

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846	Semivolatiles/Soil				

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.
The quantitation limits for the GC/MS semivolatile compounds were raised
due to the high concentration of target compounds.

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LLI Sample No. SW 2679078

Collected: 03/15/97 at 13:40 by DU

Submitted: 03/18/97

CPT/SB-04/29-31 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

04-29 SDG#: HMS04-06

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/24/97 1817	David A. Hoppman
0381	BNA Soil Extraction	SW-846 3550A	1	03/19/97 1650	Sherry Lynn Devlin
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/27/97 0122	David J. Evans
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/27/97 0122	David J. Evans
0111	Moisture	EPA 160.3 modified	1	03/19/97 1755	Neelay B. Mehta



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LLI Sample No. 2679078
 CPT/SB-04/29-31 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4593 TCL Volatiles by 8240		Batch: G970801AA									
3434	Chloromethane										
10.	ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
15.	ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
10.	ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
15.	ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
10.	ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
35.	ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
15.	ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
10.	ug/kg	N.D.		107	113	5	111			1	233
42	1,1-Dichloroethane										
5.	ug/kg	N.D.		105	109	3	108			59	155
44	Chloroform										
5.	ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
10.	ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
35.	ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
5.	ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
5.	ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
15.	ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
10.	ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
15.	ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
5.	ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
5.	ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
5.	ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
10.	ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
5.	ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
5.	ug/kg	N.D.		91	96	6	88			17	183



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LLI Sample No. **2679078**
CPT/SB-04/29-31 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3456	Bromoform										
5.	ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
15.	ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
15.	ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
5.	ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
5.	ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
5.	ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
5.	ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
5.	ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
5.	ug/kg	N.D.		98	101	3	101			74	136
3355	Xylene (total)										
5.	ug/kg	N.D.		103	104	2	102			30	200
6187	trans-1,2-Dichloroethene										
10.	ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
10.	ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97078SLC026									

1185	phenol										
1,700.	ug/kg	N.D.		86	76	13	78			5	112
3753	bis (2-chloroethyl) ether										
330.	ug/kg	N.D.		88	77	14	84			12	158
1186	2-chlorophenol										
170.	ug/kg	N.D.		88	77	14	82			23	134
3754	1,3-dichlorobenzene										
170.	ug/kg	N.D.		81	74	10	82			1	172
1187	1,4-dichlorobenzene										
170.	ug/kg	N.D.		82	75	9	83			20	124
3755	1,2-dichlorobenzene										
170.	ug/kg	N.D.		85	77	10	83			32	129
4690	2-methylphenol										
330.	ug/kg	N.D.		79	70	11	76			46	123
4691	2,2'-oxybis (1-chloropropane)										
500.	ug/kg	N.D.		74	65	14	66			36	166
4692	4-methylphenol										
5,000.	ug/kg	N.D.		83	75	10	79			5	152
1188	N-nitrosodi-n-propylamine										
330.	ug/kg	N.D.		105	92	13	92			1	230
3757	hexachloroethane										
330.	ug/kg	N.D.		83	76	10	84			40	113



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LLI Sample No. 2679078
 CPT/SB-04/29-31 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
170.	ug/kg	N.D.		90	80	12	89			35	180
3759	isophorone										
330.	ug/kg	N.D.		94	85	10	91			21	196
3746	2-nitrophenol										
330.	ug/kg	N.D.		90	79	13	87			29	182
3747	2,4-dimethylphenol										
330.	ug/kg	N.D.		29	28	2	60			32	119
3760	bis (2-chloroethoxy) methane										
170.	ug/kg	N.D.		85	76	11	83			33	184
3748	2,4-dichlorophenol										
170.	ug/kg	N.D.		84	74	12	79			39	135
1189	1,2,4-trichlorobenzene										
170.	ug/kg	N.D.		83	74	11	84			44	142
3761	naphthalene										
1,700.	ug/kg	N.D.		80	73	9	81			21	133
4693	4-chloroaniline										
500.	ug/kg	N.D.		37	27	32	40			17	116
3762	hexachlorobutadiene										
330.	ug/kg	N.D.		95	85	11	96			24	116
1190	4-chloro-3-methylphenol										
330.	ug/kg	N.D.		90	81	11	85			22	147
4694	2-methylnaphthalene										
1,700.	ug/kg	N.D.		85	77	10	82			28	123
3763	hexachlorocyclopentadiene										
830.	ug/kg	N.D.		81	72	13	76			1	100
3749	2,4,6-trichlorophenol										
330.	ug/kg	N.D.		88	78	13	88			37	144
4695	2,4,5-trichlorophenol										
330.	ug/kg	N.D.		91	79	14	87			39	151
3764	2-chloronaphthalene										
170.	ug/kg	N.D.		86	78	9	88			60	118
4696	2-nitroaniline										
330.	ug/kg	N.D.		87	76	14	82			53	143
3766	dimethyl phthalate										
170.	ug/kg	N.D.		85	75	12	84			1	112
3765	acenaphthylene										
170.	ug/kg	N.D.		85	77	10	85			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97078SLC026									

4697	3-nitroaniline										
330.	ug/kg	N.D.		51	42	19	46			7	143
1191	acenaphthene										
1,700.	ug/kg	N.D.		80	73	10	81			47	145
3750	2,4-dinitrophenol										
830.	ug/kg	N.D.		97	81	18	81			1	191
1192	4-nitrophenol										
830.	ug/kg	N.D.		93	79	16	82			1	132



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LLI Sample No. 2679078
 CPT/SB-04/29-31 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
1,700.	ug/kg	N.D.		85	76	10	84			28	131
1193	2,4-dinitrotoluene										
330.	ug/kg	N.D.		92	79	15	88			39	139
4699	2,6-dinitrotoluene										
330.	ug/kg	N.D.		92	80	14	88			50	158
3770	diethyl phthalate										
330.	ug/kg	N.D.		86	76	13	85			1	114
3769	4-chlorophenyl phenyl ether										
330.	ug/kg	N.D.		81	74	9	82			25	158
3768	fluorene										
1,700.	ug/kg	N.D.		82	75	9	84			59	121
4700	4-nitroaniline										
500.	ug/kg	N.D.		76	61	21	73			38	122
4701	4,6-dinitro-2-methylphenol										
830.	ug/kg	N.D.		91	77	17	81			1	181
3772	N-nitrosodiphenylamine										
330.	ug/kg	N.D.		82	72	12	86			38	147
3773	4-bromophenyl phenyl ether										
500.	ug/kg	N.D.		93	81	14	87			53	127
3774	hexachlorobenzene										
500.	ug/kg	N.D.		97	84	14	90			1	152
1194	pentachlorophenol										
830.	ug/kg	N.D.		97	82	17	80			14	176
3775	phenanthrene										
1,700.	ug/kg	N.D.		86	76	13	86			54	120
3776	anthracene										
170.	ug/kg	N.D.		83	73	13	84			27	133
4702	carbazole										
170.	ug/kg	N.D.		91	80	12	89			35	133
3777	di-n-butyl phthalate										
170.	ug/kg	N.D.		93	80	15	90			1	118
3778	fluoranthene										
1,700.	ug/kg	N.D.		95	82	14	89			26	137
1195	pyrene										
330.	ug/kg	N.D.		80	69	14	97			52	115
3780	butyl benzyl phthalate										
330.	ug/kg	N.D.		86	74	15	96			1	152
3783	3,3'-dichlorobenzidine										
670.	ug/kg	N.D.		49	21	81	70			1	262
3781	benzo (a) anthracene										
170.	ug/kg	N.D.		86	75	13	87			33	143
3784	bis (2-ethylhexyl) phthalate										
330.	ug/kg	N.D.		89	75	16	95			8	158
3782	chrysene										
170.	ug/kg	N.D.		90	79	13	90			17	168
3785	di-n-octyl phthalate										
330.	ug/kg	N.D.		91	75	19	93			4	146
3786	benzo (b) fluoranthene										
330.	ug/kg	N.D.		87	75	15	84			24	159



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LLI Sample No. 2679078
CPT/SB-04/29-31 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3787	benzo (k) fluoranthene										
670.	ug/kg	N.D.		92	81	13	89			11	163
3788	benzo (a) pyrene										
330.	ug/kg	N.D.		84	73	14	82			17	163
3789	indeno (1,2,3-cd) pyrene										
330.	ug/kg	N.D.		96	79	19	95			1	171
3790	dibenz (a,h) anthracene										
330.	ug/kg	N.D.		98	81	18	96			1	227
3791	benzo (ghi) perylene										
330.	ug/kg	N.D.		89	79	13	89			1	219
0111	Moisture	Batch: 970780316820003A									
0.080	% by wt.		3				100	100	0	100	101



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LLI Sample No. **2679078**
 CPT/SB-04/29-31 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	101	70	121
	d8-toluene	102	81	117
	4-BFB	112	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	96	24	113
	2-Flpheno1	92	25	121
	2,4,6-TBP	100	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	98	23	120
	2-Fbiphenyl	100	30	115
	Tphenyl-d14	101	18	137



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See reverse side for explanation of symbols and abbreviations



LLI Sample No. SW 2679080

Collected: 3/17/97 at 10:50 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

CPT/SB-06/6-10 Unspiked Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-08BKG

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

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Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4593	TCL Volatiles					See Page 2
4688	TCL Semivolatiles					See Page 3
4689	TCL Semivolatiles cont'd					See Page 4
0111	Moisture	15.7		0.080	% by wt.	
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

1 COPY TO Kerr-McGee Corporation ATTN: Dr. Gareth Van De Steeg
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Uptegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
15:28:00 D 0003 15 0 129915 557239
890 0.00 00049920 ASR000



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS

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2216 Rev. 5/01/96





LLI Sample No. SW 2679080

Collected: 3/17/97 at 10:50 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-06/6-10 Unspiked Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-08BKG

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	METHOD LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Volatiles by 8240						
3434	Chloromethane	N.D.	2.	ug/kg	N.D.	2.
3435	Bromomethane	N.D.	3.	ug/kg	N.D.	4.
3436	Vinyl Chloride	N.D.	2.	ug/kg	N.D.	2.
3437	Chloroethane	N.D.	3.	ug/kg	N.D.	4.
3440	Methylene Chloride	N.D.	2.	ug/kg	N.D.	2.
4074	Acetone	10.	J	7. ug/kg	12.	J
4076	Carbon Disulfide	N.D.	3.	ug/kg	N.D.	4.
1180	1,1-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.
3442	1,1-Dichloroethane	N.D.	1.	ug/kg	N.D.	1.
3444	Chloroform	N.D.	1.	ug/kg	N.D.	1.
3445	1,2-Dichloroethane	N.D.	2.	ug/kg	N.D.	2.
4085	2-Butanone	N.D.	7.	ug/kg	N.D.	8.
3446	1,1,1-Trichloroethane	N.D.	1.	ug/kg	N.D.	1.
3447	Carbon Tetrachloride	N.D.	1.	ug/kg	N.D.	1.
4091	Vinyl Acetate	N.D.	3.	ug/kg	N.D.	4.
3448	Bromodichloromethane	N.D.	2.	ug/kg	N.D.	2.
3450	1,2-Dichloropropane	N.D.	3.	ug/kg	N.D.	4.
3454	cis-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
1181	Trichloroethene	N.D.	1.	ug/kg	N.D.	1.
3452	Dibromochloromethane	N.D.	1.	ug/kg	N.D.	1.
3453	1,1,2-Trichloroethane	N.D.	2.	ug/kg	N.D.	2.
1182	Benzene	N.D.	1.	ug/kg	N.D.	1.
3451	trans-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
3456	Bromoform	N.D.	1.	ug/kg	N.D.	1.
4108	4-Methyl-2-pentanone	N.D.	3.	ug/kg	N.D.	4.
4107	2-Hexanone	N.D.	3.	ug/kg	N.D.	4.
3457	Tetrachloroethene	N.D.	1.	ug/kg	N.D.	1.
3449	1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	N.D.	1.
1183	Toluene	N.D.	1.	ug/kg	N.D.	1.
1184	Chlorobenzene	N.D.	1.	ug/kg	N.D.	1.
3458	Ethylbenzene	N.D.	1.	ug/kg	N.D.	1.
4117	Styrene	N.D.	1.	ug/kg	N.D.	1.
3355	Xylene (total)	N.D.	1.	ug/kg	N.D.	1.
6187	trans-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.
6277	cis-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



LLI Sample No. SW 2679080

Collected: 3/17/97 at 10:50 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-06/6-10 Unspiked Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-08BKG

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	40.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	79.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	40.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	79.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	79.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	79.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	40.
3759	isophorone	N.D.	67.	ug/kg	N.D.	79.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	79.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	79.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	40.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	40.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	40.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	79.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	79.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	40.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	79.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	79.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	40.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	40.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	40.

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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



LLI Sample No. SW 2679080

Collected: 3/17/97 at 10:50 by DU

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Discard: 4/30/97

CPT/SB-06/6-10 Unspiked Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-08BKG

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P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	40.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	200.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	40.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	79.
3768	fluorene	N.D.	33.	ug/kg	N.D.	40.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	120.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	79.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	120.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	120.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	40.
3776	anthracene	N.D.	33.	ug/kg	N.D.	40.
4702	carbazole	N.D.	33.	ug/kg	N.D.	40.
3777	di-n-butyl phthalate	N.D.	33.	ug/kg	N.D.	40.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	40.
1195	pyrene	N.D.	67.	ug/kg	N.D.	79.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	160.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	40.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	79.
3782	chrysene	N.D.	33.	ug/kg	N.D.	40.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3786	benzo (b) fluoranthene	N.D.	67.	ug/kg	N.D.	79.
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	160.
3788	benzo (a) pyrene	N.D.	67.	ug/kg	N.D.	79.
3789	indeno (1,2,3-cd) pyrene	N.D.	67.	ug/kg	N.D.	79.
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	79.
3791	benzo (ghi) perylene	N.D.	67.	ug/kg	N.D.	79.

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See reverse side for explanation of symbols and abbreviations.

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



LLI Sample No. SW 2679080

Collected: 3/17/97 at 10:50 by DU

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Discard: 4/30/97

CPT/SB-06/6-10 Unspiked Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-08BKG

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P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

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Senior Chemist, GC/MS



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2216 Rev. 5/01/96





Lancaster Laboratories

A division of Thermo Analytical Inc.

LLI Sample No. SW 2679080

Collected: 03/17/97 at 10:50 by DU

Submitted: 03/18/97

CPT/SB-06/6-10 Unspiked Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-08BKG

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/24/97 0921	Robin C. Runkle
0381	BNA Soil Extraction	SW-846 3550A	1	03/19/97 1650	Sherry Lynn Devlin
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/26/97 0115	Deb Gifford
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/26/97 0115	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	03/19/97 1755	NeeJay B. Mehta



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LLI Sample No. 2679080
CPT/SB-06/6-10 Unspiked Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4593 TCL Volatiles by 8240		Batch: G970801AA									
3434	Chloromethane										
	2. ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
	3. ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
	2. ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
	3. ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
	2. ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
	7. ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
	3. ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
	2. ug/kg	N.D.		107	113	5	111			1	233
42	1,1-Dichloroethane										
	1. ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
	1. ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
	2. ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
	7. ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
	1. ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
	1. ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
	3. ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
	2. ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
	3. ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
	1. ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
	1. ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
	1. ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
	2. ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
	1. ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
	1. ug/kg	N.D.		91	96	6	88			17	183



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.



LLI Sample No. 2679080
CPT/SB-06/6-10 Unspiked Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
1.	ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
3.	ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
3.	ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
1.	ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
1.	ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
1.	ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
1.	ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
1.	ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
1.	ug/kg	N.D.		98	101	3	101			74	136
355	Xylene (total)										
1.	ug/kg	N.D.		103	104	2	102			30	200
6187	trans-1,2-Dichloroethene										
2.	ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
2.	ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97078SLC026									

1185	phenol										
33.	ug/kg	N.D.		86	76	13	78			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		88	77	14	84			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		88	77	14	82			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		81	74	10	82			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		82	75	9	83			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		85	77	10	83			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		79	70	11	76			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		74	65	14	66			36	166
4692	4-methylphenol										
100.	ug/kg	N.D.		83	75	10	79			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		105	92	13	92			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		83	76	10	84			40	113



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2216 Rev. 5/01/96





LLI Sample No. 2679080
CPT/SB-06/6-10 Unspiked Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
33.	ug/kg	N.D.		90	80	12	89			35	180
3759	isophorone										
67.	ug/kg	N.D.		94	85	10	91			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		90	79	13	87			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		29	28	2	60			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		85	76	11	83			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		84	74	12	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		83	74	11	84			44	142
3761	naphthalene										
33.	ug/kg	N.D.		80	73	9	81			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		37	27	32	40			17	116
762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	85	11	96			24	116
190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		90	81	11	85			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		85	77	10	82			28	123
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		81	72	13	76			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		88	78	13	88			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		91	79	14	87			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		86	78	9	88			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		87	76	14	82			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		85	75	12	84			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		85	77	10	85			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97078SLC026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	42	19	46			7	143
1191	acenaphthene										
33.	ug/kg	N.D.		80	73	10	81			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		97	81	18	81			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	79	16	82			1	132



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. **2679080**
CPT/SB-06/6-10 Unspiked Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4698	dibenzofuran										
33.	ug/kg	N.D.		85	76	10	84			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	79	15	88			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		92	80	14	88			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		86	76	13	85			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		81	74	9	82			25	158
3768	fluorene										
33.	ug/kg	N.D.		82	75	9	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		76	61	21	73			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		91	77	17	81			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		82	72	12	86			38	147
773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		93	81	14	87			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		97	84	14	90			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		97	82	17	80			14	176
3775	phenanthrene										
33.	ug/kg	N.D.		86	76	13	86			54	120
3776	anthracene										
33.	ug/kg	N.D.		83	73	13	84			27	133
4702	carbazole										
33.	ug/kg	N.D.		91	80	12	89			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		93	80	15	90			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		95	82	14	89			26	137
1195	pyrene										
67.	ug/kg	N.D.		80	69	14	97			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		86	74	15	96			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		49	21	81	70			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		86	75	13	87			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	75	16	95			8	158
3782	chrysene										
33.	ug/kg	N.D.		90	79	13	90			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		91	75	19	93			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		87	75	15	84			24	159



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2679080
CPT/SB-06/6-10 Unspiked Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		92	81	13	89			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		84	73	14	82			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		96	79	19	95			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		98	81	18	96			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		89	79	13	89			1	219
0111	Moisture	Batch: 970780316820003A									
0.080	% by wt.		3				100	100	0	100	101



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LLI Sample No. **2679080**
CPT/SB-06/6-10 Unspiked Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	97	70	121
	d8-toluene	98	81	117
	4-BFB	99	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	73	24	113
	2-Flphenol	68	25	121
	2,4,6-TBP	79	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	89	23	120
	2-Fbiphenyl	87	30	115
	Tphenylid14	95	18	137



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96





LLI Sample No. SW 2679081
 Collected: 3/17/97 at 10:50 by DU

Submitted: 3/18/97 Reported: 4/15/97
 Discard: 4/30/97

CPT/SB-06/6-10 Matrix Spike Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-08MS

Account No: 07802
 Kerr-McGee Corporation
 PO Box 25861
 Oklahoma City, OK 73125-0861

P.O.
 Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4593	TCL Volatiles					
4688	TCL Semivolatiles					
4689	TCL Semivolatiles cont'd					
0118	Moisture	15.7		0.060	% by wt.	

See Page 2
 See Page 3
 See Page 4

1 COPY TO Kerr-McGee Corporation
 1 COPY TO Michael Pisani & Associates
 1 COPY TO Data Package Group

ATTN: Dr. Garet Van De Steeg
 ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300
 15:31:53 D 0003 15 0 129915 557239
 890 0.00 00049200 ASR000



Lancaster Laboratories
 2425 New Holland Pike
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Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Senior Chemist, GC/MS





LLI Sample No. SW 2679081

Collected: 3/17/97 at 10:50 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-06/6-10 Matrix Spike Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-08MS

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Volatiles by 8240						
3434	Chloromethane	17.	2.	ug/kg	20.	2.
3435	Bromomethane	16.	3.	ug/kg	20.	4.
3436	Vinyl Chloride	19.	2.	ug/kg	22.	2.
3437	Chloroethane	14.	3.	ug/kg	17.	4.
3440	Methylene Chloride	20.	2.	ug/kg	24.	2.
4074	Acetone	130.	7.	ug/kg	150.	8.
4076	Carbon Disulfide	190.	3.	ug/kg	230.	4.
1180	1,1-Dichloroethene	21.	2.	ug/kg	25.	2.
3442	1,1-Dichloroethane	21.	1.	ug/kg	25.	1.
3444	Chloroform	20.	1.	ug/kg	23.	1.
3445	1,2-Dichloroethane	18.	2.	ug/kg	22.	2.
4085	2-Butanone	140.	7.	ug/kg	160.	8.
3446	1,1,1-Trichloroethane	22.	1.	ug/kg	26.	1.
3447	Carbon Tetrachloride	21.	1.	ug/kg	25.	1.
4091	Vinyl Acetate	110.	3.	ug/kg	130.	4.
3448	Bromodichloromethane	19.	2.	ug/kg	23.	2.
3450	1,2-Dichloropropane	21.	3.	ug/kg	24.	4.
3454	cis-1,3-Dichloropropene	20.	1.	ug/kg	24.	1.
1181	Trichloroethene	21.	1.	ug/kg	24.	1.
3452	Dibromochloromethane	19.	1.	ug/kg	23.	1.
3453	1,1,2-Trichloroethane	19.	2.	ug/kg	22.	2.
1182	Benzene	20.	1.	ug/kg	24.	1.
3451	trans-1,3-Dichloropropene	19.	1.	ug/kg	22.	1.
3456	Bromoform	16.	1.	ug/kg	19.	1.
4108	4-Methyl-2-pentanone	88.	3.	ug/kg	100.	4.
4107	2-Hexanone	87.	3.	ug/kg	100.	4.
3457	Tetrachloroethene	22.	1.	ug/kg	27.	1.
3449	1,1,2,2-Tetrachloroethane	19.	1.	ug/kg	22.	1.
1183	Toluene	20.	1.	ug/kg	24.	1.
1184	Chlorobenzene	20.	1.	ug/kg	23.	1.
3458	Ethylbenzene	20.	1.	ug/kg	24.	1.
4117	Styrene	20.	1.	ug/kg	23.	1.
3355	Xylene (total)	62.	1.	ug/kg	73.	1.
6187	trans-1,2-Dichloroethene	20.	2.	ug/kg	23.	2.
6277	cis-1,2-Dichloroethene	20.	2.	ug/kg	23.	2.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



LLI Sample No. SW 2679081

Collected: 3/17/97 at 10:50 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-06/6-10 Matrix Spike Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-08MS

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

P.O.
Ref.

Oklahoma City, OK 73125-0861

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	phenol	2,900.	33.	ug/kg	3,400.	40.
3753	bis (2-chloroethyl) ether	2,900.	67.	ug/kg	3,500.	79.
1186	2-chlorophenol	2,900.	33.	ug/kg	3,500.	40.
3754	1,3-dichlorobenzene	2,700.	33.	ug/kg	3,200.	40.
1187	1,4-dichlorobenzene	2,700.	33.	ug/kg	3,200.	40.
3755	1,2-dichlorobenzene	2,800.	33.	ug/kg	3,400.	40.
4690	2-methylphenol	2,600.	67.	ug/kg	3,100.	79.
4691	2,2'-oxybis (1-chloropropane)	2,500.	100.	ug/kg	2,900.	120.
4692	4-methylphenol	2,800.	100.	ug/kg	3,300.	120.
1188	N-nitrosodi-n-propylamine	3,500.	67.	ug/kg	4,200.	79.
3757	hexachloroethane	2,800.	67.	ug/kg	3,300.	79.
3758	nitrobenzene	3,000.	33.	ug/kg	3,600.	40.
3759	isophorone	3,100.	67.	ug/kg	3,700.	79.
3746	2-nitrophenol	3,000.	67.	ug/kg	3,600.	79.
3747	2,4-dimethylphenol	970.	67.	ug/kg	1,100.	79.
3760	bis (2-chloroethoxy) methane	2,800.	33.	ug/kg	3,400.	40.
3748	2,4-dichlorophenol	2,800.	33.	ug/kg	3,300.	40.
1189	1,2,4-trichlorobenzene	2,800.	33.	ug/kg	3,300.	40.
3761	naphthalene	2,700.	33.	ug/kg	3,200.	40.
4693	4-chloroaniline	1,200.	100.	ug/kg	1,500.	120.
3762	hexachlorobutadiene	3,200.	67.	ug/kg	3,800.	79.
1190	4-chloro-3-methylphenol	3,000.	67.	ug/kg	3,600.	79.
4694	2-methylnaphthalene	2,800.	33.	ug/kg	3,400.	40.
3763	hexachlorocyclopentadiene	5,400.	170.	ug/kg	6,400.	200.
3749	2,4,6-trichlorophenol	2,900.	67.	ug/kg	3,500.	79.
4695	2,4,5-trichlorophenol	3,000.	67.	ug/kg	3,600.	79.
3764	2-chloronaphthalene	2,900.	33.	ug/kg	3,400.	40.
4696	2-nitroaniline	2,900.	67.	ug/kg	3,500.	79.
3766	dimethyl phthalate	2,800.	33.	ug/kg	3,300.	40.
3765	acenaphthylene	2,800.	33.	ug/kg	3,400.	40.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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2216 Rev. 5/01/96



LLI Sample No. SW 2679081

Collected: 3/17/97 at 10:50 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

CPT/SB-06/6-10 Matrix Spike Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-08MS

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

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CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	1,700.	67.	ug/kg	2,000.	79.	
1191	acenaphthene	2,700.	33.	ug/kg	3,200.	40.	
3750	2,4-dinitrophenol	3,200.	170.	ug/kg	3,800.	200.	
1192	4-nitrophenol	3,100.	170.	ug/kg	3,700.	200.	
4698	dibenzofuran	2,800.	33.	ug/kg	3,300.	40.	
1193	2,4-dinitrotoluene	3,100.	67.	ug/kg	3,700.	79.	
4699	2,6-dinitrotoluene	3,100.	67.	ug/kg	3,600.	79.	
3770	diethyl phthalate	2,900.	67.	ug/kg	3,400.	79.	
3769	4-chlorophenyl phenyl ether	2,700.	67.	ug/kg	3,200.	79.	
3768	fluorene	2,700.	33.	ug/kg	3,200.	40.	
4700	4-nitroaniline	2,500.	100.	ug/kg	3,000.	120.	
4701	4,6-dinitro-2-methylphenol	3,000.	170.	ug/kg	3,600.	200.	
3772	N-nitrosodiphenylamine	2,700.	67.	ug/kg	3,200.	79.	
3773	4-bromophenyl phenyl ether	3,100.	100.	ug/kg	3,700.	120.	
3774	hexachlorobenzene	3,200.	100.	ug/kg	3,800.	120.	
1194	pentachlorophenol	3,200.	170.	ug/kg	3,800.	200.	
3775	phenanthrene	2,900.	33.	ug/kg	3,400.	40.	
3776	anthracene	2,800.	33.	ug/kg	3,300.	40.	
4702	carbazole	3,000.	33.	ug/kg	3,600.	40.	
3777	di-n-butyl phthalate	3,100.	33.	ug/kg	3,700.	40.	
3778	fluoranthene	3,200.	33.	ug/kg	3,700.	40.	
1195	pyrene	2,700.	67.	ug/kg	3,200.	79.	
3780	butyl benzyl phthalate	2,900.	67.	ug/kg	3,400.	79.	
3783	3,3'-dichlorobenzidine	1,600.	130.	ug/kg	1,900.	160.	
3781	benzo (a) anthracene	2,900.	33.	ug/kg	3,400.	40.	
3784	bis (2-ethylhexyl) phthalate	3,000.	67.	ug/kg	3,500.	79.	
3782	chrysene	3,000.	33.	ug/kg	3,500.	40.	
3785	di-n-octyl phthalate	3,000.	67.	ug/kg	3,600.	79.	
3786	benzo (b) fluoranthene	2,900.	67.	ug/kg	3,500.	79.	
3787	benzo (k) fluoranthene	3,100.	130.	ug/kg	3,600.	160.	
3788	benzo (a) pyrene	2,800.	67.	ug/kg	3,300.	79.	
3789	indeno (1,2,3-cd) pyrene	3,200.	67.	ug/kg	3,800.	79.	
3790	dibenz (a,h) anthracene	3,300.	67.	ug/kg	3,900.	79.	
3791	benzo (ghi) perylene	3,000.	67.	ug/kg	3,500.	79.	

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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2216 Rev 5/01/96





LLI Sample No. SW 2679081

Collected: 3/17/97 at 10:50 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-06/6-10 Matrix Spike Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-08MS

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.





Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2679081

Collected: 03/17/97 at 10:50 by DU

Submitted: 03/18/97

CPT/SB-06/6-10 Matrix Spike Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-08MS

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/24/97 0954	Robin C. Runkle
0381	BNA Soil Extraction	SW-846 3550A	1	03/19/97 1650	Sherry Lynn Devlin
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/26/97 1903	David J. Evans
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/26/97 1903	David J. Evans
0118	Moisture	EPA 160.3 modified	1	03/19/97 1755	Neelay B. Mehta



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LLI Sample No. **2679081**
CPT/SB-06/6-10 Matrix Spike Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4593 TCL Volatiles by 8240		Batch: G970801AA									
3434	Chloromethane	N.D.		86	106	21	100			1	272
	2. ug/kg										
3435	Bromomethane	N.D.		82	102	21	95			1	241
	3. ug/kg										
3436	Vinyl Chloride	N.D.		94	116	21	108			1	250
	2. ug/kg										
3437	Chloroethane	N.D.		72	95	28	100			10	254
	3. ug/kg										
3440	Methylene Chloride	N.D.		100	107	6	101			1	221
	2. ug/kg										
4074	Acetone	N.D.		78	81	3	52			19	150
	7. ug/kg										
4076	Carbon Disulfide	N.D.		129	134	4	136			24	188
	3. ug/kg										
1180	1,1-Dichloroethene	N.D.		107	113	5	111			1	233
	2. ug/kg										
142	1,1-Dichloroethane	N.D.		105	109	3	108			59	155
	1. ug/kg										
444	Chloroform	N.D.		98	106	8	103			51	138
	1. ug/kg										
3445	1,2-Dichloroethane	N.D.		92	97	6	94			49	155
	2. ug/kg										
4085	2-Butanone	N.D.		91	98	7	65			22	167
	7. ug/kg										
3446	1,1,1-Trichloroethane	N.D.		109	116	6	110			52	162
	1. ug/kg										
3447	Carbon Tetrachloride	N.D.		105	111	6	109			70	140
	1. ug/kg										
4091	Vinyl Acetate	N.D.		111	118	6	99			19	190
	3. ug/kg										
3448	Bromodichloromethane	N.D.		97	105	8	99			35	155
	2. ug/kg										
3450	1,2-Dichloropropane	N.D.		103	109	6	102			1	209
	3. ug/kg										
3454	cis-1,3-Dichloropropene	N.D.		99	105	6	98			1	226
	1. ug/kg										
1181	Trichloroethene	N.D.		103	109	6	106			71	157
	1. ug/kg										
3452	Dibromochloromethane	N.D.		96	100	4	91			53	149
	1. ug/kg										
3453	1,1,2-Trichloroethane	N.D.		95	99	5	88			52	150
	2. ug/kg										
1182	Benzene	N.D.		100	109	8	102			37	151
	1. ug/kg										
3451	trans-1,3-Dichloropropene	N.D.		91	96	6	88			17	183
	1. ug/kg										



Lancaster Laboratories
2425 New Holland Pike
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See reverse side for explanation of symbols and abbreviations

2216 Rev. 5/01/96



LLI Sample No. 2679081
CPT/SB-06/6-10 Matrix Spike Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
	1. ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
	3. ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
	3. ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
	1. ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
	1. ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
	1. ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
	1. ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
	1. ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
	1. ug/kg	N.D.		98	101	3	101			74	136
3355	Xylene (total)										
	1. ug/kg	N.D.		103	104	2	102			30	200
1187	trans-1,2-Dichloroethene										
	2. ug/kg	N.D.		99	104	5	106			51	149
3277	cis-1,2-Dichloroethene										
	2. ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97078SLC026									

1185	phenol										
	33. ug/kg	N.D.		86	76	13	78			5	112
3753	bis (2-chloroethyl) ether										
	67. ug/kg	N.D.		88	77	14	84			12	158
1186	2-chlorophenol										
	33. ug/kg	N.D.		88	77	14	82			23	134
3754	1,3-dichlorobenzene										
	33. ug/kg	N.D.		81	74	10	82			1	172
1187	1,4-dichlorobenzene										
	33. ug/kg	N.D.		82	75	9	83			20	124
3755	1,2-dichlorobenzene										
	33. ug/kg	N.D.		85	77	10	83			32	129
4690	2-methylphenol										
	67. ug/kg	N.D.		79	70	11	76			46	123
4691	2,2'-oxybis (1-chloropropane)										
	100. ug/kg	N.D.		74	65	14	66			36	166
4692	4-methylphenol										
	100. ug/kg	N.D.		83	75	10	79			5	152
1188	N-nitrosodi-n-propylamine										
	67. ug/kg	N.D.		105	92	13	92			1	230
3757	hexachloroethane										
	67. ug/kg	N.D.		83	76	10	84			40	113



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2679081
 CPT/SB-06/6-10 Matrix Spike Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
33.	ug/kg	N.D.		90	80	12	89			35	180
3759	isophorone										
67.	ug/kg	N.D.		94	85	10	91			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		90	79	13	87			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		29	28	2	60			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		85	76	11	83			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		84	74	12	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		83	74	11	84			44	142
3761	naphthalene										
33.	ug/kg	N.D.		80	73	9	81			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		37	27	32	40			17	116
762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	85	11	96			24	116
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		90	81	11	85			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		85	77	10	82			28	123
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		81	72	13	76			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		88	78	13	88			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		91	79	14	87			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		86	78	9	88			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		87	76	14	82			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		85	75	12	84			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		85	77	10	85			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97078SLC026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	42	19	46			7	143
1191	acenaphthene										
33.	ug/kg	N.D.		80	73	10	81			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		97	81	18	81			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	79	16	82			1	132



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2679081
 CPT/SB-06/6-10 Matrix Spike Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
33.	ug/kg	N.D.		85	76	10	84			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	79	15	88			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		92	80	14	88			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		86	76	13	85			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		81	74	9	82			25	158
3768	fluorene										
33.	ug/kg	N.D.		82	75	9	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		76	61	21	73			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		91	77	17	81			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		82	72	12	86			38	147
73	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		93	81	14	87			53	127
774	hexachlorobenzene										
100.	ug/kg	N.D.		97	84	14	90			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		97	82	17	80			14	176
3775	phenanthrene										
33.	ug/kg	N.D.		86	76	13	86			54	120
3776	anthracene										
33.	ug/kg	N.D.		83	73	13	84			27	133
4702	carbazole										
33.	ug/kg	N.D.		91	80	12	89			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		93	80	15	90			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		95	82	14	89			26	137
1195	pyrene										
67.	ug/kg	N.D.		80	69	14	97			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		86	74	15	96			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		49	21	81	70			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		86	75	13	87			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	75	16	95			8	158
3782	chrysene										
33.	ug/kg	N.D.		90	79	13	90			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		91	75	19	93			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		87	75	15	84			24	159



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See reverse side for explanation of symbols and abbreviations

2216 Rev. 5/01/96



LLI Sample No. **2679081**
CPT/SB-06/6-10 Matrix Spike Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3787	benzo (k) fluoranthene 130. ug/kg	N.D.		92	81	13	89			11	163
3788	benzo (a) pyrene 67. ug/kg	N.D.		84	73	14	82			17	163
3789	indeno (1,2,3-cd) pyrene 67. ug/kg	N.D.		96	79	19	95			1	171
3790	dibenz (a,h) anthracene 67. ug/kg	N.D.		98	81	18	96			1	227
3791	benzo (ghi) perylene 67. ug/kg	N.D.		89	79	13	89			1	219
0118	Moisture 0.060 % by wt.	Batch: 970780316820003A									



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LLI Sample No. **2679081**
CPT/SB-06/6-10 Matrix Spike Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	95	70	121
	d8-toluene	102	81	117
	4-BFB	103	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	83	24	113
	2-Flphenol	75	25	121
	2,4,6-TBP	98	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	91	23	120
	2-Fbiphenyl	86	30	115
	Tphenylid14	89	18	137



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2679082

Collected: 3/17/97 at 10:50 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-06/6-10 Matrix Spike Dup. Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-DBMSD

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
4593	TCL Volatiles						See Page 2
4688	TCL Semivolatiles						See Page 3
4689	TCL Semivolatiles cont'd						See Page 4
0118	Moisture	15.7		0.060			% by wt.
0121	Moisture Duplicate	16.1		0.060			% by wt.

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Dr. Garet Van De Steeg
ATTN: Mr. David Uptegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
15:36:11 D 0003 15 0 129915 557239
890 0.00 00050400 ASR000

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



Lancaster Laboratories
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LLI Sample No. SW 2679082

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Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-06/6-10 Matrix Spike Dup. Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-08MSD

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL Volatiles by 8240							
3434	Chloromethane	21.	2.	ug/kg	25.	2.	
3435	Bromomethane	20.	3.	ug/kg	24.	4.	
3436	Vinyl Chloride	23.	2.	ug/kg	27.	2.	
3437	Chloroethane	19.	3.	ug/kg	23.	4.	
3440	Methylene Chloride	21.	2.	ug/kg	25.	2.	
4074	Acetone	130.	7.	ug/kg	150.	8.	
4076	Carbon Disulfide	200.	3.	ug/kg	240.	4.	
1180	1,1-Dichloroethene	23.	2.	ug/kg	27.	2.	
3442	1,1-Dichloroethane	22.	1.	ug/kg	26.	1.	
3444	Chloroform	21.	1.	ug/kg	25.	1.	
3445	1,2-Dichloroethane	19.	2.	ug/kg	23.	2.	
4085	2-Butanone	150.	7.	ug/kg	170.	8.	
3446	1,1,1-Trichloroethane	23.	1.	ug/kg	27.	1.	
3447	Carbon Tetrachloride	22.	1.	ug/kg	26.	1.	
4091	Vinyl Acetate	120.	3.	ug/kg	140.	4.	
3448	Bromodichloromethane	21.	2.	ug/kg	25.	2.	
3450	1,2-Dichloropropane	22.	3.	ug/kg	26.	4.	
3454	cis-1,3-Dichloropropene	21.	1.	ug/kg	25.	1.	
1181	Trichloroethene	22.	1.	ug/kg	26.	1.	
3452	Dibromochloromethane	20.	1.	ug/kg	24.	1.	
3453	1,1,2-Trichloroethane	20.	2.	ug/kg	24.	2.	
1182	Benzene	22.	1.	ug/kg	26.	1.	
3451	trans-1,3-Dichloropropene	20.	1.	ug/kg	24.	1.	
3456	Bromoform	17.	1.	ug/kg	20.	1.	
4108	4-Methyl-2-pentanone	87.	3.	ug/kg	100.	4.	
4107	2-Hexanone	86.	3.	ug/kg	100.	4.	
3457	Tetrachloroethene	22.	1.	ug/kg	27.	1.	
3449	1,1,2,2-Tetrachloroethane	19.	1.	ug/kg	23.	1.	
1183	Toluene	21.	1.	ug/kg	25.	1.	
1184	Chlorobenzene	20.	1.	ug/kg	24.	1.	
3458	Ethylbenzene	22.	1.	ug/kg	26.	1.	
4117	Styrene	20.	1.	ug/kg	24.	1.	
3355	Xylene (total)	63.	1.	ug/kg	74.	1.	
6187	trans-1,2-Dichloroethene	21.	2.	ug/kg	25.	2.	
6277	cis-1,2-Dichloroethene	21.	2.	ug/kg	25.	2.	

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



LLI Sample No. SW 2679082

Collected: 3/17/97 at 10:50 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-06/6-10 Matrix Spike Dup. Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

06--6 SDG#: HMS04-08MSD

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	2,500.	33.	ug/kg	3,000.	40.
3753	bis (2-chloroethyl) ether	2,600.	67.	ug/kg	3,000.	79.
1186	2-chlorophenol	2,600.	33.	ug/kg	3,000.	40.
3754	1,3-dichlorobenzene	2,500.	33.	ug/kg	2,900.	40.
1187	1,4-dichlorobenzene	2,500.	33.	ug/kg	3,000.	40.
3755	1,2-dichlorobenzene	2,600.	33.	ug/kg	3,000.	40.
4690	2-methylphenol	2,300.	67.	ug/kg	2,800.	79.
4691	2,2'-oxybis (1-chloropropane)	2,200.	100.	ug/kg	2,600.	120.
4692	4-methylphenol	2,500.	100.	ug/kg	3,000.	120.
1188	N-nitrosodi-n-propylamine	3,100.	67.	ug/kg	3,700.	79.
3757	hexachloroethane	2,500.	67.	ug/kg	3,000.	79.
3758	nitrobenzene	2,700.	33.	ug/kg	3,200.	40.
3759	isophorone	2,800.	67.	ug/kg	3,400.	79.
3746	2-nitrophenol	2,600.	67.	ug/kg	3,100.	79.
3747	2,4-dimethylphenol	950.	67.	ug/kg	1,100.	79.
3760	bis (2-chloroethoxy) methane	2,500.	33.	ug/kg	3,000.	40.
3748	2,4-dichlorophenol	2,500.	33.	ug/kg	2,900.	40.
1189	1,2,4-trichlorobenzene	2,500.	33.	ug/kg	2,900.	40.
3761	naphthalene	2,400.	33.	ug/kg	2,900.	40.
4693	4-chloroaniline	900.	100.	ug/kg	1,100.	120.
3762	hexachlorobutadiene	2,800.	67.	ug/kg	3,400.	79.
1190	4-chloro-3-methylphenol	2,700.	67.	ug/kg	3,200.	79.
4694	2-methylnaphthalene	2,600.	33.	ug/kg	3,100.	40.
3763	hexachlorocyclopentadiene	4,800.	170.	ug/kg	5,700.	200.
3749	2,4,6-trichlorophenol	2,600.	67.	ug/kg	3,100.	79.
4695	2,4,5-trichlorophenol	2,600.	67.	ug/kg	3,100.	79.
3764	2-chloronaphthalene	2,600.	33.	ug/kg	3,100.	40.
4696	2-nitroaniline	2,500.	67.	ug/kg	3,000.	79.
3766	dimethyl phthalate	2,500.	33.	ug/kg	3,000.	40.
3765	acenaphthylene	2,600.	33.	ug/kg	3,000.	40.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96



LLI Sample No. SW 2679082

Collected: 3/17/97 at 10:50 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-06/6-10 Matrix Spike Dup. Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

06--6 SDG#: HMS04-08MSD

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	1.400.	67.	ug/kg	1.700.	79.
1191	acenaphthene	2.400.	33.	ug/kg	2.900.	40.
3750	2,4-dinitrophenol	2.700.	170.	ug/kg	3.200.	200.
1192	4-nitrophenol	2.600.	170.	ug/kg	3.100.	200.
4698	dibenzofuran	2.500.	33.	ug/kg	3.000.	40.
1193	2,4-dinitrotoluene	2.600.	67.	ug/kg	3.100.	79.
4699	2,6-dinitrotoluene	2.700.	67.	ug/kg	3.200.	79.
3770	diethyl phthalate	2.500.	67.	ug/kg	3.000.	79.
3769	4-chlorophenyl phenyl ether	2.500.	67.	ug/kg	2.900.	79.
3768	fluorene	2.500.	33.	ug/kg	3.000.	40.
4700	4-nitroaniline	2.000.	100.	ug/kg	2.400.	120.
4701	4,6-dinitro-2-methylphenol	2.600.	170.	ug/kg	3.000.	200.
3772	N-nitrosodiphenylamine	2.400.	67.	ug/kg	2.900.	79.
3773	4-bromophenyl phenyl ether	2.700.	100.	ug/kg	3.200.	120.
3774	hexachlorobenzene	2.800.	100.	ug/kg	3.300.	120.
1194	pentachlorophenol	2.700.	170.	ug/kg	3.200.	200.
3775	phenanthrene	2.500.	33.	ug/kg	3.000.	40.
3776	anthracene	2.400.	33.	ug/kg	2.900.	40.
4702	carbazole	2.700.	33.	ug/kg	3.200.	40.
3777	di-n-butyl phthalate	2.700.	33.	ug/kg	3.200.	40.
3778	fluoranthene	2.700.	33.	ug/kg	3.300.	40.
1195	pyrene	2.300.	67.	ug/kg	2.700.	79.
3780	butyl benzyl phthalate	2.500.	67.	ug/kg	2.900.	79.
3783	3,3'-dichlorobenzidine	690.	130.	ug/kg	810.	160.
3781	benzo (a) anthracene	2.500.	33.	ug/kg	3.000.	40.
3784	bis (2-ethylhexyl) phthalate	2.500.	67.	ug/kg	3.000.	79.
3782	chrysene	2.600.	33.	ug/kg	3.100.	40.
3785	di-n-octyl phthalate	2.500.	67.	ug/kg	3.000.	79.
3786	benzo (b) fluoranthene	2.500.	67.	ug/kg	3.000.	79.
3787	benzo (k) fluoranthene	2.700.	130.	ug/kg	3.200.	160.
3788	benzo (a) pyrene	2.400.	67.	ug/kg	2.900.	79.
3789	indeno (1,2,3-cd) pyrene	2.600.	67.	ug/kg	3.100.	79.
3790	dibenz (a,h) anthracene	2.700.	67.	ug/kg	3.200.	79.
3791	benzo (ghi) perylene	2.600.	67.	ug/kg	3.100.	79.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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2216 Rev 5/01/96





LLI Sample No. SW 2679082

Collected: 3/17/97 at 10:50 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-06/6-10 Matrix Spike Dup. Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

06--6 SDG#: HMS04-08MSD

CAT NO.	ANALYSIS NAME	AS RECEIVED		DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846	Semivolatiles/Soil				

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
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Senior Chemist, GC/MS



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LLI Sample No. SW 2679082

Collected: 03/17/97 at 10:50 by DU

Submitted: 03/18/97

CPT/SB-06/6-10 Matrix Spike Dup. Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06--6 SDG#: HMS04-08MSD

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/24/97 1027	Robin C. Runkle
0381	BNA Soil Extraction	SW-846 3550A	1	03/19/97 1650	Sherry Lynn Devlin
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/26/97 1957	David J. Evans
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/26/97 1957	David J. Evans
0118	Moisture	EPA 160.3 modified	1	03/19/97 1755	Neelay B. Mehta
0121	Moisture Duplicate	EPA 160.3 modified	1	03/19/97 1755	Neelay B. Mehta



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2216 Rev 5/01/96



LLI Sample No. **2679082**
 CPT/SB-06/6-10 Matrix Spike Dup. Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
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Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4593 TCL Volatiles by 8240		Batch: G970801AA									
3434	Chloromethane										
	2. ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
	3. ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
	2. ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
	3. ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
	2. ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
	7. ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
	3. ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
	2. ug/kg	N.D.		107	113	5	111			1	233
.42	1,1-Dichloroethane										
	1. ug/kg	N.D.		105	109	3	108			59	155
44	Chloroform										
	1. ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
	2. ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
	7. ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
	1. ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
	1. ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
	3. ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
	2. ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
	3. ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
	1. ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
	1. ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
	1. ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
	2. ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
	1. ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
	1. ug/kg	N.D.		91	96	6	88			17	183



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2679082
 CPT/SB-06/6-10 Matrix Spike Dup. Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3456	Bromoform										
	1. ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
	3. ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
	3. ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
	1. ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
	1. ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
	1. ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
	1. ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
	1. ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
	1. ug/kg	N.D.		98	101	3	101			74	136
355	Xylene (total)										
	1. ug/kg	N.D.		103	104	2	102			30	200
6187	trans-1,2-Dichloroethene										
	2. ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
	2. ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97078SLC026									

1185	phenol										
	33. ug/kg	N.D.		86	76	13	78			5	112
3753	bis (2-chloroethyl) ether										
	67. ug/kg	N.D.		88	77	14	84			12	158
1186	2-chlorophenol										
	33. ug/kg	N.D.		88	77	14	82			23	134
3754	1,3-dichlorobenzene										
	33. ug/kg	N.D.		81	74	10	82			1	172
1187	1,4-dichlorobenzene										
	33. ug/kg	N.D.		82	75	9	83			20	124
3755	1,2-dichlorobenzene										
	33. ug/kg	N.D.		85	77	10	83			32	129
4690	2-methylphenol										
	67. ug/kg	N.D.		79	70	11	76			46	123
4691	2,2'-oxybis (1-chloropropane)										
	100. ug/kg	N.D.		74	65	14	66			36	166
4692	4-methylphenol										
	100. ug/kg	N.D.		83	75	10	79			5	152
1188	N-nitrosodi-n-propylamine										
	67. ug/kg	N.D.		105	92	13	92			1	230
3757	hexachloroethane										
	67. ug/kg	N.D.		83	76	10	84			40	113



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2679082
CPT/SB-06/6-10 Matrix Spike Dup. Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Table with columns: Sample MDL, Sample UNITS, BLANK, DUP RPD, MS, MSD, MS RPD, LCS, LCS DUP, LCS RPD, LCS LOW, LIMITS HIGH. Rows include various chemical compounds like nitrobenzene, isophorone, 2-nitrophenol, etc.

4689 TCL SW846 Semivolatiles/Soil Batch: 97078SLC026

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LLI Sample No. 2679082
CPT/SB-06/6-10 Matrix Spike Dup. Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
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Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
33.	ug/kg	N.D.		85	76	10	84			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	79	15	88			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		92	80	14	88			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		86	76	13	85			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		81	74	9	82			25	158
3768	fluorene										
33.	ug/kg	N.D.		82	75	9	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		76	61	21	73			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		91	77	17	81			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		82	72	12	86			38	147
773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		93	81	14	87			53	127
774	hexachlorobenzene										
100.	ug/kg	N.D.		97	84	14	90			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		97	82	17	80			14	176
3775	phenanthrene										
33.	ug/kg	N.D.		86	76	13	86			54	120
3776	anthracene										
33.	ug/kg	N.D.		83	73	13	84			27	133
4702	carbazole										
33.	ug/kg	N.D.		91	80	12	89			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		93	80	15	90			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		95	82	14	89			26	137
1195	pyrene										
67.	ug/kg	N.D.		80	69	14	97			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		86	74	15	96			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		49	21	81	70			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		86	75	13	87			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	75	16	95			8	158
3782	chrysene										
33.	ug/kg	N.D.		90	79	13	90			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		91	75	19	93			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		87	75	15	84			24	159



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96



LLI Sample No. **2679082**
CPT/SB-06/6-10 Matrix Spike Dup. Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3787	benzo (k) fluoranthene 130. ug/kg	N.D.		92	81	13	89			11	163
3788	benzo (a) pyrene 67. ug/kg	N.D.		84	73	14	82			17	163
3789	indeno (1,2,3-cd) pyrene 67. ug/kg	N.D.		96	79	19	95			1	171
3790	dibenz (a,h) anthracene 67. ug/kg	N.D.		98	81	18	96			1	227
3791	benzo (ghi) perylene 67. ug/kg	N.D.		89	79	13	89			1	219
0118	Moisture 0.060 % by wt.	Batch: 970780316820003A									
0121	Moisture Duplicate 0.060 % by wt.	Batch: 970780316820003A									



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LLI Sample No. 2679082
 CPT/SB-06/6-10 Matrix Spike Dup. Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	93	70	121
	d8-toluene	96	81	117
	4-BFB	97	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	74	24	113
	2-Flpheno1	68	25	121
	2,4,6-TBP	85	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	81	23	120
	2-Fbiphenyl	79	30	115
	Tphenyld14	77	18	137



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LLI Sample No. SW 2679083

Collected: 3/17/97 at 12:30 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

CPT/SB-07/14-16 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

07-14 SDG#: HMS04-09

Account No: 07802
Kerr-McGee Corporation
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Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4593	TCL Volatiles					
4688	TCL Semivolatiles					
4689	TCL Semivolatiles cont'd					
0111	Moisture	14.6		0.080		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

See Page 2
See Page 3
See Page 4

1 COPY TO Kerr-McGee Corporation ATTN: Dr. Garet Van De Steeg
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
15:39:47 D 0003 15 0 129915 557239
890 0.00 00049920 ASR000

Respectfully Submitted
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LLI Sample No. SW 2679083

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CPT/SB-07/14-16 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

07-14 SDG#: HMS04-09

Account No: 07802
Kerr-McGee Corporation
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Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL Volatiles by 8240							
3434	Chloromethane	N.D.	2.	ug/kg	N.D.	2.	
3435	Bromomethane	N.D.	3.	ug/kg	N.D.	4.	
3436	Vinyl Chloride	N.D.	2.	ug/kg	N.D.	2.	
3437	Chloroethane	N.D.	3.	ug/kg	N.D.	4.	
3440	Methylene Chloride	N.D.	2.	ug/kg	N.D.	2.	
4074	Acetone	42.	7.	ug/kg	50.	8.	
4076	Carbon Disulfide	N.D.	3.	ug/kg	N.D.	4.	
1180	1,1-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.	
3442	1,1-Dichloroethane	N.D.	1.	ug/kg	N.D.	1.	
3444	Chloroform	N.D.	1.	ug/kg	N.D.	1.	
3445	1,2-Dichloroethane	N.D.	2.	ug/kg	N.D.	2.	
4085	2-Butanone	N.D.	7.	ug/kg	N.D.	8.	
3446	1,1,1-Trichloroethane	N.D.	1.	ug/kg	N.D.	1.	
3447	Carbon Tetrachloride	N.D.	1.	ug/kg	N.D.	1.	
4091	Vinyl Acetate	N.D.	3.	ug/kg	N.D.	4.	
3448	Bromodichloromethane	N.D.	2.	ug/kg	N.D.	2.	
3450	1,2-Dichloropropane	N.D.	3.	ug/kg	N.D.	4.	
3454	cis-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.	
1181	Trichloroethene	N.D.	1.	ug/kg	N.D.	1.	
3452	Dibromochloromethane	N.D.	1.	ug/kg	N.D.	1.	
3453	1,1,2-Trichloroethane	N.D.	2.	ug/kg	N.D.	2.	
1182	Benzene	5.	J	ug/kg	6.	J	
3451	trans-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.	
3456	Bromoform	N.D.	1.	ug/kg	N.D.	1.	
4108	4-Methyl-2-pentanone	N.D.	3.	ug/kg	N.D.	4.	
4107	2-Hexanone	N.D.	3.	ug/kg	N.D.	4.	
3457	Tetrachloroethene	N.D.	1.	ug/kg	N.D.	1.	
3449	1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	N.D.	1.	
1183	Toluene	15.	1.	ug/kg	18.	1.	
1184	Chlorobenzene	N.D.	1.	ug/kg	N.D.	1.	
3458	Ethylbenzene	24.	1.	ug/kg	28.	1.	
4117	Styrene	N.D.	1.	ug/kg	N.D.	1.	
3355	Xylene (total)	75.	1.	ug/kg	87.	1.	
6187	trans-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.	
6277	cis-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.	

Questions? Contact your Client Services Representative
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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



LLI Sample No. SW 2679083

Collected: 3/17/97 at 12:30 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-07/14-16 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

07-14 SDG#: HMS04-09

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	39.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	78.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	39.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	78.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	78.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	78.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	67.	ug/kg	N.D.	78.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	78.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	78.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	39.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	39.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3761	naphthalene	36,000.	330.	ug/kg	43,000.	390.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	78.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	78.
4694	2-methylnaphthalene	15,000.	170.	ug/kg	18,000.	200.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	78.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	78.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	39.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	78.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	39.
3765	acenaphthylene	310.	J 33.	ug/kg	370.	J 39.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS

See reverse side for explanation of symbols and abbreviations.

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LLI Sample No. SW 2679083

Collected: 3/17/97 at 12:30 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-07/14-16 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

07-14 SDG#: HMS04-09

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.		78.
1191	acenaphthene	9,600.	170.	ug/kg	11,000.		200.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.		200.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.		200.
4698	dibenzofuran	9,700.	170.	ug/kg	11,000.		200.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.		78.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.		78.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.		78.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.		78.
3768	fluorene	8,500.	170.	ug/kg	9,900.		200.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.		120.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.		200.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.		78.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.		120.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.		120.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.		200.
3775	phenanthrene	20,000.	170.	ug/kg	23,000.		200.
3776	anthracene	4,800.	33.	ug/kg	5,600.		39.
4702	carbazole	970.	33.	ug/kg	1,100.		39.
3777	di-n-butyl phthalate	N.D.	33.	ug/kg	N.D.		39.
3778	fluoranthene	8,200.	170.	ug/kg	9,600.		200.
1195	pyrene	3,900.	67.	ug/kg	4,600.		78.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.		78.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.		160.
3781	benzo (a) anthracene	1,300.	33.	ug/kg	1,600.		39.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.		78.
3782	chrysene	1,300.	33.	ug/kg	1,500.		39.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.		78.
3786	benzo (b) fluoranthene	890.	67.	ug/kg	1,000.		78.
3787	benzo (k) fluoranthene	330.	J 130.	ug/kg	390.	J	160.
3788	benzo (a) pyrene	690.	67.	ug/kg	810.		78.
3789	indeno (1,2,3-cd) pyrene	380.	67.	ug/kg	440.		78.
3790	dibenz (a,h) anthracene	90.	J 67.	ug/kg	110.	J	78.
3791	benzo (ghi) perylene	280.	J 67.	ug/kg	330.	J	78.

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Respectfully Submitted
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Senior Chemist, GC/MS



LLI Sample No. SW 2679083

Collected: 3/17/97 at 12:30 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-07/14-16 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

07-14 SDG#: HMS04-09

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD	DETECTION LIMIT
TCL SW846	Semivolatiles/Soil						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

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2216 Rev 5/01/96





LLI Sample No. SW 2679083

Collected: 03/17/97 at 12:30 by DU

Submitted: 03/18/97

CPT/SB-07/14-16 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

07-14 SDG#: HMS04-09

Account No: 07802
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CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/24/97 1319	Robin C. Runkle
0381	BNA Soil Extraction	SW-846 3550A	1	03/19/97 1650	Sherry Lynn Devlin
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/27/97 0309	David J. Evans
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/27/97 0309	David J. Evans
0111	Moisture	EPA 160.3 modified	1	03/19/97 1755	NeeJay B. Mehta



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LLI Sample No. **2679083**
 CPT/SB-07/14-16 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4593 TCL Volatiles by 8240		Batch: G970801AA									

3434	Chloromethane										
	2. ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
	3. ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
	2. ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
	3. ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
	2. ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
	7. ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
	3. ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
	2. ug/kg	N.D.		107	113	5	111			1	233
442	1,1-Dichloroethane										
	1. ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
	1. ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
	2. ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
	7. ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
	1. ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
	1. ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
	3. ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
	2. ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
	3. ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
	1. ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
	1. ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
	1. ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
	2. ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
	1. ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
	1. ug/kg	N.D.		91	96	6	88			17	183



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LLI Sample No. 2679083
 CPT/SB-07/14-16 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
1.	ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
3.	ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
3.	ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
1.	ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
1.	ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
1.	ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
1.	ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
1.	ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
1.	ug/kg	N.D.		98	101	3	101			74	136
3455	Xylene (total)										
1.	ug/kg	N.D.		103	104	2	102			30	200
6187	trans-1,2-Dichloroethene										
2.	ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
2.	ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97078SLC026									

1185	phenol										
33.	ug/kg	N.D.		86	76	13	78			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		88	77	14	84			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		88	77	14	82			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		81	74	10	82			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		82	75	9	83			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		85	77	10	83			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		79	70	11	76			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		74	65	14	66			36	166
4692	4-methylphenol										
100.	ug/kg	N.D.		83	75	10	79			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		105	92	13	92			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		83	76	10	84			40	113



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2216 Rev 5/01/96



LLI Sample No. **2679083**
CPT/SB-07/14-16 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3758	nitrobenzene										
33.	ug/kg	N.D.		90	80	12	89			35	180
3759	isophorone										
67.	ug/kg	N.D.		94	85	10	91			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		90	79	13	87			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		29	28	2	60			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		85	76	11	83			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		84	74	12	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		83	74	11	84			44	142
3761	naphthalene										
330.	ug/kg	N.D.		80	73	9	81			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		37	27	32	40			17	116
762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	85	11	96			24	116
190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		90	81	11	85			22	147
4694	2-methylnaphthalene										
170.	ug/kg	N.D.		85	77	10	82			28	123
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		81	72	13	76			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		88	78	13	88			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		91	79	14	87			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		86	78	9	88			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		87	76	14	82			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		85	75	12	84			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		85	77	10	85			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97078SLC026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	42	19	46			7	143
1191	acenaphthene										
170.	ug/kg	N.D.		80	73	10	81			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		97	81	18	81			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	79	16	82			1	132





LLI Sample No. 2679083
CPT/SB-07/14-16 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
170.	ug/kg	N.D.		85	76	10	84			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	79	15	88			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		92	80	14	88			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		86	76	13	85			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		81	74	9	82			25	158
3768	fluorene										
170.	ug/kg	N.D.		82	75	9	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		76	61	21	73			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		91	77	17	81			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		82	72	12	86			38	147
773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		93	81	14	87			53	127
774	hexachlorobenzene										
100.	ug/kg	N.D.		97	84	14	90			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		97	82	17	80			14	176
3775	phenanthrene										
170.	ug/kg	N.D.		86	76	13	86			54	120
3776	anthracene										
33.	ug/kg	N.D.		83	73	13	84			27	133
4702	carbazole										
33.	ug/kg	N.D.		91	80	12	89			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		93	80	15	90			1	118
3778	fluoranthene										
170.	ug/kg	N.D.		95	82	14	89			26	137
1195	pyrene										
67.	ug/kg	N.D.		80	69	14	97			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		86	74	15	96			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		49	21	81	70			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		86	75	13	87			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	75	16	95			8	158
3782	chrysene										
33.	ug/kg	N.D.		90	79	13	90			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		91	75	19	93			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		87	75	15	84			24	159



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LLI Sample No. 2679083
CPT/SB-07/14-16 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3787	benzo (k) fluoranthene 130. ug/kg	N.D.		92	81	13	89			11	163
3788	benzo (a) pyrene 67. ug/kg	N.D.		84	73	14	82			17	163
3789	indeno (1,2,3-cd) pyrene 67. ug/kg	N.D.		96	79	19	95			1	171
3790	dibenz (a,h) anthracene 67. ug/kg	N.D.		98	81	18	96			1	227
3791	benzo (ghi) perylene 67. ug/kg	N.D.		89	79	13	89			1	219
0111	Moisture 0.080 % by wt.	Batch: 970780316820003A	3				100	100	0	100	101



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2679083
 CPT/SB-07/14-16 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	95	70	121
	d8-toluene	95	81	117
	4-BFB	96	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	74	24	113
	2-Flphenol	69	25	121
	2,4,6-TBP	63	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	90	23	120
	2-Fbiphenyl	79	30	115
	Tphenyl-d14	77	18	137



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See reverse side for explanation of symbols and abbreviations.



LLI Sample No. SW 2679084

Collected: 3/17/97 at 12:05 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

CPT/SB-06/36-38 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06-36 SDG#: HMS04-10

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4593	TCL Volatiles				See Page	2
4688	TCL Semivolatiles				See Page	3
4689	TCL Semivolatiles cont'd				See Page	4
0111	Moisture	20.2		0.080	% by wt.	
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Dr. Gareth Van De Steeg
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
15:41:56 D 0003 15 0 129915 557239
890 0.00 00049920 ASR000



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



LLI Sample No. SW 2679084

Collected: 3/17/97 at 12:05 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-06/36-38 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06-36 SDG#: HMS04-10

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Ret.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Volatiles by 8240						
3434	Chloromethane	N.D.	2.	ug/kg	N.D.	3.
3435	Bromomethane	N.D.	3.	ug/kg	N.D.	4.
3436	Vinyl Chloride	N.D.	2.	ug/kg	N.D.	3.
3437	Chloroethane	N.D.	3.	ug/kg	N.D.	4.
3440	Methylene Chloride	N.D.	2.	ug/kg	N.D.	3.
4074	Acetone	1,500.	35.	ug/kg	1,900.	44.
4076	Carbon Disulfide	N.D.	3.	ug/kg	N.D.	4.
1180	1,1-Dichloroethene	N.D.	2.	ug/kg	N.D.	3.
3442	1,1-Dichloroethane	N.D.	1.	ug/kg	N.D.	1.
3444	Chloroform	N.D.	1.	ug/kg	N.D.	1.
3445	1,2-Dichloroethane	N.D.	2.	ug/kg	N.D.	3.
4085	2-Butanone	N.D.	7.	ug/kg	N.D.	9.
3446	1,1,1-Trichloroethane	N.D.	1.	ug/kg	N.D.	1.
3447	Carbon Tetrachloride	N.D.	1.	ug/kg	N.D.	1.
4091	Vinyl Acetate	N.D.	3.	ug/kg	N.D.	4.
3448	Bromodichloromethane	N.D.	2.	ug/kg	N.D.	3.
3450	1,2-Dichloropropane	N.D.	3.	ug/kg	N.D.	4.
3454	cis-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
1181	Trichloroethene	N.D.	1.	ug/kg	N.D.	1.
3452	Dibromochloromethane	N.D.	1.	ug/kg	N.D.	1.
3453	1,1,2-Trichloroethane	N.D.	2.	ug/kg	N.D.	3.
1182	Benzene	N.D.	1.	ug/kg	N.D.	1.
3451	trans-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
3456	Bromoform	N.D.	1.	ug/kg	N.D.	1.
4108	4-Methyl-2-pentanone	N.D.	3.	ug/kg	N.D.	4.
4107	2-Hexanone	N.D.	3.	ug/kg	N.D.	4.
3457	Tetrachloroethene	N.D.	1.	ug/kg	N.D.	1.
3449	1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	N.D.	1.
1183	Toluene	N.D.	1.	ug/kg	N.D.	1.
1184	Chlorobenzene	N.D.	1.	ug/kg	N.D.	1.
3458	Ethylbenzene	N.D.	1.	ug/kg	N.D.	1.
4117	Styrene	N.D.	1.	ug/kg	N.D.	1.
3355	Xylene (total)	N.D.	1.	ug/kg	N.D.	1.
6187	trans-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	3.
6277	cis-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	3.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





LLI Sample No. SW 2679084

Collected: 3/17/97 at 12:05 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-06/36-38 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06-36 SDG#: HMS04-10

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles Soil							
1185	phenol	N.D.	33.	ug/kg	N.D.	42.	
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	84.	
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	42.	
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	42.	
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	42.	
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	42.	
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	84.	
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	130.	
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	130.	
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	84.	
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	84.	
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	42.	
3759	isophorone	N.D.	67.	ug/kg	N.D.	84.	
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	84.	
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	84.	
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	42.	
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	42.	
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	42.	
3761	naphthalene	50.	J	33.	63.	J	42.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	130.	
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	84.	
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	84.	
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	42.	
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	210.	
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	84.	
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	84.	
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	42.	
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	84.	
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	42.	
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	42.	

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. SW 2679084

Collected: 3/17/97 at 12:05 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

CPT/SB-06/36-38 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06-36 SDG#: HMS04-10

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	N.D.		67. ug/kg	N.D.		84.
1191	acenaphthene	42.	J	33. ug/kg	52.	J	42.
3750	2,4-dinitrophenol	N.D.		170. ug/kg	N.D.		210.
1192	4-nitrophenol	N.D.		170. ug/kg	N.D.		210.
4698	dibenzofuran	37.	J	33. ug/kg	46.	J	42.
1193	2,4-dinitrotoluene	N.D.		67. ug/kg	N.D.		84.
4699	2,6-dinitrotoluene	N.D.		67. ug/kg	N.D.		84.
3770	diethyl phthalate	N.D.		67. ug/kg	N.D.		84.
3769	4-chlorophenyl phenyl ether	N.D.		67. ug/kg	N.D.		84.
3768	fluorene	49.	J	33. ug/kg	61.	J	42.
4700	4-nitroaniline	N.D.		100. ug/kg	N.D.		130.
4701	4,6-dinitro-2-methylphenol	N.D.		170. ug/kg	N.D.		210.
3772	N-nitrosodiphenylamine	N.D.		67. ug/kg	N.D.		84.
3773	4-bromophenyl phenyl ether	N.D.		100. ug/kg	N.D.		130.
3774	hexachlorobenzene	N.D.		100. ug/kg	N.D.		130.
1194	pentachlorophenol	N.D.		170. ug/kg	N.D.		210.
3775	phenanthrene	160.	J	33. ug/kg	200.	J	42.
3776	anthracene	N.D.		33. ug/kg	N.D.		42.
4702	carbazole	N.D.		33. ug/kg	N.D.		42.
3777	di-n-butyl phthalate	N.D.		33. ug/kg	N.D.		42.
3778	fluoranthene	94.	J	33. ug/kg	120.	J	42.
1195	pyrene	N.D.		67. ug/kg	N.D.		84.
3780	butyl benzyl phthalate	N.D.		67. ug/kg	N.D.		84.
3783	3,3'-dichlorobenzidine	N.D.		130. ug/kg	N.D.		170.
3781	benzo (a) anthracene	N.D.		33. ug/kg	N.D.		42.
3784	bis (2-ethylhexyl) phthalate	N.D.		67. ug/kg	N.D.		84.
3782	chrysene	N.D.		33. ug/kg	N.D.		42.
3785	di-n-octyl phthalate	N.D.		67. ug/kg	N.D.		84.
3786	benzo (b) fluoranthene	N.D.		67. ug/kg	N.D.		84.
3787	benzo (k) fluoranthene	N.D.		130. ug/kg	N.D.		170.
3788	benzo (a) pyrene	N.D.		67. ug/kg	N.D.		84.
3789	indeno (1,2,3-cd) pyrene	N.D.		67. ug/kg	N.D.		84.
3790	dibenz (a,h) anthracene	N.D.		67. ug/kg	N.D.		84.
3791	benzo (ghi) perylene	N.D.		67. ug/kg	N.D.		84.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS





LLI Sample No. SW 2679084

Collected: 3/17/97 at 12:05 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

CPT/SB-06/36-38 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

06-36 SDG#: HMS04-10

Account No: 07802
 Kerr-McGee Corporation
 PO Box 25861
 Oklahoma City, OK 73125-0861

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846	Semivolatiles/Soil				

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
 The result reported for N-nitrosodiphenylamine represents the combined
 total of both compounds.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.



LLI Sample No. SW 2679084

Collected: 03/17/97 at 12:05 by DU

Submitted: 03/18/97

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

CPT/SB-06/36-38 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

06-36 SDG#: HMS04-10

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/24/97 1411	Robin C. Runkle
0381	BNA Soil Extraction	SW-846 3550A	1	03/19/97 1650	Sherry Lynn Devlin
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/27/97 0403	David J. Evans
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/27/97 0403	David J. Evans
0111	Moisture	EPA 160.3 modified	1	03/19/97 1755	Neelay B. Mehta



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2216 Rev. 5/01/96





L.L.I. Sample No. 2679084
CPT/SB-06/36-38 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4593 TCL Volatiles by 8240		Batch: G970801AA									
3434	Chloromethane										
	2. ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
	3. ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
	2. ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
	3. ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
	2. ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
	35. ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
	3. ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
	2. ug/kg	N.D.		107	113	5	111			1	233
442	1,1-Dichloroethane										
	1. ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
	1. ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
	2. ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
	7. ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
	1. ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
	1. ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
	3. ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
	2. ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
	3. ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
	1. ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
	1. ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
	1. ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
	2. ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
	1. ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
	1. ug/kg	N.D.		91	96	6	88			17	183



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96





LLI Sample No. 2679084
 CPT/SB-06/36-38 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
	1. ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
	3. ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
	3. ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
	1. ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,1,2-Tetrachloroethane										
	1. ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
	1. ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
	1. ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
	1. ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
	1. ug/kg	N.D.		98	101	3	101			74	136
3355	Xylene (total)										
	1. ug/kg	N.D.		103	104	2	102			30	200
6187	trans-1,2-Dichloroethene										
	2. ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
	2. ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97078SLC026									

1185	phenol										
	33. ug/kg	N.D.		86	76	13	78			5	112
3753	bis (2-chloroethyl) ether										
	67. ug/kg	N.D.		88	77	14	84			12	158
1186	2-chlorophenol										
	33. ug/kg	N.D.		88	77	14	82			23	134
3754	1,3-dichlorobenzene										
	33. ug/kg	N.D.		81	74	10	82			1	172
1187	1,4-dichlorobenzene										
	33. ug/kg	N.D.		82	75	9	83			20	124
3755	1,2-dichlorobenzene										
	33. ug/kg	N.D.		85	77	10	83			32	129
4690	2-methylphenol										
	67. ug/kg	N.D.		79	70	11	76			46	123
4691	2,2'-oxybis (1-chloropropane)										
	100. ug/kg	N.D.		74	65	14	66			36	166
4692	4-methylphenol										
	100. ug/kg	N.D.		83	75	10	79			5	152
1188	N-nitrosodi-n-propylamine										
	67. ug/kg	N.D.		105	92	13	92			1	230
3757	hexachloroethane										
	67. ug/kg	N.D.		83	76	10	84			40	113



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2679084
CPT/SB-06/36-38 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
33.	ug/kg	N.D.		90	80	12	89			35	180
3759	isophorone										
67.	ug/kg	N.D.		94	85	10	91			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		90	79	13	87			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		29	28	2	60			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		85	76	11	83			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		84	74	12	79			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		83	74	11	84			44	142
3761	naphthalene										
33.	ug/kg	N.D.		80	73	9	81			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		37	27	32	40			17	116
52	hexachlorobutadiene										
67.	ug/kg	N.D.		95	85	11	96			24	116
190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		90	81	11	85			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		85	77	10	82			28	123
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		81	72	13	76			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		88	78	13	88			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		91	79	14	87			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		86	78	9	88			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		87	76	14	82			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		85	75	12	84			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		85	77	10	85			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97078SLC026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	42	19	46			7	143
1191	acenaphthene										
33.	ug/kg	N.D.		80	73	10	81			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		97	81	18	81			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	79	16	82			1	132



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2216 Rev. 5/01/96



LLI Sample No. **2679084**
 CPT/SB-06/36-38 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
33.	ug/kg	N.D.		85	76	10	84			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	79	15	88			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		92	80	14	88			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		86	76	13	85			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		81	74	9	82			25	158
3768	fluorene										
33.	ug/kg	N.D.		82	75	9	84			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		76	61	21	73			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		91	77	17	81			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		82	72	12	86			38	147
773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		93	81	14	87			53	127
774	hexachlorobenzene										
100.	ug/kg	N.D.		97	84	14	90			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		97	82	17	80			14	176
3775	phenanthrene										
33.	ug/kg	N.D.		86	76	13	86			54	120
3776	anthracene										
33.	ug/kg	N.D.		83	73	13	84			27	133
4702	carbazole										
33.	ug/kg	N.D.		91	80	12	89			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		93	80	15	90			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		95	82	14	89			26	137
1195	pyrene										
67.	ug/kg	N.D.		80	69	14	97			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		86	74	15	96			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		49	21	81	70			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		86	75	13	87			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	75	16	95			8	158
3782	chrysene										
33.	ug/kg	N.D.		90	79	13	90			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		91	75	19	93			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		87	75	15	84			24	159



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2216 Rev. 5/01/96





LLI Sample No. 2679084
CPT/SB-06/36-38 Grab Soil Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		92	81	13	89			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		84	73	14	82			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		96	79	19	95			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		98	81	18	96			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		89	79	13	89			1	219
0111	Moisture	Batch: 970780316820003A									
0.080	% by wt.		3				100	100	0	100	101



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LLI Sample No. 2679084
 CPT/SB-06/36-38 Grab Soil Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	91	70	121
	d8-toluene	97	81	117
	4-BFB	98	74	121
4688 TCL SW846 Semivolatiles Soil	Pheno1-d6	70	24	113
	2-F1pheno1	62	25	121
	2,4,6-TBP	81	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	72	23	120
	2-Fbiphnyl	70	30	115
	Tphenyld14	74	18	137



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LLI Sample No. WW 2679085

Collected: 3/15/97 at 15:35 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

RB-4 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

RB-4- SDG#: HMS04-11RB

Account No: 07802 Kerr-McGee Corporation PO Box 25861 Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
4592	TCL Volatiles			See Page 2
4678	TCL Semivolatiles			See Page 3
4679	TCL Semivolatiles cont'd			See Page 4

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Dr. Garet Van De Steeg
ATTN: Mr. David Uptegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
15:43:30 D 0003 15 0 129915 557239
890 0.00 00045300 ASR000

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. WW 2679085

Collected: 3/15/97 at 15:35 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

RB-4 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

RB-4- SDG#: HMS04-11RB

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	N.D.	3.	ug/l
1257	Bromomethane	N.D.	3.	ug/l
3492	Vinyl Chloride	N.D.	2.	ug/l
3494	Chloroethane	N.D.	3.	ug/l
3497	Methylene Chloride	N.D.	2.	ug/l
3498	Acetone	N.D.	6.	ug/l
3499	Carbon Disulfide	N.D.	3.	ug/l
3500	1,1-Dichloroethene	N.D.	1.	ug/l
3501	1,1-Dichloroethane	N.D.	2.	ug/l
3503	Chloroform	N.D.	1.	ug/l
3504	1,2-Dichloroethane	N.D.	2.	ug/l
0316	2-Butanone	N.D.	3.	ug/l
3505	1,1,1-Trichloroethane	N.D.	1.	ug/l
3506	Carbon Tetrachloride	N.D.	1.	ug/l
3507	Vinyl Acetate	N.D.	2.	ug/l
3508	Bromodichloromethane	N.D.	1.	ug/l
3509	1,2-Dichloropropane	N.D.	1.	ug/l
3516	cis-1,3-Dichloropropene	N.D.	1.	ug/l
3511	Trichloroethene	N.D.	1.	ug/l
3512	Dibromochloromethane	N.D.	2.	ug/l
3513	1,1,2-Trichloroethane	N.D.	2.	ug/l
3515	Benzene	N.D.	1.	ug/l
3510	trans-1,3-Dichloropropene	N.D.	1.	ug/l
3518	Bromoform	N.D.	1.	ug/l
3521	4-Methyl-2-pentanone	N.D.	5.	ug/l
3520	2-Hexanone	N.D.	7.	ug/l
3522	Tetrachloroethene	N.D.	1.	ug/l
3523	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
3524	Toluene	N.D.	2.	ug/l
3525	Chlorobenzene	N.D.	1.	ug/l
3526	Ethylbenzene	N.D.	2.	ug/l
3528	Styrene	N.D.	1.	ug/l
3529	Xylene (total)	N.D.	1.	ug/l
5780	trans-1,2-Dichloroethene	N.D.	2.	ug/l
6268	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





LLI Sample No. WW 2679085

Collected: 3/15/97 at 15:35 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

RB-4 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

RB-4- SDG#: HMS04-11RB

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL SW846 Semivolatiles/Waters				
3918	phenol	N.D.	1.	ug/l
3867	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3874	2-chlorophenol	N.D.	1.	ug/l
3883	1,3-dichlorobenzene	N.D.	1.	ug/l
3884	1,4-dichlorobenzene	N.D.	1.	ug/l
3882	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	2.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	2.	ug/l
3915	N-nitrosodi-n-propylamine	N.D.	2.	ug/l
3902	hexachloroethane	N.D.	2.	ug/l
3910	nitrobenzene	N.D.	1.	ug/l
3904	isophorone	N.D.	1.	ug/l
3911	2-nitrophenol	N.D.	2.	ug/l
3890	2,4-dimethylphenol	N.D.	1.	ug/l
3866	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3886	2,4-dichlorophenol	N.D.	2.	ug/l
3921	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3906	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	2.	ug/l
3900	hexachlorobutadiene	N.D.	1.	ug/l
3872	4-chloro-3-methylphenol	N.D.	2.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3901	hexachlorocyclopentadiene	N.D.	3.	ug/l
3923	2,4,6-trichlorophenol	N.D.	1.	ug/l
3922	2,4,5-trichlorophenol	N.D.	1.	ug/l
3873	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	1.	ug/l
3891	dimethyl phthalate	N.D.	3.	ug/l
3858	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS





LLI Sample No. WW 2679085

Collected: 3/15/97 at 15:35 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

RB-4 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

RB-4- SDG#: HMS04-11RB

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters				
3908	3-nitroaniline	N.D.	1.	ug/l
3857	acenaphthene	N.D.	1.	ug/l
3893	2,4-dinitrophenol	N.D.	5.	ug/l
3912	4-nitrophenol	N.D.	5.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3894	2,4-dinitrotoluene	N.D.	2.	ug/l
3895	2,6-dinitrotoluene	N.D.	1.	ug/l
3887	diethyl phthalate	N.D.	2.	ug/l
3875	4-chlorophenyl phenyl ether	N.D.	2.	ug/l
3898	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
4683	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3914	N-nitrosodiphenylamine	N.D.	2.	ug/l
3869	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3899	hexachlorobenzene	N.D.	1.	ug/l
3916	pentachlorophenol	N.D.	1.	ug/l
3917	phenanthrene	N.D.	1.	ug/l
3859	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3880	di-n-butyl phthalate	N.D.	1.	ug/l
3897	fluoranthene	N.D.	1.	ug/l
3919	pyrene	N.D.	1.	ug/l
3870	butyl benzyl phthalate	N.D.	2.	ug/l
3885	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3860	benzo (a) anthracene	N.D.	1.	ug/l
3868	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3876	chrysene	N.D.	1.	ug/l
3896	di-n-octyl phthalate	N.D.	2.	ug/l
3861	benzo (b) fluoranthene	N.D.	2.	ug/l
3862	benzo (k) fluoranthene	N.D.	2.	ug/l
3864	benzo (a) pyrene	N.D.	2.	ug/l
3903	indeno (1,2,3-cd) pyrene	N.D.	2.	ug/l
3881	dibenz (a,h) anthracene	N.D.	2.	ug/l
3863	benzo (ghi) perylene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS





LLI Sample No. WW 2679085
 Collected: 3/15/97 at 15:35 by DU

Submitted: 3/18/97 Reported: 4/15/97
 Discard: 4/30/97

RB-4 Grab Water Sample
 Gulf States Creosoting: Hattiesburg, MS

RB-4- SDG#: HMS04-11RB

Account No: 07802
 Kerr-McGee Corporation
 PO Box 25861
 Oklahoma City, OK 73125-0861

P.O.
 Ref.

CAT
 NO. ANALYSIS NAME

AS RECEIVED
 METHOD
 RESULTS DETECTION LIMIT UNITS

TCL SW846 Semivolatiles/Waters

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
 The result reported for N-nitrosodiphenylamine represents the combined
 total of both compounds.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Christine M. Ratcliff, B.S.
 Senior Chemist, GC/MS



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LLI Sample No. WW 2679085

Collected: 03/15/97 at 15:35 by DU

Submitted: 03/18/97

RB-4 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

RB-4- SDG#: HMS04-11RB

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/20/97 0617	Joel R. Nace
0813	BNA Water Extraction	SW-846 3510B	1	03/19/97 0915	Maria A. Davenport
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/21/97 2217	David J. Evans
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/21/97 2217	David J. Evans



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2679085
 RB-4 Grab Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH

4592 TCL Volatiles by 8240 - Water Batch: K970781AB											

1258	Chloromethane										
	3. ug/l	N.D.		91	87	5					
1257	Bromomethane										
	3. ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
	2. ug/l	N.D.		99	97	1					
3494	Chloroethane										
	3. ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
	2. ug/l	N.D.		95	92	3					
3498	Acetone										
	6. ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
	3. ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
	1. ug/l	N.D.		99	96	4					
3501	1,1-Dichloroethane										
	2. ug/l	N.D.		99	96	3					
3503	Chloroform										
	1. ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
	2. ug/l	N.D.		98	97	1					
0316	2-Butanone										
	3. ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
	1. ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
	1. ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
	2. ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
	1. ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
	1. ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
	1. ug/l	N.D.		97	97	0					
3511	Trichloroethene										
	1. ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
	2. ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
	2. ug/l	N.D.		102	104	2					
3515	Benzene										
	1. ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
	1. ug/l	N.D.		92	95	3					



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LLI Sample No. **2679085**
RB-4 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3518	Bromoform										
	1. ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
	5. ug/l	N.D.		85	84	1					
3520	2-Hexanone										
	7. ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
	1. ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
	2. ug/l	N.D.		96	95	1					
3524	Toluene										
	2. ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
	1. ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
	2. ug/l	N.D.		106	101	4					
3528	Styrene										
	1. ug/l	N.D.		107	104	3					
3529	Xylene (total)										
	1. ug/l	N.D.		107	103	5					
3580	trans-1,2-Dichloroethene										
	2. ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
	2. ug/l	N.D.		100	98	2					

4678	TCL SW846 Semivolatiles/Waters	Batch: 97078WAB026076WE									
3918	phenol										
	1. ug/l	N.D.		43	41	3	41			5	112
3867	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		88	90	3	88			12	158
3874	2-chlorophenol										
	1. ug/l	N.D.		88	90	3	84			23	134
3883	1,3-dichlorobenzene										
	1. ug/l	N.D.		84	92	9	77			1	172
3884	1,4-dichlorobenzene										
	1. ug/l	N.D.		86	89	3	78			20	124
3882	1,2-dichlorobenzene										
	1. ug/l	N.D.		86	89	4	81			32	129
4680	2-methylphenol										
	2. ug/l	N.D.		78	80	3	73			46	123
4681	2,2'-oxybis (1-chloropropane)										
	2. ug/l	N.D.		69	72	5	74			36	166
4682	4-methylphenol										
	2. ug/l	N.D.		76	78	3	72			5	152
3915	N-nitrosodi-n-propylamine										
	2. ug/l	N.D.		94	100	6	99			1	230
3902	hexachloroethane										
	2. ug/l	N.D.		76	80	5	69			40	113



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2216 Rev. 5/01/96



LLI Sample No. **2679085**
 RB-4 Grab Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3910	nitrobenzene										
1.	ug/l	N.D.		96	98	2	94			35	180
3904	isophorone										
1.	ug/l	N.D.		94	93	0	95			21	196
3911	2-nitrophenol										
2.	ug/l	N.D.		91	94	3	90			29	182
3890	2,4-dimethylphenol										
1.	ug/l	N.D.		75	71	5	72			32	119
3866	bis (2-chloroethoxy) methane										
1.	ug/l	N.D.		88	90	2	88			33	184
3886	2,4-dichlorophenol										
2.	ug/l	N.D.		85	85	1	80			39	135
3921	1,2,4-trichlorobenzene										
1.	ug/l	N.D.		83	83	1	78			44	142
3906	naphthalene										
1.	ug/l	N.D.		84	86	2	83			21	133
3871	4-chloroaniline										
2.	ug/l	N.D.		47	55	16	51			17	116
3900	hexachlorobutadiene										
1.	ug/l	N.D.		83	85	3	64			24	116
3872	4-chloro-3-methylphenol										
2.	ug/l	N.D.		88	91	4	82			22	147
3905	2-methylnaphthalene										
1.	ug/l	N.D.		86	87	1	79			28	123
3901	hexachlorocyclopentadiene										
3.	ug/l	N.D.		71	72	1	66			1	100
3923	2,4,6-trichlorophenol										
1.	ug/l	N.D.		93	95	2	84			37	144
3922	2,4,5-trichlorophenol										
1.	ug/l	N.D.		90	95	6	82			39	151
3873	2-chloronaphthalene										
1.	ug/l	N.D.		90	91	1	87			60	118
3907	2-nitroaniline										
1.	ug/l	N.D.		84	90	7	89			53	143
3891	dimethyl phthalate										
3.	ug/l	N.D.		63	65	3	22			1	112
3858	acenaphthylene										
1.	ug/l	N.D.		88	90	2	84			33	145

4679	TCL SW846 Semivolatiles/Waters	Batch: 97078WAB026076WE									
3908	3-nitroaniline										
1.	ug/l	N.D.		61	67	9	55			7	143
3857	acenaphthene										
1.	ug/l	N.D.		82	84	2	79			47	145
3893	2,4-dinitrophenol										
5.	ug/l	N.D.		82	83	1	80			1	191
3912	4-nitrophenol										
5.	ug/l	N.D.		41	43	6	37			1	132



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2216 Rev. 5/01/96



LLI Sample No. **2679085**
 RB-4 Grab Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3879	dibenzofuran										
	1. ug/l	N.D.		85	87	2	82			28	131
3894	2,4-dinitrotoluene										
	2. ug/l	N.D.		88	95	8	91			39	139
3895	2,6-dinitrotoluene										
	1. ug/l	N.D.		90	95	6	83			50	158
3887	diethyl phthalate										
	2. ug/l	N.D.		76	78	2	57			1	114
3875	4-chlorophenyl phenyl ether										
	2. ug/l	N.D.		86	88	2	74			25	158
3898	fluorene										
	1. ug/l	N.D.		85	86	2	80			59	121
3909	4-nitroaniline										
	2. ug/l	N.D.		79	84	6	67			38	122
4683	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		87	91	5	86			1	181
3914	N-nitrosodiphenylamine										
	2. ug/l	N.D.		85	86	2	82			38	147
3969	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		86	88	3	81			53	127
3999	hexachlorobenzene										
	1. ug/l	N.D.		85	86	1	84			1	152
3916	pentachlorophenol										
	1. ug/l	N.D.		86	85	2	86			14	176
3917	phenanthrene										
	1. ug/l	N.D.		86	86	0	84			54	120
3859	anthracene										
	1. ug/l	N.D.		85	85	0	82			27	133
4684	carbazole										
	1. ug/l	N.D.		90	90	1	89			40	137
3880	di-n-butyl phthalate										
	1. ug/l	N.D.		93	92	0	83			1	118
3897	fluoranthene										
	1. ug/l	N.D.		87	88	0	85			26	137
3919	pyrene										
	1. ug/l	N.D.		85	90	6	80			52	115
3870	butyl benzyl phthalate										
	2. ug/l	N.D.		88	85	4	70			1	152
3885	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		60	71	17	69			1	262
3860	benzo (a) anthracene										
	1. ug/l	N.D.		85	91	7	82			33	143
3868	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		93	96	2	91			8	158
3876	chrysene										
	1. ug/l	N.D.		89	89	1	86			17	168
3896	di-n-octyl phthalate										
	2. ug/l	N.D.		87	89	2	88			4	146
3861	benzo (b) fluoranthene										
	2. ug/l	N.D.		79	83	5	79			24	159



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LLI Sample No. 2679085
 RB-4 Grab Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3862	benzo (k) fluoranthene 2. ug/l	N.D.		87	89	2	86			11	163
3864	benzo (a) pyrene 2. ug/l	N.D.		81	83	2	78			17	163
3903	indeno (1,2,3-cd) pyrene 2. ug/l	N.D.		87	89	1	85			1	171
3881	dibenz (a,h) anthracene 2. ug/l	N.D.		91	93	1	90			1	227
3863	benzo (ghi) perylene 2. ug/l	N.D.		88	89	1	82			1	219



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LLI Sample No. **2679085**
RB-4 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

	TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
				LOW	HIGH
4592 TCL Volatiles by 8240 - Water		d4-1,2-DCA	101	76	114
		d8-toluene	104	88	110
		4-BFB	109	86	115
4678 TCL SW846 Semivolatiles/Waters		2-F1pheno1	54	21	100
		Pheno1-d6	33	10	94
		2,4,6-TBP	76	10	123
4679 TCL SW846 Semivolatiles/Waters		Nitrobz-d5	81	35	114
		2-Fbiphny1	81	43	116
		Tphenylid14	91	33	141



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LLI Sample No. WW 2679086

Collected: 3/17/97 at 13:00 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

RB-5 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

RB-5- SDG#: HMS04-12RB

Account No: 07802 Kerr-McGee Corporation PO Box 25861 Oklahoma City, OK 73125-0861

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
4592	TCL Volatiles		See Page 2
4678	TCL Semivolatiles		See Page 3
4679	TCL Semivolatiles cont'd		See Page 4

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Dr. Garet Van De Steeg
ATTN: Mr. David Uptegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
15:44:28 D 0003 15 0 129915 557239
890 0.00 00045300 ASR000



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS





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Page: 2 of 12

LLI Sample No. **WW 2679086**
 Collected: 3/17/97 at 13:00 by DU

Submitted: 3/18/97 Reported: 4/15/97
 Discard: 4/30/97

RB-5 Grab Water Sample
 Gulf States Creosoting: Hattiesburg, MS

RB-5- SDG#: HMS04-12RB

Account No: 07802
 Kerr-McGee Corporation
 PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	N.D.	3.	ug/l
1257	Bromomethane	N.D.	3.	ug/l
3492	Vinyl Chloride	N.D.	2.	ug/l
3494	Chloroethane	N.D.	3.	ug/l
3497	Methylene Chloride	N.D.	2.	ug/l
3498	Acetone	N.D.	6.	ug/l
3499	Carbon Disulfide	N.D.	3.	ug/l
3500	1,1-Dichloroethene	N.D.	1.	ug/l
3501	1,1-Dichloroethane	N.D.	2.	ug/l
3503	Chloroform	N.D.	1.	ug/l
3504	1,2-Dichloroethane	N.D.	2.	ug/l
0316	2-Butanone	N.D.	3.	ug/l
3505	1,1,1-Trichloroethane	N.D.	1.	ug/l
3506	Carbon Tetrachloride	N.D.	1.	ug/l
3507	Vinyl Acetate	N.D.	2.	ug/l
3508	Bromodichloromethane	N.D.	1.	ug/l
3509	1,2-Dichloropropane	N.D.	1.	ug/l
3516	cis-1,3-Dichloropropene	N.D.	1.	ug/l
3511	Trichloroethene	N.D.	1.	ug/l
3512	Dibromochloromethane	N.D.	2.	ug/l
3513	1,1,2-Trichloroethane	N.D.	2.	ug/l
3515	Benzene	N.D.	1.	ug/l
3510	trans-1,3-Dichloropropene	N.D.	1.	ug/l
3518	Bromoform	N.D.	1.	ug/l
3521	4-Methyl-2-pentanone	N.D.	5.	ug/l
3520	2-Hexanone	N.D.	7.	ug/l
3522	Tetrachloroethene	N.D.	1.	ug/l
3523	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
3524	Toluene	N.D.	2.	ug/l
3525	Chlorobenzene	N.D.	1.	ug/l
3526	Ethylbenzene	N.D.	2.	ug/l
3528	Styrene	N.D.	1.	ug/l
3529	Xylene (total)	N.D.	1.	ug/l
5780	trans-1,2-Dichloroethene	N.D.	2.	ug/l
6268	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles





LLI Sample No. WW 2679086

Collected: 3/17/97 at 13:00 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

RB-5 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

RB-5- SDG#: HMS04-12RB

Account No: 07802
Kerr-McGee Corporation
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Oklahoma City, OK 73125-0861

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Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL SW846 Semivolatiles/Waters				
3918	phenol	N.D.	1.	ug/l
3867	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3874	2-chlorophenol	N.D.	1.	ug/l
3883	1,3-dichlorobenzene	N.D.	1.	ug/l
3884	1,4-dichlorobenzene	N.D.	1.	ug/l
3882	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	2.	ug/l
4681	2,2'-oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	2.	ug/l
3915	N-nitrosodi-n-propylamine	N.D.	2.	ug/l
3902	hexachloroethane	N.D.	2.	ug/l
3910	nitrobenzene	N.D.	1.	ug/l
3904	isophorone	N.D.	1.	ug/l
3911	2-nitrophenol	N.D.	2.	ug/l
3890	2,4-dimethylphenol	N.D.	1.	ug/l
3866	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3886	2,4-dichlorophenol	N.D.	2.	ug/l
3921	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3906	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	2.	ug/l
3900	hexachlorobutadiene	N.D.	1.	ug/l
3872	4-chloro-3-methylphenol	N.D.	2.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3901	hexachlorocyclopentadiene	N.D.	3.	ug/l
3923	2,4,6-trichlorophenol	N.D.	1.	ug/l
3922	2,4,5-trichlorophenol	N.D.	1.	ug/l
3873	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	1.	ug/l
3891	dimethyl phthalate	N.D.	3.	ug/l
3858	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Nancy Borrholm at (717) 656-2300

Respectfully Submitted
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Senior Chemist, GC/MS



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LLI Sample No. **WW 2679086**

Collected: 3/17/97 at 13:00 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

RB-5 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

RB-5- SDG#: HMS04-12RB

Account No: 07802
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Oklahoma City, OK 73125-0861

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CAT NO.	ANALYSIS NAME	METHOD		
		RESULTS	DETECTION LIMIT	UNITS
TCL SW846 Semivolatiles/Waters				
3908	3-nitroaniline	N.D.	1.	ug/l
3857	acenaphthene	N.D.	1.	ug/l
3893	2,4-dinitrophenol	N.D.	5.	ug/l
3912	4-nitrophenol	N.D.	5.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3894	2,4-dinitrotoluene	N.D.	2.	ug/l
3895	2,6-dinitrotoluene	N.D.	1.	ug/l
3887	diethyl phthalate	2.	2.	ug/l
3875	4-chlorophenyl phenyl ether	N.D.	2.	ug/l
3898	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
4683	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3914	N-nitrosodiphenylamine	N.D.	2.	ug/l
3869	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3899	hexachlorobenzene	N.D.	1.	ug/l
3916	pentachlorophenol	N.D.	1.	ug/l
3917	phenanthrene	N.D.	1.	ug/l
3859	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3880	di-n-butyl phthalate	N.D.	1.	ug/l
3897	fluoranthene	N.D.	1.	ug/l
3919	pyrene	N.D.	1.	ug/l
3870	butyl benzyl phthalate	N.D.	2.	ug/l
3885	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3860	benzo (a) anthracene	N.D.	1.	ug/l
3868	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3876	chrysene	N.D.	1.	ug/l
3896	di-n-octyl phthalate	N.D.	2.	ug/l
3861	benzo (b) fluoranthene	N.D.	2.	ug/l
3862	benzo (k) fluoranthene	N.D.	2.	ug/l
3864	benzo (a) pyrene	N.D.	2.	ug/l
3903	indeno (1,2,3-cd) pyrene	N.D.	2.	ug/l
3881	dibenz (a,h) anthracene	N.D.	2.	ug/l
3863	benzo (ghi) perylene	N.D.	2.	ug/l

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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



LLI Sample No. WW 2679086
Collected: 3/17/97 at 13:00 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

RB-5 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

RB-5- SDG#: HMS04-12RB

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL SW846 Semivolatiles/Waters

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. WW 2679086

Collected: 03/17/97 at 13:00 by DU

Submitted: 03/18/97

RB-5 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

RB-5- SDG#: HMS04-12RB

Account No: 07802
Kerr-McGee Corporation
PO Box 25861

Oklahoma City, OK 73125-0861

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/20/97 0652	Joel R. Nace
0813	BNA Water Extraction	SW-846 3510B	1	03/19/97 0915	Maria A. Davenport
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/21/97 2309	Mark A. Ratcliff
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/21/97 2309	Mark A. Ratcliff



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LLI Sample No. **2679086**
RB-5 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH

4592 TCL Volatiles by 8240 - Water Batch: K970781AB											

1258	Chloromethane										
	3. ug/l	N.D.		91	87	5					
1257	Bromomethane										
	3. ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
	2. ug/l	N.D.		99	97	1					
3494	Chloroethane										
	3. ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
	2. ug/l	N.D.		95	92	3					
3498	Acetone										
	6. ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
	3. ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
	1. ug/l	N.D.		99	96	4					
3501	1,1-Dichloroethane										
	2. ug/l	N.D.		99	96	3					
3503	Chloroform										
	1. ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
	2. ug/l	N.D.		98	97	1					
0316	2-Butanone										
	3. ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
	1. ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
	1. ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
	2. ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
	1. ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
	1. ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
	1. ug/l	N.D.		97	97	0					
3511	Trichloroethene										
	1. ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
	2. ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
	2. ug/l	N.D.		102	104	2					
3515	Benzene										
	1. ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
	1. ug/l	N.D.		92	95	3					



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LLI Sample No. **2679086**
RB-5 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3518	Bromoform										
	1. ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
	5. ug/l	N.D.		85	84	1					
3520	2-Hexanone										
	7. ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
	1. ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
	2. ug/l	N.D.		96	95	1					
3524	Toluene										
	2. ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
	1. ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
	2. ug/l	N.D.		106	101	4					
3528	Styrene										
	1. ug/l	N.D.		107	104	3					
529	Xylene (total)										
	1. ug/l	N.D.		107	103	5					
780	trans-1,2-Dichloroethene										
	2. ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
	2. ug/l	N.D.		100	98	2					

4678	TCL SW846 Semivolatiles/Waters	Batch: 97078WAB026076WE									
3918	phenol										
	1. ug/l	N.D.		43	41	3	41			5	112
3867	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		88	90	3	88			12	158
3874	2-chlorophenol										
	1. ug/l	N.D.		88	90	3	84			23	134
3883	1,3-dichlorobenzene										
	1. ug/l	N.D.		84	92	9	77			1	172
3884	1,4-dichlorobenzene										
	1. ug/l	N.D.		86	89	3	78			20	124
3882	1,2-dichlorobenzene										
	1. ug/l	N.D.		86	89	4	81			32	129
4680	2-methylphenol										
	2. ug/l	N.D.		78	80	3	73			46	123
4681	2,2'-oxybis (1-chloropropane)										
	2. ug/l	N.D.		69	72	5	74			36	166
4682	4-methylphenol										
	2. ug/l	N.D.		76	78	3	72			5	152
3915	N-nitrosodi-n-propylamine										
	2. ug/l	N.D.		94	100	6	99			1	230
3902	hexachloroethane										
	2. ug/l	N.D.		76	80	5	69			40	113



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LLI Sample No. **2679086**
RB-5 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3910	nitrobenzene										
	1. ug/l	N.D.		96	98	2	94			35	180
3904	isophorone										
	1. ug/l	N.D.		94	93	0	95			21	196
3911	2-nitrophenol										
	2. ug/l	N.D.		91	94	3	90			29	182
3890	2,4-dimethylphenol										
	1. ug/l	N.D.		75	71	5	72			32	119
3866	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		88	90	2	88			33	184
3886	2,4-dichlorophenol										
	2. ug/l	N.D.		85	85	1	80			39	135
3921	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		83	83	1	78			44	142
3906	naphthalene										
	1. ug/l	N.D.		84	86	2	83			21	133
3871	4-chloroaniline										
	2. ug/l	N.D.		47	55	16	51			17	116
900	hexachlorobutadiene										
	1. ug/l	N.D.		83	85	3	64			24	116
3872	4-chloro-3-methylphenol										
	2. ug/l	N.D.		88	91	4	82			22	147
3905	2-methylnaphthalene										
	1. ug/l	N.D.		86	87	1	79			28	123
3901	hexachlorocyclopentadiene										
	3. ug/l	N.D.		71	72	1	66			1	100
3923	2,4,6-trichlorophenol										
	1. ug/l	N.D.		93	95	2	84			37	144
3922	2,4,5-trichlorophenol										
	1. ug/l	N.D.		90	95	6	82			39	151
3873	2-chloronaphthalene										
	1. ug/l	N.D.		90	91	1	87			60	118
3907	2-nitroaniline										
	1. ug/l	N.D.		84	90	7	89			53	143
3891	dimethyl phthalate										
	3. ug/l	N.D.		63	65	3	22			1	112
3858	acenaphthylene										
	1. ug/l	N.D.		88	90	2	84			33	145

4679	TCL SW846 Semivolatiles/Waters	Batch: 97078WAB026076WE									

3908	3-nitroaniline										
	1. ug/l	N.D.		61	67	9	55			7	143
3857	acenaphthene										
	1. ug/l	N.D.		82	84	2	79			47	145
3893	2,4-dinitrophenol										
	5. ug/l	N.D.		82	83	1	80			1	191
3912	4-nitrophenol										
	5. ug/l	N.D.		41	43	6	37			1	132





LLI Sample No. 2679086
 RB-5 Grab Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3879	dibenzofuran										
1.	ug/l	N.D.		85	87	2	82			28	131
3894	2,4-dinitrotoluene										
2.	ug/l	N.D.		88	95	8	91			39	139
3895	2,6-dinitrotoluene										
1.	ug/l	N.D.		90	95	6	83			50	158
3887	diethyl phthalate										
2.	ug/l	N.D.		76	78	2	57			1	114
3875	4-chlorophenyl phenyl ether										
2.	ug/l	N.D.		86	88	2	74			25	158
3898	fluorene										
1.	ug/l	N.D.		85	86	2	80			59	121
3909	4-nitroaniline										
2.	ug/l	N.D.		79	84	6	67			38	122
4683	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		87	91	5	86			1	181
3914	N-nitrosodiphenylamine										
2.	ug/l	N.D.		85	86	2	82			38	147
3869	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		86	88	3	81			53	127
3899	hexachlorobenzene										
1.	ug/l	N.D.		85	86	1	84			1	152
3916	pentachlorophenol										
1.	ug/l	N.D.		86	85	2	86			14	176
3917	phenanthrene										
1.	ug/l	N.D.		86	86	0	84			54	120
3859	anthracene										
1.	ug/l	N.D.		85	85	0	82			27	133
4684	carbazole										
1.	ug/l	N.D.		90	90	1	89			40	137
3880	di-n-butyl phthalate										
1.	ug/l	N.D.		93	92	0	83			1	118
3897	fluoranthene										
1.	ug/l	N.D.		87	88	0	85			26	137
3919	pyrene										
1.	ug/l	N.D.		85	90	6	80			52	115
3870	butyl benzyl phthalate										
2.	ug/l	N.D.		88	85	4	70			1	152
3885	3,3'-dichlorobenzidine										
2.	ug/l	N.D.		60	71	17	69			1	262
3860	benzo (a) anthracene										
1.	ug/l	N.D.		85	91	7	82			33	143
3868	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		93	96	2	91			8	158
3876	chrysene										
1.	ug/l	N.D.		89	89	1	86			17	168
3896	di-n-octyl phthalate										
2.	ug/l	N.D.		87	89	2	88			4	146
3861	benzo (b) fluoranthene										
2.	ug/l	N.D.		79	83	5	79			24	159



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2679086
RB-5 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3862	benzo (k) fluoranthene 2. ug/l	N.D.		87	89	2	86			11	163
3864	benzo (a) pyrene 2. ug/l	N.D.		81	83	2	78			17	163
3903	indeno (1,2,3-cd) pyrene 2. ug/l	N.D.		87	89	1	85			1	171
3881	dibenz (a,h) anthracene 2. ug/l	N.D.		91	93	1	90			1	227
3863	benzo (ghi) perylene 2. ug/l	N.D.		88	89	1	82			1	219

MEMBER
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LLI Sample No. **2679086**
RB-5 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4592 TCL Volatiles by 8240 - Water	d4-1,2-DCA	103	76	114
	d8-toluene	105	88	110
	4-8FB	109	86	115
4678 TCL SW846 Semivolatiles/Waters	2-Flpheno1	56	21	100
	Pheno1-d6	35	10	94
	2,4,6-TBP	80	10	123
4679 TCL SW846 Semivolatiles/Waters	Nitrobz-d5	85	35	114
	2-Fbiphnyl	89	43	116
	Tphenylid14	98	33	141



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LLI Sample No. WW 2679087
Collected: 3/15/97 at 16:00 by DU

Submitted: 3/18/97 Reported: 4/15/97
Discard: 4/30/97

FB-1 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

FB-1- SDG#: HMS04-13FB

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

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CAT
NO. ANALYSIS NAME
4592 TCL Volatiles

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

See Page 2

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Dr. Garet Van De Steeg
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
15:45:39 D 0003 15 0 129915 557239
890 0.00 00015600 ASR000



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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS





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A division of Thermo Analytical Inc.

Page: 2 of 6

LLI Sample No. WW 2679087

Collected: 3/15/97 at 16:00 by DU

Submitted: 3/18/97 Reported: 4/15/97

Discard: 4/30/97

FB-1 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS

FB-1- SDG#: HMS04-13FB

Account No: 07802

Kerr-McGee Corporation

PO Box 25861

Oklahoma City, OK 73125-0861

P.O.
Ret.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	N.D.	3.	ug/l
1257	Bromomethane	N.D.	3.	ug/l
3492	Vinyl Chloride	N.D.	2.	ug/l
3494	Chloroethane	N.D.	3.	ug/l
3497	Methylene Chloride	N.D.	2.	ug/l
3498	Acetone	N.D.	6.	ug/l
3499	Carbon Disulfide	N.D.	3.	ug/l
3500	1,1-Dichloroethene	N.D.	1.	ug/l
3501	1,1-Dichloroethane	N.D.	2.	ug/l
3503	Chloroform	N.D.	1.	ug/l
3504	1,2-Dichloroethane	N.D.	2.	ug/l
0316	2-Butanone	N.D.	3.	ug/l
3505	1,1,1-Trichloroethane	N.D.	1.	ug/l
3506	Carbon Tetrachloride	N.D.	1.	ug/l
3507	Vinyl Acetate	N.D.	2.	ug/l
3508	Bromodichloromethane	N.D.	1.	ug/l
3509	1,2-Dichloropropane	N.D.	1.	ug/l
3516	cis-1,3-Dichloropropene	N.D.	1.	ug/l
3511	Trichloroethene	N.D.	1.	ug/l
3512	Dibromochloromethane	N.D.	2.	ug/l
3513	1,1,2-Trichloroethane	N.D.	2.	ug/l
3515	Benzene	N.D.	1.	ug/l
3510	trans-1,3-Dichloropropene	N.D.	1.	ug/l
3518	Bromoform	N.D.	1.	ug/l
3521	4-Methyl-2-pentanone	N.D.	5.	ug/l
3520	2-Hexanone	N.D.	7.	ug/l
3522	Tetrachloroethene	N.D.	1.	ug/l
3523	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
3524	Toluene	N.D.	2.	ug/l
3525	Chlorobenzene	N.D.	1.	ug/l
3526	Ethylbenzene	N.D.	2.	ug/l
3528	Styrene	N.D.	1.	ug/l
3529	Xylene (total)	N.D.	1.	ug/l
5780	trans-1,2-Dichloroethene	N.D.	2.	ug/l
6268	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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See reverse side for explanation of symbols and abbreviations.

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles

2216 Rev 5/01/96



LLI Sample No. WW 2679087

Collected: 03/15/97 at 16:00 by DU

Submitted: 03/18/97

FB-1 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

FB-1- SDG#: HMS04-13FB

Account No: 07802
Kerr-McGee Corporation
PO Box 25861
Oklahoma City, OK 73125-0861

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/20/97 0728	Joe1 R. Nace



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2216 Rev. 5/01/96



LLI Sample No. **2679087**
 FB-1 Grab Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH

4592 TCL Volatiles by 8240 - Water Batch: K970781AB											
1258	Chloromethane										
	3. ug/l	N.D.		91	87	5					
1257	Bromomethane										
	3. ug/l	N.D.		99	98	1					
3492	Vinyl Chloride										
	2. ug/l	N.D.		99	97	1					
3494	Chloroethane										
	3. ug/l	N.D.		99	97	1					
3497	Methylene Chloride										
	2. ug/l	N.D.		95	92	3					
3498	Acetone										
	6. ug/l	N.D.		85	86	1					
3499	Carbon Disulfide										
	3. ug/l	N.D.		100	94	5					
3500	1,1-Dichloroethene										
	1. ug/l	N.D.		99	96	4					
3501	1,1-Dichloroethane										
	2. ug/l	N.D.		99	96	3					
3503	Chloroform										
	1. ug/l	N.D.		100	96	4					
3504	1,2-Dichloroethane										
	2. ug/l	N.D.		98	97	1					
0316	2-Butanone										
	3. ug/l	N.D.		97	94	4					
3505	1,1,1-Trichloroethane										
	1. ug/l	N.D.		106	103	3					
3506	Carbon Tetrachloride										
	1. ug/l	N.D.		101	98	3					
3507	Vinyl Acetate										
	2. ug/l	N.D.		125	121	3					
3508	Bromodichloromethane										
	1. ug/l	N.D.		101	99	2					
3509	1,2-Dichloropropane										
	1. ug/l	N.D.		93	95	2					
3516	cis-1,3-Dichloropropene										
	1. ug/l	N.D.		97	97	0					
3511	Trichloroethene										
	1. ug/l	N.D.		103	100	2					
3512	Dibromochloromethane										
	2. ug/l	N.D.		103	103	0					
3513	1,1,2-Trichloroethane										
	2. ug/l	N.D.		102	104	2					
3515	Benzene										
	1. ug/l	N.D.		101	99	2					
3510	trans-1,3-Dichloropropene										
	1. ug/l	N.D.		92	95	3					



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 3/01/96





LLI Sample No. 2679087
 FB-1 Grab Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3518	Bromoform										
	1. ug/l	N.D.		98	99	2					
3521	4-Methyl-2-pentanone										
	5. ug/l	N.D.		85	84	1					
3520	2-Hexanone										
	7. ug/l	N.D.		93	91	3					
3522	Tetrachloroethene										
	1. ug/l	N.D.		106	102	4					
3523	1,1,2,2-Tetrachloroethane										
	2. ug/l	N.D.		96	95	1					
3524	Toluene										
	2. ug/l	N.D.		106	102	4					
3525	Chlorobenzene										
	1. ug/l	N.D.		106	102	4					
3526	Ethylbenzene										
	2. ug/l	N.D.		106	101	4					
3528	Styrene										
	1. ug/l	N.D.		107	104	3					
3529	Xylene (total)										
	1. ug/l	N.D.		107	103	5					
5780	trans-1,2-Dichloroethene										
	2. ug/l	N.D.		97	94	4					
6268	cis-1,2-Dichloroethene										
	2. ug/l	N.D.		100	98	2					



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LLI Sample No. 2679087
FB-1 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557239
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4592 TCL Volatiles by 8240 - Water	d4-1,2-DCA	105	76	114
	d8-toluene	104	88	110
	4-BFB	109	86	115



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2680801

Collected: 3/18/97 at 10:35 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-01/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-01 SDG#: HMS04-14

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4593	TCL Volatiles					
4688	TCL Semivolatiles					
4689	TCL Semivolatiles cont'd					
0111	Moisture	13.0		0.080	% by wt.	

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:16:53 D 0003 11 129915 557660
448 0.00 00049920 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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LLI Sample No. SW 2680801
 Collected: 3/18/97 at 10:35 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
 Discard: 5/ 9/97

GEO/SB-01/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
 SB-01 SDG#: HMS04-14

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Volatiles by 8240						
3434	Chloromethane	N.D.	2.	ug/kg	N.D.	2.
3435	Bromomethane	N.D.	3.	ug/kg	N.D.	3.
3436	Vinyl Chloride	N.D.	2.	ug/kg	N.D.	2.
3437	Chloroethane	N.D.	3.	ug/kg	N.D.	3.
3440	Methylene Chloride	N.D.	2.	ug/kg	N.D.	2.
4074	Acetone	N.D.	7.	ug/kg	N.D.	8.
4076	Carbon Disulfide	N.D.	3.	ug/kg	N.D.	3.
1180	1,1-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.
3442	1,1-Dichloroethane	N.D.	1.	ug/kg	N.D.	1.
3444	Chloroform	N.D.	1.	ug/kg	N.D.	1.
3445	1,2-Dichloroethane	N.D.	2.	ug/kg	N.D.	2.
4085	2-Butanone	N.D.	7.	ug/kg	N.D.	8.
3446	1,1,1-Trichloroethane	N.D.	1.	ug/kg	N.D.	1.
3447	Carbon Tetrachloride	N.D.	1.	ug/kg	N.D.	1.
4091	Vinyl Acetate	N.D.	3.	ug/kg	N.D.	3.
3448	Bromodichloromethane	N.D.	2.	ug/kg	N.D.	2.
3450	1,2-Dichloropropane	N.D.	3.	ug/kg	N.D.	3.
3454	cis-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
1181	Trichloroethene	N.D.	1.	ug/kg	N.D.	1.
3452	Dibromochloromethane	N.D.	1.	ug/kg	N.D.	1.
3453	1,1,2-Trichloroethane	N.D.	2.	ug/kg	N.D.	2.
1182	Benzene	N.D.	1.	ug/kg	N.D.	1.
3451	trans-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
3456	Bromoform	N.D.	1.	ug/kg	N.D.	1.
4108	4-Methyl-2-pentanone	N.D.	3.	ug/kg	N.D.	3.
4107	2-Hexanone	N.D.	3.	ug/kg	N.D.	3.
3457	Tetrachloroethene	N.D.	1.	ug/kg	N.D.	1.
3449	1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	N.D.	1.
1183	Toluene	N.D.	1.	ug/kg	N.D.	1.
1184	Chlorobenzene	N.D.	1.	ug/kg	N.D.	1.
3458	Ethylbenzene	N.D.	1.	ug/kg	N.D.	1.
4117	Styrene	N.D.	1.	ug/kg	N.D.	1.
3355	Xylene (total)	N.D.	1.	ug/kg	N.D.	1.
6187	trans-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.
6277	cis-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles



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2216 Rev 5/01/96





LLI Sample No. SW 2680801
Collected: 3/18/97 at 10:35 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

GEO/SB-01/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-01 SDG#: HMS04-14

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	38.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	77.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	38.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	77.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	110.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	110.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	77.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	77.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	67.	ug/kg	N.D.	77.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	77.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	77.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	38.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	38.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3761	naphthalene	98.	J 33.	ug/kg	110.	J 38.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	110.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	77.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	77.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	38.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	77.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	77.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	38.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	77.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	38.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. SW 2680801
Collected: 3/18/97 at 10:35 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

GEO/SB-01/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-01 SDG#: HMS04-14

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	77.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	38.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	190.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	190.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	38.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	77.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	77.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	77.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	110.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	77.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	110.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	110.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	38.
3776	anthracene	N.D.	33.	ug/kg	N.D.	38.
4702	carbazole	N.D.	33.	ug/kg	N.D.	38.
3777	di-n-butyl phthalate	N.D.	33.	ug/kg	N.D.	38.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	67.	ug/kg	N.D.	77.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	150.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	38.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	77.
3782	chrysene	N.D.	33.	ug/kg	N.D.	38.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3786	benzo (b) fluoranthene	N.D.	67.	ug/kg	N.D.	77.
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	150.
3788	benzo (a) pyrene	N.D.	67.	ug/kg	N.D.	77.
3789	indeno (1,2,3-cd) pyrene	N.D.	67.	ug/kg	N.D.	77.
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	77.
3791	benzo (ghi) perylene	N.D.	67.	ug/kg	N.D.	77.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. SW 2680801

Collected: 3/18/97 at 10:35 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-01/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-01 SDG#: HMS04-14

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
RESULTS METHOD
DETECTION LIMIT UNITS

DRY WEIGHT
RESULTS METHOD
DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

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Senior Chemist, GC/MS



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Lancaster Laboratories

A division of Thermo Analytical Inc.

LLI Sample No. SW 2680801

Collected: 03/18/97 at 10:35 by DU

Submitted: 03/20/97

GEO/SB-01/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-01 SDG#: HMS04-14

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/24/97 2227	David A. Hoppman
0381	BNA Soil Extraction	SW-846 3550A	1	03/21/97 0940	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0347	Deb Gifford
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0347	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	03/21/97 1911	Neelay B. Mehta



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A division of Thermo Analytical Inc.

LLI Sample No. 2680801
GEO/SB-01/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH

4593	TCL Volatiles by 8240	Batch: G970901AB									

3434	Chloromethane										
	2. ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
	3. ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
	2. ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
	3. ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
	2. ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
	7. ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
	3. ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
	2. ug/kg	N.D.		107	113	5	111			1	233
2	1,1-Dichloroethane										
	1. ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
	1. ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
	2. ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
	7. ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
	1. ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
	1. ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
	3. ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
	2. ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
	3. ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
	1. ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
	1. ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
	1. ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
	2. ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
	1. ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
	1. ug/kg	N.D.		91	96	6	88			17	183



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717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2680801
GEO/SB-01/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
	1. ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
	3. ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
	3. ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
	1. ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
	1. ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
	1. ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
	1. ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
	1. ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
	1. ug/kg	N.D.		98	101	3	101			74	136
3355	Xylene (total)										
	1. ug/kg	N.D.		103	104	2	102			30	200
1187	trans-1,2-Dichloroethene										
	2. ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
	2. ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97080SLC026078SC									

1185	phenol										
	33. ug/kg	N.D.		86	76	13	75			5	112
3753	bis (2-chloroethyl) ether										
	67. ug/kg	N.D.		88	77	14	78			12	158
1186	2-chlorophenol										
	33. ug/kg	N.D.		88	77	14	76			23	134
3754	1,3-dichlorobenzene										
	33. ug/kg	N.D.		81	74	10	77			1	172
1187	1,4-dichlorobenzene										
	33. ug/kg	N.D.		82	75	9	77			20	124
3755	1,2-dichlorobenzene										
	33. ug/kg	N.D.		85	77	10	79			32	129
4690	2-methylphenol										
	67. ug/kg	N.D.		79	70	11	74			46	123
4691	2,2'-oxybis (1-chloropropane)										
	100. ug/kg	N.D.		74	65	14	64			36	166
4692	4-methylphenol										
	100. ug/kg	N.D.		83	75	10	78			5	152
1188	N-nitrosodi-n-propylamine										
	67. ug/kg	N.D.		105	92	13	90			1	230
3757	hexachloroethane										
	67. ug/kg	N.D.		83	76	10	79			40	113



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2680801
GEO/SB-01/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
33.	ug/kg	N.D.		90	80	12	82			35	180
3759	isophorone										
67.	ug/kg	N.D.		94	85	10	86			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		90	79	13	81			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		29	28	2	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		85	76	11	79			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		84	74	12	75			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		83	74	11	78			44	142
3761	naphthalene										
33.	ug/kg	N.D.		80	73	9	73			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		37	27	32	32			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	85	11	88			24	116
290	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		90	81	11	78			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		85	77	10	76			28	123
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		81	72	13	77			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		88	78	13	83			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		91	79	14	81			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		86	78	9	83			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		87	76	14	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		85	75	12	76			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		85	77	10	79			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97080SLC026078SC									
4697	3-nitroaniline										
67.	ug/kg	N.D.		51	42	19	39			7	143
1191	acenaphthene										
33.	ug/kg	N.D.		80	73	10	74			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		97	81	18	67			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	79	16	71			1	132



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2216 Rev 5/01-96



LLI Sample No. 2680801

GEO/SB-01/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
33.	ug/kg	N.D.		85	76	10	76			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	79	15	77			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		92	80	14	80			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		86	76	13	76			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		81	74	9	75			25	158
3768	fluorene										
33.	ug/kg	N.D.		82	75	9	76			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		76	61	21	64			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		91	77	17	76			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		82	72	12	80			38	147
773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		93	81	14	84			53	127
74	hexachlorobenzene										
100.	ug/kg	N.D.		97	84	14	84			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		97	82	17	72			14	176
3775	phenanthrene										
33.	ug/kg	N.D.		86	76	13	79			54	120
3776	anthracene										
33.	ug/kg	N.D.		83	73	13	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		91	80	12	81			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		93	80	15	85			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		95	82	14	82			26	137
1195	pyrene										
67.	ug/kg	N.D.		80	69	14	79			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		86	74	15	85			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		49	21	81	60			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		86	75	13	79			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	75	16	86			8	158
3782	chrysene										
33.	ug/kg	N.D.		90	79	13	82			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		91	75	19	87			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		87	75	15	78			24	159



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LLI Sample No. 2680801
 GEO/SB-01/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		92	81	13	82			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		84	73	14	76			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		96	79	19	80			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		98	81	18	83			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		89	79	13	76			1	219
0111	Moisture	Batch: 970800316820005A	7								
0.080	% by wt.						100	100	0	100	101



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LLI Sample No. 2680801
 GEO/SB-01/10-12 Grab Soil Sample

Gulf States Creosoting, Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	97	70	121
	d8-toluene	98	81	117
	4-BFB	107	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	71	24	113
	2-Flphenol	63	25	121
	2,4,6-TBP	65	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	80	23	120
	2-Fbiphenyl	81	30	115
	Tphenylid14	76	18	137



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2216 Rev. 5/01/96





LLI Sample No. SW 2680802

Collected: 3/18/97 at 11:40 by DU
through 3/18/97 at 12:05
Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

GEO/SB-02/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-02 SDG#: HMS04-15

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4593	TCL Volatiles					
4688	TCL Semivolatiles					
4689	TCL Semivolatiles cont'd					
0111	Moisture	15.4		0.080		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

See Page 2
See Page 3
See Page 4

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:18:10 D 0003 11 129915 557660
448 0.00 00049920 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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GE0/SB-02/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-02 SDG#: HMS04-15

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL Volatiles by 8240							
3434	Chloromethane	N.D.	2.	ug/kg	N.D.	2.	
3435	Bromomethane	N.D.	3.	ug/kg	N.D.	4.	
3436	Vinyl Chloride	N.D.	2.	ug/kg	N.D.	2.	
3437	Chloroethane	N.D.	3.	ug/kg	N.D.	4.	
3440	Methylene Chloride	N.D.	2.	ug/kg	N.D.	2.	
4074	Acetone	N.D.	7.	ug/kg	N.D.	8.	
4076	Carbon Disulfide	N.D.	3.	ug/kg	N.D.	4.	
1180	1,1-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.	
3442	1,1-Dichloroethane	N.D.	1.	ug/kg	N.D.	1.	
3444	Chloroform	N.D.	1.	ug/kg	N.D.	1.	
3445	1,2-Dichloroethane	N.D.	2.	ug/kg	N.D.	1.	
4085	2-Butanone	N.D.	7.	ug/kg	N.D.	2.	
3446	1,1,1-Trichloroethane	N.D.	1.	ug/kg	N.D.	8.	
3447	Carbon Tetrachloride	N.D.	1.	ug/kg	N.D.	1.	
4091	Vinyl Acetate	N.D.	3.	ug/kg	N.D.	1.	
3448	Bromodichloromethane	N.D.	2.	ug/kg	N.D.	4.	
3450	1,2-Dichloropropane	N.D.	3.	ug/kg	N.D.	2.	
3454	cis-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	4.	
1181	Trichloroethene	N.D.	1.	ug/kg	N.D.	1.	
3452	Dibromochloromethane	N.D.	1.	ug/kg	N.D.	1.	
3453	1,1,2-Trichloroethane	N.D.	2.	ug/kg	N.D.	1.	
1182	Benzene	N.D.	1.	ug/kg	N.D.	2.	
3451	trans-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.	
3456	Bromoform	N.D.	1.	ug/kg	N.D.	1.	
4108	4-Methyl-2-pentanone	N.D.	3.	ug/kg	N.D.	1.	
4107	2-Hexanone	N.D.	3.	ug/kg	N.D.	4.	
3457	Tetrachloroethene	N.D.	1.	ug/kg	N.D.	4.	
3449	1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	N.D.	1.	
1183	Toluene	N.D.	1.	ug/kg	N.D.	1.	
1184	Chlorobenzene	N.D.	1.	ug/kg	N.D.	1.	
3458	Ethylbenzene	N.D.	1.	ug/kg	N.D.	1.	
4117	Styrene	N.D.	1.	ug/kg	N.D.	1.	
3355	Xylene (total)	N.D.	1.	ug/kg	N.D.	1.	
6187	trans-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	1.	
6277	cis-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.	

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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LLI Sample No. SW 2680802

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through 3/18/97 at 12:05
Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

GEO/SB-02/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-02 SDG#: HMS04-15

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	39.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	79.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	39.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	79.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	79.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	79.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	67.	ug/kg	N.D.	79.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	79.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	79.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	39.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	39.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	39.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	79.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	79.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	39.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	79.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	79.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	39.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	39.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	39.

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Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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GEO/SB-02/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-02 SDG#: HMS04-15

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	39.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	200.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	39.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	79.
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	120.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	79.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	120.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	120.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	39.
3776	anthracene	N.D.	33.	ug/kg	N.D.	39.
4702	carbazole	N.D.	33.	ug/kg	N.D.	39.
3777	di-n-butyl phthalate	N.D.	33.	ug/kg	N.D.	39.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	39.
1195	pyrene	N.D.	67.	ug/kg	N.D.	79.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	160.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	39.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	79.
3782	chrysene	N.D.	33.	ug/kg	N.D.	39.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3786	benzo (b) fluoranthene	N.D.	67.	ug/kg	N.D.	79.
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	160.
3788	benzo (a) pyrene	N.D.	67.	ug/kg	N.D.	79.
3789	indeno (1,2,3-cd) pyrene	N.D.	67.	ug/kg	N.D.	79.
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	79.
3791	benzo (ghi) perylene	N.D.	67.	ug/kg	N.D.	79.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2680802

Collected: 3/18/97 at 11:40 by DU
through 3/18/97 at 12:05
Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

GEO/SB-02/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-02 SDG#: HMS04-15

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846	Semivolatiles/Soil						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
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Respectfully Submitted
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Senior Chemist, GC/MS



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2216 Rev 5/01/96



**LLI Sample No. SW 2680802**

Collected: 03/18/97 at 11:40 by DU
Through: 03/18/97 at 12:05
Submitted: 03/20/97

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

GEO/SB-02/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-02 SDG#: HMS04-15

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/24/97 2300	David A. Hoppman
0381	BNA Soil Extraction	SW-846 3550A	1	03/21/97 0940	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0442	Deb Gifford
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0442	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	03/21/97 1911	Neelay B. Mehta



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LLI Sample No. 2680802

GEO/SB-02/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4593 TCL Volatiles by 8240		Batch: G970801AB									
3434	Chloromethane										
	2. ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
	3. ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
	2. ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
	3. ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
	2. ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
	7. ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
	3. ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
	2. ug/kg	N.D.		107	113	5	111			1	233
42	1,1-Dichloroethane										
	1. ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
	1. ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
	2. ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
	7. ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
	1. ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
	1. ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
	3. ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
	2. ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
	3. ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
	1. ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
	1. ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
	1. ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
	2. ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
	1. ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
	1. ug/kg	N.D.		91	96	6	88			17	183



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LLI Sample No. 2680802
GEO/SB-02/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
1.	ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
3.	ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
3.	ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
1.	ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
1.	ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
1.	ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
1.	ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
1.	ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
1.	ug/kg	N.D.		98	101	3	101			74	136
3355	Xylene (total)										
1.	ug/kg	N.D.		103	104	2	102			30	200
1187	trans-1,2-Dichloroethene										
2.	ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
2.	ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97080SLC026078SC									

1185	phenol										
33.	ug/kg	N.D.		86	76	13	75			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		88	77	14	78			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		88	77	14	76			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		81	74	10	77			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		82	75	9	77			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		85	77	10	79			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		79	70	11	74			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		74	65	14	64			36	166
4692	4-methylphenol										
100.	ug/kg	N.D.		83	75	10	78			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		105	92	13	90			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		83	76	10	79			40	113



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LLI Sample No. 2680802
GEO/SB-02/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
33.	ug/kg	N.D.		90	80	12	82			35	180
3759	isophorone										
67.	ug/kg	N.D.		94	85	10	86			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		90	79	13	81			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		29	28	2	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		85	76	11	79			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		84	74	12	75			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		83	74	11	78			44	142
3761	naphthalene										
33.	ug/kg	N.D.		80	73	9	73			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		37	27	32	32			17	116
762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	85	11	88			24	116
190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		90	81	11	78			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		85	77	10	76			28	123
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		81	72	13	77			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		88	78	13	83			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		91	79	14	81			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		86	78	9	83			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		87	76	14	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		85	75	12	76			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		85	77	10	79			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97080SLC026078SC									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	42	19	39			7	143
1191	acenaphthene										
33.	ug/kg	N.D.		80	73	10	74			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		97	81	18	67			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	79	16	71			1	132



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LLI Sample No. 2680802

GEO/SB-02/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4698	dibenzofuran										
33.	ug/kg	N.D.		85	76	10	76			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	79	15	77			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		92	80	14	80			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		86	76	13	76			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		81	74	9	75			25	158
3768	fluorene										
33.	ug/kg	N.D.		82	75	9	76			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		76	61	21	64			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		91	77	17	76			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		82	72	12	80			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		93	81	14	84			53	127
74	hexachlorobenzene										
100.	ug/kg	N.D.		97	84	14	84			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		97	82	17	72			14	176
3775	phenanthrene										
33.	ug/kg	N.D.		86	76	13	79			54	120
3776	anthracene										
33.	ug/kg	N.D.		83	73	13	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		91	80	12	81			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		93	80	15	85			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		95	82	14	82			26	137
1195	pyrene										
67.	ug/kg	N.D.		80	69	14	79			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		86	74	15	85			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		49	21	81	60			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		86	75	13	79			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	75	16	86			8	158
3782	chrysene										
33.	ug/kg	N.D.		90	79	13	82			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		91	75	19	87			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		87	75	15	78			24	159



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LLI Sample No. 2680802
 GEO/SB-02/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		92	81	13	82			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		84	73	14	76			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		96	79	19	80			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		98	81	18	83			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		89	79	13	76			1	219
0111	Moisture	Batch: 970800316820005A									
0.080	% by wt.		7				100	100	0	100	101



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LLI Sample No. 2680802
 GEO/SB-02/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4593 TCL Volatiles by 8240		d4-1,2-DCA	105	70	121
		d8-toluene	100	81	117
		4-BFB	109	74	121
4688 TCL SW846 Semivolatiles Soil		Pheno1-d6	69	24	113
		2-Flpheno1	63	25	121
		2,4,6-TBP	75	19	122
4689 TCL SW846 Semivolatiles/Soil		Nitrobz-d5	76	23	120
		2-Fbiphnyl	75	30	115
		Tphenyld14	73	18	137



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LLI Sample No. SW 2680803

Collected: 3/18/97 at 13:30 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-03/8-9.3 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SB-03 SDG#: HMS04-16

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4593	TCL Volatiles				See Page	2
4688	TCL Semivolatiles				See Page	3
4689	TCL Semivolatiles cont'd				See Page	4
0111	Moisture	11.8		0.080	% by wt.	
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:19:49 D 0003 11 129915 557660
448 0.00 00049920 ASR000



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



LLI Sample No. SW 2680803

Collected: 3/18/97 at 13:30 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-03/8-9.3 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-03 SDG#: HMS04-16

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Volatiles by 8240						
3434	Chloromethane	N.D.	2.	ug/kg	N.D.	2.
3435	Bromomethane	N.D.	3.	ug/kg	N.D.	3.
3436	Vinyl Chloride	N.D.	2.	ug/kg	N.D.	2.
3437	Chloroethane	N.D.	3.	ug/kg	N.D.	3.
3440	Methylene Chloride	N.D.	2.	ug/kg	N.D.	2.
4074	Acetone	N.D.	7.	ug/kg	N.D.	8.
4076	Carbon Disulfide	N.D.	3.	ug/kg	N.D.	3.
1180	1,1-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.
3442	1,1-Dichloroethane	N.D.	1.	ug/kg	N.D.	1.
3444	Chloroform	N.D.	1.	ug/kg	N.D.	1.
3445	1,2-Dichloroethane	N.D.	2.	ug/kg	N.D.	2.
4085	2-Butanone	N.D.	7.	ug/kg	N.D.	8.
3446	1,1,1-Trichloroethane	N.D.	1.	ug/kg	N.D.	1.
3447	Carbon Tetrachloride	N.D.	1.	ug/kg	N.D.	1.
4091	Vinyl Acetate	N.D.	3.	ug/kg	N.D.	3.
3448	Bromodichloromethane	N.D.	2.	ug/kg	N.D.	2.
3450	1,2-Dichloropropane	N.D.	3.	ug/kg	N.D.	3.
3454	cis-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
1181	Trichloroethene	N.D.	1.	ug/kg	N.D.	1.
3452	Dibromochloromethane	N.D.	1.	ug/kg	N.D.	1.
3453	1,1,2-Trichloroethane	N.D.	2.	ug/kg	N.D.	2.
1182	Benzene	N.D.	1.	ug/kg	N.D.	1.
3451	trans-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
3456	Bromoform	N.D.	1.	ug/kg	N.D.	1.
4108	4-Methyl-2-pentanone	N.D.	3.	ug/kg	N.D.	3.
4107	2-Hexanone	N.D.	3.	ug/kg	N.D.	3.
3457	Tetrachloroethene	N.D.	1.	ug/kg	N.D.	1.
3449	1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	N.D.	1.
1183	Toluene	N.D.	1.	ug/kg	N.D.	1.
1184	Chlorobenzene	N.D.	1.	ug/kg	N.D.	1.
3458	Ethylbenzene	N.D.	1.	ug/kg	N.D.	1.
4117	Styrene	N.D.	1.	ug/kg	N.D.	1.
3355	Xylene (total)	N.D.	1.	ug/kg	N.D.	1.
6187	trans-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.
6277	cis-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





LLI Sample No. SW 2680803
Collected: 3/18/97 at 13:30 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

GEO/SB-03/8-9.3 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-03 SDG#: HMS04-16

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	38.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	76.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	38.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	76.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	110.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	110.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	76.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	76.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	67.	ug/kg	N.D.	76.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	76.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	76.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	38.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	38.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3761	naphthalene	200.	J 33.	ug/kg	230.	J 38.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	110.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	76.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	76.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	38.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	76.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	76.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	38.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	38.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	38.

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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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2216 Rev. 5/01/96





LLI Sample No. SW 2680803

Collected: 3/18/97 at 13:30 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-03/8-9.3 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-03 SDG#: HMS04-16

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	38.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	190.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	190.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	38.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	76.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	76.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	76.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	110.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	76.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	110.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	110.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	38.
3776	anthracene	N.D.	33.	ug/kg	N.D.	38.
4702	carbazole	N.D.	33.	ug/kg	N.D.	38.
3777	di-n-butyl phthalate	N.D.	33.	ug/kg	N.D.	38.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	67.	ug/kg	N.D.	76.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	150.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	38.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	76.
3782	chrysene	N.D.	33.	ug/kg	N.D.	38.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3786	benzo (b) fluoranthene	N.D.	67.	ug/kg	N.D.	76.
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	150.
3788	benzo (a) pyrene	N.D.	67.	ug/kg	N.D.	76.
3789	indeno (1,2,3-cd) pyrene	N.D.	67.	ug/kg	N.D.	76.
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	76.
3791	benzo (ghi) perylene	N.D.	67.	ug/kg	N.D.	76.

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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



LLI Sample No. SW 2680803

Collected: 3/18/97 at 13:30 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-03/8-9.3 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-03 SDG#: HMS04-16

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT	UNITS
TCL SW846	Semivolatiles/Soil						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

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Respectfully Submitted
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Senior Chemist, GC/MS



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2216 Rev 5/01/96





LLI Sample No. SW 2680803

Collected: 03/18/97 at 13:30 by DU

Submitted: 03/20/97

GEO/SB-03/8-9.3 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-03 SDG#: HMS04-16

Account No: 07802
Kerr-McGee Corporation
Technology Center
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Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/24/97 2353	Clark A. Dougherty
0381	BNA Soil Extraction	SW-846 3550A	1	03/21/97 0940	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0536	Deb Gifford
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0536	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	03/21/97 1911	Neelay B. Mehta



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LLI Sample No. 2680803
GEO/SB-03/8-9.3 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4593 TCL Volatiles by 8240		Batch: G970801AB									
3434	Chloromethane										
	2. ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
	3. ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
	2. ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
	3. ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
	2. ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
	7. ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
	3. ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
	2. ug/kg	N.D.		107	113	5	111			1	233
42	1,1-Dichloroethane										
	1. ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
	1. ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
	2. ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
	7. ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
	1. ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
	1. ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
	3. ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
	2. ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
	3. ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
	1. ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
	1. ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
	1. ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
	2. ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
	1. ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
	1. ug/kg	N.D.		91	96	6	88			17	183



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5-01-96





LLI Sample No. 2680803
GEO/SB-03/8-9.3 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
	1. ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
	3. ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
	3. ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
	1. ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
	1. ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
	1. ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
	1. ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
	1. ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
	1. ug/kg	N.D.		98	101	3	101			74	136
2355	Xylene (total)										
	1. ug/kg	N.D.		103	104	2	102			30	200
1187	trans-1,2-Dichloroethene										
	2. ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
	2. ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97080SLC026078SC									

1185	phenol										
	33. ug/kg	N.D.		86	76	13	75			5	112
3753	bis (2-chloroethyl) ether										
	67. ug/kg	N.D.		88	77	14	78			12	158
1186	2-chlorophenol										
	33. ug/kg	N.D.		88	77	14	76			23	134
3754	1,3-dichlorobenzene										
	33. ug/kg	N.D.		81	74	10	77			1	172
1187	1,4-dichlorobenzene										
	33. ug/kg	N.D.		82	75	9	77			20	124
3755	1,2-dichlorobenzene										
	33. ug/kg	N.D.		85	77	10	79			32	129
4690	2-methylphenol										
	67. ug/kg	N.D.		79	70	11	74			46	123
4691	2,2'-oxybis (1-chloropropane)										
	100. ug/kg	N.D.		74	65	14	64			36	166
4692	4-methylphenol										
	100. ug/kg	N.D.		83	75	10	78			5	152
1188	N-nitrosodi-n-propylamine										
	67. ug/kg	N.D.		105	92	13	90			1	230
3757	hexachloroethane										
	67. ug/kg	N.D.		83	76	10	79			40	113



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2216 Rev. 5/01/96





LLI Sample No. 2680803

GEO/SB-03/8-9.3 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
33.	ug/kg	N.D.		90	80	12	82			35	180
3759	isophorone										
67.	ug/kg	N.D.		94	85	10	86			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		90	79	13	81			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		29	28	2	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		85	76	11	79			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		84	74	12	75			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		83	74	11	78			44	142
3761	naphthalene										
33.	ug/kg	N.D.		80	73	9	73			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		37	27	32	32			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	85	11	88			24	116
3790	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		90	81	11	78			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		85	77	10	76			28	123
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		81	72	13	77			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		88	78	13	83			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		91	79	14	81			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		86	78	9	83			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		87	76	14	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		85	75	12	76			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		85	77	10	79			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97080SLC026078SC									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	42	19	39			7	143
1191	acenaphthene										
33.	ug/kg	N.D.		80	73	10	74			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		97	81	18	67			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	79	16	71			1	132



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LLI Sample No. 2680803

GEO/SB-03/8-9.3 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
33.	ug/kg	N.D.		85	76	10	76			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	79	15	77			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		92	80	14	80			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		86	76	13	76			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		81	74	9	75			25	158
3768	fluorene										
33.	ug/kg	N.D.		82	75	9	76			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		76	61	21	64			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		91	77	17	76			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		82	72	12	80			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		93	81	14	84			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		97	84	14	84			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		97	82	17	72			14	176
3775	phenanthrene										
33.	ug/kg	N.D.		86	76	13	79			54	120
3776	anthracene										
33.	ug/kg	N.D.		83	73	13	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		91	80	12	81			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		93	80	15	85			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		95	82	14	82			26	137
1195	pyrene										
67.	ug/kg	N.D.		80	69	14	79			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		86	74	15	85			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		49	21	81	60			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		86	75	13	79			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	75	16	86			8	158
3782	chrysene										
33.	ug/kg	N.D.		90	79	13	82			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		91	75	19	87			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		87	75	15	78			24	159



Lancaster Laboratories
2425 New Holland Pike
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See reverse side for explanation of symbols and abbreviations

2216 Rev. 5/01/96





LLI Sample No. 2680803

GEO/SB-03/8-9.3 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		92	81	13	82			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		84	73	14	76			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		96	79	19	80			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		98	81	18	83			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		89	79	13	76			1	219
0111	Moisture	Batch: 970800316820005A									
0.080	% by wt.		7				100	100	0	100	101



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2680803
 GEO/SB-03/8-9.3 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	95	70	121
	d8-toluene	95	81	117
	4-BFB	101	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	68	24	113
	2-Flphenol	65	25	121
	2,4,6-TBP	74	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	81	23	120
	2-Fbiphenyl	80	30	115
	Tphenylid14	81	18	137



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See reverse side for explanation of symbols and abbreviations.



LLI Sample No. SW 2680804

Collected: 3/18/97 at 15:05 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-04/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-04 SDG#: HMS04-17

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
4593	TCL Volatiles					See Page	2
4688	TCL Semivolatiles					See Page	3
4689	TCL Semivolatiles cont'd					See Page	4
0111	Moisture	15.8		0.080		% by wt.	

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:21:26 D 0003 11 129915 557660
448 0.00 00049920 ASR000



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





LLI Sample No. SW 2680804
Collected: 3/18/97 at 15:05 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

GEO/SB-04/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-04 SDG#: HMS04-17

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Volatiles by 8240						
3434	Chloromethane	N.D.	2.	ug/kg	N.D.	2.
3435	Bromomethane	N.D.	3.	ug/kg	N.D.	4.
3436	Vinyl Chloride	N.D.	2.	ug/kg	N.D.	2.
3437	Chloroethane	N.D.	3.	ug/kg	N.D.	4.
3440	Methylene Chloride	N.D.	2.	ug/kg	N.D.	2.
4074	Acetone	N.D.	7.	ug/kg	N.D.	8.
4076	Carbon Disulfide	N.D.	3.	ug/kg	N.D.	4.
1180	1,1-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.
3442	1,1-Dichloroethane	N.D.	1.	ug/kg	N.D.	1.
3444	Chloroform	N.D.	1.	ug/kg	N.D.	1.
3445	1,2-Dichloroethane	N.D.	2.	ug/kg	N.D.	2.
4085	2-Butanone	N.D.	7.	ug/kg	N.D.	8.
3446	1,1,1-Trichloroethane	N.D.	1.	ug/kg	N.D.	1.
3447	Carbon Tetrachloride	N.D.	1.	ug/kg	N.D.	1.
4091	Vinyl Acetate	N.D.	3.	ug/kg	N.D.	4.
3448	Bromodichloromethane	N.D.	2.	ug/kg	N.D.	2.
3450	1,2-Dichloropropane	N.D.	3.	ug/kg	N.D.	4.
3454	cis-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
1181	Trichloroethene	N.D.	1.	ug/kg	N.D.	1.
3452	Dibromochloromethane	N.D.	1.	ug/kg	N.D.	1.
3453	1,1,2-Trichloroethane	N.D.	2.	ug/kg	N.D.	2.
1182	Benzene	N.D.	1.	ug/kg	N.D.	1.
3451	trans-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
3456	Bromoform	N.D.	1.	ug/kg	N.D.	1.
4108	4-Methyl-2-pentanone	N.D.	3.	ug/kg	N.D.	4.
4107	2-Hexanone	N.D.	3.	ug/kg	N.D.	4.
3457	Tetrachloroethene	N.D.	1.	ug/kg	N.D.	1.
3449	1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	N.D.	1.
1183	Toluene	N.D.	1.	ug/kg	N.D.	1.
1184	Chlorobenzene	N.D.	1.	ug/kg	N.D.	1.
3458	Ethylbenzene	N.D.	1.	ug/kg	N.D.	1.
4117	Styrene	N.D.	1.	ug/kg	N.D.	1.
3355	Xylene (total)	N.D.	1.	ug/kg	N.D.	1.
6187	trans-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.
6277	cis-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. SW 2680804
Collected: 3/18/97 at 15:05 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

GEO/SB-04/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-04 SDG#: HMS04-17

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles Soil							
1185	phenol	N.D.	33.	ug/kg	N.D.	40.	
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	79.	
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	40.	
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.	
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.	
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.	
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	79.	
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.	
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	120.	
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	79.	
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	79.	
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	40.	
3759	isophorone	N.D.	67.	ug/kg	N.D.	79.	
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	79.	
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	79.	
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	40.	
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	40.	
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	40.	
3761	naphthalene	N.D.	33.	ug/kg	N.D.	40.	
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.	
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	79.	
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	79.	
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	40.	
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.	
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	79.	
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	79.	
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	40.	
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	79.	
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	40.	
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	40.	

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. SW 2680804
Collected: 3/18/97 at 15:05 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

GEO/SB-04/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-04 SDG#: HMS04-17

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ret.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	40.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	200.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	40.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	79.
3768	fluorene	N.D.	33.	ug/kg	N.D.	40.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	120.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	79.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	120.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	120.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	40.
3776	anthracene	N.D.	33.	ug/kg	N.D.	40.
4702	carbazole	N.D.	33.	ug/kg	N.D.	40.
3777	di-n-butyl phthalate	N.D.	33.	ug/kg	N.D.	40.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	40.
1195	pyrene	N.D.	67.	ug/kg	N.D.	79.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	160.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	40.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	79.
3782	chrysene	N.D.	33.	ug/kg	N.D.	40.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3786	benzo (b) fluoranthene	N.D.	67.	ug/kg	N.D.	79.
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	160.
3788	benzo (a) pyrene	N.D.	67.	ug/kg	N.D.	79.
3789	indeno (1,2,3-cd) pyrene	N.D.	67.	ug/kg	N.D.	79.
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	79.
3791	benzo (ghi) perylene	N.D.	67.	ug/kg	N.D.	79.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96





LLI Sample No. SW 2680804

Collected: 3/18/97 at 15:05 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-04/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SB-04 SDG#: HMS04-17

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2680804

Collected: 03/18/97 at 15:05 by DU

Submitted: 03/20/97

GEO/SB-04/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-04 SDG#: HMS04-17

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/25/97 0028	Clark A. Dougherty
0381	BNA Soil Extraction	SW-846 3550A	1	03/21/97 0940	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0631	Deb Gifford
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0631	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	03/21/97 1911	Neelay B. Mehta



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2680804
GEO/SB-04/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4593 TCL Volatiles by 8240		Batch: G970801AB									
3434	Chloromethane										
	2. ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
	3. ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
	2. ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
	3. ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
	2. ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
	7. ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
	3. ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
	2. ug/kg	N.D.		107	113	5	111			1	233
42	1,1-Dichloroethane										
	1. ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
	1. ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
	2. ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
	7. ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
	1. ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
	1. ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
	3. ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
	2. ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
	3. ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
	1. ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
	1. ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
	1. ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
	2. ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
	1. ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
	1. ug/kg	N.D.		91	96	6	88			17	183



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717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2680804
GEO/SB-04/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3456	Bromoform										
	1. ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
	3. ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
	3. ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
	1. ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
	1. ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
	1. ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
	1. ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
	1. ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
	1. ug/kg	N.D.		98	101	3	101			74	136
3355	Xylene (total)										
	1. ug/kg	N.D.		103	104	2	102			30	200
87	trans-1,2-Dichloroethene										
	2. ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
	2. ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97080SLC026078SC									
1185	phenol										
	33. ug/kg	N.D.		86	76	13	75			5	112
3753	bis (2-chloroethyl) ether										
	67. ug/kg	N.D.		88	77	14	78			12	158
1186	2-chlorophenol										
	33. ug/kg	N.D.		88	77	14	76			23	134
3754	1,3-dichlorobenzene										
	33. ug/kg	N.D.		81	74	10	77			1	172
1187	1,4-dichlorobenzene										
	33. ug/kg	N.D.		82	75	9	77			20	124
3755	1,2-dichlorobenzene										
	33. ug/kg	N.D.		85	77	10	79			32	129
4690	2-methylphenol										
	67. ug/kg	N.D.		79	70	11	74			46	123
4691	2,2'-oxybis (1-chloropropane)										
	100. ug/kg	N.D.		74	65	14	64			36	166
4692	4-methylphenol										
	100. ug/kg	N.D.		83	75	10	78			5	152
1188	N-nitrosodi-n-propylamine										
	67. ug/kg	N.D.		105	92	13	90			1	230
3757	hexachloroethane										
	67. ug/kg	N.D.		83	76	10	79			40	113



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. 2680804

GEO/SB-04/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3758	nitrobenzene										
33.	ug/kg	N.D.		90	80	12	82			35	180
3759	isophorone										
67.	ug/kg	N.D.		94	85	10	86			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		90	79	13	81			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		29	28	2	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		85	76	11	79			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		84	74	12	75			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		83	74	11	78			44	142
3761	naphthalene										
33.	ug/kg	N.D.		80	73	9	73			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		37	27	32	32			17	116
762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	85	11	88			24	116
90	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		90	81	11	78			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		85	77	10	76			28	123
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		81	72	13	77			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		88	78	13	83			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		91	79	14	81			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		86	78	9	83			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		87	76	14	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		85	75	12	76			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		85	77	10	79			33	145

4689	TCL SWB46 Semivolatiles/Soil	Batch: 97080SLC026078SC									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	42	19	39			7	143
1191	acenaphthene										
33.	ug/kg	N.D.		80	73	10	74			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		97	81	18	67			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	79	16	71			1	132



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2680804
GEO/SB-04/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
33.	ug/kg	N.D.		85	76	10	76			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	79	15	77			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		92	80	14	80			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		86	76	13	76			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		81	74	9	75			25	158
3768	fluorene										
33.	ug/kg	N.D.		82	75	9	76			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		76	61	21	64			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		91	77	17	76			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		82	72	12	80			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		93	81	14	84			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		97	84	14	84			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		97	82	17	72			14	176
3775	phenanthrene										
33.	ug/kg	N.D.		86	76	13	79			54	120
3776	anthracene										
33.	ug/kg	N.D.		83	73	13	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		91	80	12	81			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		93	80	15	85			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		95	82	14	82			26	137
1195	pyrene										
67.	ug/kg	N.D.		80	69	14	79			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		86	74	15	85			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		49	21	81	60			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		86	75	13	79			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	75	16	86			8	158
3782	chrysene										
33.	ug/kg	N.D.		90	79	13	82			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		91	75	19	87			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		87	75	15	78			24	159



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LLI Sample No. 2680804

GEO/SB-04/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		92	81	13	82			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		84	73	14	76			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		96	79	19	80			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		98	81	18	83			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		89	79	13	76			1	219
0111	Moisture	Batch: 970800316820005A									
0.080	% by wt.		7				100	100	0	100	101



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2216 Rev 5/01-96





LLI Sample No. 2680804
 GEO/SB-04/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	96	70	121
	d8-toluene	92	81	117
	4-BFB	99	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	69	24	113
	2-F1pheno1	63	25	121
	2,4,6-TBP	66	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	75	23	120
	2-Fbiphnyl	72	30	115
	Tphenyld14	76	18	137



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LLI Sample No. SW 2680805

Collected: 3/18/97 at 16:05 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

GEO/SB-05/4-9 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-05 SDG#: HMS04-18

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	DETECTION	LIMIT UNITS	RESULTS	DETECTION	LIMIT
4593	TCL Volatiles			See Page		2	
1225	TCL Pesticides			See Page		4	
4688	TCL Semivolatiles			See Page		5	
4689	TCL Semivolatiles cont'd			See Page		6	
0111	Moisture	17.5	0.080	% by wt.			
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.							

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:23:00 D 0003 11 129915 557660
448 0.00 00065520 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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2216 Rev 5/01/96





LLI Sample No. SW 2680805
 Collected: 3/18/97 at 16:05 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
 Discard: 5/ 9/97

GEO/SB-05/4-9 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
 SB-05 SDG#: HMS04-18

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	
						DETECTION LIMIT	
TCL Volatiles by 8240							
3434	Chloromethane	N.D.		10.	ug/kg	N.D.	12.
3435	Bromomethane	N.D.		15.	ug/kg	N.D.	18.
3436	Vinyl Chloride	N.D.		10.	ug/kg	N.D.	12.
3437	Chloroethane	N.D.		15.	ug/kg	N.D.	18.
3440	Methylene Chloride	N.D.		10.	ug/kg	N.D.	12.
4074	Acetone	73.	J	35.	ug/kg	89.	J
4076	Carbon Disulfide	N.D.		15.	ug/kg	N.D.	18.
1180	1,1-Dichloroethene	N.D.		10.	ug/kg	N.D.	12.
3442	1,1-Dichloroethane	N.D.		5.	ug/kg	N.D.	6.
3444	Chloroform	N.D.		5.	ug/kg	N.D.	6.
3445	1,2-Dichloroethane	N.D.		10.	ug/kg	N.D.	12.
4085	2-Butanone	N.D.		35.	ug/kg	N.D.	42.
3446	1,1,1-Trichloroethane	N.D.		5.	ug/kg	N.D.	6.
3447	Carbon Tetrachloride	N.D.		5.	ug/kg	N.D.	6.
4091	Vinyl Acetate	N.D.		15.	ug/kg	N.D.	18.
3448	Bromodichloromethane	N.D.		10.	ug/kg	N.D.	12.
3450	1,2-Dichloropropane	N.D.		15.	ug/kg	N.D.	18.
3454	cis-1,3-Dichloropropene	N.D.		5.	ug/kg	N.D.	6.
1181	Trichloroethene	N.D.		5.	ug/kg	N.D.	6.
3452	Dibromochloromethane	N.D.		5.	ug/kg	N.D.	6.
3453	1,1,2-Trichloroethane	N.D.		10.	ug/kg	N.D.	12.
1182	Benzene	N.D.		5.	ug/kg	N.D.	6.
3451	trans-1,3-Dichloropropene	N.D.		5.	ug/kg	N.D.	6.
3456	Bromoform	N.D.		5.	ug/kg	N.D.	6.
4108	4-Methyl-2-pentanone	N.D.		15.	ug/kg	N.D.	18.
4107	2-Hexanone	N.D.		15.	ug/kg	N.D.	18.
3457	Tetrachloroethene	N.D.		5.	ug/kg	N.D.	6.
3449	1,1,2,2-Tetrachloroethane	N.D.		5.	ug/kg	N.D.	6.
1183	Toluene	50.		5.	ug/kg	60.	6.
1184	Chlorobenzene	N.D.		5.	ug/kg	N.D.	6.
3458	Ethylbenzene	230.		5.	ug/kg	280.	6.
4117	Styrene	N.D.		5.	ug/kg	N.D.	6.
3355	Xylene (total)	1,200.		5.	ug/kg	1,500.	6.
6187	trans-1,2-Dichloroethene	N.D.		10.	ug/kg	N.D.	12.
6277	cis-1,2-Dichloroethene	N.D.		10.	ug/kg	N.D.	12.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles



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See reverse side for explanation of symbols and abbreviations.

2236 Rev. 5-01-96





LLI Sample No. SW 2680805

Collected: 3/18/97 at 16:05 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-05/4-9 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-05 SDG#: HMS04-18

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Volatiles by 8240

The quantitation limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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Collected: 3/18/97 at 16:05 by DU

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GEO/SB-05/4-9 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-05 SDG#: HMS04-18

Account No: 07802
Kerr-McGee Corporation
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Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Pesticides in Solids						
1981	Alpha BHC	N.D.	0.4	ug/kg	N.D.	0.5
1982	Beta BHC	N.D.	1.	ug/kg	N.D.	1.
1983	Delta BHC	N.D.	0.6	ug/kg	N.D.	0.7
1218	Gamma BHC - Lindane	N.D.	0.6	ug/kg	N.D.	0.7
1219	Heptachlor	10.	1.	ug/kg	20.	1.
1220	Aldrin	N.D.	1.	ug/kg	N.D.	2.
1984	Heptachlor Epoxide	N.D.	0.6	ug/kg	N.D.	0.7
1989	Endosulfan I	4.	J	1.	5.	J
1222	Dieldrin	N.D.	2.	ug/kg	N.D.	3.
1985	DDE	N.D.	3.	ug/kg	N.D.	4.
1223	Endrin	N.D.	2.	ug/kg	N.D.	2.
1990	Endosulfan II	N.D.	4.	ug/kg	N.D.	5.
1986	DDD	N.D.	1.	ug/kg	N.D.	1.
1991	Endosulfan Sulfate	N.D.	3.	ug/kg	N.D.	4.
1221	DDT	N.D.	3.	ug/kg	N.D.	4.
3017	Endrin Ketone	N.D.	5.	ug/kg	N.D.	6.
1859	Methoxychlor	N.D.	8.	ug/kg	N.D.	10.
3025	Alpha Chlordane	N.D.	1.	ug/kg	N.D.	1.
3026	Gamma Chlordane	N.D.	0.2	ug/kg	N.D.	0.3
1988	Toxaphene	N.D.	100.	ug/kg	N.D.	100.
1992	Endrin Aldehyde	N.D.	6.	ug/kg	N.D.	7.
1993	PCB-1016	N.D.	30.	ug/kg	N.D.	40.
1994	PCB-1221	N.D.	50.	ug/kg	N.D.	60.
1995	PCB-1232	N.D.	30.	ug/kg	N.D.	30.
1996	PCB-1242	N.D.	10.	ug/kg	N.D.	20.
1997	PCB-1248	N.D.	40.	ug/kg	N.D.	40.
1998	PCB-1254	N.D.	100.	ug/kg	N.D.	200.
1999	PCB-1260	N.D.	200.	ug/kg	N.D.	200.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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2216 Rev 5-01-96





LLI Sample No. SW 2680805

Collected: 3/18/97 at 16:05 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-05/4-9 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-05 SDG#: HMS04-18

Account No: 07802
Kerr-McGee Corporation
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P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
						DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	330.	ug/kg	N.D.	400.
3753	bis (2-chloroethyl) ether	N.D.	670.	ug/kg	N.D.	810.
1186	2-chlorophenol	N.D.	330.	ug/kg	N.D.	400.
3754	1,3-dichlorobenzene	N.D.	330.	ug/kg	N.D.	400.
1187	1,4-dichlorobenzene	N.D.	330.	ug/kg	N.D.	400.
3755	1,2-dichlorobenzene	N.D.	330.	ug/kg	N.D.	400.
4690	2-methylphenol	N.D.	670.	ug/kg	N.D.	400.
4691	2,2'-oxybis (1-chloropropane)	N.D.	1,000.	ug/kg	N.D.	810.
4692	4-methylphenol	N.D.	1,000.	ug/kg	N.D.	1,200.
1188	N-nitrosodi-n-propylamine	N.D.	670.	ug/kg	N.D.	1,200.
3757	hexachloroethane	N.D.	670.	ug/kg	N.D.	810.
3758	nitrobenzene	N.D.	330.	ug/kg	N.D.	810.
3759	isophorone	N.D.	670.	ug/kg	N.D.	400.
3746	2-nitrophenol	N.D.	670.	ug/kg	N.D.	810.
3747	2,4-dimethylphenol	1,200.	J 670.	ug/kg	N.D.	810.
3760	bis (2-chloroethoxy) methane	N.D.	330.	ug/kg	1,500.	J 810.
3748	2,4-dichlorophenol	N.D.	330.	ug/kg	N.D.	400.
1189	1,2,4-trichlorobenzene	N.D.	330.	ug/kg	N.D.	400.
3761	naphthalene	400,000.	3,300.	ug/kg	N.D.	400.
4693	4-chloroaniline	N.D.	1,000.	ug/kg	490,000.	4,000.
3762	hexachlorobutadiene	N.D.	670.	ug/kg	N.D.	1,200.
1190	4-chloro-3-methylphenol	N.D.	670.	ug/kg	N.D.	810.
4694	2-methylnaphthalene	220,000.	3,300.	ug/kg	N.D.	810.
3763	hexachlorocyclopentadiene	N.D.	1,700.	ug/kg	270,000.	4,000.
3749	2,4,6-trichlorophenol	N.D.	670.	ug/kg	N.D.	2,000.
4695	2,4,5-trichlorophenol	N.D.	670.	ug/kg	N.D.	810.
3764	2-chloronaphthalene	N.D.	330.	ug/kg	N.D.	810.
4696	2-nitroaniline	N.D.	670.	ug/kg	N.D.	400.
3766	dimethyl phthalate	N.D.	330.	ug/kg	N.D.	810.
3765	acenaphthylene	8,300.	330.	ug/kg	N.D.	400.
					10,000.	400.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2680805

Collected: 3/18/97 at 16:05 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-05/4-9 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-05 SDG#: HMS04-18

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
					DETECTION LIMIT	
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	670.	ug/kg	N.D.	810.
1191	acenaphthene	63,000.	3,300.	ug/kg	76,000.	4,000.
3750	2,4-dinitrophenol	N.D.	1,700.	ug/kg	N.D.	2,000.
1192	4-nitrophenol	N.D.	1,700.	ug/kg	N.D.	2,000.
4698	dibenzofuran	130,000.	3,300.	ug/kg	160,000.	4,000.
1193	2,4-dinitrotoluene	N.D.	670.	ug/kg	N.D.	810.
4699	2,6-dinitrotoluene	N.D.	670.	ug/kg	N.D.	810.
3770	diethyl phthalate	N.D.	670.	ug/kg	N.D.	810.
3769	4-chlorophenyl phenyl ether	N.D.	670.	ug/kg	N.D.	810.
3768	fluorene	130,000.	3,300.	ug/kg	150,000.	4,000.
4700	4-nitroaniline	N.D.	1,000.	ug/kg	N.D.	1,200.
4701	4,6-dinitro-2-methylphenol	N.D.	1,700.	ug/kg	N.D.	2,000.
3772	N-nitrosodiphenylamine	N.D.	670.	ug/kg	N.D.	810.
3773	4-bromophenyl phenyl ether	N.D.	1,000.	ug/kg	N.D.	1,200.
3774	hexachlorobenzene	N.D.	1,000.	ug/kg	N.D.	1,200.
1194	pentachlorophenol	N.D.	1,700.	ug/kg	N.D.	2,000.
3775	phenanthrene	360,000.	3,300.	ug/kg	440,000.	4,000.
3776	anthracene	98,000.	3,300.	ug/kg	120,000.	4,000.
4702	carbazole	52,000.	3,300.	ug/kg	63,000.	4,000.
3777	di-n-butyl phthalate	N.D.	330.	ug/kg	N.D.	400.
3778	fluoranthene	220,000.	3,300.	ug/kg	260,000.	4,000.
1195	pyrene	180,000.	6,700.	ug/kg	210,000.	8,100.
3780	butyl benzyl phthalate	N.D.	670.	ug/kg	N.D.	810.
3783	3,3'-dichlorobenzidine	N.D.	1,300.	ug/kg	N.D.	1,600.
3781	benzo (a) anthracene	52,000.	330.	ug/kg	63,000.	400.
3784	bis (2-ethylhexyl) phthalate	N.D.	670.	ug/kg	N.D.	810.
3782	chrysene	48,000.	330.	ug/kg	58,000.	400.
3785	di-n-octyl phthalate	N.D.	670.	ug/kg	N.D.	810.
3786	benzo (b) fluoranthene	36,000.	670.	ug/kg	43,000.	810.
3787	benzo (k) fluoranthene	14,000.	1,300.	ug/kg	16,000.	1,600.
3788	benzo (a) pyrene	24,000.	670.	ug/kg	29,000.	810.
3789	indeno (1,2,3-cd) pyrene	9,600.	670.	ug/kg	12,000.	810.
3790	dibenz (a,h) anthracene	2,700.	670.	ug/kg	3,300.	810.
3791	benzo (ghi) perylene	6,400.	670.	ug/kg	7,800.	810.

Questions? Contact your Client Services Representative
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Senior Chemist, GC/MS



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LLI Sample No. SW 2680805

Collected: 3/18/97 at 16:05 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-05/4-9 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-05 SDG#: HMS04-18

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846	Semivolatiles/Soil					

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. The quantitation limits for the GC/MS semivolatile compounds were raised due to the high concentration of target compounds.

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LLI Sample No. SW 2680805

Collected: 03/18/97 at 16:05 by DU

Submitted: 03/20/97

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
--

GEO/SB-05/4-9 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-05 SDG#: HMS04-18

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/25/97 0148	Clark A. Dougherty
0819	Solid Sample Pesticide Extract	SW-846 3550A	1	03/24/97 1915	Tanya J. Reese
1225	TCL Pesticides in Solids	SW-846 8081	1	03/29/97 0918	Donna M. Lewis
0381	BNA Soil Extraction	SW-846 3550A	1	03/21/97 0940	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 1221	Deb Gifford
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 1221	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	03/21/97 1911	Neelay B. Mehta



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LLI Sample No. **2680805**

GEO/SB-05/4-9 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4593 TCL Volatiles by 8240		Batch: G970801AB									

3434	Chloromethane										
10.	ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
15.	ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
10.	ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
15.	ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
10.	ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
35.	ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
15.	ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
10.	ug/kg	N.D.		107	113	5	111			1	233
42	1,1-Dichloroethane										
5.	ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
5.	ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
10.	ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
35.	ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
5.	ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
5.	ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
15.	ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
10.	ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
15.	ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
5.	ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
5.	ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
5.	ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
10.	ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
5.	ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
5.	ug/kg	N.D.		91	96	6	88			17	183



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2216 Rev. 5/01.96





LLI Sample No. 2680805
GEO/SB-05/4-9 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
5.	ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
15.	ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
15.	ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
5.	ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
5.	ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
5.	ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
5.	ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
5.	ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
5.	ug/kg	N.D.		98	101	3	101			74	136
2355	Xylene (total)										
5.	ug/kg	N.D.		103	104	2	102			30	200
187	trans-1,2-Dichloroethene										
10.	ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
10.	ug/kg	N.D.		98	106	8	106			54	156

1225	TCL Pesticides in Solids	Batch: 970830003A									
1981	Alpha BHC										
0.4	ug/kg	N.D.		115	116	1	109			65	127
1982	Beta BHC										
1.	ug/kg	N.D.		113	112	0	108			50	137
1983	Delta BHC										
0.6	ug/kg	N.D.		107	109	2	103			67	120
1218	Gamma BHC - Lindane										
0.6	ug/kg	N.D.		110	110	0	106			73	120
1219	Heptachlor										
1.	ug/kg	N.D.		107	109	1	108			69	120
1220	Aldrin										
1.	ug/kg	N.D.		113	113	0	112			67	120
1984	Heptachlor Epoxide										
0.6	ug/kg	N.D.		106	108	2	108			60	120
1989	Endosulfan I										
1.	ug/kg	N.D.		85	85	0	85			60	120
1222	Dieldrin										
2.	ug/kg	N.D.		103	103	0	105			79	120
1985	DDE										
3.	ug/kg	N.D.		102	104	1	96			72	120
1223	Endrin										
2.	ug/kg	N.D.		121	120	1	117			68	126



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2216 Rev 5/01/90





LLI Sample No. 2680805
 GEO/SB-05/4-9 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS LIMITS HIGH
1990	Endosulfan II										
4.	ug/kg	N.D.		94	92	1	96			62	120
1986	DDD										
1.	ug/kg	N.D.		110	112	2	109			72	123
1991	Endosulfan Sulfate										
3.	ug/kg	N.D.		106	105	1	108			62	120
1221	DDT										
3.	ug/kg	N.D.		111	110	1	110			61	121
3017	Endrin Ketone										
5.	ug/kg	N.D.		102	102	0	105			75	125
1859	Methoxychlor										
8.	ug/kg	N.D.		73	75	3	83			57	141
3025	Alpha Chlordane										
1.	ug/kg	N.D.		108	109	1	110			75	125
3026	Gamma Chlordane										
0.2	ug/kg	N.D.		101	101	0	102			75	125
1988	Toxaphene										
100.	ug/kg	N.D.									
1992	Endrin Aldehyde										
6.	ug/kg	N.D.		103	101	3	114			57	123
1993	PCB-1016										
30.	ug/kg	N.D.									
1994	PCB-1221										
50.	ug/kg	N.D.									
1995	PCB-1232										
30.	ug/kg	N.D.									
1996	PCB-1242										
10.	ug/kg	N.D.									
1997	PCB-1248										
40.	ug/kg	N.D.									
1998	PCB-1254										
100.	ug/kg	N.D.									
1999	PCB-1260										
200.	ug/kg	N.D.									

4688	TCL SW846 Semivolatiles Soil	Batch: 97080SLC026078SC									
1185	phenol										
330.	ug/kg	N.D.		86	76	13	75			5	112
3753	bis (2-chloroethyl) ether										
670.	ug/kg	N.D.		88	77	14	78			12	158
1186	2-chlorophenol										
330.	ug/kg	N.D.		88	77	14	76			23	134
3754	1,3-dichlorobenzene										
330.	ug/kg	N.D.		81	74	10	77			1	172
1187	1,4-dichlorobenzene										
330.	ug/kg	N.D.		82	75	9	77			20	124
3755	1,2-dichlorobenzene										
330.	ug/kg	N.D.		85	77	10	79			32	129



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See reverse side for explanation of symbols and abbreviations



LLI Sample No. **2680805**

GEO/SB-05/4-9 Grab-Soil Sample

Gulf States Creosoting; Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4690	2-methylphenol										
670.	ug/kg	N.D.		79	70	11	74			46	123
4691	2,2'-oxybis (1-chloropropane)										
1,000.	ug/kg	N.D.		74	65	14	64			36	166
4692	4-methylphenol										
1,000.	ug/kg	N.D.		83	75	10	78			5	152
1188	N-nitrosodi-n-propylamine										
670.	ug/kg	N.D.		105	92	13	90			1	230
3757	hexachloroethane										
670.	ug/kg	N.D.		83	76	10	79			40	113
3758	nitrobenzene										
330.	ug/kg	N.D.		90	80	12	82			35	180
3759	isophorone										
670.	ug/kg	N.D.		94	85	10	86			21	196
3746	2-nitrophenol										
670.	ug/kg	N.D.		90	79	13	81			29	182
3747	2,4-dimethylphenol										
670.	ug/kg	N.D.		29	28	2	54			32	119
3760	bis (2-chloroethoxy) methane										
330.	ug/kg	N.D.		85	76	11	79			33	184
3748	2,4-dichlorophenol										
330.	ug/kg	N.D.		84	74	12	75			39	135
1189	1,2,4-trichlorobenzene										
330.	ug/kg	N.D.		83	74	11	78			44	142
3761	naphthalene										
3,300.	ug/kg	N.D.		80	73	9	73			21	133
4693	4-chloroaniline										
1,000.	ug/kg	N.D.		37	27	32	32			17	116
3762	hexachlorobutadiene										
670.	ug/kg	N.D.		95	85	11	88			24	116
1190	4-chloro-3-methylphenol										
670.	ug/kg	N.D.		90	81	11	78			22	147
4694	2-methylnaphthalene										
3,300.	ug/kg	N.D.		85	77	10	76			28	123
3763	hexachlorocyclopentadiene										
1,700.	ug/kg	N.D.		81	72	13	77			1	100
3749	2,4,6-trichlorophenol										
670.	ug/kg	N.D.		88	78	13	83			37	144
4695	2,4,5-trichlorophenol										
670.	ug/kg	N.D.		91	79	14	81			39	151
3764	2-chloronaphthalene										
330.	ug/kg	N.D.		86	78	9	83			60	118
4696	2-nitroaniline										
670.	ug/kg	N.D.		87	76	14	74			53	143
3766	dimethyl phthalate										
330.	ug/kg	N.D.		85	75	12	76			1	112
3765	acenaphthylene										
330.	ug/kg	N.D.		85	77	10	79			33	145

4689 TCL SW846 Semivolatiles/Soil Batch: 97080SLC026078SC



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2216 Rev. 5/01, 96



LLI Sample No. 2680805

GEO/SB-05/4-9 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4697	3-nitroaniline										
670.	ug/kg	N.D.		51	42	19	39			7	143
1191	acenaphthene										
3,300.	ug/kg	N.D.		80	73	10	74			47	145
3750	2,4-dinitrophenol										
1,700.	ug/kg	N.D.		97	81	18	67			1	191
1192	4-nitrophenol										
1,700.	ug/kg	N.D.		93	79	16	71			1	132
4698	dibenzofuran										
3,300.	ug/kg	N.D.		85	76	10	76			28	131
1193	2,4-dinitrotoluene										
670.	ug/kg	N.D.		92	79	15	77			39	139
4699	2,6-dinitrotoluene										
670.	ug/kg	N.D.		92	80	14	80			50	158
3770	diethyl phthalate										
670.	ug/kg	N.D.		86	76	13	76			1	114
3769	4-chlorophenyl phenyl ether										
670.	ug/kg	N.D.		81	74	9	75			25	158
768	fluorene										
3,300.	ug/kg	N.D.		82	75	9	76			59	121
700	4-nitroaniline										
1,000.	ug/kg	N.D.		76	61	21	64			38	122
4701	4,6-dinitro-2-methylphenol										
1,700.	ug/kg	N.D.		91	77	17	76			1	181
3772	N-nitrosodiphenylamine										
670.	ug/kg	N.D.		82	72	12	80			38	147
3773	4-bromophenyl phenyl ether										
1,000.	ug/kg	N.D.		93	81	14	84			53	127
3774	hexachlorobenzene										
1,000.	ug/kg	N.D.		97	84	14	84			1	152
1194	pentachlorophenol										
1,700.	ug/kg	N.D.		97	82	17	72			14	176
3775	phenanthrene										
3,300.	ug/kg	N.D.		86	76	13	79			54	120
3776	anthracene										
3,300.	ug/kg	N.D.		83	73	13	77			27	133
4702	carbazole										
3,300.	ug/kg	N.D.		91	80	12	81			35	133
3777	di-n-butyl phthalate										
330.	ug/kg	N.D.		93	80	15	85			1	118
3778	fluoranthene										
3,300.	ug/kg	N.D.		95	82	14	82			26	137
1195	pyrene										
6,700.	ug/kg	N.D.		80	69	14	79			52	115
3780	butyl benzyl phthalate										
670.	ug/kg	N.D.		86	74	15	85			1	152
3783	3,3'-dichlorobenzidine										
1,300.	ug/kg	N.D.		49	21	81	60			1	262
3781	benzo (a) anthracene										
330.	ug/kg	N.D.		86	75	13	79			33	143





LLI Sample No. 2680805
 GEO/SB-05/4-9 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3784	bis (2-ethylhexyl) phthalate										
670.	ug/kg	N.D.		89	75	16	86			8	158
3782	chrysene										
330.	ug/kg	N.D.		90	79	13	82			17	168
3785	di-n-octyl phthalate										
670.	ug/kg	N.D.		91	75	19	87			4	146
3786	benzo (b) fluoranthene										
670.	ug/kg	N.D.		87	75	15	78			24	159
3787	benzo (k) fluoranthene										
1,300.	ug/kg	N.D.		92	81	13	82			11	163
3788	benzo (a) pyrene										
670.	ug/kg	N.D.		84	73	14	76			17	163
3789	indeno (1,2,3-cd) pyrene										
670.	ug/kg	N.D.		96	79	19	80			1	171
3790	dibenz (a,h) anthracene										
670.	ug/kg	N.D.		98	81	18	83			1	227
3791	benzo (ghi) perylene										
670.	ug/kg	N.D.		89	79	13	76			1	219
Moisture		Batch: 970800316820005A									
0.080	% by wt.		7				100	100	0	100	101



Lancaster Laboratories
 2425 New Holland Pike
 PO Box 12425
 Lancaster, PA 17605-2425
 717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.

2216 Rev 5.01:96



LLI Sample No. 2680805

GEO/SB-05/4-9 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
1225 TCL Pesticides in Solids	TCX	90	50	120
	DCB	61	50	120
4593 TCL Volatiles by 8240	d4-1,2-DCA	97	70	121
	d8-toluene	97	81	117
	4-BFB	88	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	89	24	113
	2-Flphenol	87	25	121
	2,4,6-TBP	79	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	95	23	120
	2-Fbiphenyl	91	30	115
	Tphenylid14	101	18	137



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. SW 2680806
Collected: 3/18/97 at 16:45 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

GEO/SB-05A/17-19 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB05A SDG#: HMS04-19

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	DETECTION	LIMIT UNITS	RESULTS	DETECTION	LIMIT
4593	TCL Volatiles			See Page		2	
4688	TCL Semivolatiles			See Page		3	
4689	TCL Semivolatiles cont'd			See Page		4	
0111	Moisture	14.3		0.080	% by wt.		
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.							

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:24:57 D 0003 11 129915 557660
448 0.00 00049920 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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LLI Sample No. SW 2680806

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Discard: 5/ 9/97

GEO/SB-05A/17-19 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB05A SDG#: HMS04-19

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Volatiles by 8240						
3434	Chloromethane	N.D.	2.	ug/kg	N.D.	2.
3435	Bromomethane	N.D.	3.	ug/kg	N.D.	4.
3436	Vinyl Chloride	N.D.	2.	ug/kg	N.D.	2.
3437	Chloroethane	N.D.	3.	ug/kg	N.D.	4.
3440	Methylene Chloride	N.D.	2.	ug/kg	N.D.	2.
4074	Acetone	N.D.	7.	ug/kg	N.D.	8.
4076	Carbon Disulfide	N.D.	3.	ug/kg	N.D.	4.
1180	1,1-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.
3442	1,1-Dichloroethane	N.D.	1.	ug/kg	N.D.	1.
3444	Chloroform	N.D.	1.	ug/kg	N.D.	1.
3445	1,2-Dichloroethane	N.D.	2.	ug/kg	N.D.	2.
4085	2-Butanone	N.D.	7.	ug/kg	N.D.	8.
3446	1,1,1-Trichloroethane	N.D.	1.	ug/kg	N.D.	1.
3447	Carbon Tetrachloride	N.D.	1.	ug/kg	N.D.	1.
4091	Vinyl Acetate	N.D.	3.	ug/kg	N.D.	4.
3448	Bromodichloromethane	N.D.	2.	ug/kg	N.D.	2.
3450	1,2-Dichloropropane	N.D.	3.	ug/kg	N.D.	4.
3454	cis-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
1181	Trichloroethene	N.D.	1.	ug/kg	N.D.	1.
3452	Dibromochloromethane	N.D.	1.	ug/kg	N.D.	1.
3453	1,1,2-Trichloroethane	N.D.	2.	ug/kg	N.D.	2.
1182	Benzene	2.	J	ug/kg	2.	J
3451	trans-1,3-Dichloropropene	N.D.	1.	ug/kg	N.D.	1.
3456	Bromoform	N.D.	1.	ug/kg	N.D.	1.
4108	4-Methyl-2-pentanone	N.D.	3.	ug/kg	N.D.	4.
4107	2-Hexanone	N.D.	3.	ug/kg	N.D.	4.
3457	Tetrachloroethene	N.D.	1.	ug/kg	N.D.	1.
3449	1,1,2,2-Tetrachloroethane	N.D.	1.	ug/kg	N.D.	1.
1183	Toluene	N.D.	1.	ug/kg	N.D.	1.
1184	Chlorobenzene	N.D.	1.	ug/kg	N.D.	1.
3458	Ethylbenzene	N.D.	1.	ug/kg	N.D.	1.
4117	Styrene	N.D.	1.	ug/kg	N.D.	1.
3355	Xylene (total)	1.	J	ug/kg	2.	J
6187	trans-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.
6277	cis-1,2-Dichloroethene	N.D.	2.	ug/kg	N.D.	2.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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LLI Sample No. SW 2680806
Collected: 3/18/97 at 16:45 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

GEO/SB-05A/17-19 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB05A SDG#: HMS04-19

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ret.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	33.	ug/kg	N.D.	39.
3753	bis (2-chloroethyl) ether	N.D.	67.	ug/kg	N.D.	78.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	39.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
4690	2-methylphenol	N.D.	67.	ug/kg	N.D.	78.
4691	2,2'-oxybis (1-chloropropane)	N.D.	100.	ug/kg	N.D.	120.
4692	4-methylphenol	N.D.	100.	ug/kg	N.D.	120.
1188	N-nitrosodi-n-propylamine	N.D.	67.	ug/kg	N.D.	78.
3757	hexachloroethane	N.D.	67.	ug/kg	N.D.	78.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	67.	ug/kg	N.D.	78.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	78.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	78.
3760	bis (2-chloroethoxy) methane	N.D.	33.	ug/kg	N.D.	39.
3748	2,4-dichlorophenol	N.D.	33.	ug/kg	N.D.	39.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	39.
4693	4-chloroaniline	N.D.	100.	ug/kg	N.D.	120.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	78.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	78.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	39.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	78.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	78.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	39.
4696	2-nitroaniline	N.D.	67.	ug/kg	N.D.	78.
3766	dimethyl phthalate	N.D.	33.	ug/kg	N.D.	39.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	39.

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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



LLI Sample No. SW 2680806

Collected: 3/18/97 at 16:45 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-05A/17-19 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB05A SDG#: HMS04-19

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SWB46 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	78.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	39.
3750	2,4-dinitrophenol	N.D.	170.	ug/kg	N.D.	190.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	190.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	39.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	78.
4699	2,6-dinitrotoluene	N.D.	67.	ug/kg	N.D.	78.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3769	4-chlorophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	78.
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.	100.	ug/kg	N.D.	120.
4701	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	67.	ug/kg	N.D.	78.
3773	4-bromophenyl phenyl ether	N.D.	100.	ug/kg	N.D.	120.
3774	hexachlorobenzene	N.D.	100.	ug/kg	N.D.	120.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	210.	J	33.	240.	J
3776	anthracene	130.	J	33.	160.	J
4702	carbazole	56.	J	33.	65.	J
3777	di-n-butyl phthalate	N.D.	33.	ug/kg	N.D.	39.
3778	fluoranthene	160.	J	33.	180.	J
1195	pyrene	120.	J	67.	140.	J
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3783	3,3'-dichlorobenzidine	N.D.	130.	ug/kg	N.D.	160.
3781	benzo (a) anthracene	43.	J	33.	50.	J
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	78.
3782	chrysene	N.D.	33.	ug/kg	N.D.	39.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3786	benzo (b) fluoranthene	N.D.	67.	ug/kg	N.D.	78.
3787	benzo (k) fluoranthene	N.D.	130.	ug/kg	N.D.	160.
3788	benzo (a) pyrene	N.D.	67.	ug/kg	N.D.	78.
3789	indeno (1,2,3-cd) pyrene	N.D.	67.	ug/kg	N.D.	78.
3790	dibenz (a,h) anthracene	N.D.	67.	ug/kg	N.D.	78.
3791	benzo (ghi) perylene	N.D.	67.	ug/kg	N.D.	78.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96



LLI Sample No. SW 2680806

Collected: 3/18/97 at 16:45 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-05A/17-19 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB05A SDG#: HMS04-19

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION	LIMIT	RESULTS	METHOD DETECTION LIMIT
TCL SW846	Semivolatiles/Soil					

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

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Senior Chemist, GC/MS



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2216 Rev. 5/01/96





LLI Sample No. SW 2680806

Collected: 03/18/97 at 16:45 by DU

Submitted: 03/20/97

GEO/SB-05A/17-19 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB05A SDG#: HMS04-19

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/25/97 0115	Clark A. Dougherty
0381	BNA Soil Extraction	SW-846 3550A	1	03/21/97 0940	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0821	Deb Gifford
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0821	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	03/21/97 1911	Neelay B. Mehta



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See reverse side for explanation of symbols and abbreviations.





L.I. Sample No. 2680806
GEO/SB-05A/17-19 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4593 TCL Volatiles by 8240		Batch: G970801AB									
3434	Chloromethane										
	2. ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
	3. ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
	2. ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
	3. ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
	2. ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
	7. ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
	3. ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
	2. ug/kg	N.D.		107	113	5	111			1	233
42	1,1-Dichloroethane										
	1. ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
	1. ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
	2. ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
	7. ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
	1. ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
	1. ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
	3. ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
	2. ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
	3. ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
	1. ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
	1. ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
	1. ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
	2. ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
	1. ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
	1. ug/kg	N.D.		91	96	6	88			17	183



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2680806
 GEO/SB-05A/17-19 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3456	Bromoform										
1.	ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
3.	ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
3.	ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
1.	ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,1,2-Tetrachloroethane										
1.	ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
1.	ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
1.	ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
1.	ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
1.	ug/kg	N.D.		98	101	3	101			74	136
55	Xylene (total)										
1.	ug/kg	N.D.		103	104	2	102			30	200
87	trans-1,2-Dichloroethene										
2.	ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
2.	ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97080SLC0260785C									
1185	phenol										
33.	ug/kg	N.D.		86	76	13	75			5	112
3753	bis (2-chloroethyl) ether										
67.	ug/kg	N.D.		88	77	14	78			12	158
1186	2-chlorophenol										
33.	ug/kg	N.D.		88	77	14	76			23	134
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		81	74	10	77			1	172
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		82	75	9	77			20	124
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		85	77	10	79			32	129
4690	2-methylphenol										
67.	ug/kg	N.D.		79	70	11	74			46	123
4691	2,2'-oxybis (1-chloropropane)										
100.	ug/kg	N.D.		74	65	14	64			36	166
4692	4-methylphenol										
100.	ug/kg	N.D.		83	75	10	78			5	152
1188	N-nitrosodi-n-propylamine										
67.	ug/kg	N.D.		105	92	13	90			1	230
3757	hexachloroethane										
67.	ug/kg	N.D.		83	76	10	79			40	113



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See reverse side for explanation of symbols and abbreviations.



LLI Sample No. 2680806

GEO/SB-05A/17-19 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

 Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3758	nitrobenzene										
33.	ug/kg	N.D.		90	80	12	82			35	180
3759	isophorone										
67.	ug/kg	N.D.		94	85	10	86			21	196
3746	2-nitrophenol										
67.	ug/kg	N.D.		90	79	13	81			29	182
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		29	28	2	54			32	119
3760	bis (2-chloroethoxy) methane										
33.	ug/kg	N.D.		85	76	11	79			33	184
3748	2,4-dichlorophenol										
33.	ug/kg	N.D.		84	74	12	75			39	135
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		83	74	11	78			44	142
3761	naphthalene										
33.	ug/kg	N.D.		80	73	9	73			21	133
4693	4-chloroaniline										
100.	ug/kg	N.D.		37	27	32	32			17	116
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	85	11	88			24	116
3790	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		90	81	11	78			22	147
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		85	77	10	76			28	123
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		81	72	13	77			1	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		88	78	13	83			37	144
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		91	79	14	81			39	151
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		86	78	9	83			60	118
4696	2-nitroaniline										
67.	ug/kg	N.D.		87	76	14	74			53	143
3766	dimethyl phthalate										
33.	ug/kg	N.D.		85	75	12	76			1	112
3765	acenaphthylene										
33.	ug/kg	N.D.		85	77	10	79			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97080SLC026078SC									

4697	3-nitroaniline										
67.	ug/kg	N.D.		51	42	19	39			7	143
1191	acenaphthene										
33.	ug/kg	N.D.		80	73	10	74			47	145
3750	2,4-dinitrophenol										
170.	ug/kg	N.D.		97	81	18	67			1	191
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	79	16	71			1	132





LLI Sample No. 2680806
GEO/SB-05A/17-19 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
33.	ug/kg	N.D.		85	76	10	76			28	131
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	79	15	77			39	139
4699	2,6-dinitrotoluene										
67.	ug/kg	N.D.		92	80	14	80			50	158
3770	diethyl phthalate										
67.	ug/kg	N.D.		86	76	13	76			1	114
3769	4-chlorophenyl phenyl ether										
67.	ug/kg	N.D.		81	74	9	75			25	158
3768	fluorene										
33.	ug/kg	N.D.		82	75	9	76			59	121
4700	4-nitroaniline										
100.	ug/kg	N.D.		76	61	21	64			38	122
4701	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		91	77	17	76			1	181
3772	N-nitrosodiphenylamine										
67.	ug/kg	N.D.		82	72	12	80			38	147
3773	4-bromophenyl phenyl ether										
100.	ug/kg	N.D.		93	81	14	84			53	127
3774	hexachlorobenzene										
100.	ug/kg	N.D.		97	84	14	84			1	152
1194	pentachlorophenol										
170.	ug/kg	N.D.		97	82	17	72			14	176
3775	phenanthrene										
33.	ug/kg	N.D.		86	76	13	79			54	120
3776	anthracene										
33.	ug/kg	N.D.		83	73	13	77			27	133
4702	carbazole										
33.	ug/kg	N.D.		91	80	12	81			35	133
3777	di-n-butyl phthalate										
33.	ug/kg	N.D.		93	80	15	85			1	118
3778	fluoranthene										
33.	ug/kg	N.D.		95	82	14	82			26	137
1195	pyrene										
67.	ug/kg	N.D.		80	69	14	79			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		86	74	15	85			1	152
3783	3,3'-dichlorobenzidine										
130.	ug/kg	N.D.		49	21	81	60			1	262
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		86	75	13	79			33	143
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	75	16	86			8	158
3782	chrysene										
33.	ug/kg	N.D.		90	79	13	82			17	168
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		91	75	19	87			4	146
3786	benzo (b) fluoranthene										
67.	ug/kg	N.D.		87	75	15	78			24	159



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LLI Sample No. 2680806
GEO/SB-05A/17-19 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3787	benzo (k) fluoranthene										
130.	ug/kg	N.D.		92	81	13	82			11	163
3788	benzo (a) pyrene										
67.	ug/kg	N.D.		84	73	14	76			17	163
3789	indeno (1,2,3-cd) pyrene										
67.	ug/kg	N.D.		96	79	19	80			1	171
3790	dibenz (a,h) anthracene										
67.	ug/kg	N.D.		98	81	18	83			1	227
3791	benzo (ghi) perylene										
67.	ug/kg	N.D.		89	79	13	76			1	219
0111	Moisture	Batch: 970800316820005A									
0.080	% by wt.		7				100	100	0	100	101



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LLI Sample No. 2680806
 GEO/SB-05A/17-19 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	92	70	121
	d8-toluene	92	81	117
	4-BFB	99	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	66	24	113
	2-Flphenol	66	25	121
	2,4,6-TBP	76	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	80	23	120
	2-Fbiphenyl	81	30	115
	Tphenylid14	79	18	137



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LLI Sample No. **WW 2680807**

Collected: 3/18/97 at 17:50 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

RB-6 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS

RB--6 SDG#: HMS04-20RB

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

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METHOD

CAT NO.	ANALYSIS NAME	RESULTS	DETECTION LIMIT	UNITS
4592	TCL Volatiles		See Page	2
4678	TCL Semivolatiles		See Page	3
4679	TCL Semivolatiles cont'd		See Page	4

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove

ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:26:32 D 0003 11 129915 557660
448 0.00 00045300 ASR000

Respectfully Submitted
Ramona V. Layman
Manager, Metals/Leachates



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Technology Center
PO Box 25861
Oklahoma City OK 73125

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CAT NO.	ANALYSIS NAME	METHOD		
		RESULTS	DETECTION LIMIT	UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	N.D.	3.	ug/l
1257	Bromomethane	N.D.	3.	ug/l
3492	Vinyl Chloride	N.D.	2.	ug/l
3494	Chloroethane	N.D.	3.	ug/l
3497	Methylene Chloride	N.D.	2.	ug/l
3498	Acetone	N.D.	6.	ug/l
3499	Carbon Disulfide	N.D.	3.	ug/l
3500	1,1-Dichloroethene	N.D.	1.	ug/l
3501	1,1-Dichloroethane	N.D.	2.	ug/l
3503	Chloroform	N.D.	1.	ug/l
3504	1,2-Dichloroethane	N.D.	2.	ug/l
0316	2-Butanone	N.D.	3.	ug/l
3505	1,1,1-Trichloroethane	N.D.	1.	ug/l
3506	Carbon Tetrachloride	N.D.	1.	ug/l
3507	Vinyl Acetate	N.D.	2.	ug/l
3508	Bromodichloromethane	N.D.	1.	ug/l
3509	1,2-Dichloropropane	N.D.	1.	ug/l
3516	cis-1,3-Dichloropropene	N.D.	1.	ug/l
3511	Trichloroethene	N.D.	1.	ug/l
3512	Dibromochloromethane	N.D.	2.	ug/l
3513	1,1,2-Trichloroethane	N.D.	2.	ug/l
3515	Benzene	N.D.	1.	ug/l
3510	trans-1,3-Dichloropropene	N.D.	1.	ug/l
3518	Bromoform	N.D.	1.	ug/l
3521	4-Methyl-2-pentanone	N.D.	5.	ug/l
3520	2-Hexanone	N.D.	7.	ug/l
3522	Tetrachloroethene	N.D.	1.	ug/l
3523	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
3524	Toluene	N.D.	2.	ug/l
3525	Chlorobenzene	N.D.	1.	ug/l
3526	Ethylbenzene	N.D.	2.	ug/l
3528	Styrene	N.D.	1.	ug/l
3529	Xylene (total)	N.D.	1.	ug/l
5780	trans-1,2-Dichloroethene	N.D.	2.	ug/l
6268	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



LLI Sample No. **WW 2680807**

Collected: 3/18/97 at 17:50 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

RB-6 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS
RB--6 SOG#: HMS04-20RB

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

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CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL SW846 Semivolatiles/Waters				
3918	phenol	N.D.	1.	ug/l
3867	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3874	2-chlorophenol	N.D.	1.	ug/l
3883	1,3-dichlorobenzene	N.D.	1.	ug/l
3884	1,4-dichlorobenzene	N.D.	1.	ug/l
3882	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	2.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	2.	ug/l
3915	N-nitrosodi-n-propylamine	N.D.	2.	ug/l
3902	hexachloroethane	N.D.	2.	ug/l
3910	nitrobenzene	N.D.	1.	ug/l
3904	isophorone	N.D.	1.	ug/l
3911	2-nitrophenol	N.D.	2.	ug/l
3890	2,4-dimethylphenol	N.D.	1.	ug/l
3866	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3886	2,4-dichlorophenol	N.D.	2.	ug/l
3921	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3906	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	2.	ug/l
3900	hexachlorobutadiene	N.D.	1.	ug/l
3872	4-chloro-3-methylphenol	N.D.	2.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3901	hexachlorocyclopentadiene	N.D.	3.	ug/l
3923	2,4,6-trichlorophenol	N.D.	1.	ug/l
3922	2,4,5-trichlorophenol	N.D.	1.	ug/l
3873	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	1.	ug/l
3891	dimethyl phthalate	N.D.	3.	ug/l
3858	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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2216 Rev. 5/01.96





LLI Sample No. WW 2680807

Collected: 3/18/97 at 17:50 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

RB-6 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS
RB--6 SDG#: HMS04-20RB

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

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CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL SW846 Semivolatiles/Waters				
3908	3-nitroaniline	N.D.	1.	ug/l
3857	acenaphthene	N.D.	1.	ug/l
3893	2,4-dinitrophenol	N.D.	5.	ug/l
3912	4-nitrophenol	N.D.	5.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3894	2,4-dinitrotoluene	N.D.	2.	ug/l
3895	2,6-dinitrotoluene	N.D.	1.	ug/l
3887	diethyl phthalate	N.D.	2.	ug/l
3875	4-chlorophenyl phenyl ether	N.D.	2.	ug/l
3898	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
4683	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3914	N-nitrosodiphenylamine	N.D.	2.	ug/l
3869	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3899	hexachlorobenzene	N.D.	1.	ug/l
3916	pentachlorophenol	N.D.	1.	ug/l
3917	phenanthrene	1.	J	1.
3859	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3880	di-n-butyl phthalate	N.D.	1.	ug/l
3897	fluoranthene	N.D.	1.	ug/l
3919	pyrene	N.D.	1.	ug/l
3870	butyl benzyl phthalate	N.D.	2.	ug/l
3885	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3860	benzo (a) anthracene	N.D.	1.	ug/l
3868	bis (2-ethylhexyl) phthalate	4.	J	2.
3876	chrysene	N.D.	1.	ug/l
3896	di-n-octyl phthalate	N.D.	2.	ug/l
3861	benzo (b) fluoranthene	N.D.	2.	ug/l
3862	benzo (k) fluoranthene	N.D.	2.	ug/l
3864	benzo (a) pyrene	N.D.	2.	ug/l
3903	indeno (1,2,3-cd) pyrene	N.D.	2.	ug/l
3881	dibenz (a,h) anthracene	N.D.	2.	ug/l
3863	benzo (ghi) perylene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
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Senior Chemist, GC/MS

MEMBER
ACIL
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2216 Rev 5/01/96





LLI Sample No. WW 2680807

Collected: 3/18/97 at 17:50 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

RB-6 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS
RB-6 SDG#: HMS04-20RB

Account No: 07802
Kerr-McGee Corporation
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CAT NO.	ANALYSIS NAME	METHOD	
		RESULTS	DETECTION LIMIT UNITS

TCL SW846 Semivolatiles/Waters

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.

Questions? Contact your Client Services Representative
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Respectfully Submitted
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Senior Chemist, GC/MS



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2216 Rev. 5/01/96





LLI Sample No. WW 2680807

Collected: 03/18/97 at 17:50 by DU

Submitted: 03/20/97

RB-6 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS
RB--6 SDG#: HMS04-20RB

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/21/97 2145	Trent S. Sprenkle
0813	BNA Water Extraction	SW-846 3510B	1	03/21/97 1600	Lee L. Munro
4678	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/25/97 0301	Rebecca M. Barry
4679	TCL SW846 Semivolatiles/Waters	SW-846 8270B	1	03/25/97 0301	Rebecca M. Barry



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LLI Sample No. 2680807
RB-6 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	LIMITS

4592 TCL Volatiles by 8240 - Water Batch: K970801AB												

1258	Chloromethane											
	3. ug/l	N.D.		89	91	3						
1257	Bromomethane											
	3. ug/l	N.D.		94	99	6						
3492	Vinyl Chloride											
	2. ug/l	N.D.		98	102	4						
3494	Chloroethane											
	3. ug/l	N.D.		90	90	1						
3497	Methylene Chloride											
	2. ug/l	N.D.		101	103	1						
3498	Acetone											
	6. ug/l	N.D.		90	92	2						
3499	Carbon Disulfide											
	3. ug/l	N.D.		97	126	26						
3500	1,1-Dichloroethene											
	1. ug/l	N.D.		111	110	1						
03	1,1-Dichloroethane											
	2. ug/l	N.D.		106	105	1						
03	Chloroform											
	1. ug/l	N.D.		107	106	1						
3504	1,2-Dichloroethane											
	2. ug/l	N.D.		105	103	2						
0316	2-Butanone											
	3. ug/l	N.D.		105	95	10						
3505	1,1,1-Trichloroethane											
	1. ug/l	N.D.		114	111	3						
3506	Carbon Tetrachloride											
	1. ug/l	N.D.		111	109	2						
3507	Vinyl Acetate											
	2. ug/l	N.D.		128	123	4						
3508	Bromodichloromethane											
	1. ug/l	N.D.		104	102	3						
3509	1,2-Dichloropropane											
	1. ug/l	N.D.		101	97	4						
3516	cis-1,3-Dichloropropene											
	1. ug/l	N.D.		106	103	3						
3511	Trichloroethene											
	1. ug/l	N.D.		113	112	2						
3512	Dibromochloromethane											
	2. ug/l	N.D.		108	101	7						
3513	1,1,2-Trichloroethane											
	2. ug/l	N.D.		110	108	2						
3515	Benzene											
	1. ug/l	N.D.		107	106	1						
3510	trans-1,3-Dichloropropene											
	1. ug/l	N.D.		100	95	5						



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96





LLI Sample No. 2680807

RB-6 Grab Water Sample

Gulf States Creosoting; Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3518	Bromoform										
	1. ug/l	N.D.		104	101	3					
3521	4-Methyl-2-pentanone										
	5. ug/l	N.D.		87	85	2					
3520	2-Hexanone										
	7. ug/l	N.D.		97	92	6					
3522	Tetrachloroethene										
	1. ug/l	N.D.		144	141	3					
3523	1,1,1,2-Tetrachloroethane										
	2. ug/l	N.D.		99	98	0					
3524	Toluene										
	2. ug/l	N.D.		114	114	0					
3525	Chlorobenzene										
	1. ug/l	N.D.		113	113	0					
3526	Ethylbenzene										
	2. ug/l	N.D.		115	116	1					
3528	Styrene										
	1. ug/l	N.D.		115	115	0					
3529	Xylene (total)										
	1. ug/l	N.D.		115	115	0					
3580	trans-1,2-Dichloroethene										
	2. ug/l	N.D.		107	105	1					
6268	cis-1,2-Dichloroethene										
	2. ug/l	N.D.		108	106	2					

4678	TCL SW846 Semivolatiles/Waters	Batch: 97080WAD026									

3918	phenol										
	1. ug/l	N.D.		43	42	1	42	43	2	5	112
3867	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		84	83	1	83	83	0	12	158
3874	2-chlorophenol										
	1. ug/l	N.D.		82	80	3	81	82	1	23	134
3883	1,3-dichlorobenzene										
	1. ug/l	N.D.		63	69	10	66	68	2	1	172
3884	1,4-dichlorobenzene										
	1. ug/l	N.D.		65	71	9	69	70	3	20	124
3882	1,2-dichlorobenzene										
	1. ug/l	N.D.		68	72	6	70	72	3	32	129
4680	2-methylphenol										
	2. ug/l	N.D.		75	73	3	74	75	0	46	123
4681	2,2'oxybis (1-chloropropane)										
	2. ug/l	N.D.		77	76	1	76	76	0	36	166
4682	4-methylphenol										
	2. ug/l	N.D.		74	72	3	74	74	1	5	152
3915	N-nitrosodi-n-propylamine										
	2. ug/l	N.D.		100	97	3	98	99	1	1	230
3902	hexachloroethane										
	2. ug/l	N.D.		47	59	23	56	55	1	40	113



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2216 Rev 5/01/96





LLI Sample No. 2680807
RB-6 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3910	nitrobenzene										
	1. ug/l	N.D.		91	89	2	89	90	1	35	180
3904	isophorone										
	1. ug/l	N.D.		93	91	2	90	93	3	21	196
3911	2-nitrophenol										
	2. ug/l	N.D.		85	84	2	85	88	3	29	182
3890	2,4-dimethylphenol										
	1. ug/l	N.D.		75	73	2	78	79	2	32	119
3866	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		86	84	2	84	85	1	33	184
3886	2,4-dichlorophenol										
	2. ug/l	N.D.		79	78	1	78	81	3	39	135
3921	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		66	71	7	71	73	3	44	142
3906	naphthalene										
	1. ug/l	N.D.		75	76	1	77	78	2	21	133
3871	4-chloroaniline										
	2. ug/l	N.D.		62	58	6	61	63	2	17	116
3900	hexachlorobutadiene										
	1. ug/l	N.D.		47	66	34	62	60	2	24	116
3872	4-chloro-3-methylphenol										
	2. ug/l	N.D.		85	84	0	84	88	5	22	147
3905	2-methylnaphthalene										
	1. ug/l	N.D.		76	78	2	79	83	5	28	123
3901	hexachlorocyclopentadiene										
	3. ug/l	N.D.		44	55	23	57	57	0	1	100
3923	2,4,6-trichlorophenol										
	1. ug/l	N.D.		83	81	2	83	86	3	37	144
3922	2,4,5-trichlorophenol										
	1. ug/l	N.D.		81	79	3	82	84	2	39	151
3873	2-chloronaphthalene										
	1. ug/l	N.D.		79	80	1	81	83	2	60	118
3907	2-nitroaniline										
	1. ug/l	N.D.		91	91	1	92	92	1	53	143
3891	dimethyl phthalate										
	3. ug/l	N.D.		51	61	18	41	39	6	1	112
3858	acenaphthylene										
	1. ug/l	N.D.		82	82	0	82	86	4	33	145

4679 TCL SW846 Semivolatiles/Waters Batch: 97080WAD026											

3908	3-nitroaniline										
	1. ug/l	N.D.		71	71	0	69	71	3	7	143
3857	acenaphthene										
	1. ug/l	N.D.		77	78	1	77	80	4	47	145
3893	2,4-dinitrophenol										
	5. ug/l	N.D.		68	68	1	81	75	7	1	191
3912	4-nitrophenol										
	5. ug/l	N.D.		36	37	3	41	41	1	1	132



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2216 Rev. 5/01/96



LLI Sample No. 2680807

RB-6 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3879	dibenzofuran										
	1. ug/l	N.D.		81	82	1	81	83	2	28	131
3894	2,4-dinitrotoluene										
	2. ug/l	N.D.		87	87	1	88	89	1	39	139
3895	2,6-dinitrotoluene										
	1. ug/l	N.D.		82	82	1	83	84	1	50	158
3887	diethyl phthalate										
	2. ug/l	N.D.		70	75	7	67	67	1	1	114
3875	4-chlorophenyl phenyl ether										
	2. ug/l	N.D.		75	78	3	77	80	3	25	158
3898	fluorene										
	1. ug/l	N.D.		78	80	2	80	82	3	59	121
3909	4-nitroaniline										
	2. ug/l	N.D.		76	75	1	76	76	0	38	122
4683	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		74	75	1	82	80	2	1	181
3914	N-nitrosodiphenylamine										
	2. ug/l	N.D.		86	87	2	85	86	2	38	147
3869	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		83	87	4	83	87	4	53	127
3899	hexachlorobenzene										
	1. ug/l	N.D.		88	92	4	89	91	3	1	152
3916	pentachlorophenol										
	1. ug/l	N.D.		75	78	4	89	90	1	14	176
3917	phenanthrene										
	1. ug/l	N.D.		82	83	2	81	83	2	54	120
3859	anthracene										
	1. ug/l	N.D.		79	81	2	78	81	3	27	133
4684	carbazole										
	1. ug/l	N.D.		89	88	1	85	88	3	40	137
3880	di-n-butyl phthalate										
	1. ug/l	N.D.		83	85	2	81	83	3	1	118
3897	fluoranthene										
	1. ug/l	N.D.		87	87	0	85	89	5	26	137
3919	pyrene										
	1. ug/l	N.D.		70	73	4	72	72	0	52	115
3870	butyl benzyl phthalate										
	2. ug/l	N.D.		69	71	4	68	65	4	1	152
3885	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		60	59	2	55	54	1	1	262
3860	benzo (a) anthracene										
	1. ug/l	N.D.		70	72	3	71	73	3	33	143
3868	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		66	67	2	67	68	1	8	158
3876	chrysene										
	1. ug/l	N.D.		80	81	2	80	82	2	17	168
3896	di-n-octyl phthalate										
	2. ug/l	N.D.		72	70	2	72	72	0	4	146
3861	benzo (b) fluoranthene										
	2. ug/l	N.D.		75	77	2	76	77	2	24	159



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LLI Sample No. 2680807
RB-6 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3862	benzo (k) fluoranthene										
2.	ug/l	N.D.		79	79	0	80	82	4	11	163
3864	benzo (a) pyrene										
2.	ug/l	N.D.		72	74	3	73	75	3	17	163
3903	indeno (1,2,3-cd) pyrene										
2.	ug/l	N.D.		79	82	3	81	82	1	1	171
3881	dibenz (a,h) anthracene										
2.	ug/l	N.D.		82	85	4	85	86	1	1	227
3863	benzo (ghi) perylene										
2.	ug/l	N.D.		78	81	4	82	82	0	1	219





LLI Sample No. 2680807
 RB-6 Grab Water Sample
 Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4592 TCL Volatiles by 8240 - Water	d4-1,2-DCA	102	76	114
	d8-toluene	106	88	110
	4-BFB	112	86	115
4678 TCL SW846 Semivolatiles/Waters	2-Flphenol	55	21	100
	Phenol-d6	36	10	94
	2,4,6-TBP	78	10	123
4679 TCL SW846 Semivolatiles/Waters	Nitrobz-d5	72	35	114
	2-Fbiphenyl	76	43	116
	Tphenylid14	74	33	141



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2680808

Collected: 3/18/97 at 08:45 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-29 SDG#: HMS04-21

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
4593	TCL Volatiles					
4688	TCL Semivolatiles			See Page	2	
4689	TCL Semivolatiles cont'd			See Page	4	
0111	Moisture	17.4		See Page	5	
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove

ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:27:43 D 0003 11 129915 557660
448 0.00 00049920 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Volatiles by 8240						
3434	Chloromethane	N.D.	10.	ug/kg	N.D.	12.
3435	Bromomethane	N.D.	15.	ug/kg	N.D.	18.
3436	Vinyl Chloride	N.D.	10.	ug/kg	N.D.	12.
3437	Chloroethane	N.D.	15.	ug/kg	N.D.	18.
3440	Methylene Chloride	N.D.	10.	ug/kg	N.D.	12.
4074	Acetone	53.	J	35.	65.	J
4076	Carbon Disulfide	N.D.	15.	ug/kg	N.D.	18.
1180	1,1-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.
3442	1,1-Dichloroethane	N.D.	5.	ug/kg	N.D.	6.
3444	Chloroform	N.D.	5.	ug/kg	N.D.	6.
3445	1,2-Dichloroethane	N.D.	10.	ug/kg	N.D.	12.
4085	2-Butanone	N.D.	35.	ug/kg	N.D.	42.
3446	1,1,1-Trichloroethane	N.D.	5.	ug/kg	N.D.	6.
3447	Carbon Tetrachloride	N.D.	5.	ug/kg	N.D.	6.
4091	Vinyl Acetate	N.D.	15.	ug/kg	N.D.	18.
3448	Bromodichloromethane	N.D.	10.	ug/kg	N.D.	12.
3450	1,2-Dichloropropane	N.D.	15.	ug/kg	N.D.	18.
3454	cis-1,3-Dichloropropene	N.D.	5.	ug/kg	N.D.	6.
1181	Trichloroethene	N.D.	5.	ug/kg	N.D.	6.
3452	Dibromochloromethane	N.D.	5.	ug/kg	N.D.	6.
3453	1,1,2-Trichloroethane	N.D.	10.	ug/kg	N.D.	12.
1182	Benzene	N.D.	5.	ug/kg	N.D.	6.
3451	trans-1,3-Dichloropropene	N.D.	5.	ug/kg	N.D.	6.
3456	Bromoform	N.D.	5.	ug/kg	N.D.	6.
4108	4-Methyl-2-pentanone	N.D.	15.	ug/kg	N.D.	18.
4107	2-Hexanone	N.D.	15.	ug/kg	N.D.	18.
3457	Tetrachloroethene	N.D.	5.	ug/kg	N.D.	6.
3449	1,1,2,2-Tetrachloroethane	N.D.	5.	ug/kg	N.D.	6.
1183	Toluene	45.	5.	ug/kg	55.	6.
1184	Chlorobenzene	N.D.	5.	ug/kg	N.D.	6.
3458	Ethylbenzene	210.	5.	ug/kg	260.	6.
4117	Styrene	N.D.	5.	ug/kg	N.D.	6.
3355	Xylene (total)	1,200.	5.	ug/kg	1,400.	6.
6187	trans-1,2-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.
6277	cis-1,2-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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2216 Rev. 5/01/96





LLI Sample No. SW 2680808

Collected: 3/18/97 at 08:45 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SB-29 SDG#: HMS04-21

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

CAT
 NO. ANALYSIS NAME

AS RECEIVED
 METHOD
 RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
 METHOD
 RESULTS DETECTION LIMIT

TCL Volatiles by 8240

The quantitation limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
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SB-29 SDG#: HMS04-21

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Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.		170.	ug/kg	N.D.
3753	bis (2-chloroethyl) ether	N.D.		330.	ug/kg	N.D.
1186	2-chlorophenol	N.D.		170.	ug/kg	N.D.
3754	1,3-dichlorobenzene	N.D.		170.	ug/kg	N.D.
1187	1,4-dichlorobenzene	N.D.		170.	ug/kg	N.D.
3755	1,2-dichlorobenzene	N.D.		170.	ug/kg	N.D.
4690	2-methylphenol	N.D.		330.	ug/kg	N.D.
4691	2,2'-oxybis (1-chloropropane)	N.D.		500.	ug/kg	N.D.
4692	4-methylphenol	N.D.		500.	ug/kg	N.D.
1188	N-nitrosodi-n-propylamine	N.D.		330.	ug/kg	N.D.
3757	hexachloroethane	N.D.		330.	ug/kg	N.D.
3758	nitrobenzene	N.D.		170.	ug/kg	N.D.
3759	isophorone	N.D.		330.	ug/kg	N.D.
3746	2-nitrophenol	N.D.		330.	ug/kg	N.D.
747	2,4-dimethylphenol	1,000.	J	330.	ug/kg	1,200.
760	bis (2-chloroethoxy) methane	N.D.		170.	ug/kg	N.D.
3748	2,4-dichlorophenol	N.D.		170.	ug/kg	N.D.
1189	1,2,4-trichlorobenzene	N.D.		170.	ug/kg	N.D.
3761	naphthalene	380,000.		3,300.	ug/kg	460,000.
4693	4-chloroaniline	N.D.		500.	ug/kg	N.D.
3762	hexachlorobutadiene	N.D.		330.	ug/kg	N.D.
1190	4-chloro-3-methylphenol	N.D.		330.	ug/kg	N.D.
4694	2-methylnaphthalene	180,000.		1,700.	ug/kg	210,000.
3763	hexachlorocyclopentadiene	N.D.		830.	ug/kg	N.D.
3749	2,4,6-trichlorophenol	N.D.		330.	ug/kg	N.D.
4695	2,4,5-trichlorophenol	N.D.		330.	ug/kg	N.D.
3764	2-chloronaphthalene	N.D.		170.	ug/kg	N.D.
4696	2-nitroaniline	N.D.		330.	ug/kg	N.D.
3766	dimethyl phthalate	N.D.		170.	ug/kg	N.D.
3765	acenaphthylene	5,500.		170.	ug/kg	6,700.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. SW 2680808

Collected: 3/18/97 at 08:45 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-29 SDG#: HMS04-21

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL SW846 Semivolatiles/Soil						DETECTION LIMIT
4697	3-nitroaniline	N.D.	330.	ug/kg	N.D.	400.
1191	acenaphthene	130,000.	1,700.	ug/kg	150,000.	2,000.
3750	2,4-dinitrophenol	N.D.	830.	ug/kg	N.D.	1,000.
1192	4-nitrophenol	N.D.	830.	ug/kg	N.D.	1,000.
4698	dibenzofuran	120,000.	1,700.	ug/kg	140,000.	2,000.
1193	2,4-dinitrotoluene	N.D.	330.	ug/kg	N.D.	400.
4699	2,6-dinitrotoluene	N.D.	330.	ug/kg	N.D.	400.
3770	diethyl phthalate	N.D.	330.	ug/kg	N.D.	400.
3769	4-chlorophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	400.
3768	fluorene	140,000.	1,700.	ug/kg	180,000.	2,000.
4700	4-nitroaniline	N.D.	500.	ug/kg	N.D.	610.
4701	4,6-dinitro-2-methylphenol	N.D.	830.	ug/kg	N.D.	1,000.
3772	N-nitrosodiphenylamine	N.D.	330.	ug/kg	N.D.	400.
3773	4-bromophenyl phenyl ether	N.D.	500.	ug/kg	N.D.	610.
3774	hexachlorobenzene	N.D.	500.	ug/kg	N.D.	610.
1194	pentachlorophenol	N.D.	830.	ug/kg	N.D.	1,000.
3775	phenanthrene	350,000.	3,300.	ug/kg	420,000.	4,000.
3776	anthracene	78,000.	1,700.	ug/kg	95,000.	2,000.
4702	carbazole	48,000.	1,700.	ug/kg	58,000.	2,000.
3777	di-n-butyl phthalate	N.D.	170.	ug/kg	N.D.	200.
3778	fluoranthene	180,000.	1,700.	ug/kg	220,000.	2,000.
1195	pyrene	140,000.	3,300.	ug/kg	170,000.	4,000.
3780	butyl benzyl phthalate	N.D.	330.	ug/kg	N.D.	400.
3783	3,3'-dichlorobenzidine	N.D.	670.	ug/kg	N.D.	810.
3781	benzo (a) anthracene	44,000.	1,700.	ug/kg	53,000.	2,000.
3784	bis (2-ethylhexyl) phthalate	N.D.	330.	ug/kg	N.D.	400.
3782	chrysene	41,000.	1,700.	ug/kg	49,000.	2,000.
3785	di-n-octyl phthalate	N.D.	330.	ug/kg	N.D.	400.
3786	benzo (b) fluoranthene	25,000.	330.	ug/kg	30,000.	400.
3787	benzo (k) fluoranthene	8,700.	670.	ug/kg	10,000.	810.
3788	benzo (a) pyrene	17,000.	330.	ug/kg	20,000.	400.
3789	indeno (1,2,3-cd) pyrene	6,300.	330.	ug/kg	7,700.	400.
3790	dibenz (a,h) anthracene	1,800.	330.	ug/kg	2,200.	400.
3791	benzo (ghi) perylene	4,800.	330.	ug/kg	5,800.	400.
4710	benzyl alcohol	N.D.	500.	ug/kg	N.D.	610.
4711	benzoic acid	N.D.	830.	ug/kg	N.D.	1,000.

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2216 Rev. 5/01/96





LLI Sample No. SW 2680808

Collected: 3/18/97 at 08:45 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-29 SDG#: HMS04-21

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD	DETECTION LIMIT
TCL SW846	Semivolatiles/Soil						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. The quantitation limits for the GC/MS semivolatile compounds were raised due to the high concentration of target compounds.

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LLI Sample No. SW 2680808

Collected: 03/18/97 at 08:45 by DU

Submitted: 03/20/97

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-29 SDG#: HMS04-21

Account No: 07802 Kerr-McGee Corporation Technology Center PO Box 25861 Oklahoma City OK 73125
--

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/25/97 0230	Clark A. Dougherty
0381	BNA Soil Extraction	SW-846 3550A	1	03/21/97 0940	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0916	Deb Gifford
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0916	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	03/21/97 1911	NeeJay B. Mehta



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LLI Sample No. 2680808
 GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4593 TCL Volatiles by 8240		Batch: G970801AB									
3434	Chloromethane										
10.	ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
15.	ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
10.	ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
15.	ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
10.	ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
35.	ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
15.	ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
10.	ug/kg	N.D.		107	113	5	111			1	233
12	1,1-Dichloroethane										
5.	ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
5.	ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
10.	ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
35.	ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
5.	ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
5.	ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
15.	ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
10.	ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
15.	ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
5.	ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
5.	ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
5.	ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
10.	ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
5.	ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
5.	ug/kg	N.D.		91	96	6	88			17	183



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2680808
GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3456	Bromoform										
5.	ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
15.	ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
15.	ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
5.	ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
5.	ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
5.	ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
5.	ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
5.	ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
5.	ug/kg	N.D.		98	101	3	101			74	136
3355	Xylene (total)										
5.	ug/kg	N.D.		103	104	2	102			30	200
187	trans-1,2-Dichloroethene										
10.	ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
10.	ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97080SLC026078SC									

1185	phenol										
170.	ug/kg	N.D.		86	76	13	75			5	112
3753	bis (2-chloroethyl) ether										
330.	ug/kg	N.D.		88	77	14	78			12	158
1186	2-chlorophenol										
170.	ug/kg	N.D.		88	77	14	76			23	134
3754	1,3-dichlorobenzene										
170.	ug/kg	N.D.		81	74	10	77			1	172
1187	1,4-dichlorobenzene										
170.	ug/kg	N.D.		82	75	9	77			20	124
3755	1,2-dichlorobenzene										
170.	ug/kg	N.D.		85	77	10	79			32	129
4690	2-methylphenol										
330.	ug/kg	N.D.		79	70	11	74			46	123
4691	2,2'-oxybis (1-chloropropane)										
500.	ug/kg	N.D.		74	65	14	64			36	166
4692	4-methylphenol										
500.	ug/kg	N.D.		83	75	10	78			5	152
1188	N-nitrosodi-n-propylamine										
330.	ug/kg	N.D.		105	92	13	90			1	230
3757	hexachloroethane										
330.	ug/kg	N.D.		83	76	10	79			40	113



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2216 Rev 5/01/96



LLI Sample No. **2680808**

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
170.	ug/kg	N.D.		90	80	12	82			35	180
3759	isophorone										
330.	ug/kg	N.D.		94	85	10	86			21	196
3746	2-nitrophenol										
330.	ug/kg	N.D.		90	79	13	81			29	182
3747	2,4-dimethylphenol										
330.	ug/kg	N.D.		29	28	2	54			32	119
3760	bis (2-chloroethoxy) methane										
170.	ug/kg	N.D.		85	76	11	79			33	184
3748	2,4-dichlorophenol										
170.	ug/kg	N.D.		84	74	12	75			39	135
1189	1,2,4-trichlorobenzene										
170.	ug/kg	N.D.		83	74	11	78			44	142
3761	naphthalene										
3,300.	ug/kg	N.D.		80	73	9	73			21	133
4693	4-chloroaniline										
500.	ug/kg	N.D.		37	27	32	32			17	116
3762	hexachlorobutadiene										
330.	ug/kg	N.D.		95	85	11	88			24	116
3760	4-chloro-3-methylphenol										
330.	ug/kg	N.D.		90	81	11	78			22	147
4694	2-methylnaphthalene										
1,700.	ug/kg	N.D.		85	77	10	76			28	123
3763	hexachlorocyclopentadiene										
830.	ug/kg	N.D.		81	72	13	77			1	100
3749	2,4,6-trichlorophenol										
330.	ug/kg	N.D.		88	78	13	83			37	144
4695	2,4,5-trichlorophenol										
330.	ug/kg	N.D.		91	79	14	81			39	151
3764	2-chloronaphthalene										
170.	ug/kg	N.D.		86	78	9	83			60	118
4696	2-nitroaniline										
330.	ug/kg	N.D.		87	76	14	74			53	143
3766	dimethyl phthalate										
170.	ug/kg	N.D.		85	75	12	76			1	112
3765	acenaphthylene										
170.	ug/kg	N.D.		85	77	10	79			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97080SLC026078SC									

4697	3-nitroaniline										
330.	ug/kg	N.D.		51	42	19	39			7	143
1191	acenaphthene										
1,700.	ug/kg	N.D.		80	73	10	74			47	145
3750	2,4-dinitrophenol										
830.	ug/kg	N.D.		97	81	18	67			1	191
1192	4-nitrophenol										
830.	ug/kg	N.D.		93	79	16	71			1	132



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LLI Sample No. 2680808

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4698	dibenzofuran										
1,700.	ug/kg	N.D.		85	76	10	76			28	131
1193	2,4-dinitrotoluene										
330.	ug/kg	N.D.		92	79	15	77			39	139
4699	2,6-dinitrotoluene										
330.	ug/kg	N.D.		92	80	14	80			50	158
3770	diethyl phthalate										
330.	ug/kg	N.D.		86	76	13	76			1	114
3769	4-chlorophenyl phenyl ether										
330.	ug/kg	N.D.		81	74	9	75			25	158
3768	fluorene										
1,700.	ug/kg	N.D.		82	75	9	76			59	121
4700	4-nitroaniline										
500.	ug/kg	N.D.		76	61	21	64			38	122
4701	4,6-dinitro-2-methylphenol										
830.	ug/kg	N.D.		91	77	17	76			1	181
3772	N-nitrosodiphenylamine										
330.	ug/kg	N.D.		82	72	12	80			38	147
3773	4-bromophenyl phenyl ether										
500.	ug/kg	N.D.		93	81	14	84			53	127
3774	hexachlorobenzene										
500.	ug/kg	N.D.		97	84	14	84			1	152
1194	pentachlorophenol										
830.	ug/kg	N.D.		97	82	17	72			14	176
3775	phenanthrene										
3,300.	ug/kg	N.D.		86	76	13	79			54	120
3776	anthracene										
1,700.	ug/kg	N.D.		83	73	13	77			27	133
4702	carbazole										
1,700.	ug/kg	N.D.		91	80	12	81			35	133
3777	di-n-butyl phthalate										
170.	ug/kg	N.D.		93	80	15	85			1	118
3778	fluoranthene										
1,700.	ug/kg	N.D.		95	82	14	82			26	137
1195	pyrene										
3,300.	ug/kg	N.D.		80	69	14	79			52	115
3780	butyl benzyl phthalate										
330.	ug/kg	N.D.		86	74	15	85			1	152
3783	3,3'-dichlorobenzidine										
670.	ug/kg	N.D.		49	21	81	60			1	262
3781	benzo (a) anthracene										
1,700.	ug/kg	N.D.		86	75	13	79			33	143
3784	bis (2-ethylhexyl) phthalate										
330.	ug/kg	N.D.		89	75	16	86			8	158
3782	chrysene										
1,700.	ug/kg	N.D.		90	79	13	82			17	168
3785	di-n-octyl phthalate										
330.	ug/kg	N.D.		91	75	19	87			4	146
3786	benzo (b) fluoranthene										
330.	ug/kg	N.D.		87	75	15	78			24	159



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2216 Rev. 5/01/96





LLI Sample No. 2680808
 GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3787	benzo (k) fluoranthene										
670.	ug/kg	N.D.		92	81	13	82			11	163
3788	benzo (a) pyrene										
330.	ug/kg	N.D.		84	73	14	76			17	163
3789	indeno (1,2,3-cd) pyrene										
330.	ug/kg	N.D.		96	79	19	80			1	171
3790	dibenz (a,h) anthracene										
330.	ug/kg	N.D.		98	81	18	83			1	227
3791	benzo (ghi) perylene										
330.	ug/kg	N.D.		89	79	13	76			1	219
4710	benzyl alcohol										
500.	ug/kg										
4711	benzoic acid										
830.	ug/kg										
0111	Moisture	Batch: 970800316820005A									
0.080	% by wt.		7				100	100	0	100	101



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LLI Sample No. 2680808
 GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	101	70	121
	d8-toluene	97	81	117
	4-BFB	95	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	76	24	113
	2-Flphenol	72	25	121
	2,4,6-TBP	62	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	103	23	120
	2-Fbiphenyl	79	30	115
	Tphenylid14	95	18	137



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LLI Sample No. SW 2680808

Collected: 3/18/97 at 08:45 by DU

Submitted: 3/20/97 Reported: 4/ 9/97

Discard: 5/10/97

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-29 SDG#: HMS04-21

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4593	TCL Volatiles				See Page	2
4688	TCL Semivolatiles				See Page	4
4689	TCL Semivolatiles cont'd				See Page	5
0111	Moisture	17.4		0.080	% by wt.	

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Uptegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
11:01:09 D 0003 11 REP 129915 557660
288 0.00 00049920 ASR000



Lancaster Laboratories
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717-656-2300 Fax: 717-656-2581

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





LLI Sample No. SW 2680808

Collected: 3/18/97 at 08:45 by DU

Submitted: 3/20/97 Reported: 4/ 9/97

Discard: 5/10/97

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-29 SDG#: HMS04-21

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	DETECTION LIMIT
TCL Volatiles by 8240						
3434	Chloromethane	N.D.	10.	ug/kg	N.D.	12.
3435	Bromomethane	N.D.	15.	ug/kg	N.D.	18.
3436	Vinyl Chloride	N.D.	10.	ug/kg	N.D.	12.
3437	Chloroethane	N.D.	15.	ug/kg	N.D.	18.
3440	Methylene Chloride	N.D.	10.	ug/kg	N.D.	12.
4074	Acetone	53.	J	35.	65.	J
4076	Carbon Disulfide	N.D.	15.	ug/kg	N.D.	18.
1180	1,1-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.
3442	1,1-Dichloroethane	N.D.	5.	ug/kg	N.D.	6.
3444	Chloroform	N.D.	5.	ug/kg	N.D.	6.
3445	1,2-Dichloroethane	N.D.	10.	ug/kg	N.D.	12.
4085	2-Butanone	N.D.	35.	ug/kg	N.D.	42.
3446	1,1,1-Trichloroethane	N.D.	5.	ug/kg	N.D.	6.
3447	Carbon Tetrachloride	N.D.	5.	ug/kg	N.D.	6.
4091	Vinyl Acetate	N.D.	15.	ug/kg	N.D.	18.
3448	Bromodichloromethane	N.D.	10.	ug/kg	N.D.	12.
3450	1,2-Dichloropropane	N.D.	15.	ug/kg	N.D.	18.
3454	cis-1,3-Dichloropropene	N.D.	5.	ug/kg	N.D.	6.
1181	Trichloroethene	N.D.	5.	ug/kg	N.D.	6.
3452	Dibromochloromethane	N.D.	5.	ug/kg	N.D.	6.
3453	1,1,2-Trichloroethane	N.D.	10.	ug/kg	N.D.	12.
1182	Benzene	N.D.	5.	ug/kg	N.D.	6.
3451	trans-1,3-Dichloropropene	N.D.	5.	ug/kg	N.D.	6.
3456	Bromoform	N.D.	5.	ug/kg	N.D.	6.
4108	4-Methyl-2-pentanone	N.D.	15.	ug/kg	N.D.	18.
4107	2-Hexanone	N.D.	15.	ug/kg	N.D.	18.
3457	Tetrachloroethene	N.D.	5.	ug/kg	N.D.	6.
3449	1,1,2,2-Tetrachloroethane	N.D.	5.	ug/kg	N.D.	6.
1183	Toluene	45.	5.	ug/kg	55.	6.
1184	Chlorobenzene	N.D.	5.	ug/kg	N.D.	6.
3458	Ethylbenzene	210.	5.	ug/kg	260.	6.
4117	Styrene	N.D.	5.	ug/kg	N.D.	6.
3355	Xylene (total)	1,200.	5.	ug/kg	1,400.	6.
6187	trans-1,2-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.
6277	cis-1,2-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



LLI Sample No. SW 2680808

Collected: 3/18/97 at 08:45 by DU

Submitted: 3/20/97 Reported: 4/ 9/97

Discard: 5/10/97

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SB-29 SDG#: HMS04-21

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Volatiles by 8240

The quantitation limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

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See reverse side for explanation of symbols and abbreviations.

2216 Rev 5/01/96



LLI Sample No. SW 2680808

Collected: 3/18/97 at 08:45 by DU

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Discard: 5/10/97

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
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Account No: 07802
Kerr-McGee Corporation
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Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.		170.	ug/kg	N.D. 200.
3753	bis (2-chloroethyl) ether	N.D.		330.	ug/kg	N.D. 400.
1186	2-chlorophenol	N.D.		170.	ug/kg	N.D. 200.
3754	1,3-dichlorobenzene	N.D.		170.	ug/kg	N.D. 200.
1187	1,4-dichlorobenzene	N.D.		170.	ug/kg	N.D. 200.
3755	1,2-dichlorobenzene	N.D.		170.	ug/kg	N.D. 200.
4690	2-methylphenol	N.D.		330.	ug/kg	N.D. 400.
4691	2,2'-oxybis (1-chloropropane)	N.D.		500.	ug/kg	N.D. 610.
4692	4-methylphenol	N.D.		500.	ug/kg	N.D. 610.
1188	N-nitrosodi-n-propylamine	N.D.		330.	ug/kg	N.D. 400.
3757	hexachloroethane	N.D.		330.	ug/kg	N.D. 400.
3758	nitrobenzene	N.D.		170.	ug/kg	N.D. 200.
3759	isophorone	N.D.		330.	ug/kg	N.D. 400.
3746	2-nitrophenol	N.D.		330.	ug/kg	N.D. 400.
3747	2,4-dimethylphenol	1,000.	J	330.	ug/kg	1,200. J 400.
3760	bis (2-chloroethoxy) methane	N.D.		170.	ug/kg	N.D. 200.
3748	2,4-dichlorophenol	N.D.		170.	ug/kg	N.D. 200.
1189	1,2,4-trichlorobenzene	N.D.		170.	ug/kg	N.D. 200.
3761	naphthalene	380,000.		3,300.	ug/kg	460,000. 4,000.
4693	4-chloroaniline	N.D.		500.	ug/kg	N.D. 610.
3762	hexachlorobutadiene	N.D.		330.	ug/kg	N.D. 400.
1190	4-chloro-3-methylphenol	N.D.		330.	ug/kg	N.D. 400.
4694	2-methylnaphthalene	180,000.		1,700.	ug/kg	210,000. 2,000.
3763	hexachlorocyclopentadiene	N.D.		830.	ug/kg	N.D. 1,000.
3749	2,4,6-trichlorophenol	N.D.		330.	ug/kg	N.D. 400.
4695	2,4,5-trichlorophenol	N.D.		330.	ug/kg	N.D. 400.
3764	2-chloronaphthalene	N.D.		170.	ug/kg	N.D. 200.
4696	2-nitroaniline	N.D.		330.	ug/kg	N.D. 400.
3766	dimethyl phthalate	N.D.		170.	ug/kg	N.D. 200.
3765	acenaphthylene	5,500.		170.	ug/kg	6,700. 200.

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Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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2216 Rev. 5/01/96





LLI Sample No. SW 2680808

Collected: 3/18/97 at 08:45 by DU

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Discard: 5/10/97

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-29 SDG#: HMS04-21

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles/Soil						
4697	3-nitroaniline	N.D.	330.	ug/kg	N.D.	400.
1191	acenaphthene	130,000.	1,700.	ug/kg	150,000.	2,000.
3750	2,4-dinitrophenol	N.D.	830.	ug/kg	N.D.	1,000.
1192	4-nitrophenol	N.D.	830.	ug/kg	N.D.	1,000.
4698	dibenzofuran	120,000.	1,700.	ug/kg	140,000.	2,000.
1193	2,4-dinitrotoluene	N.D.	330.	ug/kg	N.D.	400.
4699	2,6-dinitrotoluene	N.D.	330.	ug/kg	N.D.	400.
3770	diethyl phthalate	N.D.	330.	ug/kg	N.D.	400.
3769	4-chlorophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	400.
3768	fluorene	140,000.	1,700.	ug/kg	180,000.	2,000.
4700	4-nitroaniline	N.D.	500.	ug/kg	N.D.	610.
4701	4,6-dinitro-2-methylphenol	N.D.	830.	ug/kg	N.D.	1,000.
3772	N-nitrosodiphenylamine	N.D.	330.	ug/kg	N.D.	400.
3773	4-bromophenyl phenyl ether	N.D.	500.	ug/kg	N.D.	610.
3774	hexachlorobenzene	N.D.	500.	ug/kg	N.D.	610.
1194	pentachlorophenol	N.D.	830.	ug/kg	N.D.	1,000.
3775	phenanthrene	350,000.	3,300.	ug/kg	420,000.	4,000.
3776	anthracene	78,000.	1,700.	ug/kg	95,000.	2,000.
4702	carbazole	48,000.	1,700.	ug/kg	58,000.	2,000.
3777	di-n-butyl phthalate	N.D.	170.	ug/kg	N.D.	200.
3778	fluoranthene	180,000.	1,700.	ug/kg	220,000.	2,000.
1195	pyrene	140,000.	3,300.	ug/kg	170,000.	4,000.
3780	butyl benzyl phthalate	N.D.	330.	ug/kg	N.D.	400.
3783	3,3'-dichlorobenzidine	N.D.	670.	ug/kg	N.D.	810.
3781	benzo (a) anthracene	44,000.	1,700.	ug/kg	53,000.	2,000.
3784	bis (2-ethylhexyl) phthalate	N.D.	330.	ug/kg	N.D.	400.
3782	chrysene	41,000.	1,700.	ug/kg	49,000.	2,000.
3785	di-n-octyl phthalate	N.D.	330.	ug/kg	N.D.	400.
3786	benzo (b) fluoranthene	25,000.	330.	ug/kg	30,000.	400.
3787	benzo (k) fluoranthene	8,700.	670.	ug/kg	10,000.	810.
3788	benzo (a) pyrene	17,000.	330.	ug/kg	20,000.	400.
3789	indeno (1,2,3-cd) pyrene	6,300.	330.	ug/kg	7,700.	400.
3790	dibenz (a,h) anthracene	1,800.	330.	ug/kg	2,200.	400.
3791	benzo (ghi) perylene	4,800.	330.	ug/kg	5,800.	400.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2680808

Collected: 3/18/97 at 08:45 by DU

Submitted: 3/20/97 Reported: 4/ 9/97

Discard: 5/10/97

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-29 SDG#: HMS04-21

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT	UNITS
TCL SW846	Semivolatiles/Soil						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. The quantitation limits for the GC/MS semivolatile compounds were raised due to the high concentration of target compounds.

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Respectfully Submitted
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Senior Chemist, GC/MS



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LLI Sample No. SW 2680808

Collected: 03/18/97 at 08:45 by DU

Submitted: 03/20/97

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-29 SDG#: HMS04-21

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/25/97 0230	Clark A. Dougherty
0381	BNA Soil Extraction	SW-846 3550A	1	03/21/97 0940	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 0916	Deb Gifford
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 0916	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	03/21/97 1911	Neelay B. Mehta



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. **2680808**
 GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
4593 TCL Volatiles by 8240		Batch: G970801AB										
3434	Chloromethane											
10.	ug/kg	N.D.		86	106	21	100			1	272	
3435	Bromomethane											
15.	ug/kg	N.D.		82	102	21	95			1	241	
3436	Vinyl Chloride											
10.	ug/kg	N.D.		94	116	21	108			1	250	
3437	Chloroethane											
15.	ug/kg	N.D.		72	95	28	100			10	254	
3440	Methylene Chloride											
10.	ug/kg	N.D.		100	107	6	101			1	221	
4074	Acetone											
35.	ug/kg	N.D.		78	81	3	52			19	150	
4076	Carbon Disulfide											
15.	ug/kg	N.D.		129	134	4	136			24	188	
1180	1,1-Dichloroethene											
10.	ug/kg	N.D.		107	113	5	111			1	233	
142	1,1-Dichloroethane											
5.	ug/kg	N.D.		105	109	3	108			59	155	
3444	Chloroform											
5.	ug/kg	N.D.		98	106	8	103			51	138	
3445	1,2-Dichloroethane											
10.	ug/kg	N.D.		92	97	6	94			49	155	
4085	2-Butanone											
35.	ug/kg	N.D.		91	98	7	65			22	167	
3446	1,1,1-Trichloroethane											
5.	ug/kg	N.D.		109	116	6	110			52	162	
3447	Carbon Tetrachloride											
5.	ug/kg	N.D.		105	111	6	109			70	140	
4091	Vinyl Acetate											
15.	ug/kg	N.D.		111	118	6	99			19	190	
3448	Bromodichloromethane											
10.	ug/kg	N.D.		97	105	8	99			35	155	
3450	1,2-Dichloropropane											
15.	ug/kg	N.D.		103	109	6	102			1	209	
3454	cis-1,3-Dichloropropene											
5.	ug/kg	N.D.		99	105	6	98			1	226	
1181	Trichloroethene											
5.	ug/kg	N.D.		103	109	6	106			71	157	
3452	Dibromochloromethane											
5.	ug/kg	N.D.		96	100	4	91			53	149	
3453	1,1,2-Trichloroethane											
10.	ug/kg	N.D.		95	99	5	88			52	150	
1182	Benzene											
5.	ug/kg	N.D.		100	109	8	102			37	151	
3451	trans-1,3-Dichloropropene											
5.	ug/kg	N.D.		91	96	6	88			17	183	



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2216 Rev. 5/01/96





LLI Sample No. 2680808
GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
5.	ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
15.	ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
15.	ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
5.	ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
5.	ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
5.	ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
5.	ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
5.	ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
5.	ug/kg	N.D.		98	101	3	101			74	136
3355	Xylene (total)										
5.	ug/kg	N.D.		103	104	2	102			30	200
3187	trans-1,2-Dichloroethene										
10.	ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
10.	ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97080SLC026078SC									

1185	phenol										
170.	ug/kg	N.D.		86	76	13	75			5	112
3753	bis (2-chloroethyl) ether										
330.	ug/kg	N.D.		88	77	14	78			12	158
1186	2-chlorophenol										
170.	ug/kg	N.D.		88	77	14	76			23	134
3754	1,3-dichlorobenzene										
170.	ug/kg	N.D.		81	74	10	77			1	172
1187	1,4-dichlorobenzene										
170.	ug/kg	N.D.		82	75	9	77			20	124
3755	1,2-dichlorobenzene										
170.	ug/kg	N.D.		85	77	10	79			32	129
4690	2-methylphenol										
330.	ug/kg	N.D.		79	70	11	74			46	123
4691	2,2'-oxybis (1-chloropropane)										
500.	ug/kg	N.D.		74	65	14	64			36	166
4692	4-methylphenol										
500.	ug/kg	N.D.		83	75	10	78			5	152
1188	N-nitrosodi-n-propylamine										
330.	ug/kg	N.D.		105	92	13	90			1	230
3757	hexachloroethane										
330.	ug/kg	N.D.		83	76	10	79			40	113



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2216 Rev. 5/01/96



LLI Sample No. 2680808
GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3758	nitrobenzene										
170.	ug/kg	N.D.		90	80	12	82			35	180
3759	isophorone										
330.	ug/kg	N.D.		94	85	10	86			21	196
3746	2-nitrophenol										
330.	ug/kg	N.D.		90	79	13	81			29	182
3747	2,4-dimethylphenol										
330.	ug/kg	N.D.		29	28	2	54			32	119
3760	bis (2-chloroethoxy) methane										
170.	ug/kg	N.D.		85	76	11	79			33	184
3748	2,4-dichlorophenol										
170.	ug/kg	N.D.		84	74	12	75			39	135
1189	1,2,4-trichlorobenzene										
170.	ug/kg	N.D.		83	74	11	78			44	142
3761	naphthalene										
3,300.	ug/kg	N.D.		80	73	9	73			21	133
4693	4-chloroaniline										
500.	ug/kg	N.D.		37	27	32	32			17	116
7762	hexachlorobutadiene										
330.	ug/kg	N.D.		95	85	11	88			24	116
4190	4-chloro-3-methylphenol										
330.	ug/kg	N.D.		90	81	11	78			22	147
4694	2-methylnaphthalene										
1,700.	ug/kg	N.D.		85	77	10	76			28	123
3763	hexachlorocyclopentadiene										
830.	ug/kg	N.D.		81	72	13	77			1	100
3749	2,4,6-trichlorophenol										
330.	ug/kg	N.D.		88	78	13	83			37	144
4695	2,4,5-trichlorophenol										
330.	ug/kg	N.D.		91	79	14	81			39	151
3764	2-chloronaphthalene										
170.	ug/kg	N.D.		86	78	9	83			60	118
4696	2-nitroaniline										
330.	ug/kg	N.D.		87	76	14	74			53	143
3766	dimethyl phthalate										
170.	ug/kg	N.D.		85	75	12	76			1	112
3765	acenaphthylene										
170.	ug/kg	N.D.		85	77	10	79			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97080SLC026078SC									

4697	3-nitroaniline										
330.	ug/kg	N.D.		51	42	19	39			7	143
1191	acenaphthene										
1,700.	ug/kg	N.D.		80	73	10	74			47	145
3750	2,4-dinitrophenol										
830.	ug/kg	N.D.		97	81	18	67			1	191
1192	4-nitrophenol										
830.	ug/kg	N.D.		93	79	16	71			1	132



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See reverse side for explanation of symbols and abbreviations

2216 Rev. 5/01-96



LLI Sample No. 2680808

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
1,700.	ug/kg	N.D.		85	76	10	76			28	131
1193	2,4-dinitrotoluene										
330.	ug/kg	N.D.		92	79	15	77			39	139
4699	2,6-dinitrotoluene										
330.	ug/kg	N.D.		92	80	14	80			50	158
3770	diethyl phthalate										
330.	ug/kg	N.D.		86	76	13	76			1	114
3769	4-chlorophenyl phenyl ether										
330.	ug/kg	N.D.		81	74	9	75			25	158
3768	fluorene										
1,700.	ug/kg	N.D.		82	75	9	76			59	121
4700	4-nitroaniline										
500.	ug/kg	N.D.		76	61	21	64			38	122
4701	4,6-dinitro-2-methylphenol										
830.	ug/kg	N.D.		91	77	17	76			1	181
3772	N-nitrosodiphenylamine										
330.	ug/kg	N.D.		82	72	12	80			38	147
773	4-bromophenyl phenyl ether										
500.	ug/kg	N.D.		93	81	14	84			53	127
774	hexachlorobenzene										
500.	ug/kg	N.D.		97	84	14	84			1	152
1194	pentachlorophenol										
830.	ug/kg	N.D.		97	82	17	72			14	176
3775	phenanthrene										
3,300.	ug/kg	N.D.		86	76	13	79			54	120
3776	anthracene										
1,700.	ug/kg	N.D.		83	73	13	77			27	133
4702	carbazole										
1,700.	ug/kg	N.D.		91	80	12	81			35	133
3777	di-n-butyl phthalate										
170.	ug/kg	N.D.		93	80	15	85			1	118
3778	fluoranthene										
1,700.	ug/kg	N.D.		95	82	14	82			26	137
1195	pyrene										
3,300.	ug/kg	N.D.		80	69	14	79			52	115
3780	butyl benzyl phthalate										
330.	ug/kg	N.D.		86	74	15	85			1	152
3783	3,3'-dichlorobenzidine										
670.	ug/kg	N.D.		49	21	81	60			1	262
3781	benzo (a) anthracene										
1,700.	ug/kg	N.D.		86	75	13	79			33	143
3784	bis (2-ethylhexyl) phthalate										
330.	ug/kg	N.D.		89	75	16	86			8	158
3782	chrysene										
1,700.	ug/kg	N.D.		90	79	13	82			17	168
3785	di-n-octyl phthalate										
330.	ug/kg	N.D.		91	75	19	87			4	146
3786	benzo (b) fluoranthene										
330.	ug/kg	N.D.		87	75	15	78			24	159



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2216 Rev. 5/01/96





LLI Sample No. 2680808

GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3787	benzo (k) fluoranthene										
670.	ug/kg	N.D.		92	81	13	82			11	163
3788	benzo (a) pyrene										
330.	ug/kg	N.D.		84	73	14	76			17	163
3789	indeno (1,2,3-cd) pyrene										
330.	ug/kg	N.D.		96	79	19	80			1	171
3790	dibenz (a,h) anthracene										
330.	ug/kg	N.D.		98	81	18	83			1	227
3791	benzo (ghi) perylene										
330.	ug/kg	N.D.		89	79	13	76			1	219
0111	Moisture	Batch: 970800316820005A									
0.080	% by wt.		7				100	100	0	100	101



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2216 Rev 5/01/96





LLI Sample No. 2680808
 GEO/SB-29/6-8 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	101	70	121
	d8-toluene	97	81	117
	4-BFB	95	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	76	24	113
	2-Flphenol	72	25	121
	2,4,6-TBP	62	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	103	23	120
	2-Fbiphenyl	79	30	115
	Tphenylid14	95	18	137



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LLI Sample No. SW 2680809

Collected: 3/19/97 at 07:55 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-06/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SB-06 SDG#: HMS04-22

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4593	TCL Volatiles					See Page 2
4688	TCL Semivolatiles					See Page 4
4689	TCL Semivolatiles cont'd					See Page 5
0111	Moisture	26.8		0.080	% by wt.	
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove

ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:29:22 D 0003 11 129915 557660
448 0.00 00049920 ASR000

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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SB-06 SDG#: HMS04-22

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CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Volatiles by 8240						
3434	Chloromethane	N.D.	10.	ug/kg	N.D.	14.
3435	Bromomethane	N.D.	15.	ug/kg	N.D.	20.
3436	Vinyl Chloride	N.D.	10.	ug/kg	N.D.	14.
3437	Chloroethane	N.D.	15.	ug/kg	N.D.	20.
3440	Methylene Chloride	N.D.	10.	ug/kg	N.D.	14.
4074	Acetone	44.	J	35.	60.	J 48.
4076	Carbon Disulfide	N.D.	15.	ug/kg	N.D.	20.
1180	1,1-Dichloroethene	N.D.	10.	ug/kg	N.D.	14.
3442	1,1-Dichloroethane	N.D.	5.	ug/kg	N.D.	7.
3444	Chloroform	N.D.	5.	ug/kg	N.D.	7.
3445	1,2-Dichloroethane	N.D.	10.	ug/kg	N.D.	14.
4085	2-Butanone	N.D.	35.	ug/kg	N.D.	48.
3446	1,1,1-Trichloroethane	N.D.	5.	ug/kg	N.D.	7.
3447	Carbon Tetrachloride	N.D.	5.	ug/kg	N.D.	7.
4091	Vinyl Acetate	N.D.	15.	ug/kg	N.D.	20.
3448	Bromodichloromethane	N.D.	10.	ug/kg	N.D.	14.
3450	1,2-Dichloropropane	N.D.	15.	ug/kg	N.D.	20.
3454	cis-1,3-Dichloropropene	N.D.	5.	ug/kg	N.D.	7.
1181	Trichloroethene	N.D.	5.	ug/kg	N.D.	7.
3452	Dibromochloromethane	N.D.	5.	ug/kg	N.D.	7.
3453	1,1,2-Trichloroethane	N.D.	10.	ug/kg	N.D.	14.
1182	Benzene	8.	J	5.	11.	J 7.
3451	trans-1,3-Dichloropropene	N.D.	5.	ug/kg	N.D.	7.
3456	Bromoform	N.D.	5.	ug/kg	N.D.	7.
4108	4-Methyl-2-pentanone	N.D.	15.	ug/kg	N.D.	20.
4107	2-Hexanone	N.D.	15.	ug/kg	N.D.	20.
3457	Tetrachloroethene	N.D.	5.	ug/kg	N.D.	7.
3449	1,1,2,2-Tetrachloroethane	N.D.	5.	ug/kg	N.D.	7.
1183	Toluene	95.		ug/kg	130.	7.
1184	Chlorobenzene	N.D.	5.	ug/kg	N.D.	7.
3458	Ethylbenzene	480.		ug/kg	650.	7.
4117	Styrene	N.D.	5.	ug/kg	N.D.	7.
3355	Xylene (total)	1,700.		ug/kg	2,300.	7.
6187	trans-1,2-Dichloroethene	N.D.	10.	ug/kg	N.D.	14.
6277	cis-1,2-Dichloroethene	N.D.	10.	ug/kg	N.D.	14.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300



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See reverse side for explanation of symbols and abbreviations

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





LLI Sample No. SW 2680809

Collected: 3/19/97 at 07:55 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-06/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-06 SDG#: HMS04-22

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

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CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Volatiles by 8240

The quantitation limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

Questions? Contact your Client Services Representative
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Respectfully Submitted
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Group Leader, GC/MS Volatiles



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CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
						DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	170.	ug/kg	N.D.	230.
3753	bis (2-chloroethyl) ether	N.D.	330.	ug/kg	N.D.	460.
1186	2-chlorophenol	N.D.	170.	ug/kg	N.D.	230.
3754	1,3-dichlorobenzene	N.D.	170.	ug/kg	N.D.	230.
1187	1,4-dichlorobenzene	N.D.	170.	ug/kg	N.D.	230.
3755	1,2-dichlorobenzene	N.D.	170.	ug/kg	N.D.	230.
4690	2-methylphenol	N.D.	330.	ug/kg	N.D.	460.
4691	2,2'-oxybis (1-chloropropane)	N.D.	500.	ug/kg	N.D.	680.
4692	4-methylphenol	N.D.	500.	ug/kg	N.D.	680.
1188	N-nitrosodi-n-propylamine	N.D.	330.	ug/kg	N.D.	460.
3757	hexachloroethane	N.D.	330.	ug/kg	N.D.	460.
3758	nitrobenzene	N.D.	170.	ug/kg	N.D.	230.
3759	isophorone	N.D.	330.	ug/kg	N.D.	460.
3746	2-nitrophenol	N.D.	330.	ug/kg	N.D.	460.
3747	2,4-dimethylphenol	1,300.	J 330.	ug/kg	1,800.	J 460.
3760	bis (2-chloroethoxy) methane	N.D.	170.	ug/kg	N.D.	230.
3748	2,4-dichlorophenol	N.D.	170.	ug/kg	N.D.	230.
1189	1,2,4-trichlorobenzene	N.D.	170.	ug/kg	N.D.	230.
3761	naphthalene	420,000.	3,300.	ug/kg	580,000.	4,600.
4693	4-chloroaniline	N.D.	500.	ug/kg	N.D.	680.
3762	hexachlorobutadiene	N.D.	330.	ug/kg	N.D.	460.
1190	4-chloro-3-methylphenol	N.D.	330.	ug/kg	N.D.	460.
4694	2-methylnaphthalene	190,000.	1,700.	ug/kg	260,000.	2,300.
3763	hexachlorocyclopentadiene	N.D.	830.	ug/kg	N.D.	1,100.
3749	2,4,6-trichlorophenol	N.D.	330.	ug/kg	N.D.	460.
4695	2,4,5-trichlorophenol	N.D.	330.	ug/kg	N.D.	460.
3764	2-chloronaphthalene	N.D.	170.	ug/kg	N.D.	230.
4696	2-nitroaniline	N.D.	330.	ug/kg	N.D.	460.
3766	dimethyl phthalate	N.D.	170.	ug/kg	N.D.	230.
3765	acenaphthylene	5,200.	170.	ug/kg	7,100.	230.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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GEO/SB-06/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-06 SDG#: HMS04-22

Account No: 07802
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P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	N.D.	330.	ug/kg	N.D.	460.	
1191	acenaphthene	150,000.	1,700.	ug/kg	200,000.	2,300.	
3750	2,4-dinitrophenol	N.D.	830.	ug/kg	N.D.	1,100.	
1192	4-nitrophenol	N.D.	830.	ug/kg	N.D.	1,100.	
4698	dibenzofuran	130,000.	1,700.	ug/kg	180,000.	2,300.	
1193	2,4-dinitrotoluene	N.D.	330.	ug/kg	N.D.	460.	
4699	2,6-dinitrotoluene	N.D.	330.	ug/kg	N.D.	460.	
3770	diethyl phthalate	N.D.	330.	ug/kg	N.D.	460.	
3769	4-chlorophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	460.	
3768	fluorene	160,000.	1,700.	ug/kg	210,000.	2,300.	
4700	4-nitroaniline	N.D.	500.	ug/kg	N.D.	680.	
4701	4,6-dinitro-2-methylphenol	N.D.	830.	ug/kg	N.D.	1,100.	
3772	N-nitrosodiphenylamine	N.D.	330.	ug/kg	N.D.	460.	
3773	4-bromophenyl phenyl ether	N.D.	500.	ug/kg	N.D.	680.	
3774	hexachlorobenzene	N.D.	500.	ug/kg	N.D.	680.	
1194	pentachlorophenol	N.D.	830.	ug/kg	N.D.	1,100.	
3775	phenanthrene	370,000.	3,300.	ug/kg	510,000.	4,600.	
3776	anthracene	55,000.	1,700.	ug/kg	75,000.	2,300.	
4702	carbazole	38,000.	1,700.	ug/kg	51,000.	2,300.	
3777	di-n-butyl phthalate	N.D.	170.	ug/kg	N.D.	230.	
3778	fluoranthene	170,000.	1,700.	ug/kg	230,000.	2,300.	
1195	pyrene	120,000.	3,300.	ug/kg	170,000.	4,600.	
3780	butyl benzyl phthalate	N.D.	330.	ug/kg	N.D.	460.	
3783	3,3'-dichlorobenzidine	N.D.	670.	ug/kg	N.D.	910.	
3781	benzo (a) anthracene	40,000.	1,700.	ug/kg	55,000.	2,300.	
3784	bis (2-ethylhexyl) phthalate	N.D.	330.	ug/kg	N.D.	460.	
3782	chrysene	33,000.	1,700.	ug/kg	45,000.	2,300.	
3785	di-n-octyl phthalate	N.D.	330.	ug/kg	N.D.	460.	
3786	benzo (b) fluoranthene	18,000.	330.	ug/kg	25,000.	460.	
3787	benzo (k) fluoranthene	6,700.	670.	ug/kg	9,200.	910.	
3788	benzo (a) pyrene	13,000.	330.	ug/kg	18,000.	460.	
3789	indeno (1,2,3-cd) pyrene	4,100.	330.	ug/kg	5,600.	460.	
3790	dibenz (a,h) anthracene	1,400.	J 330.	ug/kg	1,900.	J 460.	
3791	benzo (ghi) perylene	2,400.	330.	ug/kg	3,300.	460.	

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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2216 Rev 5, C1 96



LLI Sample No. SW 2680809

Collected: 3/19/97 at 07:55 by DU

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GEO/SB-06/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-06 SDG#: HMS04-22

Account No: 07802
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Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT

TCL SW846 Semivolatiles/Soil

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.
The quantitation limits for the GC/MS semivolatile compounds were raised
due to the high concentration of target compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



Lancaster Laboratories
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2216 Rev 5/01/96





LLI Sample No. SW 2680809

Collected: 03/19/97 at 07:55 by DU

Submitted: 03/20/97

GEO/SB-06/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-06 SDG#: HMS04-22

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/25/97 0410	Clark A. Dougherty
0381	BNA Soil Extraction	SW-846 3550A	1	03/21/97 0940	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 1011	Deb Gifford
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 1011	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	03/21/97 1911	Neelay B. Mehta



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LLI Sample No. 2680809
 GEO/SB-06/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4593 TCL Volatiles by 8240		Batch: G970801AB									
3434	Chloromethane										
10.	ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
15.	ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
10.	ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
15.	ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
10.	ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
35.	ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
15.	ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
10.	ug/kg	N.D.		107	113	5	111			1	233
12	1,1-Dichloroethane										
5.	ug/kg	N.D.		105	109	3	108			59	155
3444	Chloroform										
5.	ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
10.	ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
35.	ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
5.	ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
5.	ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
15.	ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
10.	ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
15.	ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
5.	ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
5.	ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
5.	ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
10.	ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
5.	ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
5.	ug/kg	N.D.		91	96	6	88			17	183



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2216 Rev 5/01/96



LLI Sample No. 2680809
GEO/SB-06/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3456	Bromoform										
5.	ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
15.	ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
15.	ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
5.	ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
5.	ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
5.	ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
5.	ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
5.	ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
5.	ug/kg	N.D.		98	101	3	101			74	136
2255	Xylene (total)										
5.	ug/kg	N.D.		103	104	2	102			30	200
287	trans-1,2-Dichloroethene										
10.	ug/kg	N.D.		99	104	5	106			51	149
2277	cis-1,2-Dichloroethene										
10.	ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97080SLC026078SC									

1185	phenol										
170.	ug/kg	N.D.		86	76	13	75			5	112
3753	bis (2-chloroethyl) ether										
330.	ug/kg	N.D.		88	77	14	78			12	158
1186	2-chlorophenol										
170.	ug/kg	N.D.		88	77	14	76			23	134
3754	1,3-dichlorobenzene										
170.	ug/kg	N.D.		81	74	10	77			1	172
1187	1,4-dichlorobenzene										
170.	ug/kg	N.D.		82	75	9	77			20	124
3755	1,2-dichlorobenzene										
170.	ug/kg	N.D.		85	77	10	79			32	129
4690	2-methylphenol										
330.	ug/kg	N.D.		79	70	11	74			46	123
4691	2,2'-oxybis (1-chloropropane)										
500.	ug/kg	N.D.		74	65	14	64			36	166
4692	4-methylphenol										
500.	ug/kg	N.D.		83	75	10	78			5	152
1188	N-nitrosodi-n-propylamine										
330.	ug/kg	N.D.		105	92	13	90			1	230
3757	hexachloroethane										
330.	ug/kg	N.D.		83	76	10	79			40	113



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2680809

GEO/SB-06/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
170.	ug/kg	N.D.		90	80	12	82			35	180
3759	isophorone										
330.	ug/kg	N.D.		94	85	10	86			21	196
3746	2-nitrophenol										
330.	ug/kg	N.D.		90	79	13	81			29	182
3747	2,4-dimethylphenol										
330.	ug/kg	N.D.		29	28	2	54			32	119
3760	bis (2-chloroethoxy) methane										
170.	ug/kg	N.D.		85	76	11	79			33	184
3748	2,4-dichlorophenol										
170.	ug/kg	N.D.		84	74	12	75			39	135
1189	1,2,4-trichlorobenzene										
170.	ug/kg	N.D.		83	74	11	78			44	142
3761	naphthalene										
3,300.	ug/kg	N.D.		80	73	9	73			21	133
4693	4-chloroaniline										
500.	ug/kg	N.D.		37	27	32	32			17	116
752	hexachlorobutadiene										
330.	ug/kg	N.D.		95	85	11	88			24	116
90	4-chloro-3-methylphenol										
330.	ug/kg	N.D.		90	81	11	78			22	147
4694	2-methylnaphthalene										
1,700.	ug/kg	N.D.		85	77	10	76			28	123
3763	hexachlorocyclopentadiene										
830.	ug/kg	N.D.		81	72	13	77			1	100
3749	2,4,6-trichlorophenol										
330.	ug/kg	N.D.		88	78	13	83			37	144
4695	2,4,5-trichlorophenol										
330.	ug/kg	N.D.		91	79	14	81			39	151
3764	2-chloronaphthalene										
170.	ug/kg	N.D.		86	78	9	83			60	118
4696	2-nitroaniline										
330.	ug/kg	N.D.		87	76	14	74			53	143
3766	dimethyl phthalate										
170.	ug/kg	N.D.		85	75	12	76			1	112
3765	acenaphthylene										
170.	ug/kg	N.D.		85	77	10	79			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97080SLC026078SC									

4697	3-nitroaniline										
330.	ug/kg	N.D.		51	42	19	39			7	143
1191	acenaphthene										
1,700.	ug/kg	N.D.		80	73	10	74			47	145
3750	2,4-dinitrophenol										
830.	ug/kg	N.D.		97	81	18	67			1	191
1192	4-nitrophenol										
830.	ug/kg	N.D.		93	79	16	71			1	132



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2216 Rev. 5/01/96





LLI Sample No. 2680809
GEO/SB-06/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
1,700.	ug/kg	N.D.		85	76	10	76			28	131
1193	2,4-dinitrotoluene										
330.	ug/kg	N.D.		92	79	15	77			39	139
4699	2,6-dinitrotoluene										
330.	ug/kg	N.D.		92	80	14	80			50	158
3770	diethyl phthalate										
330.	ug/kg	N.D.		86	76	13	76			1	114
3769	4-chlorophenyl phenyl ether										
330.	ug/kg	N.D.		81	74	9	75			25	158
3768	fluorene										
1,700.	ug/kg	N.D.		82	75	9	76			59	121
4700	4-nitroaniline										
500.	ug/kg	N.D.		76	61	21	64			38	122
4701	4,6-dinitro-2-methylphenol										
830.	ug/kg	N.D.		91	77	17	76			1	181
3772	N-nitrosodiphenylamine										
330.	ug/kg	N.D.		82	72	12	80			38	147
3773	4-bromophenyl phenyl ether										
500.	ug/kg	N.D.		93	81	14	84			53	127
3774	hexachlorobenzene										
500.	ug/kg	N.D.		97	84	14	84			1	152
1194	pentachlorophenol										
830.	ug/kg	N.D.		97	82	17	72			14	176
3775	phenanthrene										
3,300.	ug/kg	N.D.		86	76	13	79			54	120
3776	anthracene										
1,700.	ug/kg	N.D.		83	73	13	77			27	133
4702	carbazole										
1,700.	ug/kg	N.D.		91	80	12	81			35	133
3777	di-n-butyl phthalate										
170.	ug/kg	N.D.		93	80	15	85			1	118
3778	fluoranthene										
1,700.	ug/kg	N.D.		95	82	14	82			26	137
1195	pyrene										
3,300.	ug/kg	N.D.		80	69	14	79			52	115
3780	butyl benzyl phthalate										
330.	ug/kg	N.D.		86	74	15	85			1	152
3783	3,3'-dichlorobenzidine										
670.	ug/kg	N.D.		49	21	81	60			1	262
3781	benzo (a) anthracene										
1,700.	ug/kg	N.D.		86	75	13	79			33	143
3784	bis (2-ethylhexyl) phthalate										
330.	ug/kg	N.D.		89	75	16	86			8	158
3782	chrysene										
1,700.	ug/kg	N.D.		90	79	13	82			17	168
3785	di-n-octyl phthalate										
330.	ug/kg	N.D.		91	75	19	87			4	146
3786	benzo (b) fluoranthene										
330.	ug/kg	N.D.		87	75	15	78			24	159



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LLI Sample No. 2680809
 GEO/SB-06/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3787	benzo (k) fluoranthene										
670.	ug/kg	N.D.		92	81	13	82			11	163
3788	benzo (a) pyrene										
330.	ug/kg	N.D.		84	73	14	76			17	163
3789	indeno (1,2,3-cd) pyrene										
330.	ug/kg	N.D.		96	79	19	80			1	171
3790	dibenz (a,h) anthracene										
330.	ug/kg	N.D.		98	81	18	83			1	227
3791	benzo (ghi) perylene										
330.	ug/kg	N.D.		89	79	13	76			1	219
0111	Moisture	Batch: 970800316820005A									
0.080	% by wt.		7				100	100	0	100	101



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LLI Sample No. 2680809

GEO/SB-06/10-12 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	99	70	121
	d8-toluene	90	81	117
	4-BFB	92	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	86	24	113
	2-Flphenol	80	25	121
	2,4,6-TBP	74	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	(5)	23	120
	2-Fbiphenyl	89	30	115
	Tphenylid14	100	18	137

Accurate surrogate recoveries could not be determined due to interferences or dilution necessary for this sample.



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2216 Rev 5/01/96





LLI Sample No. SW 2680810

Collected: 3/19/97 at 08:50 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-07/5-7 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-07 SDG#: HMS04-23

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
4593	TCL Volatiles					
4688	TCL Semivolatiles			See Page		2
4689	TCL Semivolatiles cont'd			See Page		4
0111	Moisture	14.6		0.080	% by wt.	5
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Uptegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:31:01 D 0003 11 129915 557660
448 0.00 00049920 ASR000



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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





LLI Sample No. SW 2680810

Collected: 3/19/97 at 08:50 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-07/5-7 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

SB-07 SDG#: HMS04-23

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL Volatiles by 8240							
3434	Chloromethane	N.D.	10.	ug/kg	N.D.	12.	
3435	Bromomethane	N.D.	15.	ug/kg	N.D.	18.	
3436	Vinyl Chloride	N.D.	10.	ug/kg	N.D.	12.	
3437	Chloroethane	N.D.	15.	ug/kg	N.D.	18.	
3440	Methylene Chloride	N.D.	10.	ug/kg	N.D.	12.	
4074	Acetone	N.D.	35.	ug/kg	N.D.	41.	
4076	Carbon Disulfide	N.D.	15.	ug/kg	N.D.	18.	
1180	1,1-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.	
3442	1,1-Dichloroethane	N.D.	5.	ug/kg	N.D.	6.	
3444	Chloroform	N.D.	5.	ug/kg	N.D.	6.	
3445	1,2-Dichloroethane	N.D.	10.	ug/kg	N.D.	12.	
4085	2-Butanone	N.D.	35.	ug/kg	N.D.	41.	
3446	1,1,1-Trichloroethane	N.D.	5.	ug/kg	N.D.	6.	
3447	Carbon Tetrachloride	N.D.	5.	ug/kg	N.D.	6.	
4091	Vinyl Acetate	N.D.	15.	ug/kg	N.D.	18.	
3448	Bromodichloromethane	N.D.	10.	ug/kg	N.D.	12.	
3450	1,2-Dichloropropane	N.D.	15.	ug/kg	N.D.	18.	
3454	cis-1,3-Dichloropropene	N.D.	5.	ug/kg	N.D.	6.	
1181	Trichloroethene	N.D.	5.	ug/kg	N.D.	6.	
3452	Dibromochloromethane	N.D.	5.	ug/kg	N.D.	6.	
3453	1,1,2-Trichloroethane	N.D.	10.	ug/kg	N.D.	12.	
1182	Benzene	N.D.	5.	ug/kg	N.D.	6.	
3451	trans-1,3-Dichloropropene	N.D.	5.	ug/kg	N.D.	6.	
3456	Bromoform	N.D.	5.	ug/kg	N.D.	6.	
4108	4-Methyl-2-pentanone	N.D.	15.	ug/kg	N.D.	18.	
4107	2-Hexanone	N.D.	15.	ug/kg	N.D.	18.	
3457	Tetrachloroethene	N.D.	5.	ug/kg	N.D.	6.	
3449	1,1,2,2-Tetrachloroethane	N.D.	5.	ug/kg	N.D.	6.	
1183	Toluene	14.	J	5.	17.	J	6.
1184	Chlorobenzene	N.D.	5.	ug/kg	N.D.	6.	
3458	Ethylbenzene	68.	5.	ug/kg	79.	6.	
4117	Styrene	N.D.	5.	ug/kg	N.D.	6.	
3355	Xylene (total)	490.	5.	ug/kg	570.	6.	
6187	trans-1,2-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.	
6277	cis-1,2-Dichloroethene	N.D.	10.	ug/kg	N.D.	12.	

Questions? Contact your Client Services Representative
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Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles





LLI Sample No. SW 2680810

Collected: 3/19/97 at 08:50 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-07/5-7 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-07 SDG#: HMS04-23

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
RESULTS METHOD
DETECTION LIMIT UNITS

DRY WEIGHT
RESULTS METHOD
DETECTION LIMIT

TCL Volatiles by 8240

The quantitation limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5/01/96





LLI Sample No. SW 2680810

Collected: 3/19/97 at 08:50 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-07/5-7 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-07 SDG#: HMS04-23

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
						DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	phenol	N.D.	170.	ug/kg	N.D.	200.
3753	bis (2-chloroethyl) ether	N.D.	330.	ug/kg	N.D.	390.
1186	2-chlorophenol	N.D.	170.	ug/kg	N.D.	200.
3754	1,3-dichlorobenzene	N.D.	170.	ug/kg	N.D.	200.
1187	1,4-dichlorobenzene	N.D.	170.	ug/kg	N.D.	200.
3755	1,2-dichlorobenzene	N.D.	170.	ug/kg	N.D.	200.
4690	2-methylphenol	N.D.	330.	ug/kg	N.D.	390.
4691	2,2'-oxybis (1-chloropropane)	N.D.	500.	ug/kg	N.D.	590.
4692	4-methylphenol	N.D.	500.	ug/kg	N.D.	590.
1188	N-nitrosodi-n-propylamine	N.D.	330.	ug/kg	N.D.	390.
3757	hexachloroethane	N.D.	330.	ug/kg	N.D.	390.
3758	nitrobenzene	N.D.	170.	ug/kg	N.D.	200.
3759	isophorone	N.D.	330.	ug/kg	N.D.	390.
3746	2-nitrophenol	N.D.	330.	ug/kg	N.D.	390.
3747	2,4-dimethylphenol	N.D.	330.	ug/kg	N.D.	390.
3760	bis (2-chloroethoxy) methane	N.D.	170.	ug/kg	N.D.	200.
3748	2,4-dichlorophenol	N.D.	170.	ug/kg	N.D.	200.
1189	1,2,4-trichlorobenzene	N.D.	170.	ug/kg	N.D.	200.
3761	naphthalene	210,000.	4,200.	ug/kg	250,000.	4,900.
4693	4-chloroaniline	N.D.	500.	ug/kg	N.D.	590.
3762	hexachlorobutadiene	N.D.	330.	ug/kg	N.D.	390.
1190	4-chloro-3-methylphenol	N.D.	330.	ug/kg	N.D.	390.
4694	2-methylnaphthalene	230,000.	4,200.	ug/kg	270,000.	4,900.
3763	hexachlorocyclopentadiene	N.D.	830.	ug/kg	N.D.	980.
3749	2,4,6-trichlorophenol	N.D.	330.	ug/kg	N.D.	390.
4695	2,4,5-trichlorophenol	N.D.	330.	ug/kg	N.D.	390.
3764	2-chloronaphthalene	N.D.	170.	ug/kg	N.D.	200.
4696	2-nitroaniline	N.D.	330.	ug/kg	N.D.	390.
3766	dimethyl phthalate	N.D.	170.	ug/kg	N.D.	200.
3765	acenaphthylene	7,700.	170.	ug/kg	9,000.	200.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS



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LLI Sample No. SW 2680810

Collected: 3/19/97 at 08:50 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-07/5-7 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-07 SDG#: HMS04-23

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	
TCL SW846 Semivolatiles/Soil							
4697	3-nitroaniline	N.D.		330.	ug/kg	N.D.	390.
1191	acenaphthene	200,000.		4,200.	ug/kg	230,000.	4,900.
3750	2,4-dinitrophenol	N.D.		830.	ug/kg	N.D.	980.
1192	4-nitrophenol	N.D.		830.	ug/kg	N.D.	980.
4698	dibenzofuran	180,000.		4,200.	ug/kg	210,000.	4,900.
1193	2,4-dinitrotoluene	N.D.		330.	ug/kg	N.D.	390.
4699	2,6-dinitrotoluene	N.D.		330.	ug/kg	N.D.	390.
3770	diethyl phthalate	N.D.		330.	ug/kg	N.D.	390.
3769	4-chlorophenyl phenyl ether	N.D.		330.	ug/kg	N.D.	390.
3768	fluorene	250,000.		4,200.	ug/kg	290,000.	4,900.
4700	4-nitroaniline	N.D.		500.	ug/kg	N.D.	590.
4701	4,6-dinitro-2-methylphenol	N.D.		830.	ug/kg	N.D.	980.
3772	N-nitrosodiphenylamine	N.D.		330.	ug/kg	N.D.	390.
3773	4-bromophenyl phenyl ether	N.D.		500.	ug/kg	N.D.	590.
3774	hexachlorobenzene	N.D.		500.	ug/kg	N.D.	590.
1194	pentachlorophenol	N.D.		830.	ug/kg	N.D.	980.
3775	phenanthrene	510,000.		4,200.	ug/kg	600,000.	4,900.
3776	anthracene	120,000.		4,200.	ug/kg	140,000.	4,900.
4702	carbazole	27,000.	J	4,200.	ug/kg	32,000.	J 4,900.
3777	di-n-butyl phthalate	N.D.		170.	ug/kg	N.D.	200.
3778	fluoranthene	250,000.		4,200.	ug/kg	290,000.	4,900.
1195	pyrene	230,000.		8,300.	ug/kg	270,000.	9,800.
3780	butyl benzyl phthalate	N.D.		330.	ug/kg	N.D.	390.
3783	3,3'-dichlorobenzidine	N.D.		670.	ug/kg	N.D.	780.
3781	benzo (a) anthracene	61,000.		4,200.	ug/kg	71,000.	4,900.
3784	bis (2-ethylhexyl) phthalate	N.D.		330.	ug/kg	N.D.	390.
3782	chrysene	52,000.		4,200.	ug/kg	61,000.	4,900.
3785	di-n-octyl phthalate	N.D.		330.	ug/kg	N.D.	390.
3786	benzo (b) fluoranthene	33,000.	J	8,300.	ug/kg	39,000.	J 9,800.
3787	benzo (k) fluoranthene	11,000.		670.	ug/kg	13,000.	780.
3788	benzo (a) pyrene	22,000.		330.	ug/kg	26,000.	390.
3789	indeno (1,2,3-cd) pyrene	8,700.		330.	ug/kg	10,000.	390.
3790	dibenz (a,h) anthracene	3,400.		330.	ug/kg	4,000.	390.
3791	benzo (ghi) perylene	6,400.		330.	ug/kg	7,500.	390.

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300

Respectfully Submitted
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Senior Chemist, GC/MS



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LLI Sample No. SW 2680810

Collected: 3/19/97 at 08:50 by DU

Submitted: 3/20/97 Reported: 4/ 8/97

Discard: 5/ 9/97

GEO/SB-07/5-7 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-07 SDG#: HMS04-23

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL SW846	Semivolatiles/Soil						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. The quantitation limits for the GC/MS semivolatile compounds were raised due to the high concentration of target compounds.

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Senior Chemist, GC/MS

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2216 Rev. 5/01/96





LLI Sample No. SW 2680810

Collected: 03/19/97 at 08:50 by DU

Submitted: 03/20/97

GEO/SB-07/5-7 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS
SB-07 SDG#: HMS04-23

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4593	TCL Volatiles by 8240	SW-846 8240B	1	03/25/97 0304	Clark A. Dougherty
0381	BNA Soil Extraction	SW-846 3550A	1	03/21/97 0940	Denise L. Trimby
4688	TCL SW846 Semivolatiles Soil	SW-846 8270B	1	03/25/97 1107	Deb Gifford
4689	TCL SW846 Semivolatiles/Soil	SW-846 8270B	1	03/25/97 1107	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	03/21/97 1911	NeeJay B. Mehta



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LLI Sample No. 2680810

GE0/SB-07/5-7 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4593 TCL Volatiles by 8240		Batch: G970801AB									
3434	Chloromethane										
10.	ug/kg	N.D.		86	106	21	100			1	272
3435	Bromomethane										
15.	ug/kg	N.D.		82	102	21	95			1	241
3436	Vinyl Chloride										
10.	ug/kg	N.D.		94	116	21	108			1	250
3437	Chloroethane										
15.	ug/kg	N.D.		72	95	28	100			10	254
3440	Methylene Chloride										
10.	ug/kg	N.D.		100	107	6	101			1	221
4074	Acetone										
35.	ug/kg	N.D.		78	81	3	52			19	150
4076	Carbon Disulfide										
15.	ug/kg	N.D.		129	134	4	136			24	188
1180	1,1-Dichloroethene										
10.	ug/kg	N.D.		107	113	5	111			1	233
12	1,1-Dichloroethane										
5.	ug/kg	N.D.		105	109	3	108			59	155
44	Chloroform										
5.	ug/kg	N.D.		98	106	8	103			51	138
3445	1,2-Dichloroethane										
10.	ug/kg	N.D.		92	97	6	94			49	155
4085	2-Butanone										
35.	ug/kg	N.D.		91	98	7	65			22	167
3446	1,1,1-Trichloroethane										
5.	ug/kg	N.D.		109	116	6	110			52	162
3447	Carbon Tetrachloride										
5.	ug/kg	N.D.		105	111	6	109			70	140
4091	Vinyl Acetate										
15.	ug/kg	N.D.		111	118	6	99			19	190
3448	Bromodichloromethane										
10.	ug/kg	N.D.		97	105	8	99			35	155
3450	1,2-Dichloropropane										
15.	ug/kg	N.D.		103	109	6	102			1	209
3454	cis-1,3-Dichloropropene										
5.	ug/kg	N.D.		99	105	6	98			1	226
1181	Trichloroethene										
5.	ug/kg	N.D.		103	109	6	106			71	157
3452	Dibromochloromethane										
5.	ug/kg	N.D.		96	100	4	91			53	149
3453	1,1,2-Trichloroethane										
10.	ug/kg	N.D.		95	99	5	88			52	150
1182	Benzene										
5.	ug/kg	N.D.		100	109	8	102			37	151
3451	trans-1,3-Dichloropropene										
5.	ug/kg	N.D.		91	96	6	88			17	183



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2216 Rev. 5/01/96





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A division of Thermo Analytical Inc.

LLI Sample No. 2680810

GEO/SB-07/5-7 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3456	Bromoform										
5.	ug/kg	N.D.		79	85	7	70			45	169
4108	4-Methyl-2-pentanone										
15.	ug/kg	N.D.		88	87	1	60			50	124
4107	2-Hexanone										
15.	ug/kg	N.D.		87	86	1	57			52	140
3457	Tetrachloroethene										
5.	ug/kg	N.D.		112	112	0	115			64	148
3449	1,1,2,2-Tetrachloroethane										
5.	ug/kg	N.D.		95	95	0	75			46	157
1183	Toluene										
5.	ug/kg	N.D.		101	105	3	103			47	150
1184	Chlorobenzene										
5.	ug/kg	N.D.		98	101	3	103			37	160
3458	Ethylbenzene										
5.	ug/kg	N.D.		101	108	6	105			37	162
4117	Styrene										
5.	ug/kg	N.D.		98	101	3	101			74	136
355	Xylene (total)										
5.	ug/kg	N.D.		103	104	2	102			30	200
6187	trans-1,2-Dichloroethene										
10.	ug/kg	N.D.		99	104	5	106			51	149
6277	cis-1,2-Dichloroethene										
10.	ug/kg	N.D.		98	106	8	106			54	156

4688	TCL SW846 Semivolatiles Soil	Batch: 97080SLC026078SC									

1185	phenol										
170.	ug/kg	N.D.		86	76	13	75			5	112
3753	bis (2-chloroethyl) ether										
330.	ug/kg	N.D.		88	77	14	78			12	158
1186	2-chlorophenol										
170.	ug/kg	N.D.		88	77	14	76			23	134
3754	1,3-dichlorobenzene										
170.	ug/kg	N.D.		81	74	10	77			1	172
1187	1,4-dichlorobenzene										
170.	ug/kg	N.D.		82	75	9	77			20	124
3755	1,2-dichlorobenzene										
170.	ug/kg	N.D.		85	77	10	79			32	129
4690	2-methylphenol										
330.	ug/kg	N.D.		79	70	11	74			46	123
4691	2,2'-oxybis (1-chloropropane)										
500.	ug/kg	N.D.		74	65	14	64			36	166
4692	4-methylphenol										
500.	ug/kg	N.D.		83	75	10	78			5	152
1188	N-nitrosodi-n-propylamine										
330.	ug/kg	N.D.		105	92	13	90			1	230
3757	hexachloroethane										
330.	ug/kg	N.D.		83	76	10	79			40	113

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See reverse side for explanation of symbols and abbreviations

2216 Rev. 5/01/96





LLI Sample No. 2680810
 GEO/SB-07/5-7 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3758	nitrobenzene										
170.	ug/kg	N.D.		90	80	12	82			35	180
3759	isophorone										
330.	ug/kg	N.D.		94	85	10	86			21	196
3746	2-nitrophenol										
330.	ug/kg	N.D.		90	79	13	81			29	182
3747	2,4-dimethylphenol										
330.	ug/kg	N.D.		29	28	2	54			32	119
3760	bis (2-chloroethoxy) methane										
170.	ug/kg	N.D.		85	76	11	79			33	184
3748	2,4-dichlorophenol										
170.	ug/kg	N.D.		84	74	12	75			39	135
1189	1,2,4-trichlorobenzene										
170.	ug/kg	N.D.		83	74	11	78			44	142
3761	naphthalene										
4,200.	ug/kg	N.D.		80	73	9	73			21	133
4693	4-chloroaniline										
500.	ug/kg	N.D.		37	27	32	32			17	116
762	hexachlorobutadiene										
330.	ug/kg	N.D.		95	85	11	88			24	116
190	4-chloro-3-methylphenol										
330.	ug/kg	N.D.		90	81	11	78			22	147
4694	2-methylnaphthalene										
4,200.	ug/kg	N.D.		85	77	10	76			28	123
3763	hexachlorocyclopentadiene										
830.	ug/kg	N.D.		81	72	13	77			1	100
3749	2,4,6-trichlorophenol										
330.	ug/kg	N.D.		88	78	13	83			37	144
4695	2,4,5-trichlorophenol										
330.	ug/kg	N.D.		91	79	14	81			39	151
3764	2-chloronaphthalene										
170.	ug/kg	N.D.		86	78	9	83			60	118
4696	2-nitroaniline										
330.	ug/kg	N.D.		87	76	14	74			53	143
3766	dimethyl phthalate										
170.	ug/kg	N.D.		85	75	12	76			1	112
3765	acenaphthylene										
170.	ug/kg	N.D.		85	77	10	79			33	145

4689	TCL SW846 Semivolatiles/Soil	Batch: 97080SLC026078SC									
4697	3-nitroaniline										
330.	ug/kg	N.D.		51	42	19	39			7	143
1191	acenaphthene										
4,200.	ug/kg	N.D.		80	73	10	74			47	145
3750	2,4-dinitrophenol										
830.	ug/kg	N.D.		97	81	18	67			1	191
1192	4-nitrophenol										
830.	ug/kg	N.D.		93	79	16	71			1	132



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2216 Rev 5/01/96





LLI Sample No. 2680810

GEO/SB-07/5-7 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4698	dibenzofuran										
4,200.	ug/kg	N.D.		85	76	10	76			28	131
1193	2,4-dinitrotoluene										
330.	ug/kg	N.D.		92	79	15	77			39	139
4699	2,6-dinitrotoluene										
330.	ug/kg	N.D.		92	80	14	80			50	158
3770	diethyl phthalate										
330.	ug/kg	N.D.		86	76	13	76			1	114
3769	4-chlorophenyl phenyl ether										
330.	ug/kg	N.D.		81	74	9	75			25	158
3768	fluorene										
4,200.	ug/kg	N.D.		82	75	9	76			59	121
4700	4-nitroaniline										
500.	ug/kg	N.D.		76	61	21	64			38	122
4701	4,6-dinitro-2-methylphenol										
830.	ug/kg	N.D.		91	77	17	76			1	181
3772	N-nitrosodiphenylamine										
330.	ug/kg	N.D.		82	72	12	80			38	147
3773	4-bromophenyl phenyl ether										
500.	ug/kg	N.D.		93	81	14	84			53	127
74	hexachlorobenzene										
500.	ug/kg	N.D.		97	84	14	84			1	152
1194	pentachlorophenol										
830.	ug/kg	N.D.		97	82	17	72			14	176
3775	phenanthrene										
4,200.	ug/kg	N.D.		86	76	13	79			54	120
3776	anthracene										
4,200.	ug/kg	N.D.		83	73	13	77			27	133
4702	carbazole										
4,200.	ug/kg	N.D.		91	80	12	81			35	133
3777	di-n-butyl phthalate										
170.	ug/kg	N.D.		93	80	15	85			1	118
3778	fluoranthene										
4,200.	ug/kg	N.D.		95	82	14	82			26	137
1195	pyrene										
8,300.	ug/kg	N.D.		80	69	14	79			52	115
3780	butyl benzyl phthalate										
330.	ug/kg	N.D.		86	74	15	85			1	152
3783	3,3'-dichlorobenzidine										
670.	ug/kg	N.D.		49	21	81	60			1	262
3781	benzo (a) anthracene										
4,200.	ug/kg	N.D.		86	75	13	79			33	143
3784	bis (2-ethylhexyl) phthalate										
330.	ug/kg	N.D.		89	75	16	86			8	158
3782	chrysene										
4,200.	ug/kg	N.D.		90	79	13	82			17	168
3785	di-n-octyl phthalate										
330.	ug/kg	N.D.		91	75	19	87			4	146
3786	benzo (b) fluoranthene										
8,300.	ug/kg	N.D.		87	75	15	78			24	159



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2216 Rev. 5/01/96





LLI Sample No. 2680810
 GEO/SB-07/5-7 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3787	benzo (k) fluoranthene										
670.	ug/kg	N.D.		92	81	13	82			11	163
3788	benzo (a) pyrene										
330.	ug/kg	N.D.		84	73	14	76			17	163
3789	indeno (1,2,3-cd) pyrene										
330.	ug/kg	N.D.		96	79	19	80			1	171
3790	dibenz (a,h) anthracene										
330.	ug/kg	N.D.		98	81	18	83			1	227
3791	benzo (ghi) perylene										
330.	ug/kg	N.D.		89	79	13	76			1	219
0111	Moisture	Batch: 970800316820005A									
0.080	% by wt.		7				100	100	0	100	101



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L.L.I. Sample No. 2680810
GEO/SB-07/5-7 Grab Soil Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4593 TCL Volatiles by 8240	d4-1,2-DCA	97	70	121
	d8-toluene	102	81	117
	4-BFB	80	74	121
4688 TCL SW846 Semivolatiles Soil	Phenol-d6	93	24	113
	2-Flphenol	87	25	121
	2,4,6-TBP	69	19	122
4689 TCL SW846 Semivolatiles/Soil	Nitrobz-d5	111	23	120
	2-Fbiphenyl	101	30	115
	Tphenylid14	113	18	137



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LLI Sample No. **WW 2680811**
Collected: 3/19/97 at 11:00 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
Discard: 5/ 9/97

FB-2 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS
FB--2 SDG#: HMS04-24*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

P.O.
Rel.

AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

CAT
NO. ANALYSIS NAME
4592 TCL Volatiles

See Page 2

1 COPY TO Michael Pisani & Assoc.
1 COPY TO Data Package Group
1 COPY TO Kerr-McGee Corporation

ATTN: Mr. David Upthegrove
ATTN: Dr. Garet Van De Steeg

Questions? Contact your Client Services Representative
Nancy Bornholm at (717) 656-2300
03:32:49 D 0003 11 129915 557660
448 0.00 00015600 ASR000

Respectfully Submitted
Ramona V. Layman
Manager, Metals/Leachates



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LLI Sample No. WW 2680811
 Collected: 3/19/97 at 11:00 by DU

Submitted: 3/20/97 Reported: 4/ 8/97
 Discard: 5/ 9/97

FB-2 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS
 FB-2 SDG#: HMS04-24*

Account No: 07802
 Kerr-McGee Corporation
 Technology Center
 PO Box 25861
 Oklahoma City OK 73125

P.O.
 Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Volatiles by 8240 - Water				
1258	Chloromethane	N.D.	3.	ug/l
1257	Bromomethane	N.D.	3.	ug/l
3492	Vinyl Chloride	N.D.	2.	ug/l
3494	Chloroethane	N.D.	3.	ug/l
3497	Methylene Chloride	N.D.	2.	ug/l
3498	Acetone	N.D.	6.	ug/l
3499	Carbon Disulfide	N.D.	3.	ug/l
3500	1,1-Dichloroethene	N.D.	1.	ug/l
3501	1,1-Dichloroethane	N.D.	2.	ug/l
3503	Chloroform	N.D.	1.	ug/l
3504	1,2-Dichloroethane	N.D.	2.	ug/l
0316	2-Butanone	N.D.	3.	ug/l
3505	1,1,1-Trichloroethane	N.D.	1.	ug/l
3506	Carbon Tetrachloride	N.D.	1.	ug/l
3507	Vinyl Acetate	N.D.	2.	ug/l
3508	Bromodichloromethane	N.D.	1.	ug/l
3509	1,2-Dichloropropane	N.D.	1.	ug/l
3516	cis-1,3-Dichloropropene	N.D.	1.	ug/l
3511	Trichloroethene	N.D.	1.	ug/l
3512	Dibromochloromethane	N.D.	2.	ug/l
3513	1,1,2-Trichloroethane	N.D.	2.	ug/l
3515	Benzene	N.D.	1.	ug/l
3510	trans-1,3-Dichloropropene	N.D.	1.	ug/l
3518	Bromoform	N.D.	1.	ug/l
3521	4-Methyl-2-pentanone	N.D.	5.	ug/l
3520	2-Hexanone	N.D.	7.	ug/l
3522	Tetrachloroethene	N.D.	1.	ug/l
3523	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
3524	Toluene	N.D.	2.	ug/l
3525	Chlorobenzene	N.D.	1.	ug/l
3526	Ethylbenzene	N.D.	2.	ug/l
3528	Styrene	N.D.	1.	ug/l
3529	Xylene (total)	N.D.	1.	ug/l
5780	trans-1,2-Dichloroethene	N.D.	2.	ug/l
6268	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
 Nancy Bornholm at (717) 656-2300

Respectfully Submitted
 Duane A. Luckenbill, B.S.
 Group Leader, GC/MS Volatiles



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LLI Sample No. WW 2680811

Collected: 03/19/97 at 11:00 by DU

Submitted: 03/20/97

FB-2 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS
FB--2 SDG#: HMS04-24*

Account No: 07802
Kerr-McGee Corporation
Technology Center
PO Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
4592	TCL Volatiles by 8240 - Water	SW-846 8240B	1	03/21/97 2237	Trent S. Sprenkle



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LLI Sample No. 2680811
 FB-2 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH

4592 TCL Volatiles by 8240 - Water Batch: K970801AB											
1258	Chloromethane										
	3. ug/l	N.D.		89	91	3					
1257	Bromomethane										
	3. ug/l	N.D.		94	99	6					
3492	Vinyl Chloride										
	2. ug/l	N.D.		98	102	4					
3494	Chloroethane										
	3. ug/l	N.D.		90	90	1					
3497	Methylene Chloride										
	2. ug/l	N.D.		101	103	1					
3498	Acetone										
	6. ug/l	N.D.		90	92	2					
3499	Carbon Disulfide										
	3. ug/l	N.D.		97	126	26					
3500	1,1-Dichloroethene										
	1. ug/l	N.D.		111	110	1					
3501	1,1-Dichloroethane										
	2. ug/l	N.D.		106	105	1					
3503	Chloroform										
	1. ug/l	N.D.		107	106	1					
3504	1,2-Dichloroethane										
	2. ug/l	N.D.		105	103	2					
0316	2-Butanone										
	3. ug/l	N.D.		105	95	10					
3505	1,1,1-Trichloroethane										
	1. ug/l	N.D.		114	111	3					
3506	Carbon Tetrachloride										
	1. ug/l	N.D.		111	109	2					
3507	Vinyl Acetate										
	2. ug/l	N.D.		128	123	4					
3508	Bromodichloromethane										
	1. ug/l	N.D.		104	102	3					
3509	1,2-Dichloropropane										
	1. ug/l	N.D.		101	97	4					
3516	cis-1,3-Dichloropropene										
	1. ug/l	N.D.		106	103	3					
3511	Trichloroethene										
	1. ug/l	N.D.		113	112	2					
3512	Dibromochloromethane										
	2. ug/l	N.D.		108	101	7					
3513	1,1,2-Trichloroethane										
	2. ug/l	N.D.		110	108	2					
3515	Benzene										
	1. ug/l	N.D.		107	106	1					
3510	trans-1,3-Dichloropropene										
	1. ug/l	N.D.		100	95	5					



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LLI Sample No. 2680811
 FB-2 Grab Water Sample

Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
 Kerr-McGee Corporation

Sample MDL	Sample UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS		
										LOW	HIGH	
3518	Bromoform											
	1. ug/l	N.D.		104	101	3						
3521	4-Methyl-2-pentanone											
	5. ug/l	N.D.		87	85	2						
3520	2-Hexanone											
	7. ug/l	N.D.		97	92	6						
3522	Tetrachloroethene											
	1. ug/l	N.D.		144	141	3						
3523	1,1,2,2-Tetrachloroethane											
	2. ug/l	N.D.		99	98	0						
3524	Toluene											
	2. ug/l	N.D.		114	114	0						
3525	Chlorobenzene											
	1. ug/l	N.D.		113	113	0						
3526	Ethylbenzene											
	2. ug/l	N.D.		115	116	1						
3528	Styrene											
	1. ug/l	N.D.		115	115	0						
529	Xylene (total)											
	1. ug/l	N.D.		115	115	0						
780	trans-1,2-Dichloroethene											
	2. ug/l	N.D.		107	105	1						
6268	cis-1,2-Dichloroethene											
	2. ug/l	N.D.		108	106	2						



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LLI Sample No. 2680811
FB-2 Grab Water Sample
Gulf States Creosoting: Hattiesburg, MS

Group No. 557660
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4592 TCL Volatiles by 8240 - Water	d4-1,2-DCA	105	76	114
	d8-toluene	104	88	110
	4-BFB	110	86	115

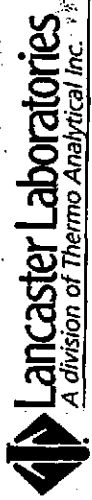


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Analysis Required by Environmental Services Chain Custody



For Lancaster Laboratories use only

Acct. # _____ Sample # _____

Please print. Instructions on reverse side correspond with circled numbers.

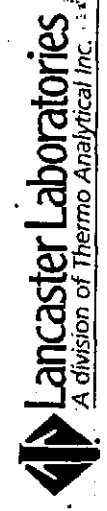
Client: Michael Pisoni & Associates Acct. # _____
 Project Name: Gulf States Coasting PWSID # _____
 Project Manager: David A. Ullrich PO # _____
 Sampler: David Ullrich Quote # _____
 Name of state where samples were collected: Mississippi

1	2	3	4	5	6	7	8	9
GE0/SB-01/10-22	3-12-07	1235	X	Z	1	1	1	3-16-07 1030
GE0/SB-02/10-12	3-12-07	1235	X	Z	1	1	1	3-16-07 1030
GE0/SB-03/10-12	3-12-07	1235	X	Z	1	1	1	3-16-07 1030
GE0/SB-04/10-12	3-12-07	1235	X	Z	1	1	1	3-16-07 1030
GE0/SB-05/10-12	3-12-07	1235	X	Z	1	1	1	3-16-07 1030
GE0/SB-06/10-12	3-12-07	1235	X	Z	1	1	1	3-16-07 1030
RR-1/10-12	3-12-07	1235	X	Z	1	1	1	3-16-07 1030
GE0/SB-24/6-2	3-12-07	1235	X	Z	1	1	1	3-16-07 1030
GE0/SB-08/10-12	3-12-07	1235	X	Z	1	1	1	3-16-07 1030
GE0/SB-07/10-12	3-12-07	1235	X	Z	1	1	1	3-16-07 1030

Turnaround Time Requested (TAT) (please circle): Normal
 (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
 Date results are needed: _____
 Rush results requested by (please circle): _____
 Phone #: _____ Fax #: _____

8 Data Package Options (please circle if requested)
 QC Summary Type VI (Raw Data) Yes No
 Type I (Tier I) GLP
 Type II (Tier II) Other
 Type III (Tier III) Site-specific QC required? Yes No
 (If yes, indicate QC sample and submit replicate volume.)
 Type IV (CIP) Internal Chain of Custody required? Yes No

Analysis Req / Environmental Services Chail Custod



For Lancaster Laboratories use only

Acct. # _____ Sample # _____

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: Michael Prosser & Associates Acct. # _____ PWSID # _____
 Project Name: Gulf States (-o-c-s-f-c)
 Project Manager: David Upthegrove P.O. # _____
 Sampler: David Upthegrove Quote # _____
 Name of state where samples were collected: MD

2

5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	0
<p>6 Turnaround Time Requested (TAT) (please circle): <u>Normal</u> Rush _____ Date results are needed: _____ Rush results requested by (please circle): <u>Phone</u> Fax _____ Phone #: _____ Fax #: _____</p>																																													

7

QC Summary	Type VI (Raw Data)	GLP	Other	Site-specific QC required? (If yes, indicate QC sample and submit replicate volume)	Internal Chain of Custody required? (Yes/No)	Type I (Tier I)	Type II (Tier II)	Type III (Tier III)	Type IV (CLP)	Relinquished by	Date	Time	Relinquished by	Date	Time	Relinquished by	Date	Time	Relinquished by	Date	Time
										<u>Michael Prosser</u>	<u>3-14-17</u>	<u>1435</u>	<u>Michael Prosser</u>	<u>3-14-17</u>	<u>1900</u>	<u>Michael Prosser</u>	<u>3-14-17</u>	<u>1900</u>	<u>Michael Prosser</u>	<u>3-14-17</u>	<u>1900</u>

8 Data Package Options (please circle if requested)

QC Summary Type VI (Raw Data) GLP Other Site-specific QC required? (If yes, indicate QC sample and submit replicate volume) Internal Chain of Custody required? (Yes/No)

Type I (Tier I) Type II (Tier II) Type III (Tier III) Type IV (CLP)

Relinquished by: _____ Date: _____ Time: _____
 Relinquished by: _____ Date: _____ Time: _____
 Relinquished by: _____ Date: _____ Time: _____
 Relinquished by: _____ Date: _____ Time: _____
 Relinquished by: _____ Date: _____ Time: _____